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Municipal officials are requested to contact the authors to report changes in income tax rate, non-resident contribution to the city's tax base, and tax credits.

The Ohio Municipal Income Tax: Preliminary Observations

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The Ohio Municipal Income Tax: Preliminary Observations

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For the past decade or so, regional governance has been given a lot of academic and media attention. The policy debates on the merits of regional governance include service delivery, revenue systems, voluntary cooperation, mergers and annexations, among a host of other issues. Regional tax-base sharing is among those concerns and the Twin Cities property tax-sharing program is often proffered as the model for other metropolitan areas. This approach, and others similar to it, is currently gaining considerable attention, especially with the publication of Myron Orfield's *Metropolitics* and David Rusk's *Cities Without Suburbs* and his new *Inside Game/Outside Game*.¹ One important prescription by these authors relates to the need for region's wealthier areas to share their expanding tax bases with the relatively poorer central cities, which are often the region's employment centers.

Along with these prescriptive works, Ladd and Yinger's seminal work on financing cities, *America's Ailing Cities*,² measures the tax-exporting capacity of different municipal tax structures. One such mechanism that they study is an earnings tax, which has existed in the state of Ohio for over 40 years but is poorly understood (see comment in the recently released volume by the National Academy of Science, *Governance and Opportunity in Metropolitan America*³). In fact, in their analysis of 75 major US cities, Ladd and Yinger find that Ohio cities rank among the highest (and, therefore, the best) in tax exporting potential, but they do not examine the reasons for the high ranking.

The purpose of this report, then, is to explore whether and how Ohio's municipal tax structure acts as a tax-exporting tool. First, we describe the concept of tax-base sharing reviewing what is known about the tax-base sharing capacity of different municipal tax policies. We then describe the fiscal and political implications of Ohio's municipal income tax. We conclude by discussing our research agenda on local/regional tax-base sharing.

Municipal Policies Designed for Tax-Base Sharing

Incorporated municipalities are granted access to certain sources of taxation and are responsible for providing services to their residents and non-resident users. To the extent

¹ Myron Orfield, *Metropolitics: A Regional Agenda for Community and Stability* (Washington, DC: Brookings Institution and Lincoln Institute of Land Policy, 1996); David Rusk, *Cities Without Suburbs* (Baltimore: Johns Hopkins University Press, 1993); David Rusk, *Inside Game/Outside Game* (Washington, DC: Brookings Institution, 1999).

² Helen Ladd and John Yinger, *America's Ailing Cities* (Baltimore: Johns Hopkins University Press, 1989).

³ Alan Altshuler, William Morrill, Harold Wolman, and Faith Mitchell, eds. *Governance and Opportunity in Metropolitan America* (Washington, DC: National Academy Press, 1999).

that those individuals and firms that contribute tax revenue are the same set of users, the principle of *contiguity* is met. Contiguity requires that the individuals who receive the full complement of services are the same individuals who pay for those services. Yet, no municipality is legally entitled to prevent visitors or guests from entering (mobility cannot be impeded) nor allowed to deny certain basic services to them (e.g., safety). If there is no mechanism to force visitors to contribute to the services they consume, then the costs of visitors' use of city services are borne by the city's taxpayers. The principle of contiguity, then, is violated. Services benefit non-paying recipients.

Municipalities, however, do not operate in such a fashion. Through an array of pricing mechanisms, from general taxes and fees to permits and special assessments, residents and non-residents provide revenue to cities for some services although not always in equal amounts. Water fees, for example, are charged to all users, even if the user is a non-resident who rents office space within the city. Building permits are charged to anyone, resident or non-resident, who builds within the city's limits. Sales tax revenue is collected at the point of transaction, rather than on the basis of one's residency status.

Nevertheless, cities have continually explored mechanisms of trying to ensure that costs of services are spread among users and not borne solely by residents. As the nation's migratory impulse pushed concentrations of people outside the original jurisdictions of municipalities, cities searched for means of extending the legal boundaries of their landmass, political stretching, and of extending the fiscal reach of their taxing powers, fiscal stretching.⁴

Political Stretching

The most common mechanism available to cities-- and one that historically has been adopted by nearly all incorporated municipalities-- is annexation. Cities annex unincorporated territory, thereby stretching the legal reach of their legal and financial systems, and capturing at least part of the tax base of the users of city services. Annexation laws vary across the country. Typically, property owners petition the city to be incorporated and both the city and residents or property owners of the area to be annexed must agree.⁵ For instance, this is the allowable procedure for Ohio's municipalities. Between 1990 and 1995, Ohio's municipalities annexed 172 square miles of unincorporated area that housed approximately 86,900 persons.⁶ This action not only places the taxable real estate property under the jurisdiction of the municipality and requires delivery of city services to the newly incorporated area, but it more importantly also gives those municipalities the opportunity to tax the income of residents in the newly incorporated areas.

⁴ This section on political and fiscal stretching is derived from Michael A. Pagano, "Metropolitan Limits: Intrametropolitan Disparities and Governance in US Laboratories of Democracy," in Alan Altshuler, William Morrill, Harold Wolman, and Faith Mitchell, eds. *Governance and Opportunity in Metropolitan America* (Washington, DC: National Academy Press, 1999), pp. 253-292.

⁵ Some state annexation laws are less restrictive. For example, in Texas, state law allows a city to claim annexing authority over area two miles from the city's border and annexation is a unilateral action of the city.

⁶ Joel Miller, "Boundary Changes, 1990-1995," in *The Municipal Year Book, 1997* (Washington, DC: International City/County Management Association, 1997), p. 35.

The political and fiscal motivation for cities' pursuing annexation policies depends in part on the general taxing authority of the municipality. Most municipalities throughout the nation pursue annexation policies as a mechanism for stretching the property tax base of those cities in order to finance city services (e.g., Texas). Other municipalities, however, pursue annexation policies as a mechanism for stretching their sales tax base, which provide the bulk of municipal revenues (e.g., Arizona). Ohio's municipalities derive the majority of their own-source revenues from the income tax, and therefore pursue annexation as a mechanism to stretch their income tax base in order to finance city service delivery.

Consolidation of local governments, typically involving the merging of a municipality with another municipality or with a county, is another form of political stretching. Though infrequent today, consolidation historically has been a fairly common mechanism for improving efficiency and reducing the unit costs of services. Larger production units, according to proponents of consolidation, can produce a unit of a public good at a lower marginal cost than smaller production units. Consequently, metropolitan-wide service-delivery areas are often more efficient, and consolidation of local general-purpose governments or specific services is encouraged. In addition to the efficiency arguments, consolidation is also considered more equitable as cost shifting to central city residents is unlikely under uniform, countywide tax systems. The consolidation of the five boroughs into New York City in 1898 was certainly the best known and largest, but others in the 20th Century are significant as well.

City-county consolidation has been pursued aggressively, but the success rate is not high. Since 1921, fewer than one in five proposed consolidations have been approved. In the past 20 years, nearly all consolidations that involved a large central city and the surrounding county have failed. There is evidence that city-county consolidations in less populated areas (under 250,000 population) have been somewhat more successful in recent years and that the arguments advanced in these smaller counties have focused on service efficiency. But, there appears to be little support by suburban or county residents for consolidating their municipal corporations with the county's major city.

Durning notes that scale economies and administrative efficiency are more likely to accrue to fragmented local governments in large counties (>250,000) and that efficiency gains are more likely in consolidated counties that are small (<250,000).⁷ In recent years consolidation proposals have become important on the political agenda of smaller metropolitan areas. During the 1960s, the average-size county voting on consolidation was 221,995; in the 1970s, it was 193,781; and during the 1980s, it was 132,234.⁸

This is not to suggest that piecemeal consolidation has little support in suburban areas. To the contrary, the most rapid growth in local governments is found in the proliferation of special districts, another form of political stretching. Special districts provide a select

⁷ Dan Durning, "The Effects of City-County Government Consolidation," *Public Administration Quarterly* (Fall 1995), 272-298.

⁸ Durning, "The Effects of ...," p. 295.

service to residents of a metropolitan area or region. Creation of special districts that provide a tangible service, the cost of which can be attributed to individual users, seems to find favor among residents of several and diverse jurisdictions.⁹ This approach has been found to be more politically acceptable than wholesale consolidation of municipal or municipal/county governments. For example, transportation improvement districts, sewer districts, utility districts, and other consolidated services have been presented to the public, and often successfully, as services that can be more efficiently provided to a region than to an individual city.¹⁰

Rather than pursuing a legal consolidation of governments, cities have become aggressive in seeking a strategy of reducing service costs by contracting with other local governments and private firms. Inter-local agreements are contractual arrangements between two (or more) governments for the provision of a specific service. Gains in economies of scale are anticipated, but no loss of political identity results.

Fiscal Stretching

Non-resident visitors of municipalities receive city services. Some of those services can be priced through fees which are included (implicitly, at least) in the price of a good or service, such as the rate for a hotel room that covers water and sewer costs. Other services, however, are provided by the municipality for which a fee is not feasible. Services, such as public safety, protection, and transportation, are provided to the visitor and the costs are often shifted to those users via lodging, entertainment (e.g., sports tickets), and restaurant taxes. These selective sales taxes reimburse the municipality for services rendered to users who tend not to be residents of the municipality and, in return, do not burden residents for the costs of services provided to visitors.

Most cities impose taxes, called own-source taxes, for the purpose of defraying the cost of service provision to residents, employees who work within the city's limits, and occasional visitors. In some states, municipal corporations are granted access to a general set of tax instruments; in others, they are not proscribed from taxing specific items. Each of the three major tax structures -- property, sales, income -- places a differential burden on individuals and firms and on residents and non-residents.

Property Tax Cities

An ad valorem real estate tax is a tax on land and structures, which are place specific. Owners of real property pay taxes on the assessed value of the property, which is determined by state and municipal law. If the owner is also the resident, then the taxpayer-citizen pays property taxes to the municipality in exchange for services. If the owner is a non-resident who rents a facility, the costs of providing city services are potentially borne by the owner although they might be shifted at least partly to the tenant, depending on demand for rental property (i.e., the higher the demand, the more likely the owner can shift tax costs to the renter). Studies on property tax burden suggest that the

⁹ Kathryn Foster, *The Political Economy of Special Purpose Government* (Washington, D.C.: Georgetown University Press, 1997).

¹⁰ Nancy Burns, *The Formation of American Local Governments* (Oxford: Oxford University Press, 1994).

ability to export taxes to non-residents is greater among cities with more commercial/industrial property than it is among cities with more residential property.

Suburban or bedroom communities are less able to shift the property tax burden to non-residents since most residents own their homes. The assumption hinges on the perspective that commercial property taxes are probably shifted to the consumers of the products that are produced or distributed by the firm. Those consumers are assumed to be distributed across the metropolitan area (or beyond) and not just across the city's residents. Estimates of the exporting capacity of the property tax average around 0.52, meaning that for every \$1.00 of property tax contributed by resident property owners, \$.52 can be raised from non-residents in property taxes.¹¹

Sales Tax Cities

Municipalities that have the authority to impose a tax on retail sales or on other commercial transactions cannot distinguish between consumers who are residents of the municipality and consumers who are not. It is quite likely, in fact, that sales tax payers do not always reside in the jurisdiction within which the purchase was made. Some sales taxes, then, are shifted or exported to non-residents in municipalities that are centers of commerce and retail sales, reducing the effective tax rate on residents.

It should be noted that residents of these municipalities that are centers of commerce and retail sales are also purchasers of goods and services in other jurisdictions. As a result, municipalities with the authority to impose a sales tax shift or export taxes to non-residents but also residents of those municipalities often pay sales taxes to other jurisdictions.¹² The net effect of these tax transfers, according to estimates by Ladd and

¹¹ Helen Ladd and John Yinger, *America's Ailing Cities*, p. 51.

¹² Many states give their municipalities the authority to directly levy a sales tax (Arizona, Arkansas, Colorado, Florida, Illinois, Kansas, Louisiana, Missouri, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Virginia, Washington), while California shares a portion of the state sales tax with the city (California returns one cent to the city in which the sale originated). Idaho gives three cities a sales tax authority. Only Philadelphia among Pennsylvania municipalities has a sales tax. Other states require cities and counties to share a sales tax. Tennessee, as an example, allows municipalities to impose up to a one-cent tax if the county has not already claimed the one-cent local-option sales tax. In other words, where a county sales tax is levied, it preempts the city tax and the city can only levy the difference between the maximum local tax rate and the rate levied by the county, assuming the county does not levy the maximum rate. Ten Tennessee cities levy a sales tax. Cities also receive a portion of the county sales tax based on origination. In North Carolina, all counties are authorized and levy a 2% local sales tax. Cities within each county receive a portion of the sales tax revenue based on origination and/or population (depending on county formula). Minnesota cities need both state and municipal approval before a sales tax can be levied. Currently, nine cities have temporary and one city (Duluth) has permanent sales tax authority. Sales tax authority is granted through special state legislation and subsequent voter approval. It is generally authorized for regionally significant projects, the authority ends with project completion. Seven additional cities are authorized, pending voter approval. In Georgia, counties are authorized to levy a sales tax. Cities in the 154 counties that levy the tax receive a portion of the revenue (only five counties do not levy the tax). The city's portion is determined by a formula that is negotiated by county. Iowa's municipalities have the authority to levy a sales tax, but also need the county residents' approval. The sales tax is voted by countywide referendum, but to be approved it also needs a majority of the municipality's voters. (Information is derived from Michael A. Pagano, *City Fiscal Conditions in 1999* [Washington, DC: National League of Cities, 1999], Appendix A.)

Yinger, is that for every \$1.00 raised in sales tax revenues from residents of a municipality another \$.21 is collected from non-residents.¹³

Income Tax Cities

The third most prevalent general tax form is the income tax, or variants of the income tax sometimes called an earnings, wage or payroll tax. This tax instrument allows municipalities to tax the income of individuals or some portion of an individual's income (e.g., payroll earnings). Few states allow all their municipalities access to this revenue source. Indeed, municipalities in Ohio and Pennsylvania account for over 90% of all income-taxing jurisdictions.¹⁴ Whether non-resident workers of a municipality pay income taxes to the place of work or to the place of residence or some combination is dependent on state law. For example, Pennsylvania municipalities can tax wages of non-residents up to a maximum of 1%, even if wages of residents are taxed at a higher rate. As discussed in the next section, Ohio's municipalities can impose an income tax on individuals (persons and firms) and on non-resident workers in their cities. Some municipalities in Ohio allow their residents to credit all or a portion of their income tax payments that are made to the municipalities where they work against what is owed to their municipality of residence.

The definition of "income" for those municipalities with the authority to levy an income tax varies. The cities of Ohio and Pennsylvania are restricted to taxing wages primarily, and not capital gains. The explosive growth in state income tax revenues over the past decade has been at a higher rate than growth in municipal tax revenues because the latter's taxable base excludes non-wage income. New York City, on the other hand, includes capital gains in its income-tax base and has seen an extraordinary growth in income tax collections in the past few years. A recent report noted that "... nearly 80 percent surge in city PIT [city collected personal income tax] revenues in recent years [1994-1997] results from an increase in the tax liability of upper-income residents ... The increasing PIT shares of wealthy and very wealthy for the most part reflect these groups' growing share of income as opposed to changes in tax policy."¹⁵ The report estimates that the increase in income on the part of the city's millionaires was "fueled by a 162 percent surge in income from capital gains from 1994 to 1997."¹⁶ Wage growth, on the other hand, is what fuels the tax collections of the nation's other income-tax cities.

¹³ Ladd and Yinger, *America's Ailing Cities*, p. 54.

¹⁴ Only two cities in New York State are permitted to levy an income tax (Yonkers and New York City). The high court of New York State recently ruled that a 1999 state law prohibits the city of New York from collecting income taxes from commuters, resulting in a loss of over \$210 million from New York state commuters and \$150 million loss from commuters outside the state. Like New York, some states permit only select cities to implement an income tax, including Wilmington (DE), Baltimore, St. Louis and Kansas City. Alabama and Michigan permit their municipalities to levy an income tax, but only 18 Alabama and 22 Michigan cities have opted for the tax. Georgia allows municipalities to impose an income tax with the approval of a majority of all *registered* voters. With voter turnout often falling below half of registered voters, no city has sought the tax.

¹⁵ New York City Independent Budget Office, "*Big City, Big Bucks: NYC's Changing Income Distribution*," June 2000, p. 5

¹⁶ *Ibid*, p. 1.

The potential of the income tax to export tax burden to non-residents is the most substantial of the three general tax forms. Ladd and Yinger find that a city that can impose an earnings tax is likely to raise \$1.27 from non-residents for every \$1.00 raised from residents.¹⁷

Tax-Base Sharing and Ohio's Municipal Income Tax Structure

In this section, we describe the methodology, history and current state of the tax, and then explain the strategic determinants of why cities adopt different tax rate and credit policies illustrating these patterns with maps of Ohio metropolitan areas.

Methodology

The state of Ohio does not centralize the collection of data on a municipality's tax-exportation of the income tax. Although all cities are required to have their expenses audited, the origin of taxes is not a required item. Therefore, the composition of the municipal income tax by resident status is not collected. The data for this report are drawn from several sources. First, in October 1999, the Ohio Municipal League sent a short survey to all municipalities and villages in the state, requesting from the chief finance officer the best estimate of non-residents' contributions to the city's income tax collection. The survey also asked for information on the size of the city's General Fund. Second, municipal income tax rates and tax credits (i.e., the credit allowed to a resident who works in a different incorporated municipality) are also not collected by the state. The City of Columbus' tax division, however, has a fairly extensive database on tax rates and tax credits. The city has compiled contemporary tax data on 541 villages and cities in the state, which they graciously provided to us. The state auditor in 1999 found that 231 cities and 310 villages levied the income tax. Thus, our database on income tax rates and income tax credits covers the universe of taxing jurisdictions. These two data sources were merged with spatial Census data (1990) in GIS format, using HUD's 2020 Maptitude program.

History and Practice of the Municipal Income Tax

Since 1946, Ohio municipalities have exercised a power to levy a municipal income tax. Toledo was the first Ohio city to pass an income tax, followed in 1949 by Columbus, Dayton, and Youngstown. In *Angell v. Toledo* (153 Ohio St. 179), the Ohio Supreme Court upheld Toledo's municipal income tax as constitutional application of their home rule powers. Additionally, the Court clarified the right of all Ohio municipalities to tax non-resident workers subject to the Ohio General Assembly's constitutional prerogative to limit that authority. Ohio municipalities also may adopt a tax credit, partial tax credit, or piggy-back tax rules for their residents who pay municipal taxes to the municipality of their place of employment. The Ohio Court has also stated that municipalities may require withholding of employees' taxes by employers.

By 1957, 27 Ohio municipalities had adopted an income tax and many others were considering adoption. The provisions of these municipality income tax ordinances,

¹⁷ Ladd and Yinger, *America's Ailing Cities*, p. 54.

though, varied widely by rate, taxable income, and credits. Consequently, the Ohio General Assembly passed legislation in 1957 to provide greater uniformity among municipalities' income tax provisions. Section 718 of the Ohio Revised Code, particularly, requires that a municipal income tax be levied at a uniform rate and that any tax imposed at a rate in excess of 1 percent be voted on by the municipality's electorate. This section remains as the State's primary statutory guidelines over municipalities' income tax policies.

Municipal Tax Rate and Tax Credit Variation

Ohio did not impose a state income tax until 1971 and, by that time, over 300 municipalities had adopted their own income tax. The latest report published by the state Department of Taxation lists 541 municipalities, 4 economic development districts, and 3 joint economic development zones that have adopted an income tax. The latest data (1998) show that 231 cities (of 241 cities in Ohio) and 310 villages (of 700 villages in Ohio) levy the tax, collecting \$3 billion in revenue (\$2.8 billion were collected by cities).¹⁸

Figure 1 is a map that shows the distribution of municipal income tax rates across Ohio's municipalities. Rates range between .25 and 2.85 percent with a mean of 1.34 and a standard deviation of .45. This average rate has gradually increased from its 1983 average of 1.16. In reality, only 22 municipalities tax income at a level under 1%, while 242 impose a 1% tax. Another 179 municipalities have imposed a tax at between 1.1% and 1.9%, 82 municipalities operate under a 2% income tax rate, and 15 have a greater than 2% income tax rate. Of the state's largest seven cities, Toledo, Youngstown, and Dayton impose a 2.25% income tax, Cincinnati a 2.1% tax, and Cleveland, Columbus, and Akron are at 2%.

Figure 2 shows a comparable map of municipal tax credit policies. Again, municipalities may give partial, complete, or no tax credit for their residents who pay an income tax to another municipality. Sixty-eight percent of municipalities give a full tax credit, and over three-quarters of municipalities provide at least a 50 percent tax credit to residents. The average tax credit is 82%, with a standard deviation of 31.2.

These average rates and credits, though, do not necessarily reflect what the typical Ohioan pays. As indicated by figures one and two, urban and suburban population centers – Greater Akron, Cincinnati, Cleveland, Columbus, Dayton, Toledo, Youngstown -- tend to have higher variation among their municipalities' tax rate and credit policies. We next argue that these metropolitan variations reflect our expectations about the tax exporting capacity and equity concerns inherent to a municipal income tax.

¹⁸ State of Ohio, Department of Taxation, "Tax Data Series: Municipal Income Taxes -- Tax Rates and Amounts Collected, by Municipality, Calendar Year 1998," <http://www.state.oh.us/tax/stats/LG11/lg11cy98.htm>

Figure 1: Tax Rates

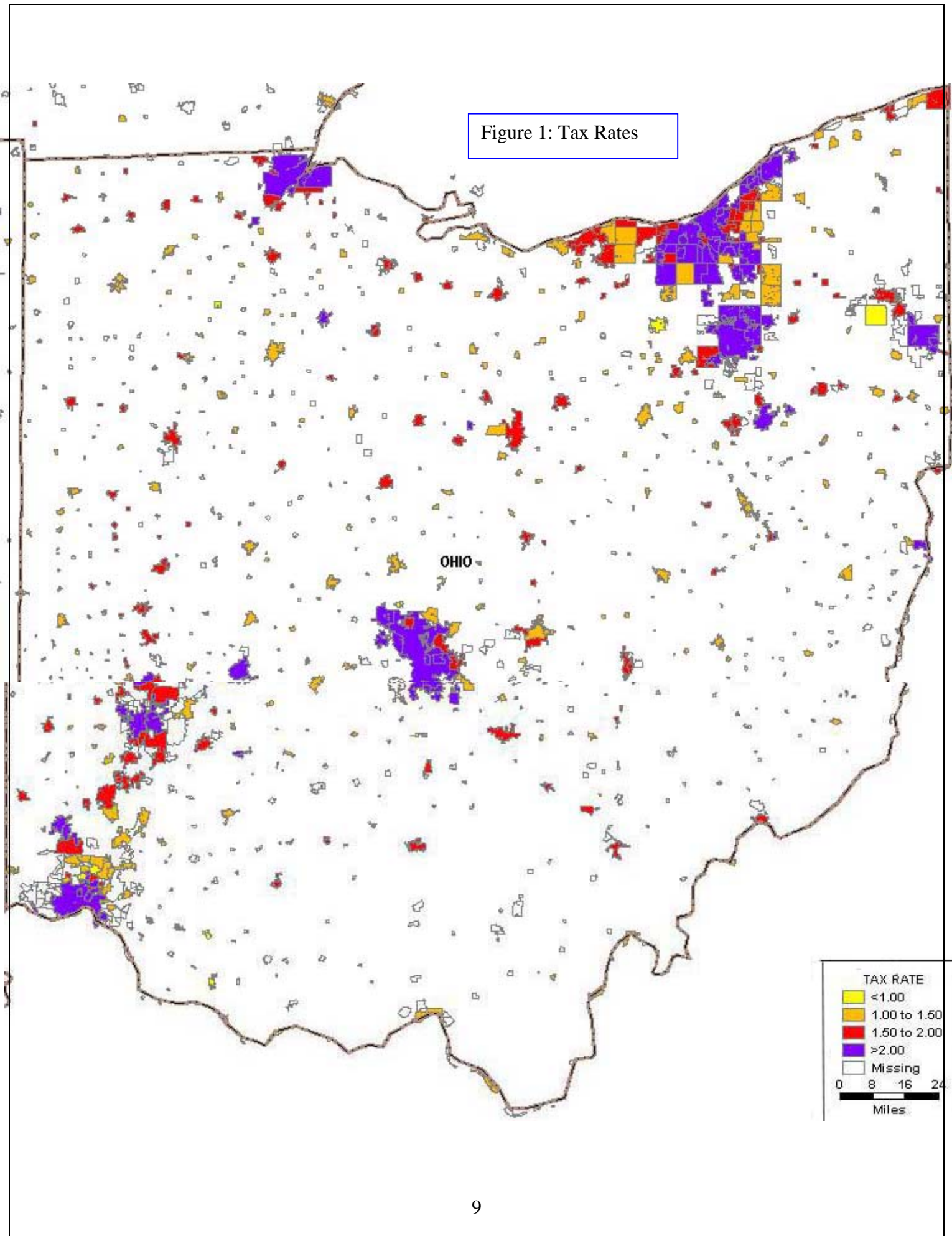
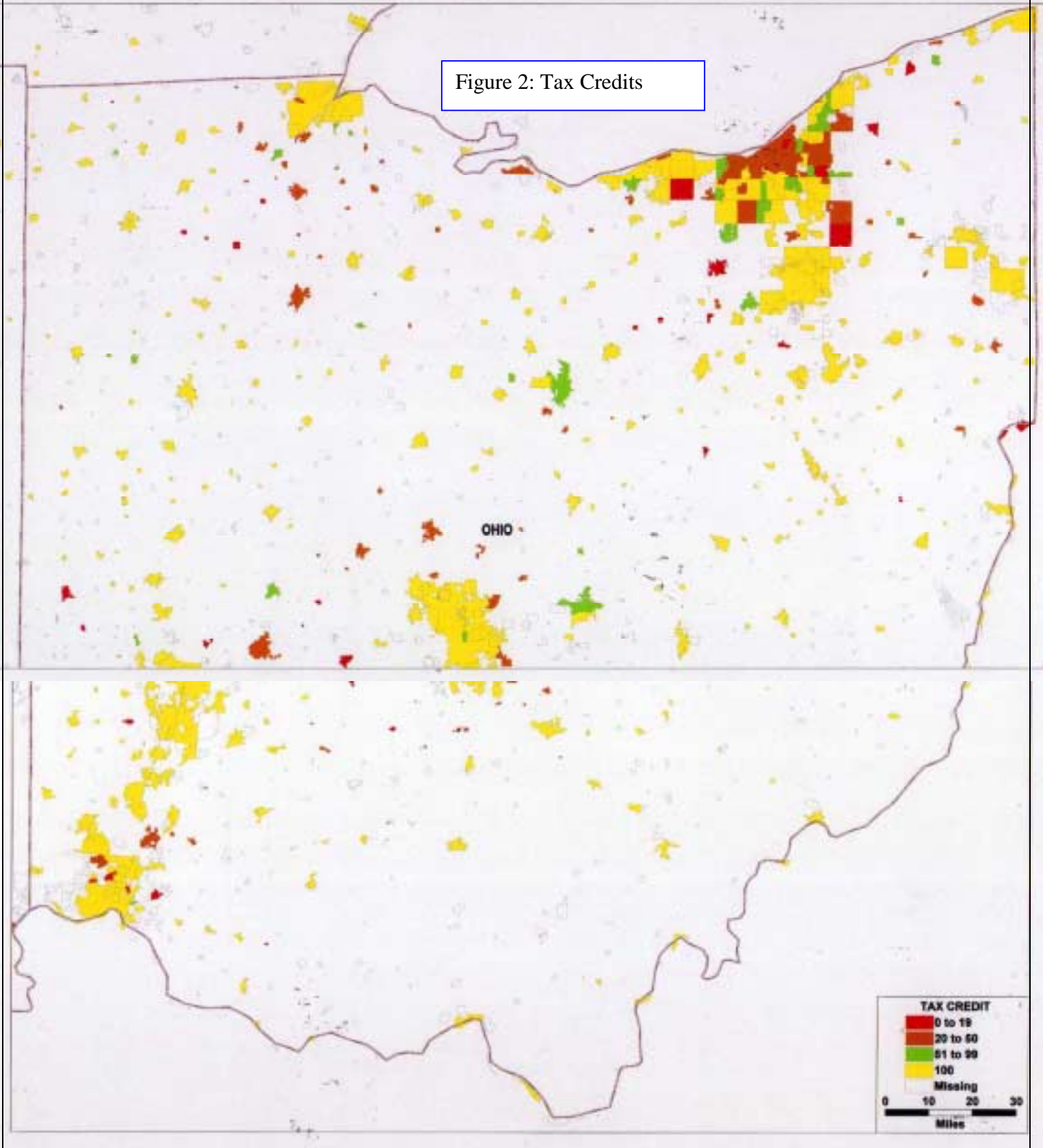


Figure 2: Tax Credits



Strategic Determinants of Municipal Income Tax Policies

Nearly all cities in Ohio and a large number of villages have opted to levy the income tax. With the exception of Springfield (a city that eliminated its property tax in favor of an income tax in the mid-1970s), all municipalities also have legal authority to levy a property tax. Under Ohio law, counties determine how to divide a local-government 10-mill property tax (“inside” millage) among the local governments of the county (school districts, townships, county, and municipalities). The municipal property-tax rate for any one municipality varies by county. Municipalities also can adjust the tax rate by adding to the “inside” millage (“outside” millage) with a vote of the people. Therefore, municipal property tax rates vary across the state. Nevertheless, the income tax has become the dominant source of revenues for most municipalities (especially for those that choose to levy the income tax), reaching upwards of 70-80% of general-tax revenue for some cities.

One explanation for pursuing this heavy income-tax reliance clearly relates to the tax exporting capacity of the income tax (requiring non-residents to contribute) and the contentious nature of property tax politics. Figure 3 presents the estimates of non-residents’ income tax to city tax collections. The darker (green, blue, purple) cities depend a great deal on non-residents for their contribution to the cities’ general funds. The larger cities that rely on non-resident income taxes include Cincinnati, Dayton, and Cleveland. Although Columbus and Toledo rely to a lesser extent on non-resident income tax, the dollar contribution is noteworthy. Figure 4 presents the cities by the dollar amount collected from non-residents. Columbus, Dayton, Cleveland, Toledo and Cincinnati receive more than \$30 million from non-residents via income tax collections.

Not surprisingly, one would expect that a larger proportion of the employed workforce in the outer-ring suburbs commute away from their municipality of residence to work. Figure 5 maps the estimates of commuting behavior for select cities. The darker (green) cities indicate that more than 60% or 80% of the municipalities’ residents who are employed actually leave their municipality of residence and work in another location. It is assumed that many of those commuters are contributing income tax revenue to their place of work. In the absence of a tax credit proffered to those commuters, they are taxed twice: once by the municipality of employment, the other by the municipality of residence. Municipalities, therefore, opt to credit the portion of the commuter-resident’s income tax owed to the municipality of employment against the income tax obligation to the municipality of residence, or it doesn’t, or it credits a certain percentage.

Nevertheless, the variation in income tax rates and tax credits raises questions about municipalities’ strategic behavior. Clearly, cities that are places of employment are motivated to levy an income tax as a means of exporting costs to non-resident users of municipal services. But, given interjurisdictional competition and the opportunity for residents and firms to “vote with their feet,” little is known about how and why municipalities select the income tax rate or offer tax credits to residents. We propose that municipalities adopt differential municipal income tax rates and tax credits to maximize municipal revenues within the constraints of a balanced budget and interjurisdictional tax competition in response to some or all of the following: the demand for city services by resident and non-resident users, the ability to pay for municipal services, the employment

structure of the municipality, the growth in residential and commercial real estate, the strategic behavior of neighboring municipalities, and the proportion of the city's employment that is non-resident.

Data are unavailable to test the explanatory power of each of these strategies. We, therefore, intend to pursue the following ideas in future work:

- We expect tax exporting capacity and need is greatest for poorer central cities in which commuting workers from surrounding wealthier suburbs routinely use city-services and goods. High population cities with an employment base and relatively poor residents would be most likely to have the highest tax rates and generous residency tax credits.(Figure 6 maps the median household income; Figure 1 maps the tax rates; Figure 2 maps the tax credits.)
- We expect to find that the higher the median-income of the municipality, the lower the tax rate because high income/wager earners contribute more dollars at a lower tax rate and consumer fewer city services. (Figure 6 maps median household income; Figure 1 is tax rate.)
- As non-residents comprise a larger proportion of the city's workforce, the city can maximize its tax exporting by raising the tax rate. Higher income tax rates, then, should be associated with municipalities that have smaller proportions of their workforce working within the city. Moreover, those same cities with high income tax rates are expected to grant their own residents full tax credit for income-tax contributions to other municipalities in which they work. (Figure 5 presents the proportion of the workforce who lives and works in the same municipality; Figure 1 presents the income tax rate.)
- More "elastic" cities are tend to capture the population's migration away from the central city by extending their boundaries. The more elastic the city, the less dependent on non-residents' income tax it is expected to be. Figure 3 presents a map of all Ohio municipalities that could estimate the proportion of General Fund revenues that were derived from non-resident payers of the municipal income tax. Nine cities are highlighted. According to Rusk's measure of elasticity, Columbus is rated a "high elasticity" city and Toledo and Hamilton "medium elasticity" cities. Dayton and Akron are rated "low elasticity" cities and Cleveland, Cincinnati and Youngstown are rated "zero elasticity" cities. The two cities with the highest reliance on non-resident contributions are Cincinnati, Dayton, and Cleveland, while Columbus, Toledo, and Akron are the least dependent on non-residential income-tax contribution to the General Fund.
- Poorer cities in which residential and commercial growth is limited would have a greater dependency on income taxes and to achieve some stability in their general revenue fund. (Figure 1 shows northern and southern Ohio's tax rates; Figure 6 presents median household income.)

Figure 3: Nonresident Contributions as Percent of General Fund Revenues



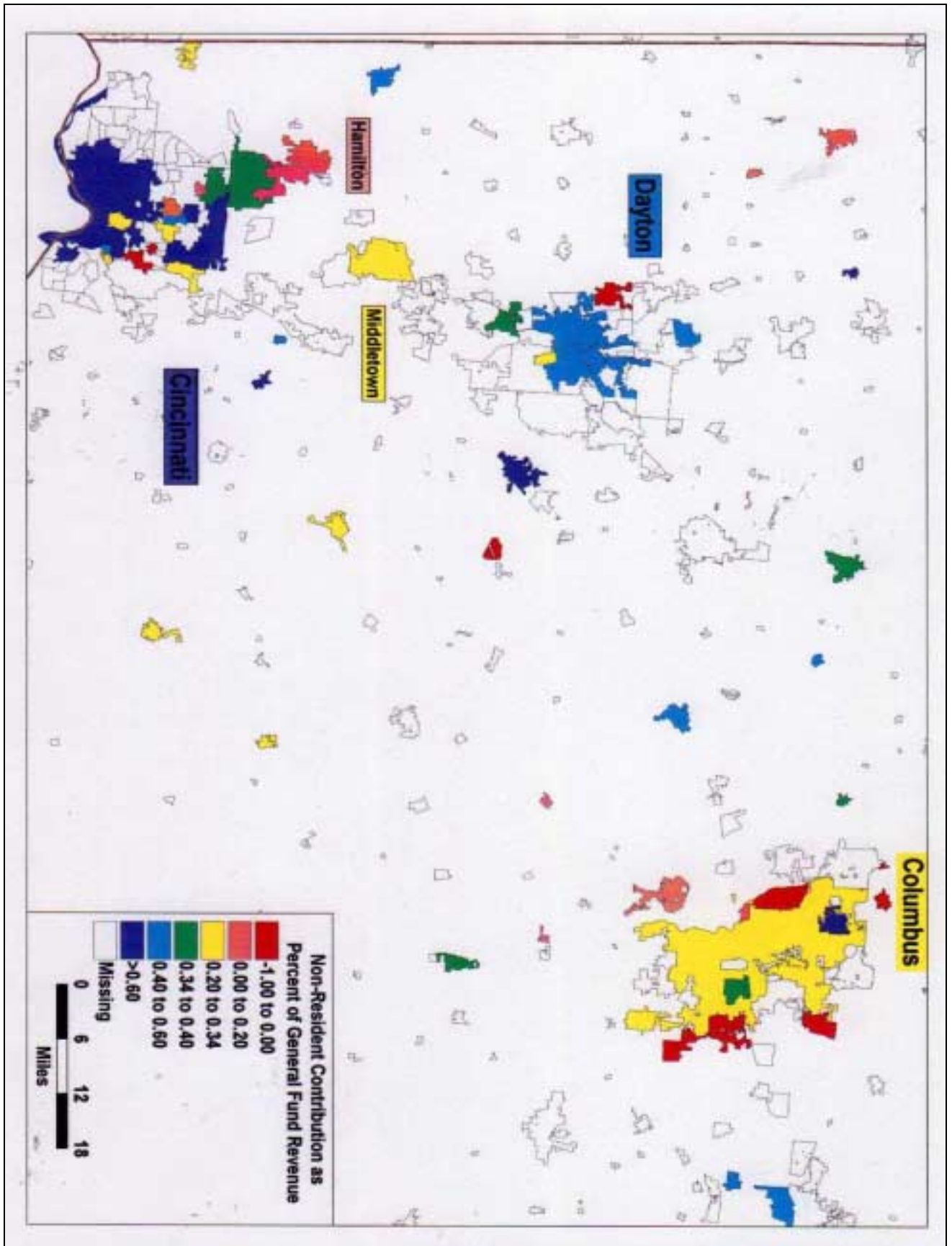
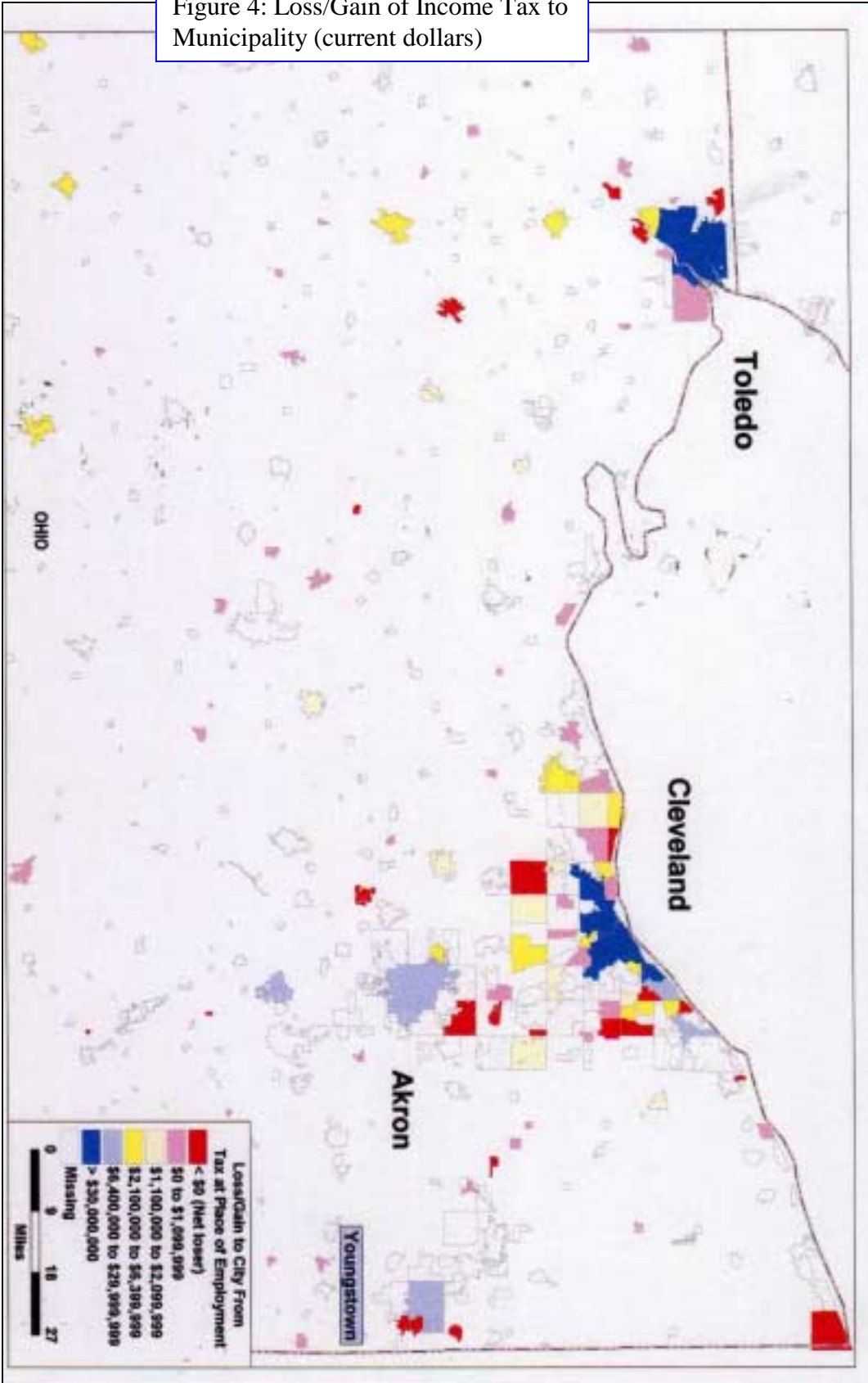


Figure 4: Loss/Gain of Income Tax to Municipality (current dollars)



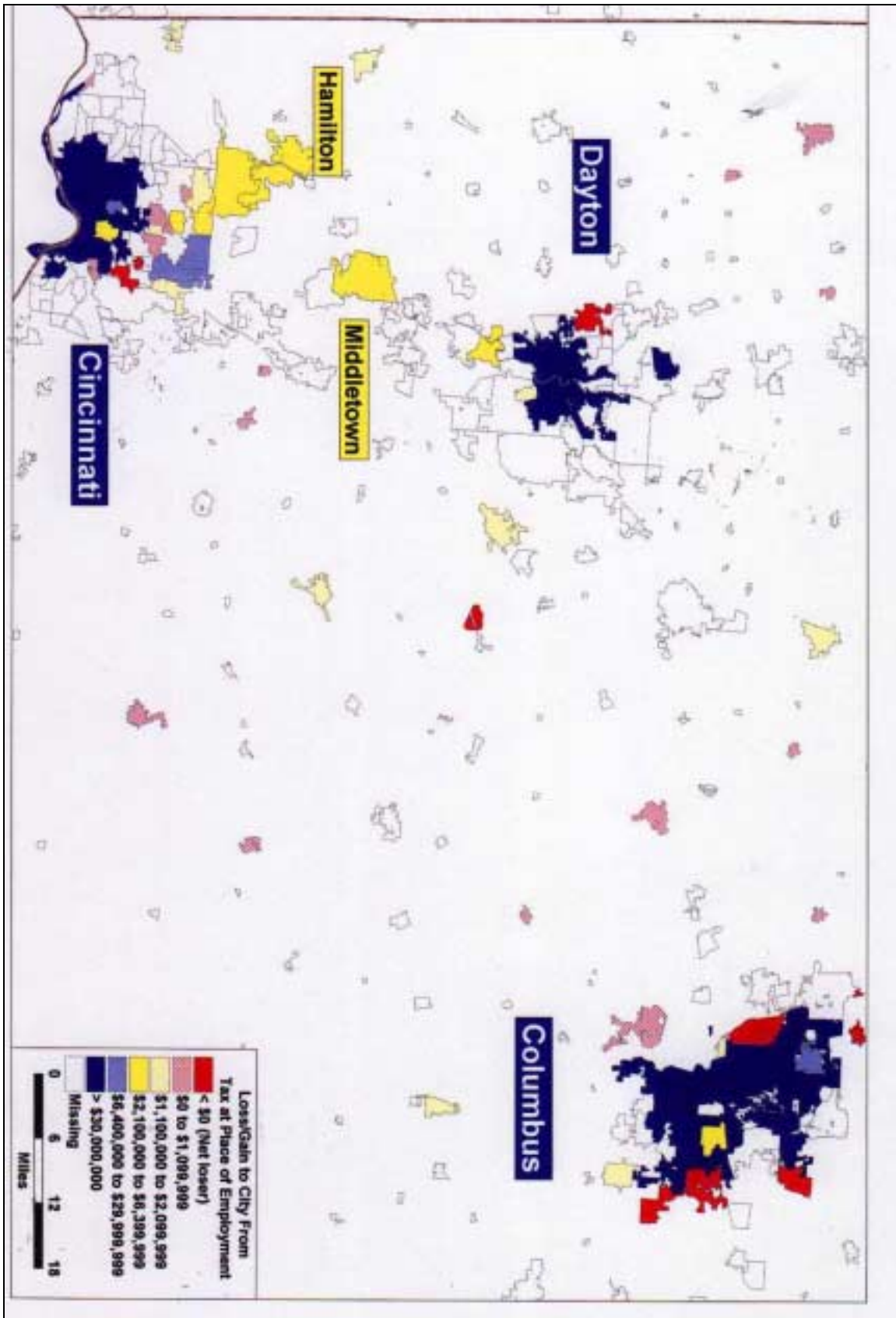
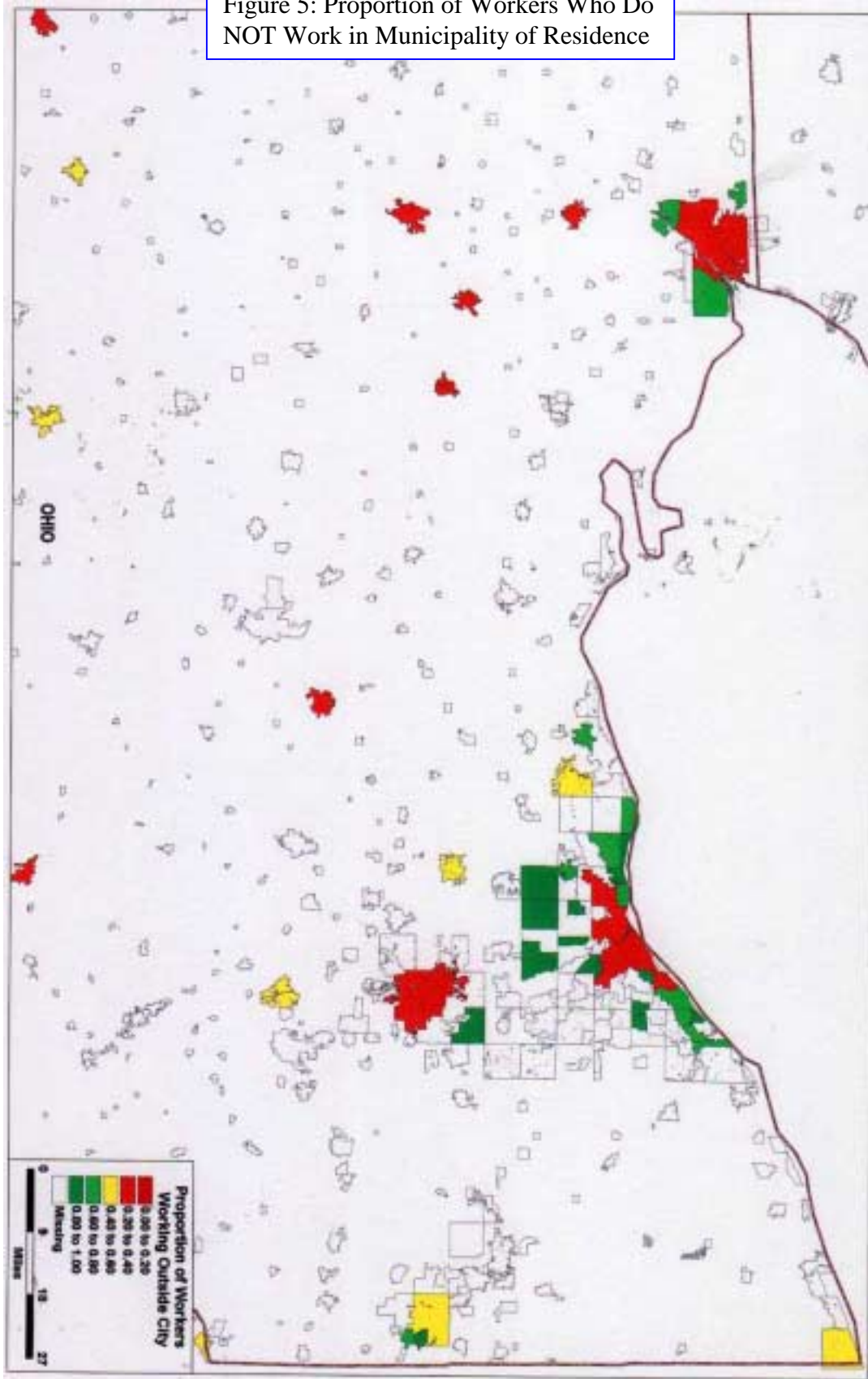


Figure 5: Proportion of Workers Who Do NOT Work in Municipality of Residence



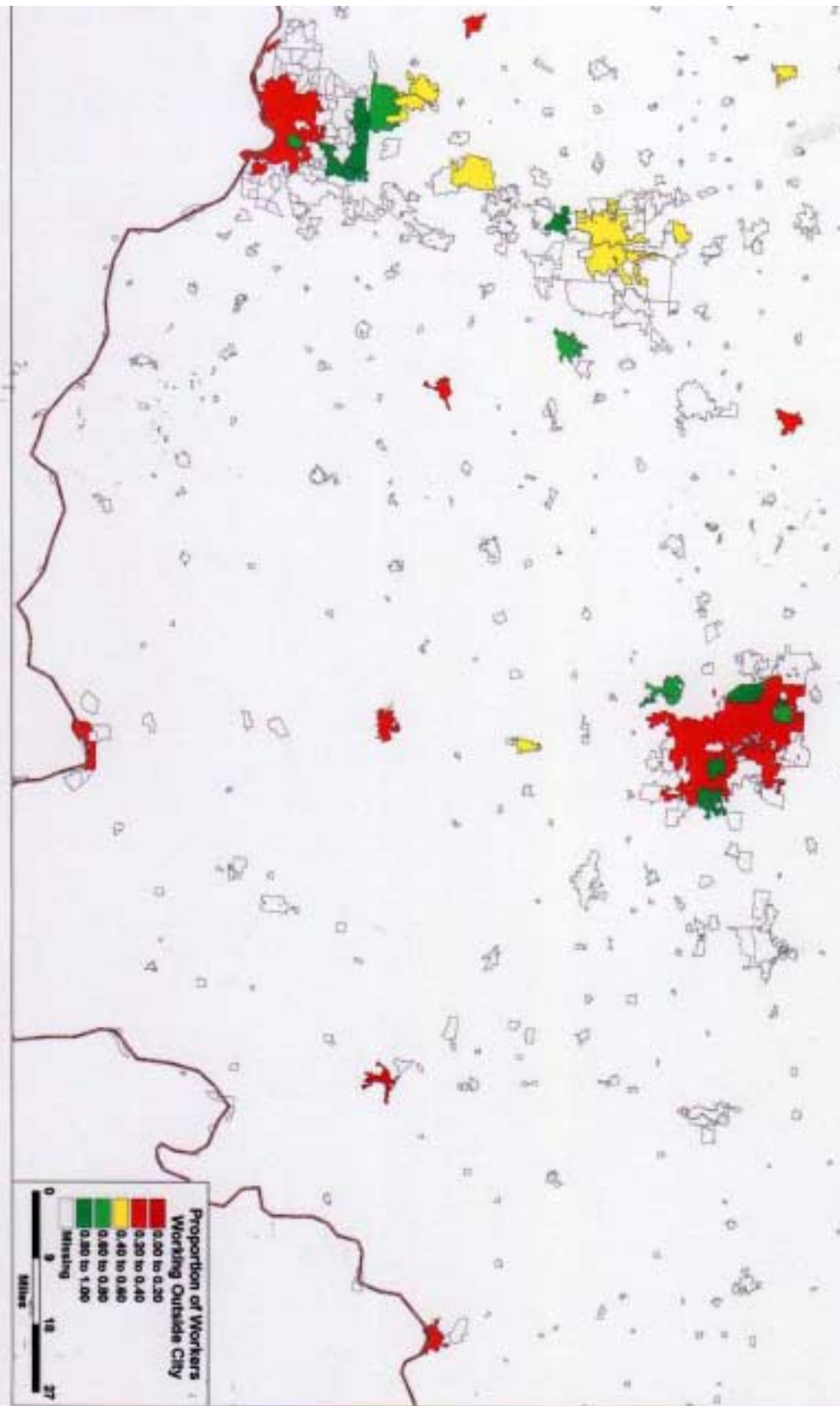
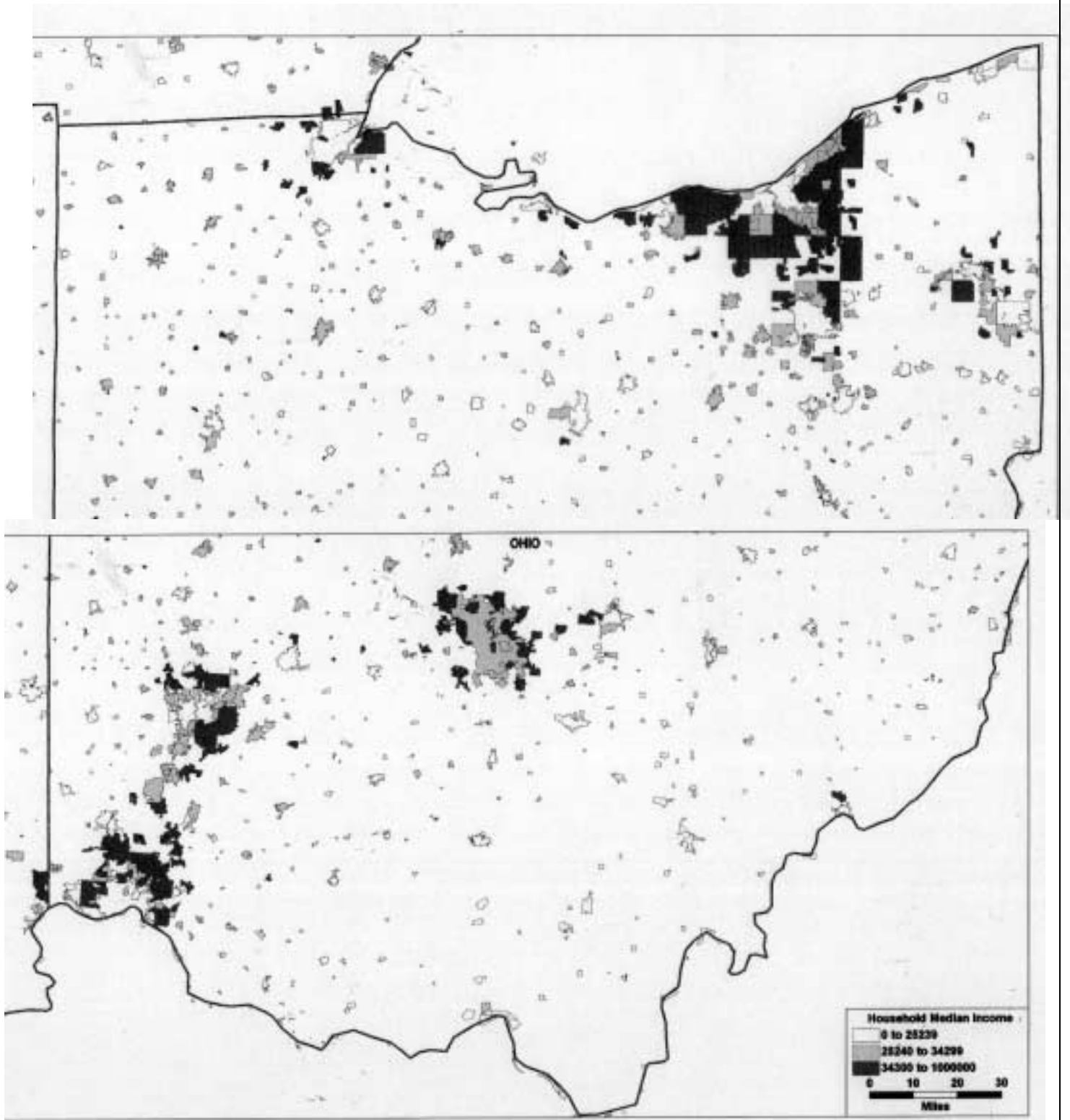


Figure 6: Household Median Income (1990)



A Brief Discussion of Future Tax-Base Sharing Research

We are investigating patterns of how Ohio's municipal income tax policies have developed across cities. Notably, tax exporting capacity -- as measured by the proportion of workers who are nonresident workers -- has been greatest in Cincinnati, Cleveland, and Dayton. Tax dependency, the proportion of general revenue derived from a municipality's income tax, has been greatest in some of the smaller municipalities. Among the large cities, however, Cincinnati received 60% of its General Fund revenue from non-resident taxpayers. Also, the maps illustrate the contrast between the Cleveland and Cincinnati cases, on the one hand, and Columbus, on the other, in terms of cities' tax exporting capacity. We conclude with a discussion of some political and policy implications of these tax exporting patterns and a discussion of a larger research agenda.

Ohio's unique municipal income tax structure leads to several political and policy implications that we hope to investigate in future work. Politically, tax exporting creates tension among suburban commuters and central cities. Demographic, commercial and residential development patterns have generally increased this suburban-urban tension over tax exporting. Suburbanites--particularly township residents or municipality residents without a full tax credit--may perceive a growing dependency of central cities on nonresident workers' wages as a revenue source.

This perception of excessive tax exporting is manifest in emerging political issues in Ohio. A referendum movement (see www.ohioteaparty.com) to rescind Ohio's municipal income tax failed to gain sufficient number of signatures for placement on this November's ballot. Referendum proponents generally focused on the issue of democratic fairness introduced when nonresident workers have no voice or vote in a municipalities' tax or spending policymaking. While failing to gain ballot access, the referendum effort has been implicitly tied to another emergent political issue, annexation reform. This Ohio legislative measure would limit municipalities' capacity to annex township lands without township and county agreement. Township trustees sought a legal process to insulate them from annexation practices of cities and the home-building industry.

In addition to fanning old political cleavages, Ohio's municipal income tax structure has important policy implications that are also areas for future research. First, we expect that local control of municipal income tax policy introduces the potential for greater inter-jurisdictional competition. To what extent are business and residential development locational decisions affected by municipal tax policies? Are economic development strategies (local government tax abatement, subsidies) more aggressive in Ohio for manufacturing firms because municipalities are willing to forego property tax revenue (or spend budget resources) to gain the income tax exporting capability from new workers?

Vertical and horizontal equity concerns arise from a municipal income tax structure. The relative tax burdens of individuals with different or similar capacities to pay taxes is complicated by a tax rate structure that may vary by jurisdiction but cannot vary among residents within any jurisdiction. "Who pays?" becomes a central question in

understanding the equity issues underlying a municipal income tax. Drawing and collecting data from a sample of individual-level tax files may allow us to investigate these issues in future research. Not all municipalities require taxpayers to file an income-tax form. In fact, many of the rural cities and quite a few in southwestern Ohio do not require filing. This focus of the research project on an assessment of individual filers will be on northwestern and central Ohio (see Figure 7).

Finally, another set of policy implications relate to service quality, service quantity, and fiscal stability resulting from tax-base sharing of the municipal income tax structure. As noted earlier, Ladd and Yinger find the income tax to be most effective mechanism for tax base sharing. Can we demonstrate the degree and conditions to which the municipal income tax promotes fiscally healthy cities? Future research may adopt a most-similar research design to gain some leverage on the independent effect of tax structure on cities' fiscal health.

Figure 7: Mandatory Filing Cities

