An Examination of The State of Michigan's Constitutional Revenue Sharing System

Considering the socio-economic conditions and modern trends of development and migration, are changes necessary?

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Executive Summary

State revenue sharing is an extraordinarily complex and contentious issue, one which involves political, constitutional, economic, and policy considerations. Fiscal relationships, equalization, regional relations, and resource management are some of the areas affected by the constitutional state revenue sharing system in Michigan. This report presents data from an exploratory study that focuses on some of the challenges associated with Michigan's current constitutional revenue sharing system. We specifically ask, "if not per capita allocations, then what?" and evaluate whether other variables such as poverty rates, daytime population, local millages, taxable value, and density could be used to redefine Michigan's constitutional revenue sharing system.

This report is structured in five parts: background, problem definition, data analysis, policy alternatives and recommendations. In the background section, we frame the issue of state revenue sharing, explore its underlying principles and objectives, provide a brief history of revenue sharing and its legislative history in Michigan, and provide cases of revenue sharing in other states. We also investigate key debates over state revenue sharing in Michigan and provide a summary of the views of key stakeholder's on Michigan's revenue sharing system.

In the problem definition section, we address some of the challenges of revenue sharing. Through a review of the literature, we specifically evaluate the benefits of restricted versus unrestricted revenue sharing; the complexities of defining local "need"; the key issues associated with per capita allocations including whether a per capita allocation system is fair, impacts growth patterns, and adequately captures need; and whether revenue sharing could be used as the means to other statewide reforms. In addition to reviewing the literature, we provide an assessment of the consequences of a purely per capita revenue sharing system by surveying several policy experts from Michigan. The literature review and survey of policy experts yields several variables that could be used to define "need" for further analysis.

In the data analysis section, we use the literature review and the survey of policy experts to isolate several variables that could be used to modify Michigan's constitutional revenue sharing system and associated formula. Key variables include taxable value, local millages, jobs, daytime population, income, poverty rates, and population growth. Through spatial and statistical analyses, we evaluate whether and how Michigan's current per capita system relates to and impacts the above-mentioned variables. Our research shows that municipalities with the same population could have tremendous differences in terms of the services provided, tax base, municipal revenues and consequent expenditures, tax rates, incomes, poverty rates, and daytime populations. This raises questions about whether Michigan's per capita system adequately captures and equalizes municipal need.

In the policy alternatives section, we contemplate whether the variables from the data analysis section could be used as alternatives to the current per-capita system. We also explore whether the constitutional revenue sharing recipient list would change significantly if the constitutional revenue sharing formula were to be changed to include the variables outlined above.

In the final section, we provide conclusions and offer recommendations. We recommend undertaking more serious and comprehensive studies of the variables identified in our report; developing a more nuanced and complicated method of defining and capturing local need; developing new formula components; creating a comprehensive and centralized data storage system; further evaluating the use of revenue sharing as a vehicle for comprehensive land use,

growth management, infrastructure, and services related reform; and exploring process alternatives for revenue sharing and distribution. We also recommend conducting a more detailed and coordinated survey of the impacts of revenue sharing on Michigan municipalities, and assembling more in-depth case studies of innovations in revenue sharing.

This report is merely exploratory, in that it offers no conclusive evidence of the benefits or pitfalls of Michigan's current per capita system. Our goal has been to simply develop an understanding of the complex issues associated with a population based allocation of state revenue sharing and to evaluate whether this current system could be modified to better address local need, and promote better service delivery and development patterns on the ground.

Chapter 1: Background

Introduction to Government Revenue Sharing

In 1805, President Thomas Jefferson advised "a just repartition" of federal revenues among the states for the support of "canals, roads, arts, manufactures, education, and other great objects within each state" (Steele 1971). Jefferson saw such sharing as a way to fund these large projects. The first legislation authorizing revenue sharing was enacted in 1863 and was not revived in earnest until the 1940s (Bradshaw and Taylor 2006). To understand the complexities of revenue sharing, one must understand the process of revenue sharing; how it works; what revenue sharing means at the federal, state, regional, and local levels; the history of revenue sharing; the motives behind revenue sharing; why revenue sharing is important; and the connection between revenue sharing and municipal budgeting.

Revenue sharing occurs when a government shares part of its tax income with other governments. It can be restricted or unrestricted. Restricted revenue is when the entity sharing the revenue dictates what the recipients can spend their revenue sharing dollars on. When revenue sharing is unrestricted, recipients of revenue sharing are allowed to spend their revenue sharing dollars on anything they see fit.

Revenue sharing can be practiced at the federal, state, regional, and local levels, allowing each level of government to accommodate its specific needs. The different types of revenue sharing include federal-state; federal-state-local; state-local; and local-local. Federal-state-local government revenue sharing occurs when the federal government shares some of its revenue with state governments, allowing those governments to allocate money more comprehensively to ensure the well-being of the states. Similarly, state-local revenue sharing occurs when states share their revenues with local governments in order to ensure the well-being of local governments and therefore the overall financial prosperity of the state (Bradshaw and Taylor 2006).

On a regional scale, local-local revenue sharing occurs when local governments share their revenue with other local governments in order to combine services for their residents. Sharing at the local level allows local governments to capitalize on economies of scale, increase administrative efficiency, improve the quality and quantity of local services, alleviate fiscal disparities among local governments, and increase the participation of civil society in local decision making (Bradshaw and Taylor 2006). Revenue sharing also relieves local tax burdens, and improves and diversifies the overall state of the local tax structure (Lupher 2012).

Revenue sharing at the regional level reduces the amount of competition among municipalities by creating an even distribution of tax benefits and reducing per-capita inconsistencies in the tax base. When a whole region cooperates and shares its revenue, it generates more cost savings for the local governments involved (Bradshaw and Taylor 2006). These savings can in turn impact the quality of local amenities such as public safety, law enforcement, environmental protection, public transportation, health, sanitation, community development, and social services.

The focus of this report is on state-local revenue sharing in Michigan. In this section, we survey the characteristics of state-local revenue sharing programs in other states, and describe the practice of revenue sharing as it exists today in Michigan. We present a legislative analysis, identify key stakeholders, and discuss key debates as related to Michigan’s revenue sharing system.

Revenue Sharing in Other States

Revenue collection sources and distribution methods vary from state to state, as do unrestricted and restricted designations and allocation formulae. Tennessee, for example, shares revenues from 12 sources, including a beer tax, corporate excise tax, and gasoline tax (Tennessee Advisory Commission on Intergovernmental Relations 2004:xi). Revenue from each tax source is then distributed on a restricted basis using four different methods; situs-based (distributions to the jurisdiction from which the tax was collected), per-capita, land area, and an equal-shares basis (Tennessee Advisory Commission on Intergovernmental Relations 2004:x). The state of New York shares revenues from taxes with its local governments on an unrestricted basis using outdated elements of existing statutory allocation formulas that are overridden by legislature annually (Office of the New York State Comptroller 1 & 12). A closer examination of Illinois, Ohio, and Wisconsin, three states chosen because of their geographical proximity to Michigan, exemplify in more detail the range of different approaches to state-local revenue sharing.

Illinois

The State of Illinois has multiple methods of transferring state funds to local governments. The primary source of state revenue sharing is the Local Government Distributive Fund, which returns ten percent of the state's income tax revenues on an unrestricted basis to local governments based on their percentage of the total state population (Mancini 2008:23). Local governments also receive 20% of their state sales tax collections and 100% of a 1% tax on food and drugs.

Replacement taxes make up for the loss of revenue from taxes which local governments are no longer permitted to impose personal property taxes on corporations and businesses. These are collected from income taxes on corporations, partnerships, trusts, and a public utility tax on invested capital (State of Illinois Department of Revenue 2012). Cook County receives 51.65% of replacement taxes collected and distributes the revenues to its local districts based on personal property tax collections in 1976 for that district, while downstate counties receive 48.35% and distribute the revenues based on personal property tax collections in 1977 (State of Illinois Department of Revenue 2012).

Ohio

Ohio has a temporary new method for distribution of revenue sharing enacted during fiscal year of 2012–2013. Previous to the change, the Local Government Fund (LGF) received 3.68 percent of tax revenue of the previous month from the General Purpose Fund, to be distributed to counties and municipalities (Ohio Department of Taxation 2011). The current temporary method for funding the LGF is based on a percentage of tax revenue earned each month from the corresponding month of fiscal (base) year 2010–2011. The percentage of funding distributions to the LGF will decrease each year through 2013, such that the municipalities will receive 75% for 2012 and 50% for 2013 (Ohio Department of Taxation 2011). In June 2013, a new permanent percentage rate will replace pervious and current temporary methods. For example, previously the June 2011 LGF distribution was 3.68% of May 2011 GPF tax revenues. Currently, the June 2012 LGF distribution will be 75% of the June 2011 distribution, and June 2013 will be 50% of the June 2011 distribution. Table 1 demonstrates a

sample of LGF funding distribution from the General Purpose Fund for the months of May through August for 2011–2013, including the transition from the old 3.68% formula to the new formula to be determined in 2013.

Table 1: Sample schedule of LGF distributions for 2011 - 2013

Month	Basis for 2011 Distributions	Basis for 2012 Distributions	Basis for 2013 Distributions
May	3.68% of April 2011 Revenue	75% of May 2011 Distribution	50% of May 2011 Distribution
June	3.68% of May 2011 Revenue	75% of June 2011 Distribution	50% of June 2011 Distribution
July	3.68% of June 2011 Revenue	50% of July 2010 Distribution	Unknown percentage of June 2013 Revenue
August	75% of August 2010 Distribution	50% of August 2010 Distribution	Unknown Percentage of July 2012 Revenue

LFG distributions are divided into municipal and county portions. Municipalities that levy income taxes receive one-tenth of the LGF in unrestricted revenue sharing allocations based on a percentage of income tax collected compared to statewide collection. Counties receive nine-tenths of the LGF based on the greater of two formulae outputs which are based on county population and property tax values. County officials then distribute the funds among cities, townships and villages to be used for current operating expenses.

Wisconsin

The State of Wisconsin shares its revenues with local governments through utility taxes, base payments, and expenditure restraint payments (Wisconsin Department of Revenue 2011:4 & 5). All three distributions are unrestricted. Utility taxes are collected by the state from utility companies with a power production capacity of at least 50 megawatts, and revenue aid is then distributed to counties and municipalities using a complex seven-part formula (Reschovsky 1). Utility companies with a production capacity of less than 50 megawatts remain subject to the local property tax and do not participate in shared revenue utility aid (1).

Base payments to counties and municipalities are determined by multiple complex formulas using 2001 as a base year. Since then, payments to counties and municipalities have been reduced annually based on a formula that includes ranges of population size.

The Expenditure Restraint Program (ERP) was instituted in 1990. At that time, state revenue sharing program aid payments were partially dependent on spending, which encouraged growth in municipal spending. The ERP was implemented to target aid to high-tax rate municipalities that restrained spending growth. To qualify for ERP funding, municipalities must meet tax-rate and budgetary conditions (Wisconsin Department of Revenue, 2011:1).

Funding for revenue sharing comes from the General Purpose Revenue accounting for 42% of the state budget (Cornelius, 2011, 5). The GPR obtains revenues from sales tax, corporate taxes, excise taxes, individual income taxes and public utility and insurance company taxes (Cornelius, 2011, 9).

Summary of Revenue Sharing in Other States

As summarized above, Ohio, Illinois and Wisconsin each have versions of revenue sharing programs in place with varying degrees of funding sources, allocation formulae and restrictive or unrestricted allocations. Similar to other states in the country, Michigan also shares revenues with local governments using its own set of criteria.

Revenue Sharing in Michigan

In Michigan's revenue sharing system, certain local taxes have been eliminated and the job of collecting those revenues has been transferred to the state level. The state then distributes them to city, township, and village governments. The ultimate goal behind this process is to equalize financial resources and improve efficiency among local governments which have different revenue raising abilities.

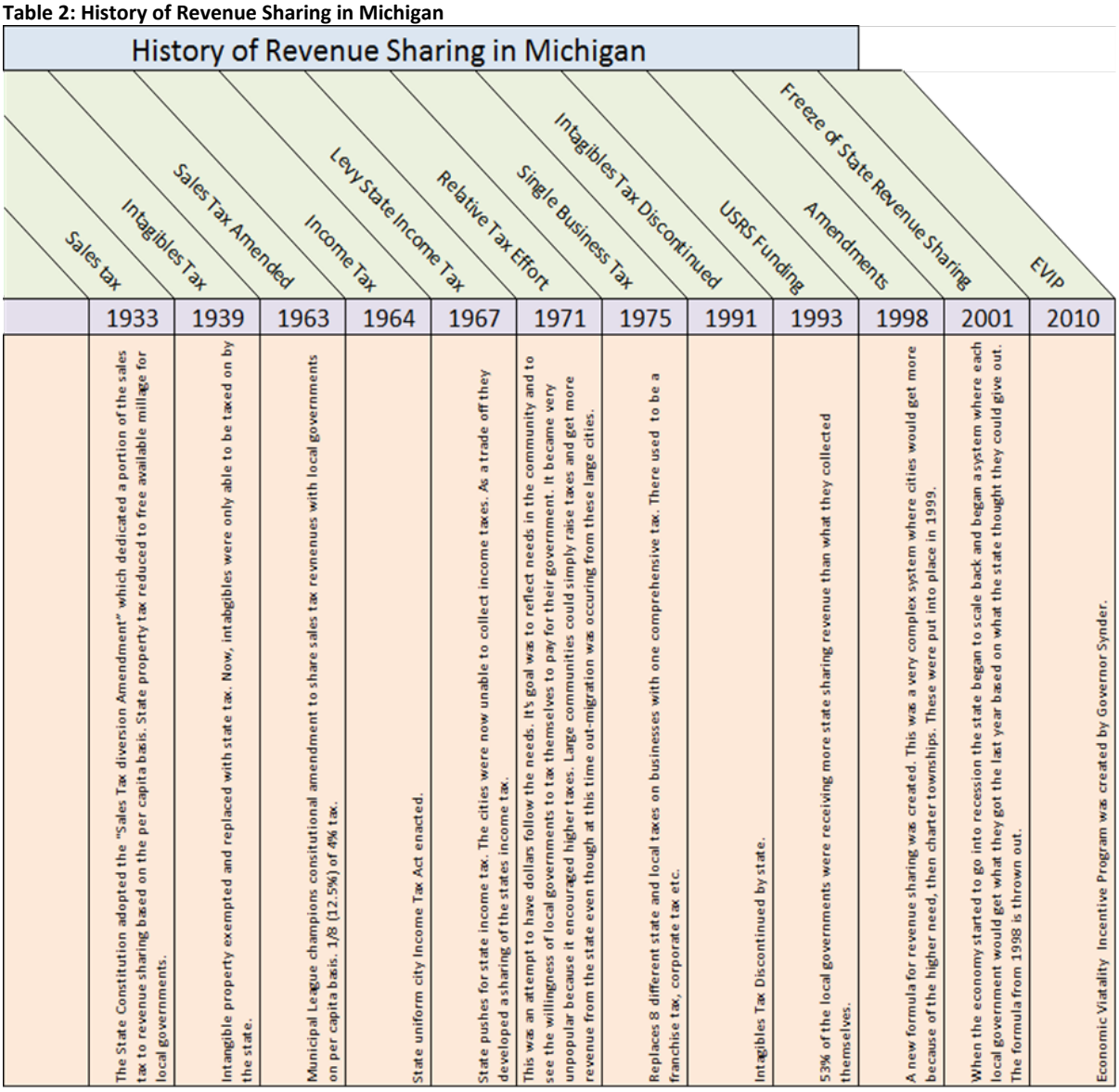
Michigan's revenue system sharing dates back to the Great Depression of the 1930s. As the prohibition era came to a close in 1933, Michigan started taxing licenses to sell alcoholic beverages, then returning 85% of the funds directly to the cities, townships, and villages (Robbins 2010). Over the years, the distribution formula has been reorganized repeatedly.

The program distributes sales tax collected by the state of Michigan to local governments as unrestricted revenues. Revenues are allocated through two methods: a Constitutional revenue sharing program and a statutory Economic Vitality Income Program (EVIP). In 1946, the state began sharing sales tax revenue with the passage of a constitutional amendment under Article XI Section 10 (Michigan Suburbs Alliance 2007). Modified in 1963, the amendment directs the state to distribute 15% of the 4% sales tax revenue on a per capita basis (Michigan Treasury 2012). The population is determined by federal census data and then adjusted by subtracting 50% of the number of patients, wards, and convicts confined to public tax-supported systems in that municipality (Michigan Treasury 2012).

The statutory distribution of funds is authorized by State Revenue Sharing Act, Public Act 140 of 1971 (Lupher 2012). The state legislature discontinued sharing business and income tax revenue with a new formula in 1998 and enacted a statute sharing an additional 21.3% of the 4% sales tax. While constitutional revenue sharing is fixed, the statutory portion can be adjusted by the legislature according to the state's budget (Michigan Suburbs Alliance 2007), and statutory revenue sharing has been regularly reduced since then in an effort to balance the state's budget (Lupher 2012). This reconstruction of the statutory formula was part of a ten year phase-out system of the old formulas to reduce budget disparities between local governments. The complex 1998 distribution formula was based on a four factors: percent share of fiscal year 1998 payments, population unit type, taxable value per capita, and yield equalization (Lupher 2012).

This statutory distribution formula of 1998 was used until the economic downturn of the early 2000s. The formula was frozen by the state in 2001, and for the next eight years statutory payments simply based on the previous payment to the municipality and the state's fiscal budget. After state legislature budget negotiations under Governor Snyder in 2010, statutory revenue sharing was replaced with the Economic Vitality Income Program (EVIP). This program lowered the entire budget for statutory revenue sharing to $200 million and offered the revenues through an incentive-based program. It established a three-stage process for local governments to qualify for their full funds: publishing citizens' guides to financial performance and performance dashboards, forming new intergovernmental collaboration arrangements, and reform of municipal employees' health care (Lupher 2012).

Table 2: History of Revenue Sharing in Michigan



History of Revenue Sharing in Michigan

	1933	1939	1963	1964	1967	1971	1975	1991	1993	1998	2001	2010
Sales tax	The State Constitution adopted the "Sales Tax diversion Amendment" which dedicated a portion of the sales tax to revenue sharing based on the per capita basis. State property tax reduced to free available millage for local governments.											
Intagibles Tax		Intangible property exempted and replaced with state tax. Now, intabgibles were only able to be taxed on by the state.										
Sales Tax Amended			Municipal League champions consitutional amendment to share sales tax revnenues with local governments on per capita basis. 1/8 (12.5%) of 4% tax.									
Income Tax				State uniform city Income Tax Act enacted.								
Levy State Income Tax					State pushes for state income tax. The cities were now unable to collect income taxes. As a trade off they developed a sharing of the states income tax.							
Relative Tax Effort						This was an attempt to have dollars follow the needs. It's goal was to reflect needs in the community and to see the willingness of local governments to tax themselves to pay for their government. It became very unpopular because it encouraged higher taxes. Large communities could simply raise taxes and get more revenue from the state even though at this time out-migration was occuring from these large cities.					
Single Business Tax							Replaces 8 different state and local taxes on businesses with one comprehensive tax. There used to be a franchise tax, corporate tax etc.					
Intagibles Tax Discontinued								Intagibles Tax Discontinued by state.				
USRS Funding									53% of the local governments were receiving more state sharing revenue than what they collected themselves.			
Amendments										A new formula for revenue sharing was created. This was a very complex system where cities would get more because of the higher need, then charter townships. These were put into place in 1999.		
Freeze of State Revenue Sharing											When the economy started to go into recession the state began to scale back and began a system where each local government would get what they got the last year based on what the state thought they could give out. The formula from 1998 is thrown out.	
EVIP												Economic Viatality Incentive Program was created by Governor Synder.

Under the EVIP, only 486 of Michigan's more than 1800 local governments received statutory payments, and Detroit received 50% of the allocated budget (Lupher 2012). The constitutional revenue sharing program, which cannot be changed without a constitutional amendment, continues to ensure that all local governments with a population receive a payment. The state of Michigan uses the combination of these two methods to distribute revenue sharing to local governments to equalize resources through the state. Outlined below is the history of key legislation changes leading to these two current revenue sharing methods in the State of Michigan

Legislative Analysis of Revenue Sharing in Michigan

Sales Tax: Act 167 of 1933

- 1933: State property tax was reduced to free available millage for local governments; sales tax was enacted to provide revenues for local governments.
- 1946: Municipal League champions "The Sales Tax Diversion Amendment" requiring that the state share sales tax revenues with local governments on a per capita basis. The amendment required that one-sixth of the 3% sales tax revenues be distributed among cities, villages, and townships on a per capita basis.
- 1963: Michigan Constitution-Section 10 of Article IX amended again to return one-eighth (12.5%) of the 4% sales tax to local governments.
- 1974: Amendment to the State Constitution exempted food and prescriptive drugs from sales tax base, increasing the allocation to a total of 15% of the 4% tax (Michigan in Brief).

Intangibles Tax: Act No.301 of the Public Acts of 1939

- 1939: The Intangibles Tax, imposed by Act No.301 of the Public Acts of 1939, was the first tax for which the state explicitly promised to share revenues with local governments. Intangible property such as stocks, bonds, and monies on deposit were taxed as part of the General Property Tax Act; two-thirds of the revenue was returned to cities, villages, and townships on a per capita basis (Citizens Research Council of Michigan 1993).
    Key Debates:
    - Lack of information to properly assess intangible property value—local governments had jurisdiction to tax, but only a few cities made an attempt to assess this type of property due to administrative costs and lack of assessment knowledge and uniformity (Citizens Research Council of Michigan 1993).
- 1945: Intangibles tax was amended to return 100% of revenue distribution to cities, villages, and townships.
- 1951-1957: Intangibles tax was frozen at $11 million.
- 1958-1998: Intangibles tax was frozen at $9.5 million with some exemptions (8% of total state intangibles tax revenues when ended)
- 1991: State discontinued distribution of this tax.

Income Tax: Act 284 of 1964

- 1961: Detroit and Hamtramck began levying city income taxes.
- 1964: State adopted the Uniform City Income Tax act to provide a local-option tax for other cities. Initial distribution was 17% of a 2.6% tax, distributed on a per capita basis. Half of the distribution went to counties, and the other half went to cities, villages, and townships (Lupher 2012).

  Key Debates:
  - Concern of preempting cities from levying local taxes
  - Distributions changed over time such that counties received less and cities received more
- 1967: State Income Tax act 281 of 1967 was enacted to increase state revenues.

State Revenue Sharing Act: Public Act 140 of 1971

- 1971: The State Revenue Sharing program distributed sales tax collected by the State of Michigan to local governments as unrestricted revenues, authorized by the State Revenue Sharing Act, Public Act 140 of 1971, as amended (MCL 141.901). Funding for the State Revenue Sharing program consists of the following dedicated tax revenues:
  - Constitutional: 15% of the 4% gross collections of the state sales tax
  - Statutory: 21.3% of the 4% gross collections of the state sales

  In addition, the act authorized the appropriation and distribution of state General Fund-General Purpose revenues when local governments qualify for certain supplemental payments (Michigan Department of Treasury, 2012).
- 1998: Amended to a formula based on a four factors: percent share of fiscal year 1998 payments, population unit type, taxable value per capita, and yield equalization (MCL 141.901)

Relative Tax Effort: Public Act 212 of 1972

- 1971 (introduced): For the first time, Relative Tax Effort (RTE) tied cities', villages', and townships' share of their state income tax revenue to the rate at which they taxed themselves.

  Key Debates:
  - Perceived to encourage higher taxes; for example, Detroit has a higher crime rate than Troy, and therefore a greater need for police services, but to raise the same revenue per capita, Detroit must also levy higher tax rates because its property values are much lower than Troy's (Michigan in Brief 2012)
  - Sent money to cities while general out-migration was occurring from these cities

Single Business Tax: 1975

- 1975: Single Business Tax was enacted to replace eight state and local taxes on businesses. Cities, villages, and townships shared in growth of the single business tax revenue using the RTE formula to reimburse them for loss of revenue (Citizens Research Council 1993:4).

Key Debates:
  - Over time, the tax had no relationship to inflation, economic changes, of variations on growth
- 1998: State discontinued distribution.
- 2002: P.A. 531 of 2002 repealed the Single Business Tax Act for tax years beginning after December 31, 2007.

1996 Changes: Distribution Public Act 342 of 1996 & Source Public Act 342 of 1996

- 1996: Distribution Public Act 342 of 1996 changed the revenue sharing formula. It capped the amount paid under the RTE formula, and a bipartisan revenue-sharing task force was established. Public Act 342 of 1996 changed the source of revenue sharing funds, removing income tax and SBT revenue and replacing it with additional sales tax revenue. Thus, virtually all revenue sharing came from sales tax revenue (Michigan in Brief 2012).

1998 Amendments: Public Act 532 of 1998

- 1998: Public Act 532 of 1998 amended the revenue sharing act in that. Only counties were annually reimbursed with a portion of the sales tax for business inventory personal property that had not been subject to local taxation since 1975. The 1998 amendment did three things: provided a new formula-unit population weighting, provided greater state support to units with smaller per capita tax bases, and provided yield equalization (Michigan in Brief 2012).

  Key Debates:
  - The original RTE formula benefited cities more than villages and townships at a time when people were moving out of cities and away from southeast Michigan
  - Formula was extremely complicated
  - Economy went into recession, freezing the amount of funding available; beginning in 2001, the amount of funding was based on the previous year's amount (Lupher 2012).
- 2006: Formula expired June 30, 2006; distributed revenues were based on the previous year's dispersions.

Revenue Sharing Today

- 2011: Governor Snyder's $47.4 billion budget bills (House Bills 4526 and 4325) increased constitutional revenue sharing payments to cities, villages and townships by $25.5 million, or 4%, in fiscal year 2012 based on estimated sales tax collections. It also eliminated statutory revenue sharing payments for cities, villages, and townships in fiscal year 2012, leading to a net savings of $92.1 million. To encourage necessary reforms, the Governor's budget included $200 million for a new incentive-based revenue sharing program (EVIP) available to cities, villages, and townships that meet specific standards and adopt best practices (Snyder 2011:56).

Key Debates:

- Budget cuts out 509 local governments; a little less than 30% of all local units now receive statutory revenue sharing
- Dashboard incentive may serve as more of a marketing tool than a tool to show need
- Should restricted revenue for the state be examined?
- Is the 1998 formula worth going back to after evaluation (Lupher 2012)?

The role of state revenue sharing and the amount of money to be shared have grown as the State has replaced local taxes with state taxes and preempted local governments from levying certain taxes. Understanding the history and assessing the political possibilities of the program returning to its intended purpose is necessary before allowing the system to change (Michigan Department of Treasury 2012). Due to the inherent nature of revenue creating winners and losers, there are various stakeholders in Michigan with vested interests in the current system and any potential changes that may occur.

Key Stakeholders in Michigan Revenue Sharing

In this section, the perspectives of various stakeholders in Michigan's revenue sharing system are explored. Cities, villages, and townships (CVTs) are the primary stakeholders. After 2001, less than half of the CVTs received statutory funds (Lupher 2007). Local governments that do receive statutory funds have seen their share drop year after year and are now under Governor Snyder's EVIP system designed to make local entities show regional relations, trim employee healthcare costs, and provide transparency.

Many of the cities, villages, and urban townships in the state are a part of the Michigan Municipal League (MML), a non-profit organization that advocates collectively for its members. The MML and its member municipalities argue that state revenue sharing constitutes a significant portion of their budgets and that the consistent reductions in the revenue sharing amount over the past several years have negatively impacted their ability to provide valuable services; one example is the statewide loss of 1,577 law enforcement and 2,400 firefighting positions from the years 2001-2007 (MML 2007). The MML website also states, "People do not want to live (and companies do not want to locate) in communities that cannot provide public safety, adequate roads and bridges, sewer systems, and other essential services" (Michigan Municipal League 2011 & 2012).

The Michigan Townships Association (MTA) also plays a role as a primary stakeholder. As of February 2011, only 40 townships out of Michigan's 1,240 actually see any statutory revenues; the MTA argues that Michigan's revenue sharing system is inequitable and discriminatory toward townships through its policy platform quoted here (Michigan Townships Association 2011):

- basing more of the revenue sharing disbursements on population instead of disproportionately rewarding high tax levels;
- if revenue sharing incentives are provided by the state for local government cooperation… recognize communities that have already established shared services;
- maintaining the original intent of sharing state collected revenue with all local

governments through revenue sharing instead of directing it to specific communities with specific services;
- not penalizing communities that are unable to share services

Under the old system, the weights on the type of community for statutory distributions used a higher multiplier for cities and villages than townships. Now, only communities that received $4500 or more in FY 2010 will get a maximum of 67% of the 2010 amount paid to them.

The Michigan Association of Counties (MAC) is a stakeholder even though counties in Michigan do not technically receive state revenue sharing. In 2005, it was decided that counties would draw only state-allowed amounts out of the counties' collection of taxes before the payments were sent to treasury. These payments-in-lieu of funding were to be a temporary assistance to the state during the recession. MAC and its members are now asking to be made whole again. “Recognizing that two-thirds of county expenditures are for mandated services, MAC supports a constitutional amendment providing full funding and constitutional protection for county revenue sharing grants” (MAC Taxation Platform).

There are many secondary stakeholders in the revenue sharing process. These organizations include governments that house local entities as members, groups made up from local government initiatives, or supportive non-profits with specific functions.

The Michigan Suburbs Alliance (MSA) is a non-profit that assists “first-ring” metropolitan Detroit cities. This collaboration believes that “cooperative governance” should be rewarded and that re-establishing revenue sharing levels that support “core services” is needed for the survival of Michigan communities (Michigan Suburbs Alliance 2011).

The Land Information Access Association (LIAA) is also a non-profit that supports communities with mapping and land use information. Their stance is that local governments need to cooperate and work together in order to provide services in light of the continual reduction of local incomes.

The Southeast Michigan Council of Governments (SEMCOG) is a metropolitan planning organization consisting of 158 governments. SEMCOG “has taken the lead to transform how we work together to align scarce public revenues to create a successful future” and “is focused on achieving six interrelated outcomes: economic prosperity; desirable communities; reliable, quality infrastructure; fiscally sustainable public services; healthy, attractive environmental assets; and access to services, jobs, markets and amenities” (SEMCOG 2012). Other metropolitan planning organizations in Michigan that also hold these or similar aspirations for their member communities include Washtenaw Area Transportation Study, Twin Cities Area Transportation Study in Benton Harbor, and Bay County Transportation Study.

The Michigan Land Use Institute (MLUI) is a non-profit planning organization that also takes on environmental concerns, food and farming, and economic development. It encourages and supports communities, believes that urban cores should be strengthened, feels that funding for existing public services should be the top priority, and discourages new development as these ventures draw on limited resources and pull people out of currently built areas (Michigan Land Use Institute 2004; Schneider 2005).

There are many other supportive organizations in the state, including the Michigan Association of Planning, Ann Arbor Spark, and the Citizens Research Council, that have studied, advised and forecasted matters related to revenue sharing although they are not primarily or secondarily affected.

Revenue sharing therefore creates stakeholders with vested interests in where and how revenues are allocated. Its methods of distribution also spur debates as to the efficacy and equitability of the system.

Key Debates Regarding Revenue Sharing in Michigan

Is revenue sharing a good idea under any circumstances?

Most of the debates over revenue sharing in Michigan focus on the statutory portion because it is the only one for which change is relatively accessible, but underpinning the entire discussion is an assumption that revenue sharing is a desirable practice. The Citizens Research Council (1993) points out that in addition to helping local governments directly, shared revenue can also provide indirect aid by decreasing the tax burden on its residents. The Michigan State University Land Use Institute (Skole 2002) expands by saying that distribution of state-collected revenues can take advantage of economies of scale, compensate local governments for taxes that have been moved to the state level, equalize local revenues, and reimburse local jurisdictions for services they provide which benefit larger regions or the state as a whole.

The Mackinac Center for Public Policy disagrees. An opinion solicited by the Detroit News on October 2, 2009 states, “Revenue sharing allows communities to provide local residents with more services while appearing to pass the costs on to everyone else in the state. This encourages the expansion of nonessential programs. If local government services were instead funded entirely by local taxes, it would limit both the demands of residents and the empire-building tendencies of municipal officials.” While this article spoke specifically to the elimination of the statutory portion of the revenue share, it is nearly identical to a simpler argument against the practice in general: “Revenue sharing divorces the joyful privilege of spending public revenue from the burdensome responsibility for raising it” (Ulmer 1971:56).

How much of a responsibility should property taxes bear for the health of a community?

Michigan's revenue sharing practice has frequently been responsive to property taxpayer revolt. According to the Citizens Research Council (1999), local governments came to rely heavily—sometimes exclusively—on property taxes throughout the 20th century, particularly to shoulder the cost of school operating expenses. As a result, three major reforms were passed limiting the rate of property taxation: 15/50 mill tax limitations in 1932, the Headlee Amendment of 1978, and Proposal A of 1994. The resultant limitations on local budgets prompted a shift in the view of shared state revenue: instead of just being a mechanism by which the State could compensate local governments for taxes that it had pre-empted, it became a means of supplementing the role of the property tax revenues in local budgets. This allowed municipalities to keep school services at an acceptable level while maintaining lower property tax rates, effectively shifting greater responsibility for education to the State level.

Should funds be apportioned on the basis of need? How would such need be determined?

Revenues were shared on a purely per-capita basis until Michigan passed Public Act 212 in 1972, which tried to account for the disparity among municipalities' tax bases, tax rates, and need for public services by tying the statutory portion of the funds to their “relative tax effort,” or the rate at which they were taxing themselves (Citizens Research Council 1993). By 1998,

however, the idea that this practice rewarded municipalities for raising their taxes helped spur a legislative overhaul. The new three-part distribution formula did give additional weight to cities on the basis of their greater perceived need. It also continued to recognize relative tax effort, although only as it related to the taxable value of property within the municipality (Crosby and Robbins 2010). This formula turned out to not benefit cities because of the proportion of their land area that is taken up by non-residential uses, however. The EVIP formula instituted in 2012 does not recognize need at all, so it would seem that the prevailing view on this question has come full circle.

Is the state keeping its promise to return revenue?

Cuts to statutory revenue sharing payments have been so drastic over the last ten years that less than half of the cities, townships, and villages in Michigan are expected to get any payment at all in FY2011 (Citizens Research Council 2011). In a white paper reviewing the history of revenue sharing, the City of Grand Rapids (2006) charges that in 2000, "the State broke [its] pledge to return State sales taxes to local government. The State changed the law to keep more of the taxes for State government," detailing an increasing shortfall over the next seven years. The State does insist that municipalities keep their own promises, however. According to a January 25, 2012 article in the Detroit Free Press, "a cut in the income tax rate - from 2.5% to 2.4% for residents and from 1.25% to 1.20% for nonresidents - will be required under a 1998 state law that was part of a deal to preserve [Detroit's] state revenue-sharing payments in return for a gradual reduction in the income tax." The payments that the deal was intended to preserve have been declining since 2004. The relative ease with which the State can alter its obligated statutory payments to make offers an opportunity to use that money to balance its own budget rather than distribute funds as earmarked by prior legislatures.

Is the current practice of revenue sharing supporting growth in villages and townships at the expense of cities?

In general, cities are the overwhelming recipients of revenue sharing, but recent reforms have favored townships and villages. A Michigan State University report finds that the consequences of the 1998 changes in statutory revenue sharing have seemed to "benefit growing areas, disadvantage largest communities and support urban sprawl and loss of farmland surrounding suburbs" (Taylor and Weissert, 2001,17). Changes recommended by Governor Snyder in early 2011 have yet to be fully implemented, but the respective reactions from leaders of the Michigan Township Administration and the Michigan Municipal League suggest that the trend may be continuing. MTA (2011) points out that only 40 of 1240 townships receive any revenue sharing at all, then characterizes township services as "low cost" before stating that it sees incentives aimed at increasing regional and collaborative services as "an opportunity to address a 40-year-old inequitable distribution formula that discriminates against township residents." On the other hand, the MML (2011) says the very term "revenue sharing" was "a misnomer from the beginning—state government doesn't share revenue—they give communities money collected on behalf of those communities" and paints a dramatic picture of failing municipal services before bluntly insisting that without revenue sharing, "Michigan will shove another generation of young people out the door. These cuts are not about turning off the lights. They are about taking the lights down." Both sides, then, clearly feel entitled to the revenue

sharing funds.

How does revenue sharing affect the relationship among local governments?

Opinions differ widely with regard to how revenue sharing *does* affect the relationship between local units of government, and they are just as diverse with regard to how it *should* affect that relationship. Eric Lupher (2007) of the Citizens Research Council says, “It is readily accepted that increased use of intergovernmental cooperation by local governments in Michigan can lead to increased economy and efficiency,” taking this benefit as an assumption exempt from debate. The Snyder administration (2011) appears to share that view, as demonstrated by its requirement that “municipalities must develop plans to consolidate services that will result in taxpayer savings” in order to receive a portion of their statutory shared revenue. It is also consistent with a 1999 Citizens Research Council report claiming “State aid may have lessened the incentives for cities, village, and townships to consider more efficient ways to operate.” The Mackinac Center for Public Policy takes the opposite view: "Revenue sharing ... reduces competition between communities, which would otherwise encourage greater government efficiency” (Detroit News 2009). The ability for money to modify behavior probably assures some effect on its relationship among local governments, but no definitive conclusion can yet be reached about what it is.

Chapter 2: Problem Definition

Michigan's constitutional revenue sharing system allocates unrestricted revenues to municipalities on a per capita basis. This chapter will explore the key issues associated with this allocation system. The chapter is divided into five major parts: the first part contemplates the use of unrestricted versus restricted revenue sharing; the second part explores per capita allocation issues in relation to need/defines need; the third part examines fairness and equity associated with the redistribution, the fourth part examines the effect of per capita revenue distribution on sprawl; and the final part summarizes a series of interviews with experts, pertaining to unrestricted revenue sharing on a per capita basis.

Unrestricted versus Restricted Revenues

Revenue sharing can be either unrestricted or restricted; unrestricted revenue sharing imposes no constraints on how shared revenues are spent by the local government; with restricted revenue sharing the state imposes constraints on how shared revenues are spent by local governments (examples of common restrictions include: schools, highways, courts, and police services, etc.).

Every state in the United States has some form of revenue sharing. States generally share revenues with local governments to serve two purposes: to directly aid local governments by providing revenues in addition to local taxes and to indirectly aid local tax payers by relieving local tax burden. Every state approaches revenue sharing differently; they can choose to un-restrict, restrict, or partially-restrict the funds received from revenue sharing. The most commonly shared revenues come from sales tax, use tax, motor fuel and special fuel taxes. Of the 23 states that share both sales and use tax revenue, only Alabama, California, Iowa, Maryland, Nebraska, Washington, and West Virginia restrict the uses of some or all of their shared revenues. The debates on restricted versus unrestricted revenue sharing are described below.

Benefits of Unrestricted Revenue Sharing

1. Rejuvenates Local Decision-Making: Unrestricted revenue sharing rejuvenates local decision-making. Local officials, free of the restrictions, would better address the particular problems facing their own jurisdictions. Unrestricted revenue sharing gives local units more freedom to spend the money they receive on what they see fit (Wallin 1996).

2. Enhances Local Revenues: State revenue sharing has greatly enhanced revenues in some local governmental units. In fact, 935 of the cities, villages and townships (53 percent) received more state revenue sharing distributions than they collected through local taxes in fiscal year 1993 (Citizens Research Council of Michigan 1993).

3. Stimulates Capital Expenditures: According to the Economic Policy Institute in Washington D.C., a 20-year survey conducted between the states of New Jersey and California captured the attitudes, opinions, and beliefs of the chief executives in 100 large cities, on the impact of general revenue sharing in their cities. The study concluded that, unrestricted aid stimulates

capital expenditures (Wallin 1996).

Debates on Unrestricted Revenue Sharing

1. Loss of Revenue Raises Local Millages: If unrestricted state revenue sharing were eliminated, local governmental units would have to increase their local millages to make up for lost revenue or cut local spending. In Michigan, cities, villages, and townships had to increase their millages by an average of 6.7 mills to make up for the loss of state revenue sharing dollars in 1993 (Citizens Research Council of Michigan 1993).

2. Creates a System of Dependency: While state revenue sharing has greatly enhanced revenues in some local governmental units, it has also arguably created a system of dependency. Some local governmental units rely on state-shared revenues for a large percentage of their revenues, while others are much less dependent. Local governmental units of all sizes are found on both ends of this spectrum (Citizens Research Council 1993).

Benefits of Restricted Revenue Sharing

1. Fosters Regional Cooperation/ Increases Funding if Paid to Two or More Governmental Units: The State of New York, established the Services Incentive Program in 2006, a $25 million dollar grant program created to assist municipalities consolidate local government services (NYSAC 2006).

2. Provides Provision for Basic Services (even in times of recession): Several states restrict the uses of some or all of their shared revenues to provide basic services: Alabama requires counties to use their shared sales and use tax revenues for law enforcement, public health, and agriculture extension services. Iowa earmarks their motor vehicle use tax revenues shared with cities and counties for road projects in the approved transportation plan. Sales tax revenues collected on rental cars by Maryland and Nebraska and shared with local governments must be used for transportation-related projects. A portion of Washington's shared sales and use tax revenues must be dedicated to stadiums. While West Virginia's shared sales and use tax revenues must be used for infrastructure improvements, economic development, regional jail and correctional authority and county jail expenses (State-by-State 2006).

3. Restrictions as carrots and/or sticks: In the state of Florida, the growth management law requires that local governments comply with the state-planning mandate. Local governments lose a certain amount of revenue sharing dollars for non-compliance (Committee on Tax and Finance 2006). Michigan has used revenue sharing as an incentive through the EVIP (Michigan Department of Treasury 2012).

Debates on Restricted Revenue Sharing

1. Extra Costs to Restrict Aid Not Necessary: Imposing restrictions on an already complicated system of revenue sharing might increase administration and compliance costs.

2. Restriction on Spending Provides Less Flexibility: Putting a restriction on spending creates a much slower process (e.g. development could require specific applications and audit), and provides less flexibility for a local unit to respond to change (e.g. population increase and need for increase infrastructure: sewer and water) (Lupher 14).

When to Restrict and Unrestrict: Summary

Policy analysts argue that the impact of revenue sharing varies based primarily on whether or not it is restricted, the type of restrictions, the amount of money that can be spent, and amount of shared revenue (Lupher 2003). Revenue sharing is usually justified on the basis of broad public policy goals: using equitable and efficient tax sources to finance public services; promoting property tax relief; and ensuring that a basic level of public services can be provided by each local unit of government (CRC Memorandum 2000).

States may choose to unrestrict revenues to allow local discretion in the use of funds; unrestricting revenue allows local governments to make decisions as and when the need for such decisions arise; and local units can spend as they see fit. Unrestricted revenue sharing enhances local revenues generally and impacts local millage rates (as seen in Michigan in 1993).

States may choose to restrict the use of revenue sharing dollars when there is a need to identify core-services such as fire, police, and highways. Restricting revenues might help ensure minimum standards across local government units. Restricted revenue sharing could be used as carrots or sticks in conjunction with more comprehensive reforms (e.g., Florida).

Per-Capita Allocation Issues In Relation To Need

State revenue sharing on a per-capita basis distributes an equal amount of funds per person to each local unit of government. In Michigan, revenue sharing allocations become part of a local government's general fund to be spent in an unrestricted manner to address the needs of the community. This type of distribution method is based on the assumption that the needs are where the people are. In other words, where there is a greater amount of population, there is a correlated greater amount of need experienced by that population's unit of local government. However, this simplistic assumption of distribution based on population ignores many other potential variables that may be considered necessary to adequately capture the needs of each local government. An agglomeration of factors including but not limited to demographics, outmigration, development trends, type of local government, municipal budgets, and the revenue generating capabilities of each local government lend to the complexities of defining and identifying needs that are ignored by the per-capita distribution method.

Based on 2010 U.S. Census data township population in Michigan varies from 10 to approximately 96,000 people (United States Census 2010). A township with 10 people has limited service needs. Therefore, it can be argued that population does reflect the need in this case. Concurrently, it can be argued a township with 96,000 has a greater need to provide a larger amount of services. Therefore, population may reflect need in this case as well. A closer look at other influencing factors, however, shows that more variables (other than simple population) are required to adequately identify and capture local need. We begin by examining the types and functions of local government.

Types of Local Government

Local governments vary in population, type, size, budgets, services, and ability to raise revenue. In Michigan, there are several different types of local units of government; counties, charter townships, general law townships, charter villages, general law villages, and cities, each having different functions. Counties will not be examined in this report as they do not receive constitutional revenue sharing allocations.

General Law Townships: General law townships offer limited services mandated by the state including assessment administration, elections administration and tax collection and are allocated at least 1 mill in allocated millage (Michigan Township Association 2012).

Charter Townships: Charter townships are permitted by the state to perform more services than general law townships that may resemble the level of services a city might offer. Furthermore, charter townships are permitted to levy 5 mills of property tax upon charter status and potential to levy additional 5 mills with voter approval (Michigan in Brief 2002). In accordance with The Charter Township Act, a general law township with a minimum population of 2,000 is authorized to incorporate as a charter township. In order to be exempt from annexation a charter township must provide a minimal level of services including: fire protection, police protection, water and sewer, solid waste disposal, and be governed by a zoning ordinance or master plan.

General Law Villages: General law villages may levy up to 20 mills in taxes with voter approval and are restricted as to: 12.5 mills for operation, 2.5 mills for cemeteries and 5.9 mills for streets (Michigan in Brief 2002). Villages may provide local level services such as fire, police and public utilities (Michigan Municipal League 2004), however, services mandated by the state on townships do not apply to villages therefore the township in which the village resides is responsible for assessment and elections administration and tax collection. A minimum population of 150 and a minimum density of 100 people per a square mile are required for incorporation of a village.

Charter Villages: Charter villages function in the same way as a general law village and may levy up to 20 mills in taxes for operation with voter approval (Michigan in Brief 2002).

Cities: Cities, unlike villages, are a single integrated unit separated from the township and must perform state mandated duties including: assessing property, tax collection and elections administration as well as the services it chooses to provide on its own (Michigan Municipal League 2004). Cities are limited to levy a maximum of 20 mils plus an additional millage for garbage and library services, senior citizen services, and police and fire pension funding (Citizens Research Counsel 1999).

Examination of Need Per Type of Local Government

Taking into account the type of local government, per-capita revenue sharing has different implications in relation to need for Clinton Township with a population of 96,796, a charter township, compared to Pointe Aux Barques Township with a population of 10, a general law township (Unites States Census 2010). These two types of townships are authorized to

provide services yet each has a different maximum allowable millage rate they are permitted levy. The maximum permitted millage rate affects the capacity of each township to generate revenue and pay for services. It can be argued that Pointe Aux Barques revenue needs are met by per-capita allocation due to only having 10 residents. This is based on the logical assumption that a township with only 10 residents will not have many needs. Things become more complex when examining charter townships like Clinton. Clinton Township has more residents to serve. Therefore, it can be inferred that it has a need to provide more services. However, the state does not mandate charter townships to provide more services than a general law township, the state simply gives charter townships permissive powers to provide more services if it chooses to do so (Michigan Township Association 2012).

If a charter township with a large population like Clinton chooses to offer a vast array of services it may have a need for additional revenue to fund its services. However, it may not have a need to provide the services, it may be a "want" or a desire of the residents and once the "wanted" or desired services are offered there may be a newly created need for higher revenues to sustain those services. Furthermore, if a charter township desires to be exempt from annexation then the township must provide water and sewer, solid waste, fire and police services and may need additional revenues to fund the necessary services for exemption. Since townships are limited in their ability to levy taxes, the need for state allocated funds increases if the township chooses to provide more services (Michigan Township Association, 2012, 7). Conversely, if a charter township has a relatively high population and chooses not to provide many services then the need for state allocated revenue may not be as high and per-capita allocations may provide an unnecessary revenue flow. In other words, a township with a higher population receives a correlated higher amount of revenue sharing. Yet if the township is not offering many services its need for revenue is lower and the higher revenue sharing allocation it receives may be providing revenue the township does not necessarily need.

Another factor to consider is the level of service provided. If a local government is providing the same amount of services as another, it does not mean they are necessarily providing the same level of services. For example, two municipalities may provide snow removal services, yet one may have fewer and older trucks than the other municipality. If a local government offers a lower level of services, it may not have the same revenue needs as a local government offering a high level of services. However, if the lower level services need upgrading, then there may be an associated need for higher revenues.

More variables apply when comparing populations in one type of local government to another. In general, cities provide more services than townships regardless of population size. Cities, however, are permitted to levy higher taxes than townships helping fund the cost of its services. Therefore, a city with the same population as a charter township has a greater ability to pay for its services through city generated revenues; this fact may or may not reduce a city's need for state allocated revenue as cities may need to provide more services requiring more revenue. A city may be in a position where it has to provide an extensive array of services making it difficult to fund the services even after raising taxes. Raising taxes to pay for services is not politically desired and may also lead to outmigration of the local government's residents seeking a new place to reside with lower taxes. The loss of residents would equate a loss of tax generated revenues. In this scenario the city may have a need for increased state allocated revenue.

Outmigration

Older cities tend to experience a continual population decline therefore creating a smaller tax base and thus creating less revenue generating ability for the city. Rising incomes and declining costs in transportation and communication are argued to be reasons why individuals and corporations are moving to outlying areas where land and taxes are generally cheaper (Chernick and Reschovsky, 2001,7). Although there is a decrease in population, it might be assumed there is a decreased need for services; however, declining cities still have an infrastructure in place that remains to be serviced at a high cost and increasing social programs that need to be funded. Since infrastructure in cities is typically older than that of the suburbs, costs of infrastructure maintenance, and often fire protection, are higher for cities (Chernick, 2001). Cities also experiences higher rates of poverty and many of the nation's social problems such as AIDS and homelessness have higher rates of occurrence in central cities (Chernick, 2001). Therefore, cities need to divert a portion of revenues away from other services to fund social programs. Outmigration and the loss of revenues present a challenge for cities to continue to provide services, potentially resulting in increased tax rates on remaining residents. Increased tax rates may result in further outmigration of residents to more affordable areas and may also result in the need for increased social services as the remaining residents may not be able to afford the higher taxes. Outmigration not only reduces a city's ability to generate its own revenues due to the loss of its tax base, it also results in a reduction of state per-capita revenue distribution over time – even as population declines - further exacerbating financial hardships. In this case, it can be argued that per-capita revenue distribution clearly fails to adequately address need.

Outmigration issues are relevant in Michigan because census data shows many older cities in Michigan are experiencing population decline. Michigan's three largest cities by population are Detroit, 713,777, Grand Rapids, 188,040, and Warren, 134,056. Each experienced a decline in population from 2000 to 2010 by 25%, 4.9% and 3% respectively (United States Census 2010).

Summary

While population in some cases may be a factor for indicating the revenue or service needs of a local government, such as townships with low populations, it is only one of many factors that determine need in townships and cities with larger populations where it is much more difficult to measure need. The difference of mandated and permitted provisions of services and restricted ability to levy taxes depending on type of local government and outmigration are just two measures that should be considered to define and determine need.

The following section examines the redistributive nature of revenue sharing, as it relates to fairness and equity.

The Scope of Redistribution – Fair or Equitable?

In this section, the justification of why federal, regional and state level governments redistribute revenues to the local level, the substantive and operational reasons of federal, regional and state involvement, and the issue of tax disparity are discussed.

The redistribution of tax revenue is a commonly debated topic for several reasons. In an argument against redistribution, one must consider Michigan's constitutional portion of revenue sharing that is generated by sales taxes, but is then redistributed according to a local unit's population. This process does not take into consideration that some municipalities contribute more in sales taxes than others. Therefore, when revenues are redistributed based on population, it is conceivable that a municipality that contributed very little in sales tax revenues could receive much more than its contribution.

Arguments for redistribution include a concept called equalization. Equalization recognizes disparities between municipalities and "is meant to close the gap between the costs for services that local governments have to provide and the direct resources from which they can collect" (Kesner-Skreb 2009). But who decides what the factors triggering equalization ought to be? And why?

Federal, State, and Regional Involvement

Reasons to justify federal, state or regional involvement in lower level or local affairs are typically based on both procedural and substantive matters. One argument is that procedures like sales tax collection can be overwhelming for local government staff that is already saddled with numerous operational responsibilities including property tax intake. Goetz (2006) argues that large-scale land use decisions, a substantive issue, are also better suited for the state to handle, but why?

The lack of capacity, whether procedural or resource based, at the local level is one factor that calls for the involvement of a higher-level government. Downey also believes that higher-level governments and agencies are larger in scope, have greater resources, and greater expertise (2010). If capacity can be defined as the ability to procure and/or have access to resources, the structure of an organization, a government's technological sophistication, or the ability to secure external funding then it is higher levels of government that have greater capacity (Brody, Kang & Bernhardt 2009). Training and expertise are other reasons. The expertise of a state department of natural resources in addressing flood mitigation is one example of state resource capacity levels and expertise in matters that local staff is not well equipped to handle (Brody, Kang & Bernhardt 2009).

Resources, a factor in themselves, are more readily available to higher forms of government. Again, regional, state or federal governments' reach encompasses materials, personnel, facilities, services and connections to which local governments do not always have access. There is also the ability to pool together multiple agencies and assets when confronting issues and crisis, as well as daily operational needs.

Substantively, the involvement of higher levels of governments arguably encourages efficiency. For example, if every municipality were to track the migration of a certain species through the region by Geographic Information Systems, it would prove to be quite costly; a regional or state agency could handle the scope of this activity in a more efficient manner (Goetz 2006).

There are more substantive reasons why higher-level governments get involved. The case for the involvement of a higher level of government in local affairs is made when the issues at hand are complicated, overlapping, cross multiple borders, include differing types of communities (heterogeneity), and possess a high degree of interdependency.

Similarly, calls for regionalism and regional government are based on the notion that some services are better provided and some issues are better tackled at a regional level or scale. Take into account the smoke from incinerators that floats over multiple municipal borders; the members of the workforce are tracked in a regional scope (Goodman 2004); and roads are connected to allow people to travel regionally. That is, there is a larger public purpose to be served by examining issues at a larger scale than that of the local municipality. In New Jersey, regional fair share affordable housing policies ensure that local affordable housing disparities are minimized (Calavita, Grimes & Mallch 1997). Similarly, in Minneapolis, regional tax base sharing allows local tax base disparities to be addressed at the regional scale. The pioneer of this concept, Myron Orfield, and others continue to stress that this technique will equalize communities that share regional services and public goods (Hunter 2006) and "reduce the economic disparities between rich and poor communities" (Rabinowitz 2004).

Tax Disparity Resolution

Suppose that urban centers with declining populations have unused or under-used infrastructure that still needs maintenance and funding; should it fall on the local government to handle this issue even though neighboring communities thrive? Mobility of populations can reduce the means by which a community can generate revenues; less people means less potential sales of goods and fewer properties for property tax revenue generation. Cities are sometimes forced to raise property tax rates to make up for declining tax base. Initiatives like tax-base sharing strive to level the horizontal field marred by mobility issues, drive efficiency into the development process, and equalize taxes so benefits occur in areas where taxes would normally stifle growth (Garner, Siedl & Hoag 2000).

The funding for most initiatives taken on by government, whether for a service or redistribution, comes from taxes. And many groups have asked when is it ever good to take from one person and give to another. Academics, policymakers, and professionals alike have argued for federal, state and municipal governments to support social, environmental, and fiscal equity in governmental policies so that disadvantaged groups and localities do not suffer further from institutionalized disparities (Kantor 1991, Brooks & Stegman 1968). The Michigan Land Use Institute (2005) released a report on the impacts of revenue sharing and its "subsidizing" of sprawl. This report shows how multiple funding sources were applied to non-core communities at a two to one ratio than core communities, and how some cities have changed their service policies to more effectively address blight, infill, street and facade improvements, street widths, and the ever disappearing shared revenue. While some argue that "local" decision making, control, and home rule are necessary for good, effective, and efficient government (Berman 2003; Gordon 2006), others contend that such fragmented decision making has fuelled sprawling development patterns and fiscally and socially inequitable outcomes on the ground (e.g., large commercial projects in greenfield locations that rely heavily on infrastructure, fuel sprawl, and result in inequitable distributions of tax base). In this case, the argument for redistribution is aimed at discouraging outward expansion, redistributing funds to urban core areas, and limiting competition among municipalities. Any local decision-making that can affect neighboring communities but fails to consider those neighbors' concerns could potentially be problematic for everyone.

The role of higher levels of governments, then, would be to stabilize the extremes – to equalize – to even the playing field: municipalities that drop the tax rate to make themselves

more competitive and desirable to live in or establish a business in, taking the gamble that new property taxes will result and still cover service level costs; or municipalities that raise their tax rate to recover lost revenues due to population loses, gambling the retention of the existing tax base.

Summary

There are many reasons, procedural and substantive, why federal, state and regional entities redistribute revenues to the local level. Scholars argue that a higher level of government is better positioned to evaluate and address issues that cross municipal boundaries. If the goal of revenue sharing is to equalize resources across municipalities, then this lends credibility to the argument for redistribution by a higher level government (e.g., the state). But what would the conditions of redistribution be? The literature reveals that the type of local government, extent of and need for local services, local wealth, and the need for social services are all parts of the redistribution puzzle. What about disinvestment in urban cores and the outward movement of population? Is the process of allocating state shared revenues contributing to the outgrowth of our populations to areas away from urban centers and first-ring suburbs?

Per capita Revenue Sharing and Sprawl

In recent years, per capita revenue sharing and its effects on sprawl have become a great concern for state and local governments. To analyze this topic further it is important to define sprawl, look at where growth is occurring in the United States, look at where growth is occurring in Michigan specifically, analyze historical population changes in Michigan, and become familiar with the implications of per capita allocation on such growth.

Sprawl is generally defined as an increased development of land in suburban and rural areas outside of the city center. These areas are known for their low population density, car-dependency, and slow decentralization of human occupancy. The primary effect of sprawl is that communities require more land and space to supply the same given population with homes and amenities. Sprawl in the United States has significantly increased in the past several decades and has increased even more rapidly in the past several years (Squires 2002).

The four fastest growing states in the country are Nevada, Arizona, Utah and Idaho. California and Texas alone have made up one-fourth of the nation's total population gain since 2000 (Fisher 2011). The cities within these states are growing outward as well. Currently, sprawl has spread to both rural and suburban areas. Although rural and suburban areas contrast in their general landscape, the growth occurring in both of these areas have similar consequences.

Suburban and rural sprawl patterns increase the demand for roads and utility infrastructure as well as more amenities per capita than city centers with a higher density. The increased amount of amenities needed develops problems in growing rural and suburban areas because these areas often do not generate enough revenue to facilitate the needs of their growth. For example, the upkeep of parking lots, water lines to the individual houses, and the roads that need to be built are far more in quantity and more expensive in sprawling areas as compared to denser cities (Engle 2010).

The map below represents the change in population between the years 1990 to 2010 in Michigan. The first map shows the number of people that moved in or out of a county in the past

20 years. The darker green represents the areas that have experienced growth and the lighter green represent areas that decreased in growth.

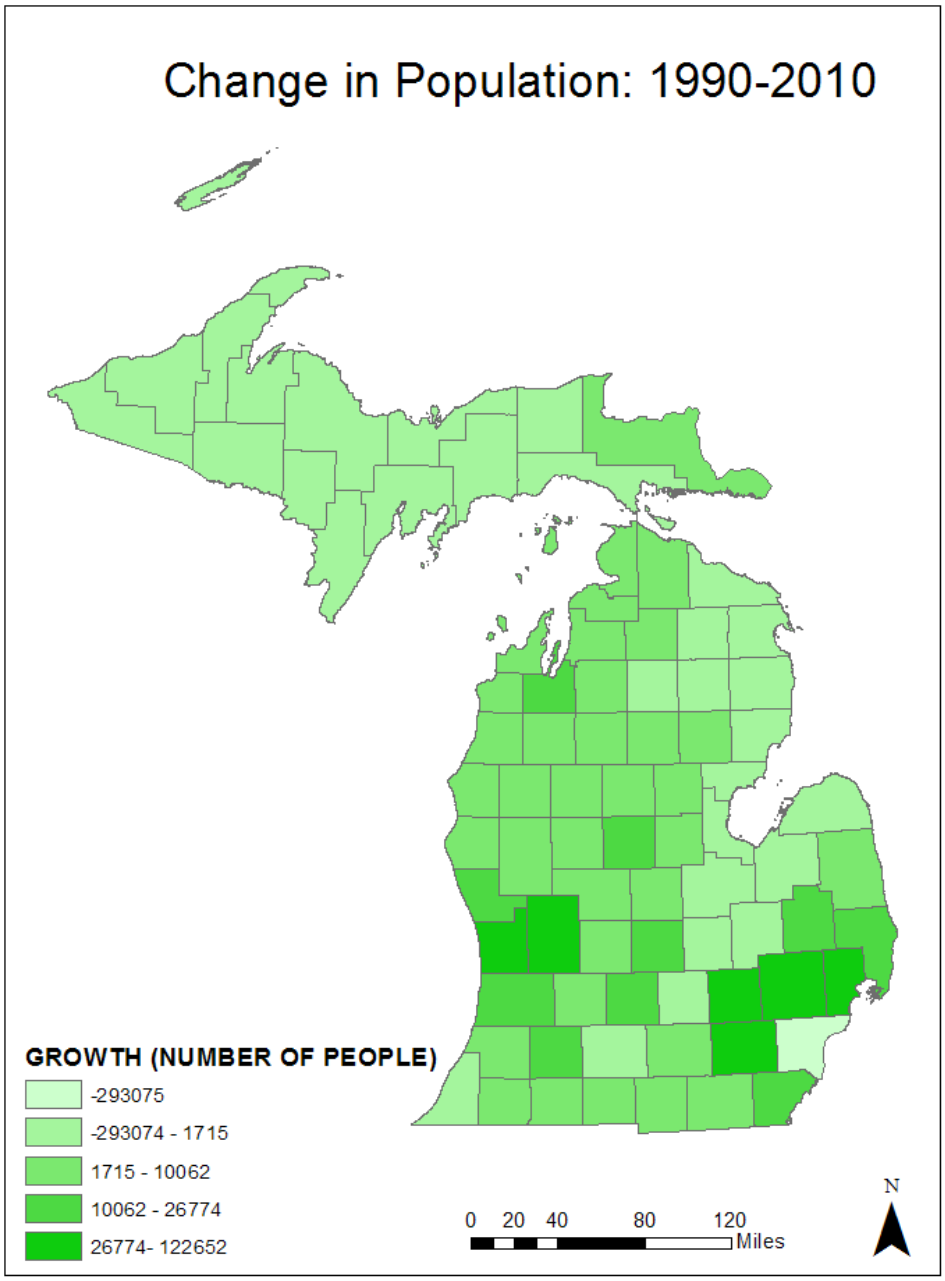


Figure 1 - Change in Population: 1990-2010

The second map represents the percentage of growth that each county in Michigan has experienced. Again, the darker green represents a larger amount of growth and the lighter green represents a decrease in population.

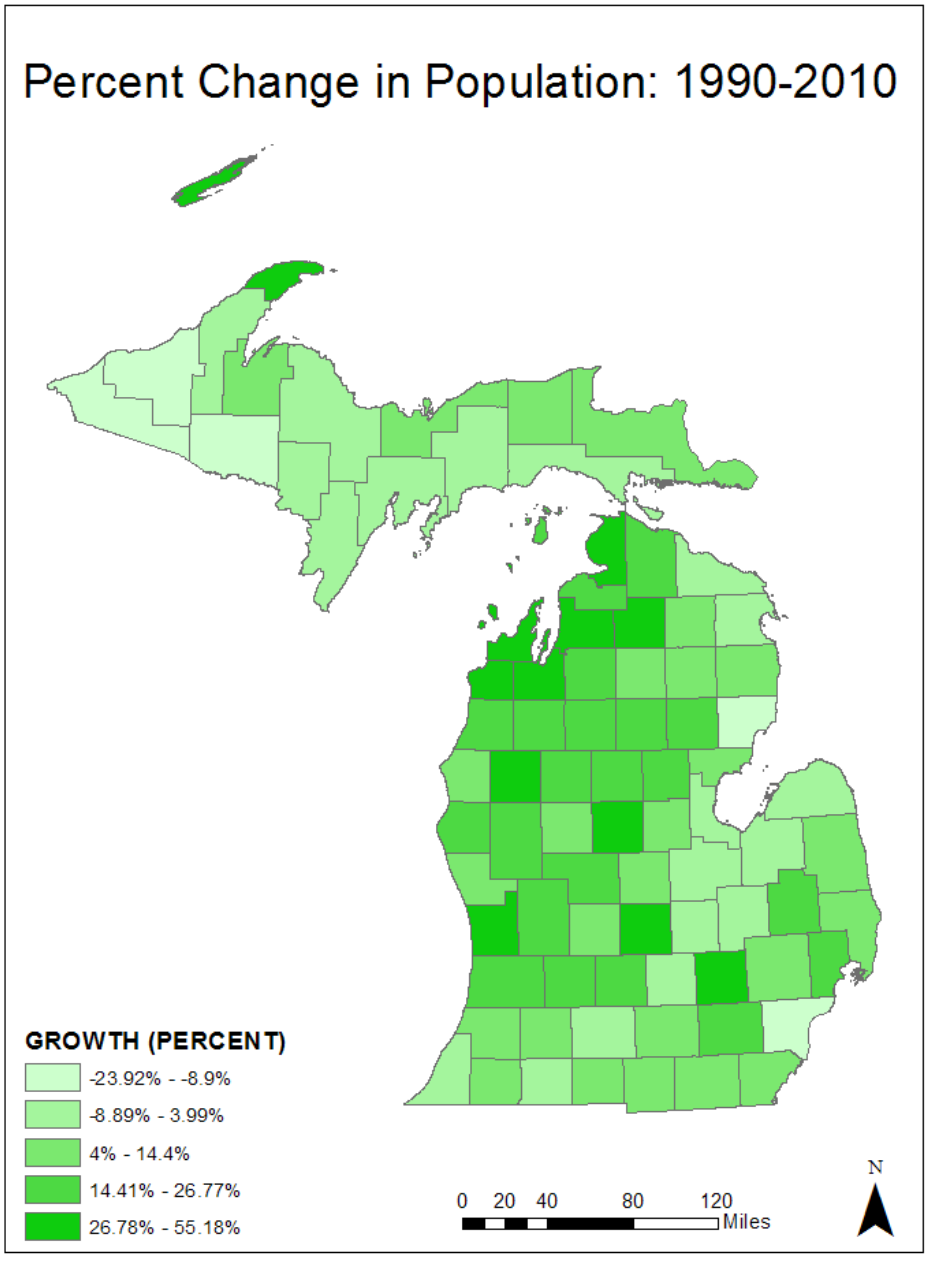


Figure 2 Percent Change in Population: 1990-2010

Both of these maps show an increase in growth on both the east and west side of the state. On the west side of the state, Grand Rapids and its surrounding suburbs are all growing.

Meanwhile, on the east side of the state, Detroit suburbs are growing but not the city of Detroit itself. The tables below, reproduced from a report by Taylor (2002), show the largest and fastest growing communities in Michigan.

Table 3: Largest Communities in Michigan and Their Characteristics

Appendix 3: Characteristics of 20 Largest Communities								
Community	Twp or City	County	2000 Population	Actual 2001 Payments	2001 Payments Using pre-1998 Formula	2001 Payments if Current Formula Fully Implemented	% Difference pre-1998 formula v. actual 2001 payments	% Difference pre-1998 formula v. payments if formula fully implemented
Grand Rapids	City	Kent	197,215	14,192,342	15,818,921	18,641,999	(10.28)	17.85
Warren	City	Macomb	138,247	9,895,200	10,337,785	5,420,348	(4.28)	(47.57)
Flint	City	Genesee	124,646	15,952,438	13,940,336	14,865,037	14.43	6.63
Lansing	City	Ingham/ Eaton	119,128	13,728,281	14,046,357	12,101,358	(2.26)	(13.85)
Ann Arbor	City	Washtenaw	113,992	6,687,972	8,134,610	4,443,692	(17.78)	(45.37)
Livonia	City	Wayne	100,545	4677824	5,133,331	3,599,365	(8.87)	(29.88)
Westland	City	Wayne	86,483	4,954,330	4,737,019	6,316,558	4.59	33.34
Southfield	City	Oakland	78,263	4,284,192	5,070,124	2,468,240	(15.50)	(51.32)
Kalamazoo	City	Kalamazoo	76,901	7,880,231	8,240,940	6,877,282	(4.38)	(16.55)
Taylor	City	Wayne	65,868	5,941,001	6,973,971	5,262,252	(14.81)	(24.54)
Pontiac	City	Oakland	65,738	12,751,839	12,872,166	7,217,060	(0.93)	(43.93)
St Clair Shores	City	Macomb	63,096	3,057,868	3,031,976	2,473,679	0.85	(18.41)
Saginaw	City	Saginaw	61,520	9415524	8,463,641	8,429,400	11.25	(0.40)
Royal Oak	City	Oakland	60,062	3,393,244	2,997,573	2,092,660	13.20	(30.19)
Dearborn Hts.	City	Wayne	58,264	3,485,294	3,989,036	3,679,947	(12.63)	(7.75)
Battle Creek	City	Calhoun	53,057	4,521,940	5,078,101	3,140,407	(10.95)	(38.16)
Redford	Twp	Wayne	51,622	3,834,941	3,789,029	2,948,982	1.21	(22.17)
Roseville	City	Macomb	48,129	3,099,546	3,105,859	2,508,961	(0.20)	(19.22)
East Lansing	City	Ingham	46,525	3,997,503	3,400,404	5,483,709	17.56	61.27
Bloomfield	Twp	Oakland	43,023	1,210,110	1,147,460	1,200,587	5.46	4.63
						AVERAGE	(1.72)	(14.28)

(Taylor 2002)

Table 4: Fastest Growing Communities in Michigan and Their Characteristics

Appendix 2: Characteristics of 50 Fastest Growing Communities									
Community	Twp or City	County	2000 Population	% Population Change 1990-2000	Actual 2001 Payments	2001 Payments Using pre-1998 Formula	2001 Payments if Current Formula Fully Implemented	% Difference pre-1998 formula v. actual 2001 payments	% Difference pre-1998 formula v. payments if formula fully implemented
Macomb	Twp	Macomb	50,478	122.2	791,886	852,636	1,805,042	(7.12)	111.70
Pittsfield	Twp	Washtenaw	29,501	72.3	613,402	749,633	844,940	(18.17)	12.71
Holland	Twp	Ottawa	28,911	65.0	628,210	789,685	891,845	(20.45)	12.94
Allendale	Twp	Ottawa	13,042	62.6	266,938	149,216	641,637	78.89	330.01
Hartland	Twp	Livingston	10,996	60.3	110,705	143,719	184,421	(22.97)	28.32
Oakland	Twp	Oakland	13,071	58.9	173,549	213,186	295,851	(18.59)	38.78
Hamburg	Twp	Livingston	20,512	58.4	285,140	242,771	619,119	17.45	155.02
Wixom	City	Oakland	13,263	55.1	511,469	683,507	301,974	(25.17)	(55.82)
South Lyon	City	Oakland	10,036	54.9	408,590	561,389	363,087	(27.22)	(35.32)
Cannon	Twp	Kent	12,075	52.3	131,974	107,044	219,998	23.29	105.52
Washington	Twp	Macomb	17,122	50.4	239,841	251,572	431,319	(4.66)	71.45
Genoa	Twp	Livingston	15,901	47.0	156,145	115,000	243,704	35.78	111.92
Rochester	City	Oakland	10,467	46.8	379,641	610,152	250,837	(37.78)	(58.89)
Orion	Twp	Oakland	30,748	46.3	601,481	663,451	824,678	(9.34)	24.30
Chesterfield	Twp	Macomb	37,405	44.4	795,684	1,008,876	1,169,173	(21.13)	15.89
Novi	City	Oakland	47,386	43.6	1,373,275	1,843,247	1,444,656	(25.50)	(21.62)
Alpine	Twp	Kent	13,976	41.7	194,153	118,709	382,154	63.55	221.92
Texas	Twp	Kalamazoo	10,919	41.6	104,696	84,887	183,800	23.34	116.52
Scio	Twp	Washtenaw	13,421	40.3	144,771	133,828	161,021	8.18	20.32
Oxford	Twp	Oakland	14,485	38.7	318,698	235,221	196,110	35.49	(16.63)
Gaines	Twp	Kent	20,112	38.4	316,795	110,814	759,831	185.88	585.68
Independence	Twp	Oakland	32,581	37.4	786,003	875,878	966,177	(10.26)	10.31
Commerce	Twp	Oakland	30,349	37.0	483,813	356,674	816,780	35.65	129.00
Grand Haven	Twp	Ottawa	13,278	36.7	225,514	247,129	237,436	(8.75)	(3.92)
Green Oak	Twp	Livingston	15,403	35.6	166,744	216,030	232,994	(22.81)	7.85
Springfield	Twp	Oakland	13,338	34.4	194,251	218,389	226,543	(11.05)	3.69
Shelby	Twp	Macomb	65,159	33.9	1,876,630	2,168,781	2,196,720	(13.47)	1.29
Canton	Twp	Wayne	76,366	33.9	2,260,675	2,646,443	2,653,468	(14.58)	0.27

(Taylor 2002)

Table 5: Continuation of the Fastest Growing Communities in Michigan and Their Characteristics

Appendix 2: Characteristics of 50 Fastest Growing Communities									
Community	Twp or City	County	2000 Population	% Population Change 1990-2000	Actual 2001 Payments	2001 Payments Using pre-1998 Formula	2001 Payments if Current Formula Fully Implemented	% Difference pre-1998 formula v. actual 2001 payments	% Difference pre-1998 formula v. payments if formula fully implemented
Byron	Twp	Kent	17,553	32.6	262,197	165,630	492,234	58.30	197.19
Garfield	Twp	Gr Traverse	13,840	31.6	200,214	182,532	217,746	9.69	19.29
Huron	Twp	Wayne	13,737	31.5	333,264	257,474	496,683	29.44	92.92
Grand Rapids	Twp	Kent	14,056	30.6	150,202	106,438	221,228	41.12	107.85
Park	Twp	Ottawa	17,579	29.8	270,687	252,226	463,064	7.32	83.59
Spring Lake	Twp	Ottawa	10,626	29.4	157,102	110,568	159,710	42.09	44.45
Fenton	Twp	Genesee	12,968	28.7	147,565	126,483	212,766	16.67	68.22
Georgetown	Twp	Ottawa	41,658	27.5	711,549	367,804	1,685,473	93.46	358.25
Oshtemo	Twp	Kalamazoo	17,003	26.9	380,404	448,363	366,332	(15.16)	(18.30)
Walker	City	Kent	21,842	26.4	673,643	850,240	643,281	(20.77)	(24.34)
Fenton	City	Genesee	10,582	25.5	386,154	497,762	301,596	(22.42)	(39.41)
White Lake	Twp	Oakland	28,144	25.1	630,497	635,994	888,150	(0.86)	39.65
Lyon	Twp	Oakland	11,041	25.1	168,307	223,020	179,512	(24.53)	(19.51)
Northville	Twp	Wayne	20,372	23.4	419,597	553,922	543,341	(24.25)	(1.91)
Superior	Twp	Washtenaw	10,740	23.2	226,177	225,922	297,187	0.11	31.54
Hamtramck	City	Wayne	22,558	22.8	3,398,416	3,771,695	3,961,936	(9.90)	5.04
Brandon	Twp	Oakland	13,230	22.5	332,894	544,199	249,529	(38.83)	(54.15)
Brownstown	Twp	Wayne	22,989	22.2	1,487,327	1,677,275	1,132,163	(11.32)	(32.50)
Plainfield	Twp	Kent	30,195	21.0	569,380	342,411	1,007,007	66.29	194.09
Davison	Twp	Genesee	17,722	20.8	412,165	322,517	765,668	27.80	137.40
Bedford	Twp	Monroe	28,606	20.5	481,611	224,206	1,023,180	114.81	356.36
Kentwood	City	Kent	45,255	19.6	1,139,541	1,436,484	1,473,122	(20.67)	2.55
							AVERAGE	10.1	69.4

(Taylor 2002)

The data from Taylor (2002) reveals that the largest communities in Michigan are mostly cities, while the fastest growing communities in Michigan are mostly townships. Under a per capita system, these largest communities will receive more money than the fastest growing communities. However, over time, the revenue shares of the fastest growing communities will increase at a much higher rate. The problem with this system is that it creates competition between rural/suburban areas and urban cores as the population shifts from the urban cores to the peripheral areas. This competition continues until the population from the larger cities dwindles and the sprawling surrounding communities and associated infrastructure continue to grow outward.

Correlations between Per-Capita Revenue Sharing and Sprawl: Summary

There are reasons to be supportive of a per capita system of revenue sharing. Per-capita revenue sharing is simple and easy to understand. If need is defined as an artifact of population, solely based on the sheer number of persons residing in a community, then per capita revenue sharing captures this need. This argument assumes that more people would require more services discounting the nuances of population characteristics, population distribution, and the wealth of the community. Assuming that most populated areas are also the most urban areas and city centers, then per-capita distribution methods will allocate more revenue to those places. However, the needs of urban cores might be greater than those of new growth communities in the urban periphery. Urban cores are often saddled with the task of maintaining older infrastructure while dealing with population, tax base and job loses. Further, from a normative planning perspective, growth in greenfield locations is unsustainable for a variety of reasons (see Squires 2002 and Heid 2004). Should a revenue sharing system consider the nuances of population change, sprawling development, and their consequent impacts on a community's infrastructure and wealth?

The final section summarizes a series of interviews with experts, and their thoughts on unrestricted revenue sharing on a per capita basis.

Thoughts from the Experts

The per capita distribution system in Michigan is seen to be fair under the assumption that a community's population is an indicator of service needs, the level of service to be provided being proportional to the number of people served (Michigan Treasury 2011). In this section, we provide the perspectives of policy experts from the University of Michigan, Eastern Michigan University, Michigan State University, and selected Michigan policy organizations. We identified a total of twenty experts, all of whom were contacted with requests for telephone interviews. Four declined to participate and five did not respond. This resulted in hour-long telephone interviews with eleven of the twenty identified policy experts. The experts interviewed believe that Michigan's per capita distribution system may seem fair from a simple perspective; however, at its core it misses key variables that should be included to determine the needs of municipalities.

Under the current constitutional revenue sharing system the type of municipality is not taken into consideration. Townships, cities, and villages provide varying levels of service. There are differences in terms of the services mandated by the state and expected by the residents. The interviewed experts argue that townships and villages in Michigan have fewer responsibilities for services while cities are providers of services and commerce. Cities as service providers are required to provide higher levels of safety services, transportation and emergency services for those living within their boundaries and those who commute to the city for jobs, shopping, and amenities (Interview 2012). Maintaining infrastructure and levels of service requires large sums of money that cannot be approximated through a sheer head count of municipal residents. While some interviewees argue that jobs are predominantly located in urban centers and townships

largely remain residential others caution that "It is not as simple as saying cities versus townships but where the service development areas are, those are the centers that need more money that those places that do not provide as much" (Interview 2012). Ultimately, this discussion highlights the importance of separating residential communities from job centers and service providers. One expert argues that residential areas do not need to do much for their residents because most of them are in the job centers for a majority of the time. "Population is not a good approximation of what community values are and what is needed within those communities" (Interview 2012). Most of our interviewees believe that recognizing the differences between municipalities (not just by type but by the extent of services provided) should be an important component of any change to the existing constitutional revenue sharing system.

Distributing money based on population has many experts wondering not only whether the needs of communities are being over looked but also if this system promotes sprawl. Suburban communities benefit when people move out to suburban locations to receive lower taxes but still commute to the city center every day for work and its amenities. Cities (especially those with inelastic boundaries) have smaller room to grow within their limits and are unable to compete at the same level with the surrounding suburbs for population growth. Suburban communities have the ability to keep taxes low and provide minimum services while cities often feel the pressure of lower incomes, a lower tax base per capita, greater service provision, disproportionate revenues to expenditures, and consequently higher tax rates. Under the constitutional revenue sharing system suburban communities receive the same amount of funding as urban cores with similar populations (Interview 2012). In this manner, most of our interviewees concur that Michigan's revenue sharing system has an indirect impact on sprawl. Others caution that sprawl is fuelled by a complex set of factors and that the connections between revenue sharing and sprawl would have to be carefully examined before conclusions can be reached. One interviewed expert argues the counterpoint that suburban communities with expanding populations are equally in need of funding to build new infrastructure to which others respond that this building of new infrastructure in greenfield areas is the exact development pattern that is emblematic of sprawl (Interview 2012).

Many factors affect municipalities' financial needs and the experts interviewed as a whole believe that creating a more sophisticated revenue sharing formula would be beneficial. They provide several suggestions for alternative formulae. One suggested alternative formula involves separating municipalities by type and developing a weighted system of needs. These needs would be based on variables such as: poverty levels, income, and services provided. The purpose of revenue sharing is to equalize resources and revenues to all communities. Many of these experts believe poverty rates to be a major indicator of community need. Currently, the per capita system is primarily based on census records that account for where residence is claimed. Many of the interviewed experts take issue with this method and suggest another alternative formula that does not measure where someone sleeps at night but rather where they live their lives i.e., where they spend most of their time while awake. For example, if someone claimed residency in Township A but worked, shopped, and ate in City B, this alternative formula would account for time spent in City B as well as Township A. This alternative formula would suggest that, "Population does not have to be human; population can account for a unit for human actions. Units for where a person works, where they spend their time eating etc." (Interview 2012). These experts believe that developing a system of units or weights for where people spend their time would be a good alternative to a formula based on municipality type and services

provided. Any community that hosts a large employment center such as a hospital, university or school district buildings would experience a much higher day population than the night time population typically captured in census data. For example, people use much less services when they are asleep than when they are awake. In the current system, city centers that provide services only receive constitutional revenue sharing for their “sleeping population” (Interview 2012). The suggested alternative formula that attempts to measure daytime population would capture population movement through population units. These population units would measure where a person lives, works, and plays. With this formula the panel of experts surveyed suggest, one can capture where people are, based on employment, commerce, social services etc.

Chapter 3: Data Analysis

This chapter presents an analysis of constitutional revenue sharing in terms of several key variables: local unit sales tax contributions, services provided, taxable value, jobs, poverty and income, and sprawl. We introduce each variable by explaining its significance to our project. After describing our findings in Michigan, we relate them to the distribution of constitutional revenue sharing funds using spatial and statistical analyses. Finally, we conclude by summarizing our findings regarding the relationship of each value to the practice of per-capita distribution of revenue sharing dollars.

Local Unit Sales Tax Contributions

In this section, sales tax contributions from municipalities grouped by county are compared with the distribution of state revenue sharing dollars to municipalities, again, grouped by county for FY 1999-2000. This comparison was chosen in order to assess which units of government receive more money than they contribute, and which units contribute more than they receive under the current revenue sharing system – to identify the "winners" and "losers". To do this, estimated sales tax for FY 1999-2000 were collected from a report issued by the State of Michigan House Fiscal Agency. The preferred analysis would have been conducted at a municipal level; however, sales tax data were only available aggregated by county. Data was then collected for the revenues received by each municipality from the Michigan Department of Treasury. It is important to note that since counties do not receive constitutional revenue, the individual revenue characteristics for the cities, villages, and townships (CVTs) have been combined in their respective counties in order to make a comparison between the contributions and distributions. Fiscal 1999-2000 was chosen based upon the sales tax and revenue data available for this non-census year.

Michigan assesses a 4% sales tax on most purchases, exclusive of food and prescription medications; 36.3% of this amount is returned to local governments in the form of revenue sharing (Ross 2000:7). Of this total, 15% is distributed on a per capita basis as required by the state constitution. The three major factors that determine the revenue sharing payments for the local units include:

1. the level of funding or appropriation (growth in sales tax level)
2. the distribution formula
3. the population of local units.

To determine how revenue sharing distribution compares with the sales tax contribution, the following formula was used:

Constitutional Revenue Allocation / Local Unit Sales Tax x 100
= % of constitutional revenue allocations from sales tax

Equation 1

Figure 3: Total Revenue Sharing Distribution

CONSTITUTIONAL AND STATUTORY REVENUE SHARING APPROPRIATIONS
(Millions of Dollars)

	Enacted Final FY 1999-2000	Enacted Estimate FY 2000-01	Executive Recommendation FY 2001-02	Change from FY 2000-01 to FY 2001-02 Amount	Percent
Constitutional Share	$628.4	$648.8	$683.9	$35.1	5.4%
Detroit	69.6	62.2	65.5	3.4	5.4%
Other CVTs	558.8	586.6	618.4	31.7	5.4%
Statutory Share	$833.7	$921.3	$971.1	$49.8	5.4%
Counties	214.3	230.9	243.4	12.5	5.4%
Detroit	264.3	271.7	268.4	(3.4)	-1.2%
Other CVTs	355.1	418.6	459.4	40.7	9.7%
Totals	$1,462.2	$1,570.0	$1,655.0	$85.0	5.4%
Counties	214.3	230.9	243.4	12.5	5.4%
Detroit	333.9	333.9	333.9	0.0	0.0%
Other CVTs	914.0	1,005.3	1,077.7	72.5	7.2%

Summary of Distribution

Revenue sharing payments for CVTs equal a little less than half of the total amount of resident local taxes collected by those units for the State of Michigan (Citizens Research Council 2000:1). In FY 1999-2000, state sales tax generated about $6.3 billion. As shown in Figure 3, $1462.2 million was then returned to local governments; of that total, $628.4 million was distributed using the constitutional per capita formula.

Figures 4 and 5 show that the sum total of municipalities in Wayne County received the largest total constitutional sharing payment at $140.5 million, while the sum total of municipalities in Huron County had largest share of constitutional payments per capita.

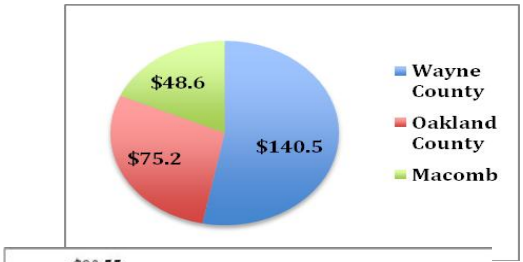


Figure 4: Counties Receiving the Most Constitutional Revenue Sharing Dollars, FY1999-2000

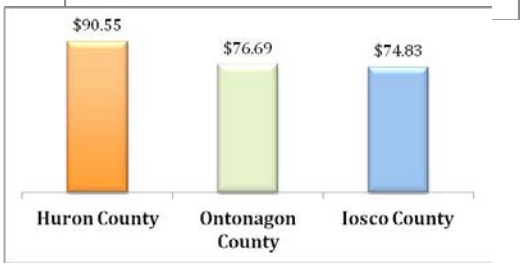


Figure 5: Counties Receiving the Largest Total Constitutional Allocations Per Capita FY 1999-2000

Figure 6 illustrates the spatial distribution of FY 1999-2000 per capita constitutional revenue distributions per capita within the state. The counties in dark green represent local units that are receiving the greatest share of revenue sharing dollars per capita (e.g., Huron, Ontonagon, and Iosco), and the counties in red represent local units that are receiving the least amount of revenue sharing dollars per capita (i.e. Livingston, Lake).

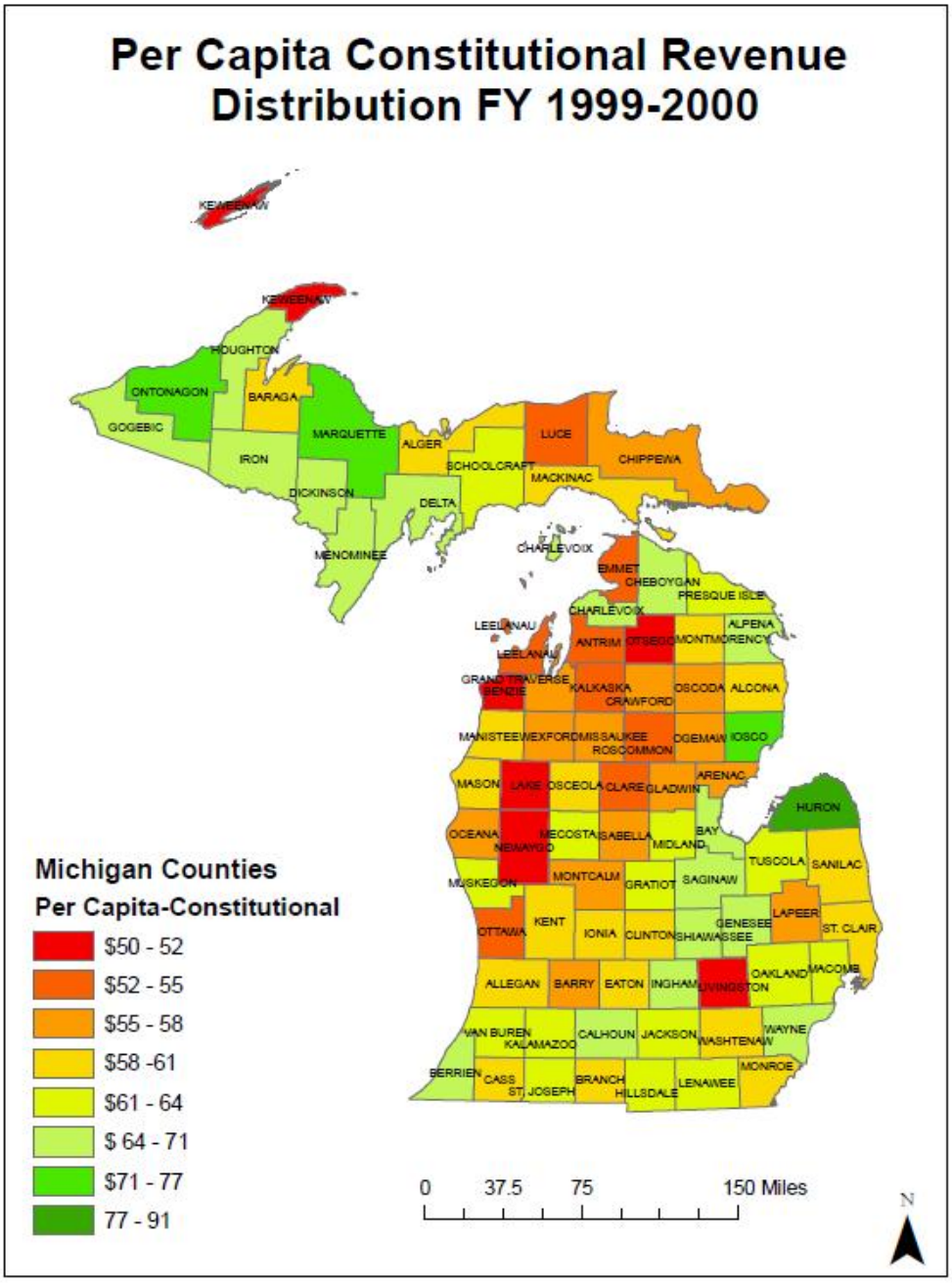


Figure 6: Per Capita Constitutional Revenue Distribution, FY 1999-2000

As shown in Figure 7, Wayne County generated the greatest amount of sales tax at $1.134 billion. Local units in Grand Traverse County generated the greatest amount of sales tax per capita at $1187.52 (figure 8).

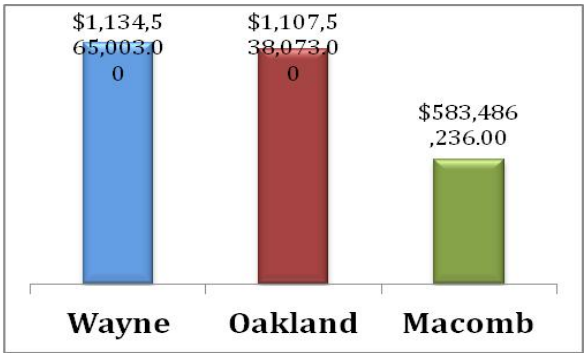


Figure 7: Counties Contributing the Most Total Sales Tax

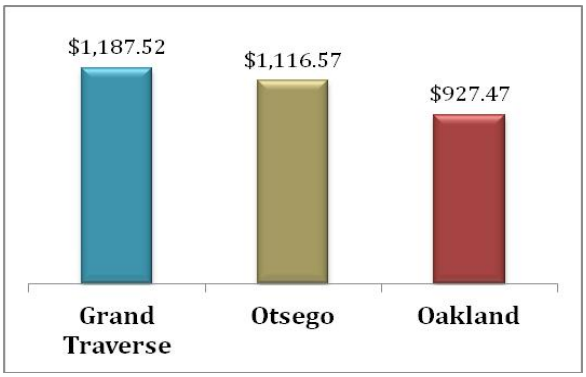


Figure 8: Counties Contributing the Most Total Sales Tax Per Capita

Figure 9 illustrates the amount of sales tax that each county contributed per capita in FY 1999-2000. The counties in red indicate the local units that contributed the largest amount of sales tax per capita (as noted in the charts above), and the counties in dark green indicate the local units that contributed the least. Southeast Michigan has a high concentration of orange, which indicates higher sales tax per capita, ranging from $528-$927.

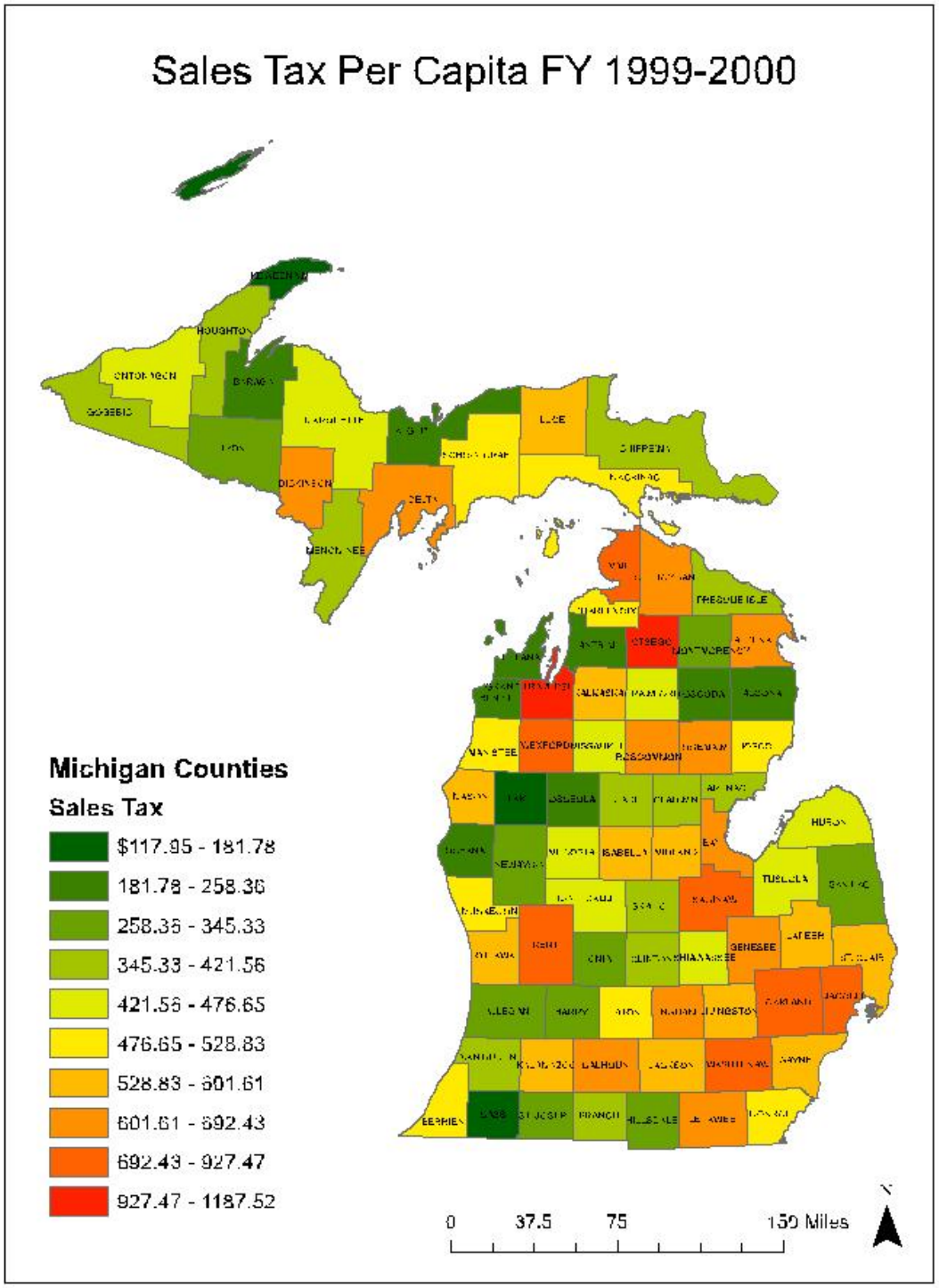


Figure 9: Sales Tax Contributed Per Capita

Comparing Distribution and Contribution

How does local unit distribution compare with the amount of sales tax those units contributed to state revenue sharing? To answer this question, a comparison of sales tax generated and the amount of sales tax distributed as revenue was examined using the calculation listed above (Formula 1).

Figure 10 shows that local units in Cass County received the largest percentage of sales tax contributed in the form of constitutional revenue sharing payment.

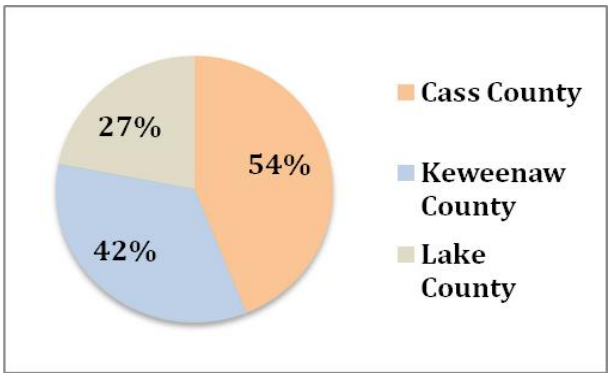


Figure 10: Largest percentage of Sales Tax Returned by Constitutional Revenue Sharing Payments

Figure 11 illustrates the percentages of sales tax collected that were returned to the local units by county through constitutional revenue allocations. The counties in green receive the highest percentage of sales tax return from constitutional revenue sharing payments (Cass, Keweenaw). The counties in red indicate the local units receiving the least (Macomb, Oakland).

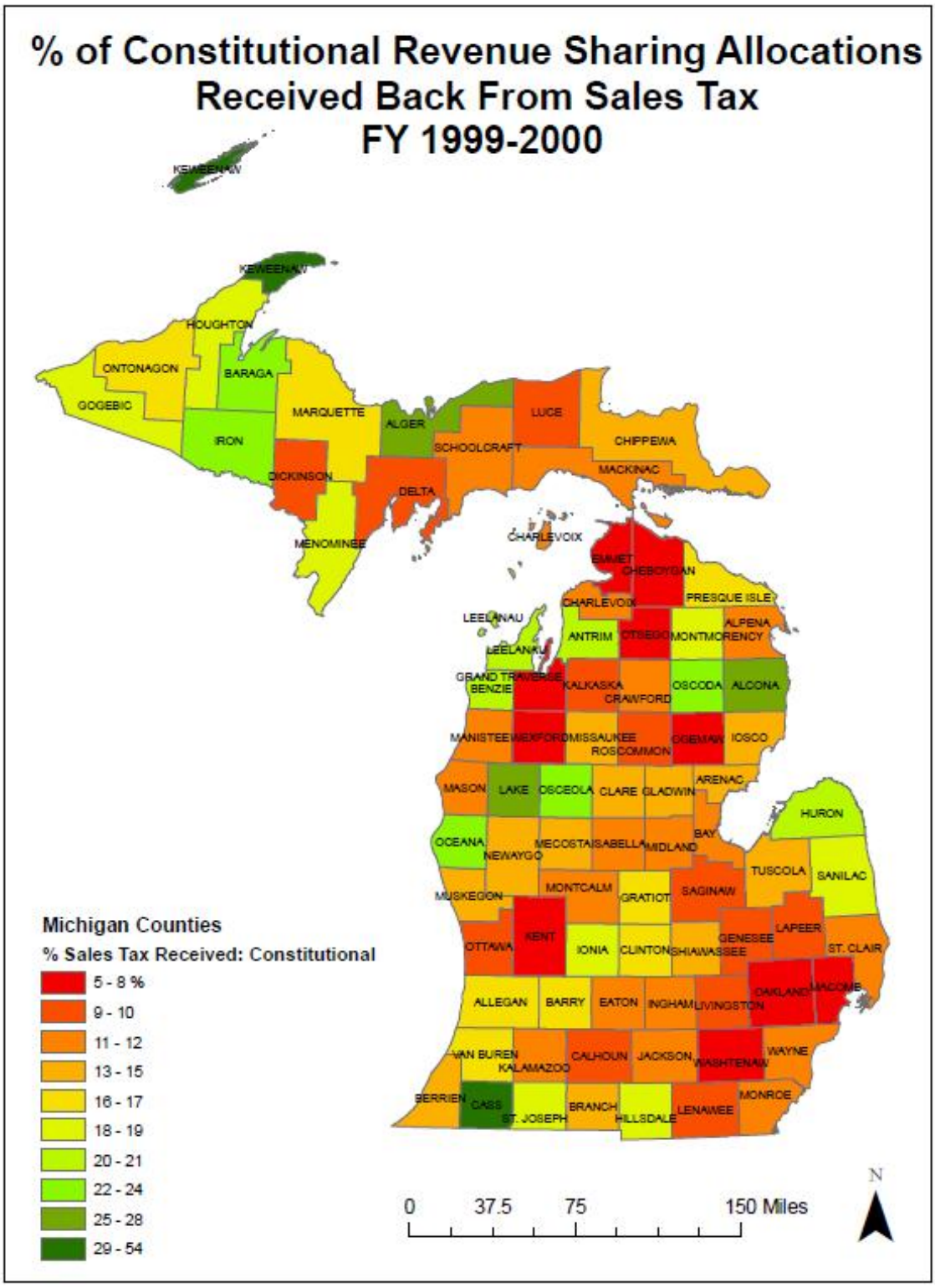


Figure 11: Largest percentage of sales tax returned by constitutional revenue sharing payments

Based upon this analysis, our current practice of collecting sales tax contributions and re-distributing these dollars in the form of per-capita revenue sharing is resulting in some counties emerging as "winners" and some as "losers." Areas in Southeast and Central Lower Michigan (Wayne, Macomb, Oakland Counties) are receiving less in distribution than they are contributing in sales tax. Even though local units in Wayne County receive the greatest amount of revenue sharing dollars as shown above, it does not compare to the amount of sales tax that is generated ($1,134,565,003 billion dollars in FY 1999-2000). Ostego County in the Lower Peninsula is contributing the some of the highest sales tax per capita while receiving some of the lowest constitutional distributions. By contrast, counties in the Upper Peninsula such as Keweenau are contributing less in sales tax than they are receiving in revenue sharing dollars. In general, it is the urban and suburban counties which are contributing more and receiving less in return, particularly in Southeast Michigan, whereas rural counties in the Upper Peninsula which have low populations and levels of development are witnessing the opposite effect. It is interesting to note that these areas in the Upper Peninsula do not witness a high level of development. These relationships are highlighted in figures 9 and 11.

This pattern of distribution does not seem fair for local units in Southeast Michigan counties to receive a negative return on their sales tax investments and struggle to provide their residents with basic infrastructure and services; while local units in rural areas which do not provide those services or infrastructure, receive a positive return on their sales tax dollars. Based upon this analysis, it would appear that a larger distribution from constitutional state revenue sharing coupled with a lesser sales tax contribution limits the competition for development, which would logically fuel sprawl in rural areas. The effect of a similar concentration of revenue sharing dollars on urban areas is unknown. Furthermore, because available data constrains this analysis to the county level, a comparison between contribution and distribution of sales tax revenue on a smaller municipal scale would likely yield more nuanced and potentially more useful and interesting results.

Budget, Tax Rate and Services

Since each type of local government in the State of Michigan differ in structure, the services provided, and maximum allowable millage rate, this analysis examines a sample of how each type of local government fares in comparison to its constitutional revenue sharing allocations. With the exception of the first analysis comparing a municipality that provides a full range of services to one providing minimal services, population size is used as a constant variable in comparing each type of local government. Population is used as the constant variable since it directly relates to the amount of per-capita revenue sharing allocation each local government being compared receives. Data was obtained from the State of Michigan F65 database and the 2010 census.

Comparison of Services to Budgets

This first analysis is a comparison of Verona Township, a municipality which provides only emergency and state mandated services (assessment, elections and tax collection) to the City of Livonia, a municipality which provides a full complement of services that include: assessing, human resources, community resources, engineering, economic development, finance, fire, housing, IT, code enforcement and inspection, library, parks and recreation, planning, police, public service, water, and sewer. The purpose of this analysis is to examine the percentage of the total budget made up by revenue sharing payments in a municipality offering a full range of services receives as compared to the percentage of the overall budget in a municipality offering minimal services. As shown in Figure 12, Verona Township received $85,690 in 2010 from state constitutional revenue sharing, which made up 20% of its total revenue. The City of Livonia received $6,386,678 that year, or 6% percent of its revenue, from state constitutional revenue sharing. However, population differences could account for this difference in percentage: Livonia has 96,942 residents, while Verona's population has 1,259 residents. A comparison of two governments with similar populations is therefore necessary for further examination.

Verona Township **City of Livonia**

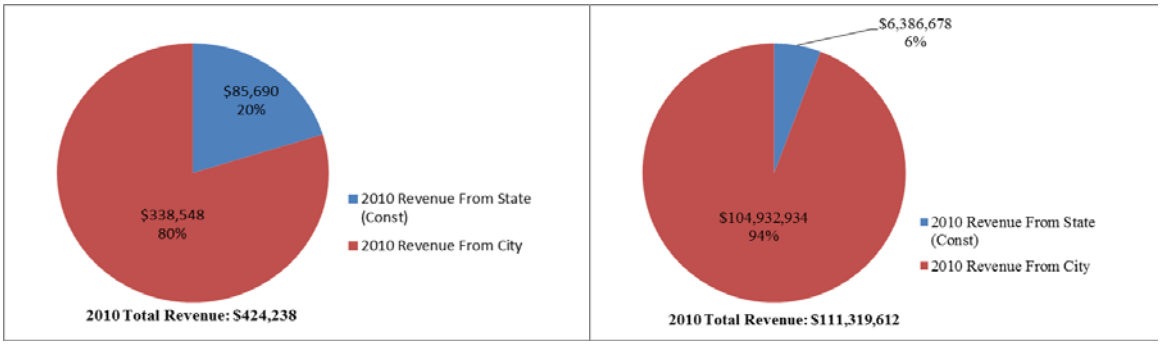


Figure 12: Comparison of Percentage and Amount

For consistency, Verona Township is used again, this time in comparison to the City of Brown. As stated above, Verona has a population of 1,259 and in 2010 received $85,690 from state constitutional revenue sharing. The City of Brown's population is comparable with 1,325 residents, and thus received a comparable amount of $84,355 from the per-capita based constitutional revenue sharing formula. The City of Brown is a full-service city which provides community development, building, fire, police, public works, water, sewer, and parks. The difference in the amount of services provided, despite the similarity in population to that of Verona is reflective of the difference of type of government, as cities inherently provide more services than general law townships. Although the constitutional revenue sharing amount the City of Brown received is similar to that which Verona Township received, the amount of revenue sharing the City of Brown received made up a much smaller percentage of its overall budget: 20% of Verona's revenues were received from constitutional revenue sharing, compared to 8% for that of the City of Brown (Figure 13). Despite receiving similar amounts, it can be

argued that the constitutional revenue allocation received by the City of Brown is not equitable when compared to Verona Township, as it has a higher need for revenues to provide services.

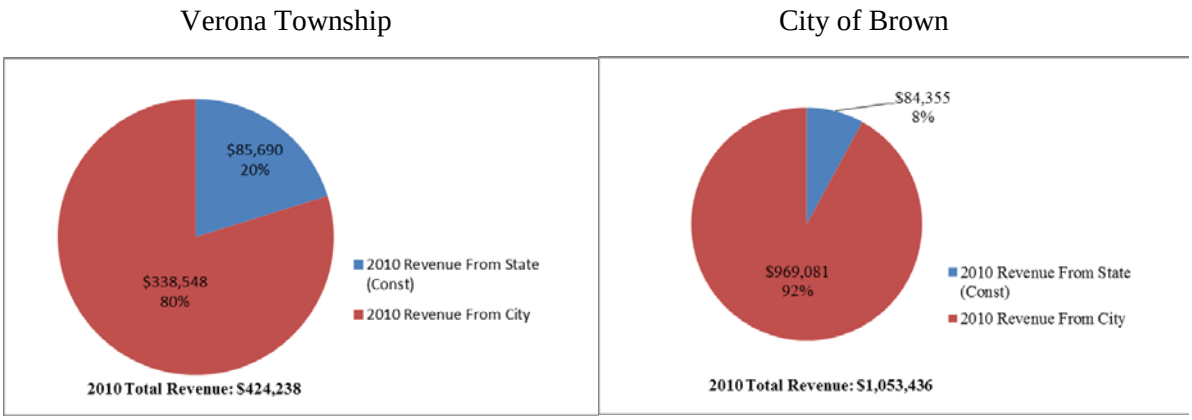


Figure 13: Comparison of Percentage and Amount of Constitutional State Revenue Sharing

Comparison of Tax Rates to Services Among Local Governments With Similar Populations

This section examines tax rates as compared to services provided between two different types of local governments with similar populations. The local governments compared have similar populations and therefore receive similar state constitutional revenue sharing amounts, yet levy different millages in accordance with the maximum allowable millage per type of local government (Figure 14).

Figure 14: Maximum Allowable Millage Rates Per Type of Local Government

Local government type	Maximum allowable millage
General Law Townships	At least 1 mill from the 15/18 mills allocated among townships, the county, public schools, and school district
Charter Townships	Up to 5 mills, may increase to a total of 10 mills with electorate approval
General Law village	Up to 20 mills, limited to 5 mills – Streets 2.5 mills – Cemeteries 12.5 mills – Operations
Charter Village	Up to 20 mills
Cities	Up to 20 mills plus additional mills for solid waste services, library services, services for the aged, and police and fire pension funding

Sources: Michigan in Brief, Citizens Research Council

Comparing a City to a General Law Township:
City of Brown - Verona Township

As shown in Figure 15, the difference between Verona Township's budget of $424,328 and the City of Brown's budget of $1,053,436 comes largely from revenue raised by the municipality itself: Verona Township levies 4.76 mills, whereas Brown City residents pay 18.12 mills.

Although Verona Township receives a higher percentage of its revenue from state constitutional revenue sharing than the City of Brown, Verona is limited to the amount of taxes it can levy so the higher percentage may be necessary. However, Verona does not offer any services. The City of Brown in comparison levies a higher tax rate, receives less of percentage of its revenues from state constitutional revenue sharing, and offers full services. The question this scenario presents is: is the per capita revenue allocation fair and addressing need? Cities can levy higher tax rates, so it may be considered fair that the City of Brown receives less of a percentage of state constitutional revenue sharing than Verona Township with its much lower cap on allowable millage. Conversely, however, when examining services offered, it can be argued the constitutional revenue sharing is unbalanced because the City of Brown offers a full range of services compared to Verona, and receives less support for doing so in terms of the percentage of its budget supplied by constitutional revenue sharing.

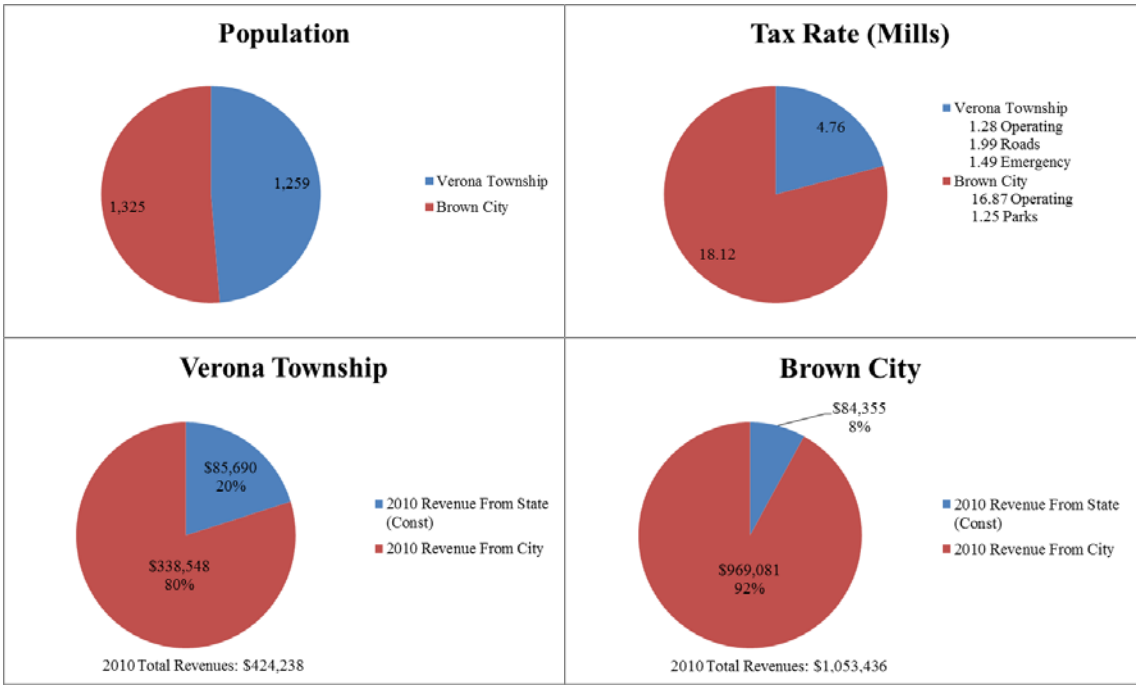


Figure 15: Comparison of Verona Township and the City of Brown Millage Rates to Percentage and Amount of Constitutional State Revenue Sharing

Comparing a City to a Charter Township:
Bay City- Pittsfield Charter Township

Bay City and Pittsfield Charter Township have similar populations (34,932 and 34,663, respectively) and offer a similar full range of services (assessing, building and code enforcement, engineering, fire, human resources, IT, parks and recreation, planning, police, water, sewer, and solid waste). However, Pittsfield Charter Township levies 5.15 mills of its 10 mill maximum (five of which require voter approval), whereas Bay City's assessment of 21.48 mills exceeds its 20 mill maximum, and therefore must reflect at least one dedicated millage. As shown in Figure 16, Pittsfield Charter Township receives 12% of its revenue from state constitutional revenue sharing, whereas Bay City receives just 7% of its total revenue from revenue sharing.

In this case both municipalities are almost indistinguishable from each other in regards to population and services offered, yet because charter townships are limited to levying a smaller millage rate than cities, Pittsfield Township relies more on revenue sharing than does Bay City. It can be argued that since both municipalities are practically indistinguishable, their revenue sharing amounts should equate to similar percentages of the overall budget.

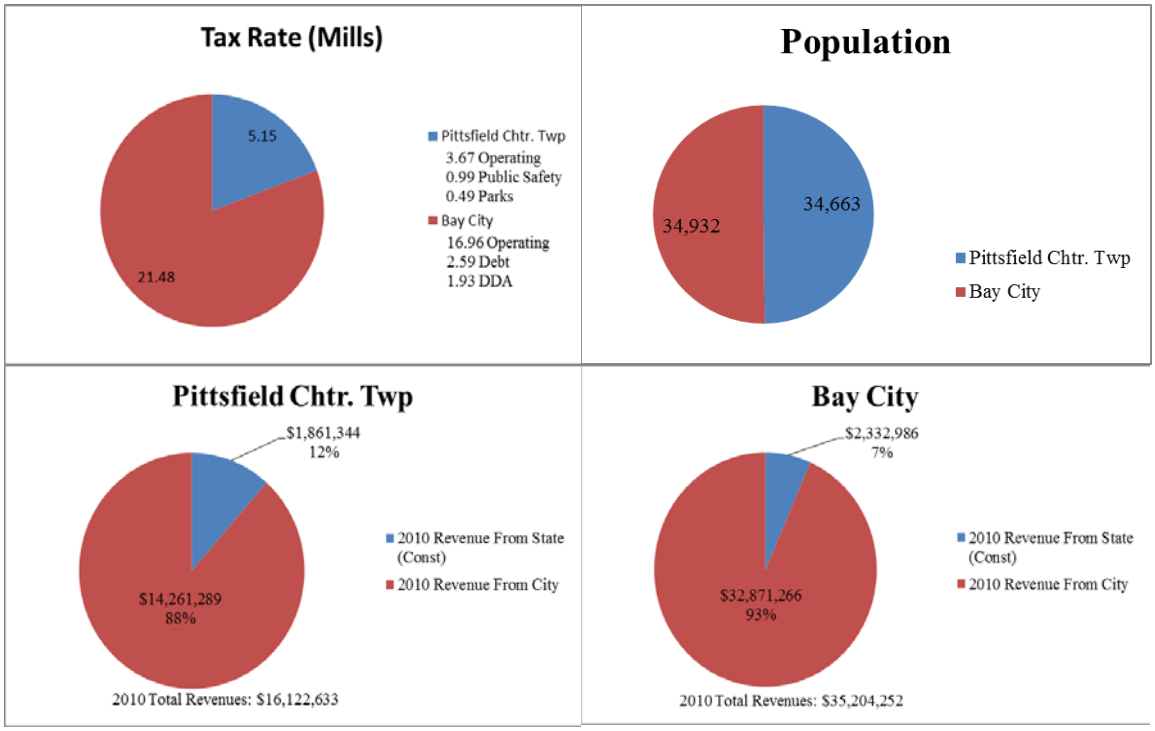
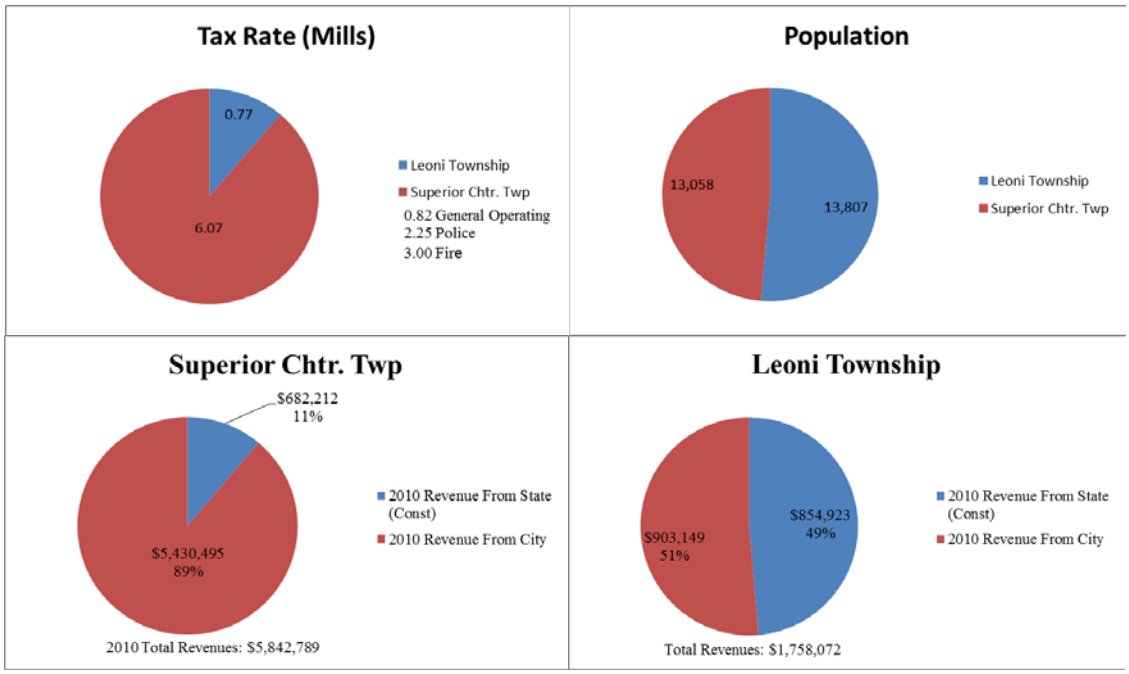


Figure 16: Comparison of Pittsfield Charter Township and Bay City Millage Rates to Percentage and Amount of Constitutional State Revenue Sharing

Comparing a Charter Township to a General Law Township:
Superior Charter Township - Leoni Township

Superior Charter Township's population of 13,058 is similar to Leoni Township's population of 13,807, but the level of service provided by each varies: Superior offers assessing, building, fire, police, public works, water, sewer, parks, and planning; while Leoni offers water, sewer, and merged police and fire with Blackman Township. Superior's status as a charter township allows it to levy 6.07 mills, whereas the general law township of Leoni only assesses its residents at a rate of 0.77 mills. We see in Figure 17 that this results in Superior Township deriving just 11% of its revenue from state constitutional revenue sharing, while this mechanism comprises just under half of Leoni Township's total revenue. Although this difference is significant, the same arguments apply here as in the case of Verona Township and the City of Brown: Leoni is limited to the amount of taxes it can levy and so the higher percentage may be necessary, but Superior's expanded service offerings suggest that it may need a more proportional percentage of revenue sharing to help pay for them.

Figure 17: Comparison of Superior Charter Township and Leoni Township Millage Rates to Percentage and Amount of Constitutional State Revenue Sharing



Conclusion of Comparison of Revenues, Tax Rates and Services Offered

If we view services provided by a municipality as a need, this examination shows that municipalities which offer full services are receiving a smaller percentage of state constitutional shared revenue compared to municipalities that offer limited services. An argument could be posited that municipalities offering full services should receive more revenue

sharing to address the need of providing the services. Conversely, an argument could be posited that municipalities limited to the amount of millages levied should be receiving a higher percentage of their revenues from state revenue sharing, especially the charter townships that provide full services.

Taxable Value, Expenditures, Total Revenues & Revenue Sharing

Each local unit is affected by taxable value of real property, tax rates, total revenues, total expenditures and constitutional revenue sharing distributions. These variables are often inter-related and used for social and economic studies.

Taxable values for real property are widely used to show the desirability or demand for a place. The Midland, Michigan website gives a good explanation of how taxable values are calculated:

> … property in Michigan was assessed at half its market value for tax purposes. This is known as a property's assessed value (AV).In 1994, Michigan voters passed Proposal A, which changed the State's constitution. Proposal A shifted some of the tax burden off of property and onto the sales tax, which rose from four (4) to six (6) cents on every dollar spent.
> The result of this proposal was the development of a new way of calculating property taxes using what's known as a property's taxable value (TV). A property's taxable value is determined using one of the equations below (whichever one is less):
> (Last year's taxable value) - (losses) + (5%) + (additions);
> OR
> (Last year's taxable value) - (losses) + (the rate of inflation) + (additions) (2012)

The initial value is determined by assessed value (or half of market value) so there is an inherent "place" factor: if there are many amenities, a parcel is located near or on a lake, or sales of other parcels in the area are favorable, taxable values can rise or fall dependent of those surrounding factors. The taxable value is multiplied with the municipality's tax rate to determine a parcel's annual property tax obligation. Taxable value, therefore, can indicate a municipality's ability to generate income independent of revenue sharing payments, such as property tax payments.

Tax rates can be telling as well. Sometimes municipalities will use low tax rates competitively in comparison to other areas to draw in residents/investors. Tax rates are shown in mills (or $1 to every $1000 in taxable value) to cover costs from operational needs to special projects like road improvements. It is possible to have a community with a low rate and high taxable value and vice a versa.

Expenditures can reveal how government activities are procured. The amount of services or the level at which services are delivered can vary in cost. A highly populated area may be more costly to serve just in regards to volume of those served. In other instances a place may have low expenditures but have a need to rely on other municipalities to fill in the gaps of fewer services. Expenditures can show how thrifty one is and may imply accessibility to resources, or economies of scale and how they affect the ability of an entity to run itself.

Revenues can be a factor in a community even though public entities are non-profit driven. Examining total revenues can show how a local unit generates funds exclusive of state shared revenues. If a community has a high taxable value and large number of parcels, a higher percentage of their revenues may come from property taxes and therefore reliance on other revenue sources may not be so critical.

These variables in addition to state constitutional revenue sharing distributions can be analyzed alone and together. The revenue sharing numbers are already based on population as set in the state constitution. Data collection for this section was all from the State of Michigan website with the exception of the 2000 population figures taken from the Census.gov database.

There were challenges primarily in matching multiple sets of data together to create one master set; for example, one spreadsheet might have taxable values but not tax rates for each local government, so the tax rates were added later. The Michigan Department of Treasury's collaborative stores with Michigan State University, the F-65 Database Portal, served as a source for the secondary data gathered including: taxable values, expenditures, revenues, and the population figures for 2005. There were several variations in spelling (e.g. Freesoil and Free Soil or Grosse Pointe Shores and the Village of Grosse Pointe Shores a Michigan City) and some missing data (some expenditure data was not available in the F-65 data for 2005; Detroit was one of these). Although each municipality is required by law to report these data every year, not all of them do (Skidmore 2012).

Most of the analysis was conducted through maps created using Geographic Information Systems (GIS) software. Use of thematic maps for comparative purposes in conjunction with a few scatter-plot charts made up the analysis tools. Most time was spent rectifying data to match sets of variables on spreadsheets, where the data could be joined to the shapefiles used for spatial analysis. Where there were differences, some data was excluded on the maps during the spatial analysis. An example of this was the city of Detroit's 2005 – 2010 change in expenditure figure: the 2005 figure was not listed in the data from the F-65 portal; therefore the change from 2005 to 2010 would be extremely large since Detroit probably spent more than $0 in 2005.

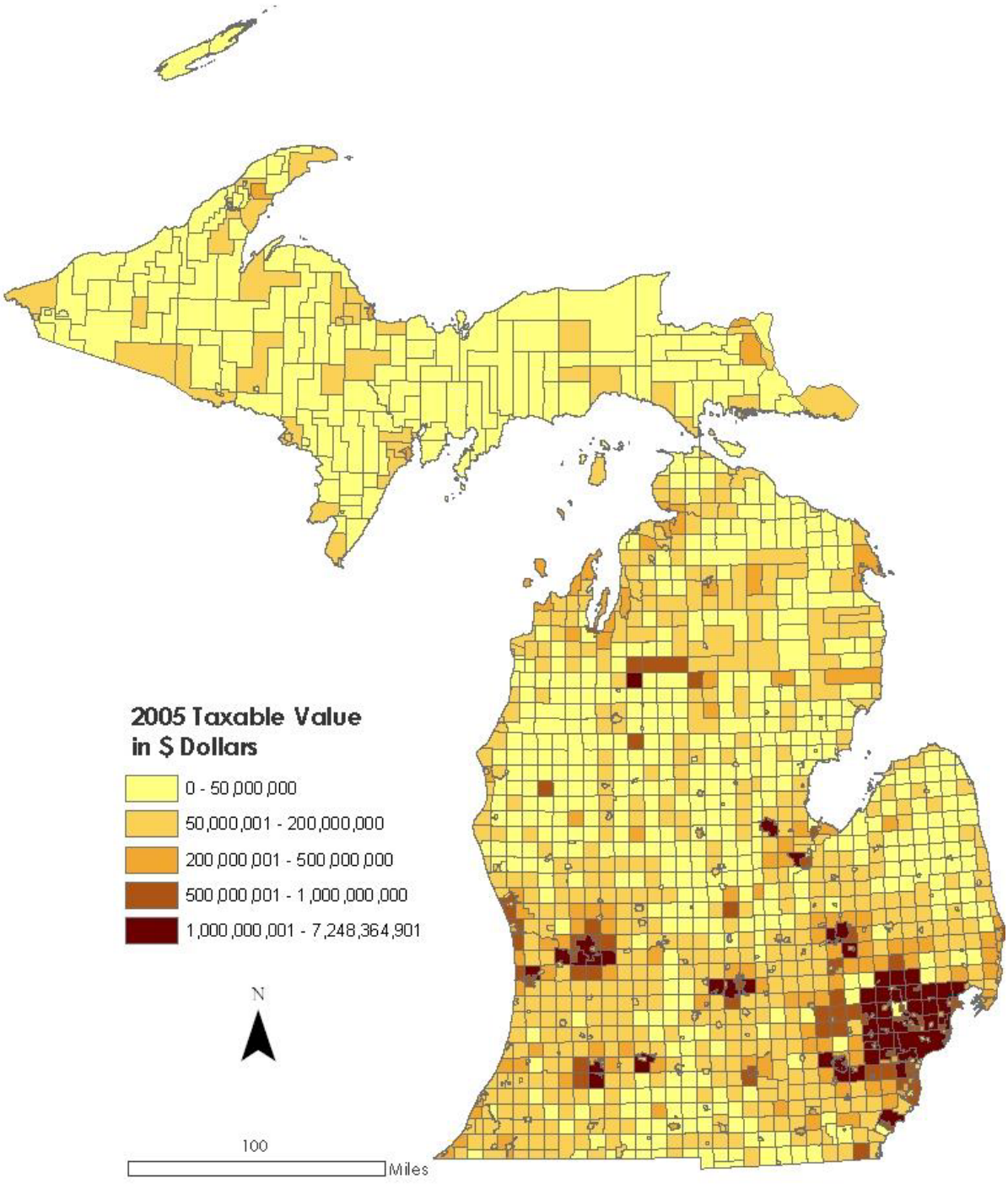


Figure 18: 2005 Taxable Value

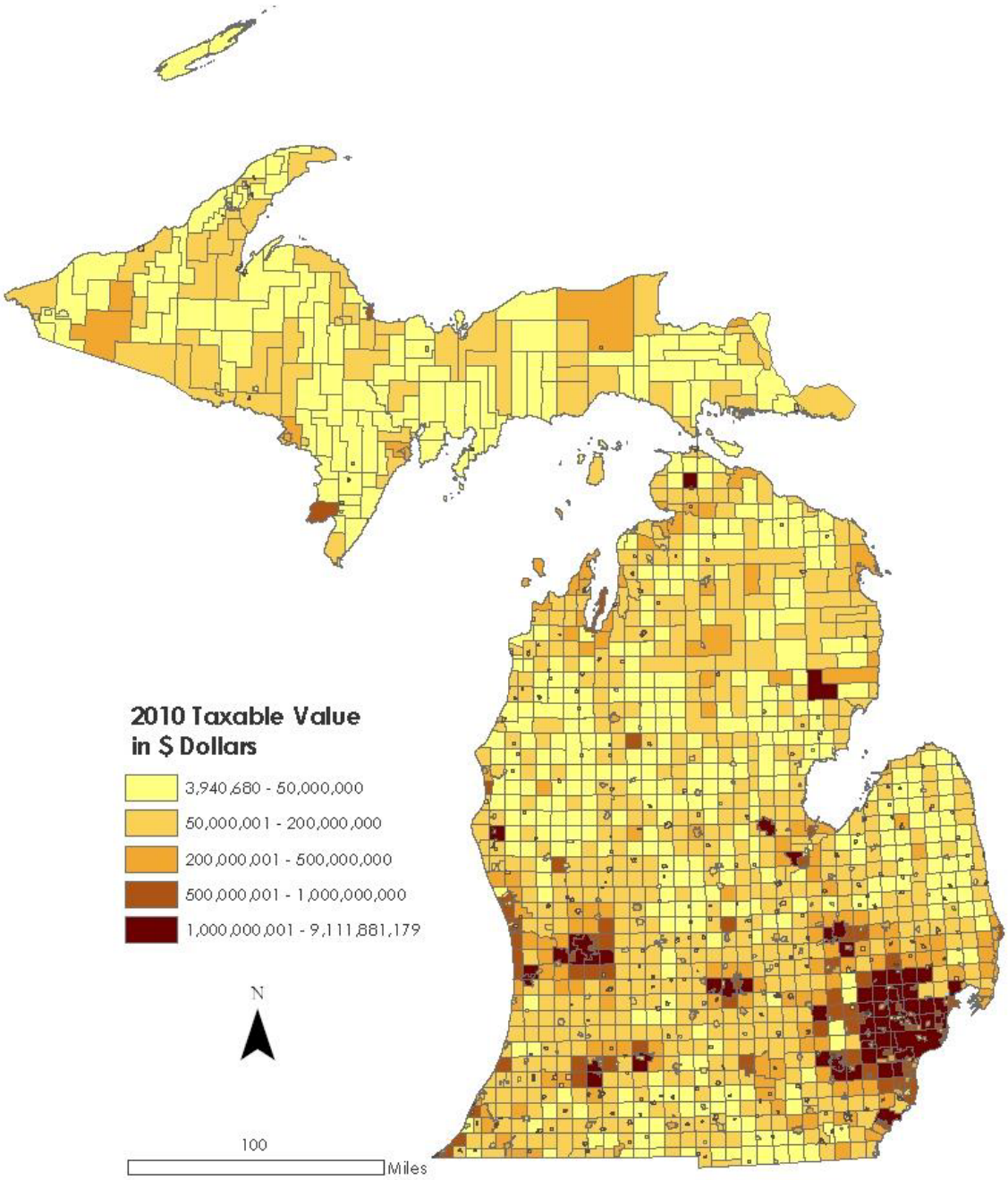


Figure 19: 2010 Taxable Value

According to figures from 2005 and 2010 (figures 18 and 19), taxable values increased. The Upper Peninsula and the areas that lie beyond the urban centers such as metropolitan Detroit, Grand Rapids, and the tri-cities of Bay City, Saginaw, and Midland in the Lower Peninsula seemed to grow in value. In light of the tough economic times, the reporting of taxable values may be skewed, as market conditions do not always affect the assessment of properties by local governments in quick fashion.

A per capita view shown in Figures 20 and 21 also reveals a rise in the upper portions of the state as well as in the coastal areas. Whether these changes are due to increases in value or a drop in population is unknown; according to the figures provided by the state, the overall population dropped by nearly 2.2% from 2005 to 2010.

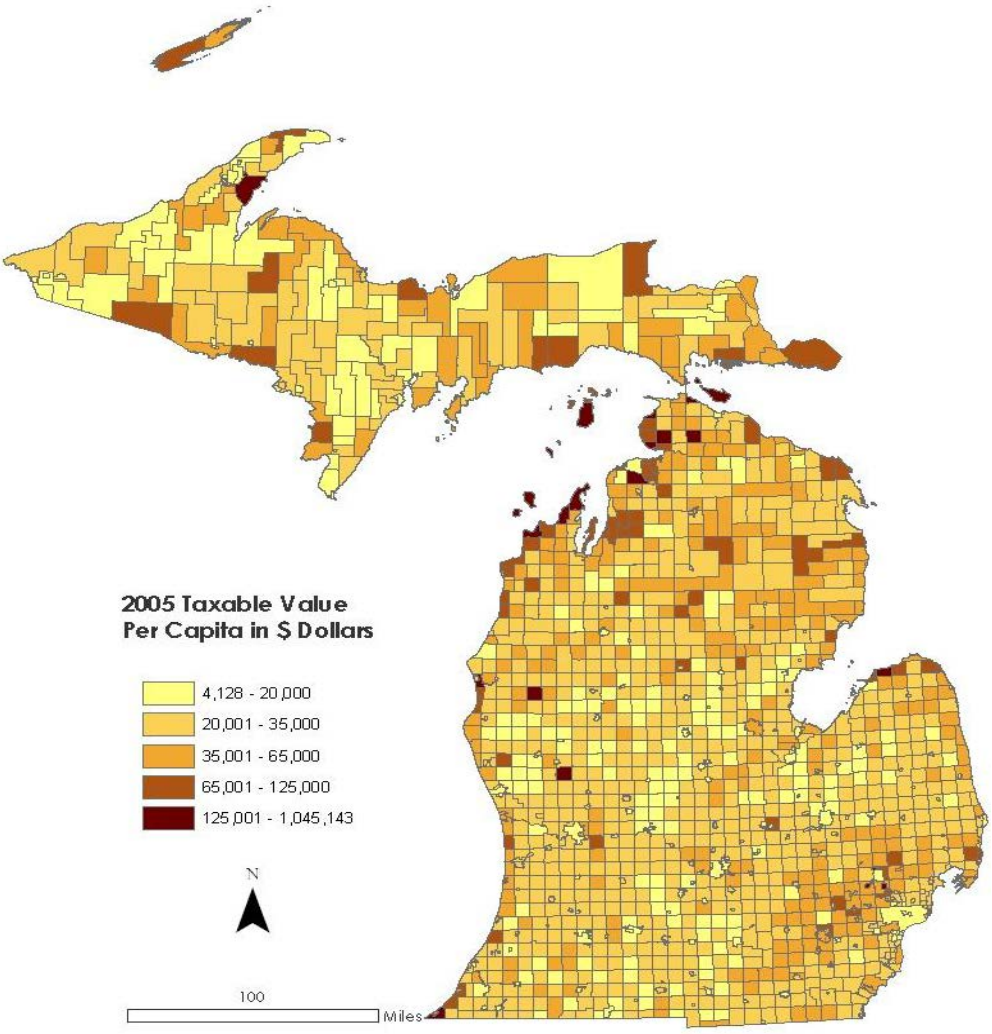


Figure 20: 2005 Taxable Value Per Capita

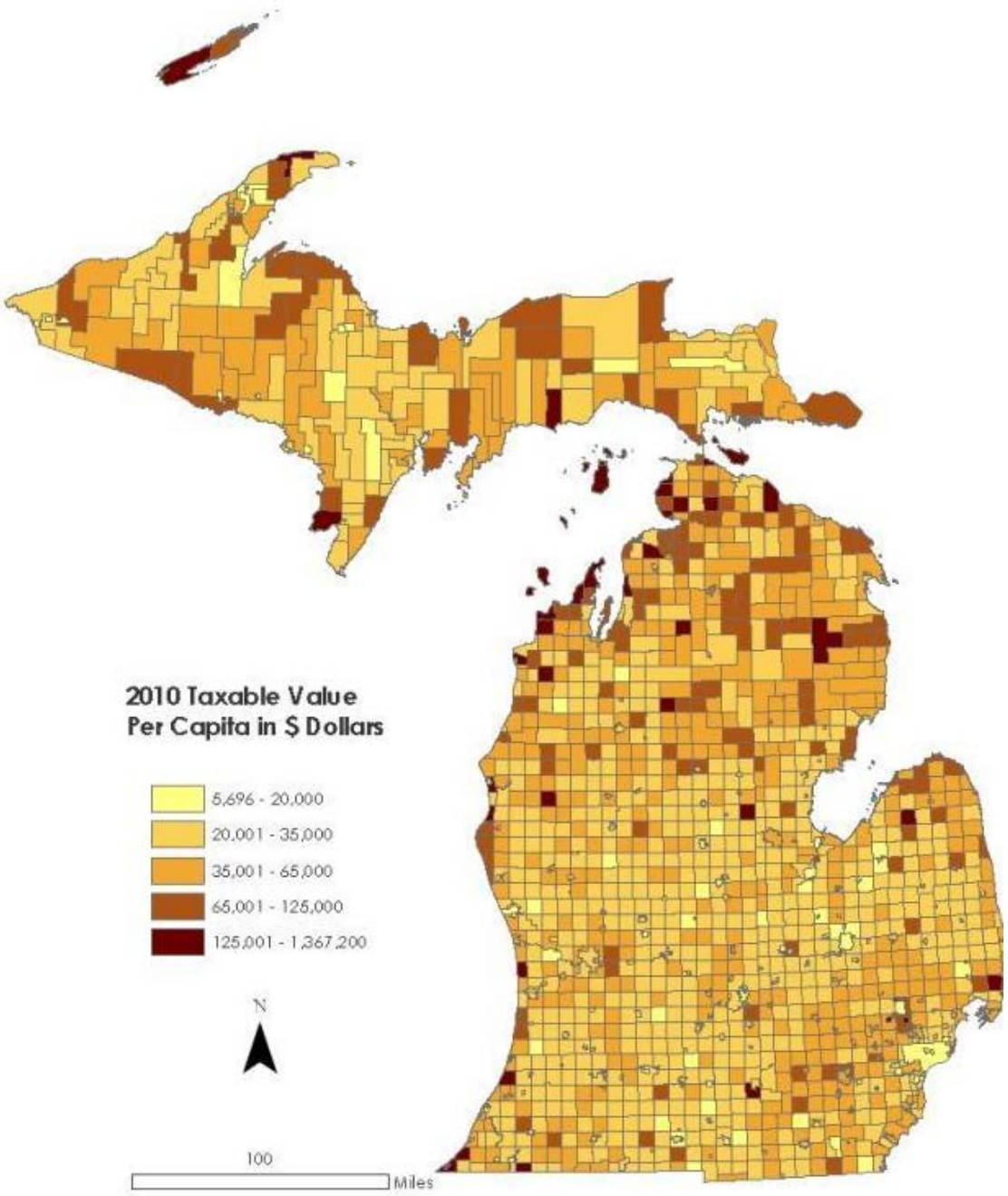


Figure 21: 2010 Taxable Value Per Capita

Viewing the taxable-value-related maps (figures 18-21), the per person numbers show that places away from the metropolitan areas may benefit from taxable values more, even though the municipalities with high taxable value overall are still higher. This could be a reflection of decades of investment in the older cities where massive infrastructure already exist; it could also indirectly suggest that lower per capita taxable value is pointing at densely populated areas. Any significant rise in a sparsely-populated area's taxable value would also have a greater impact in its per capita amount: if two communities both had an increase of $20,000 in value, but one community had a population of 2 and the other had a population of 20, the per capita figures would show $10,000 more per capita in the first and only $1,000 per capita in the second.

Expenditures (figures 22 and 23) show a pattern of higher levels in and around the bigger urban centers such as Saginaw, Flint, Lansing, but also an overall increase in the non-urban areas. Over time the costs of things in the market increase. These increasing numbers could be saying that there are already municipalities that have large spending needs and that more communities are also increasing their spending, keeping in mind the rising costs as dictated by the markets. But why would these outer-metropolitan areas need to spend more? Are they providing more services? Are there more people to serve? Do they somehow have more resources to spend than they did five years ago? (Here we see where the absence of Detroit's 2005 figure makes a difference in the maximum value from figure 22 to figure 23)

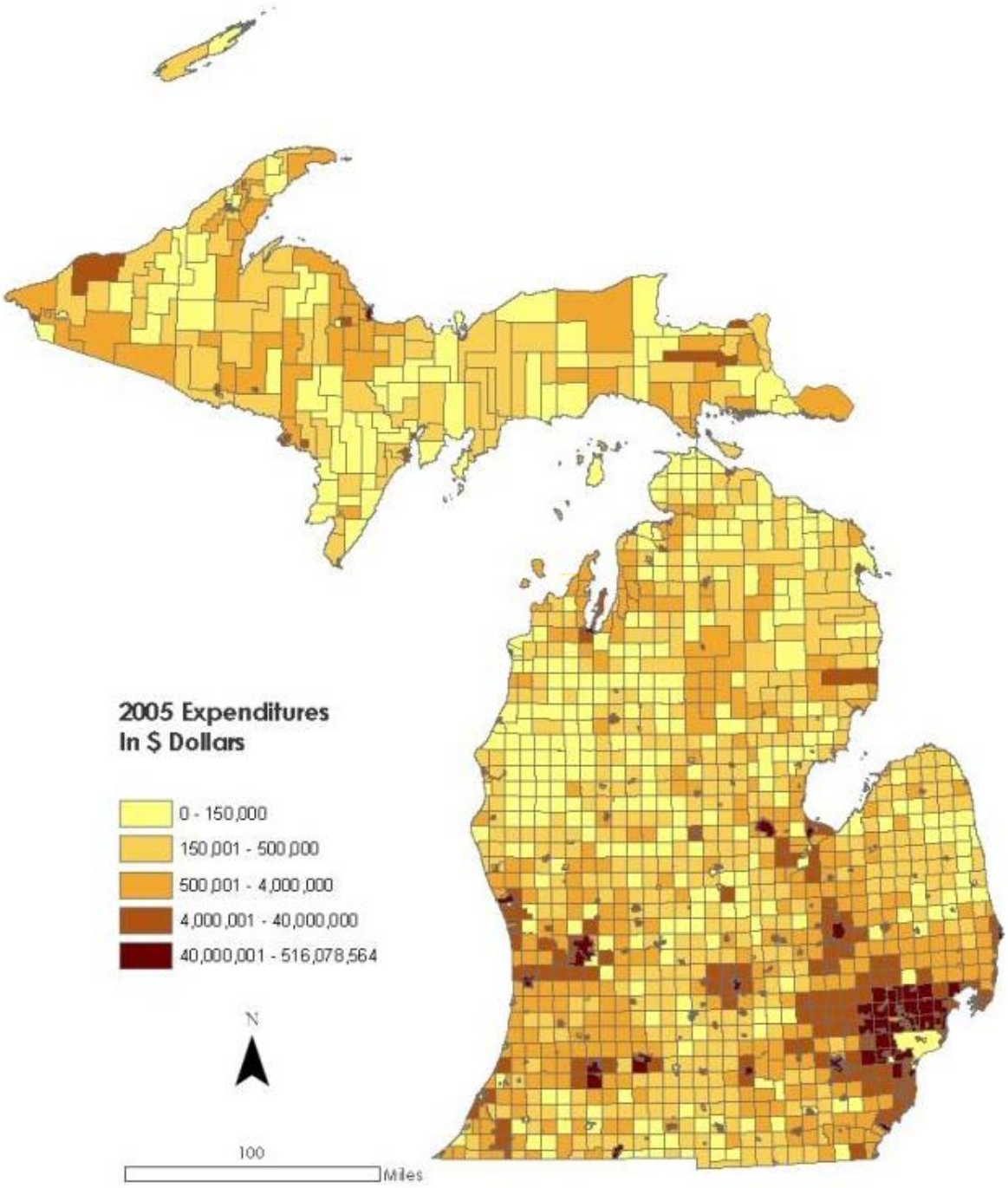


Figure 22: 2005 Expenditures

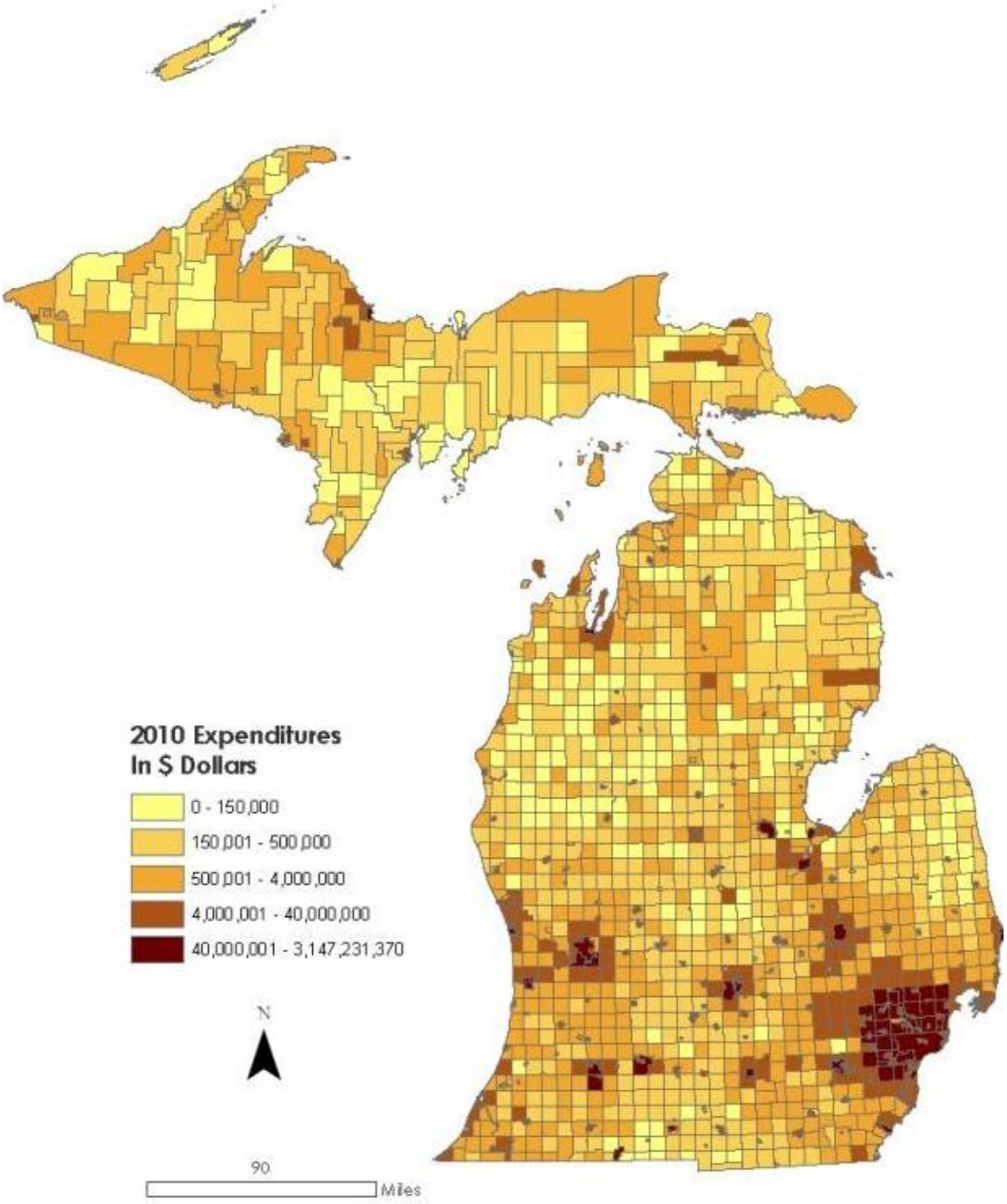


Figure 23: 2010 Expenditures

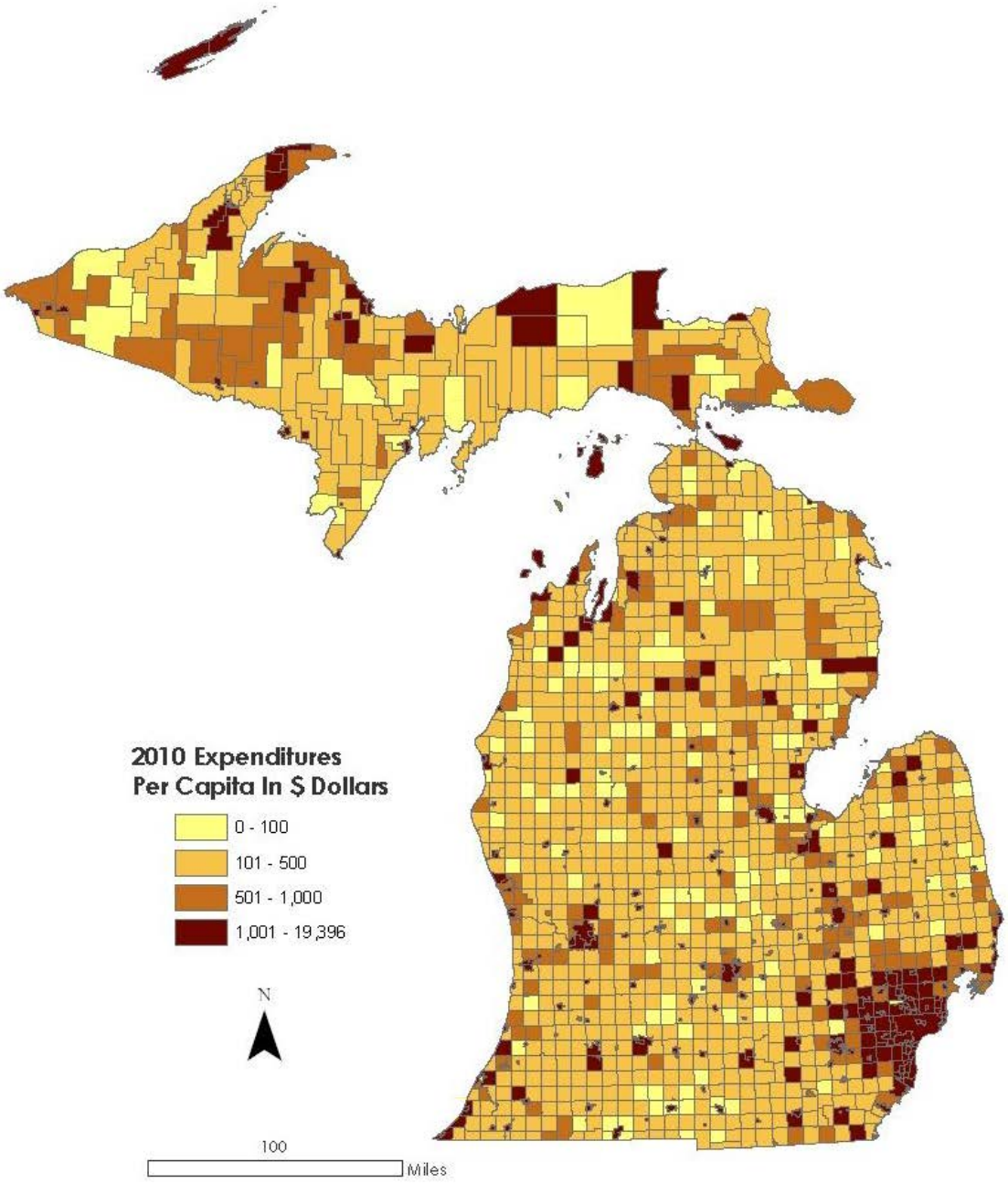


Figure 24: 2010 Expenditures Per Capita

Expenditures per capita also give some insight to how things changed in Michigan from 2005 to 2010. Many municipalities of the low value set ($0-100 per person) rose into the next category up ($101-500 per person) over the time period. Figures 24 and 25 show that the outer-ring suburbs of Detroit and Grand Rapids took a step higher in their respective levels.

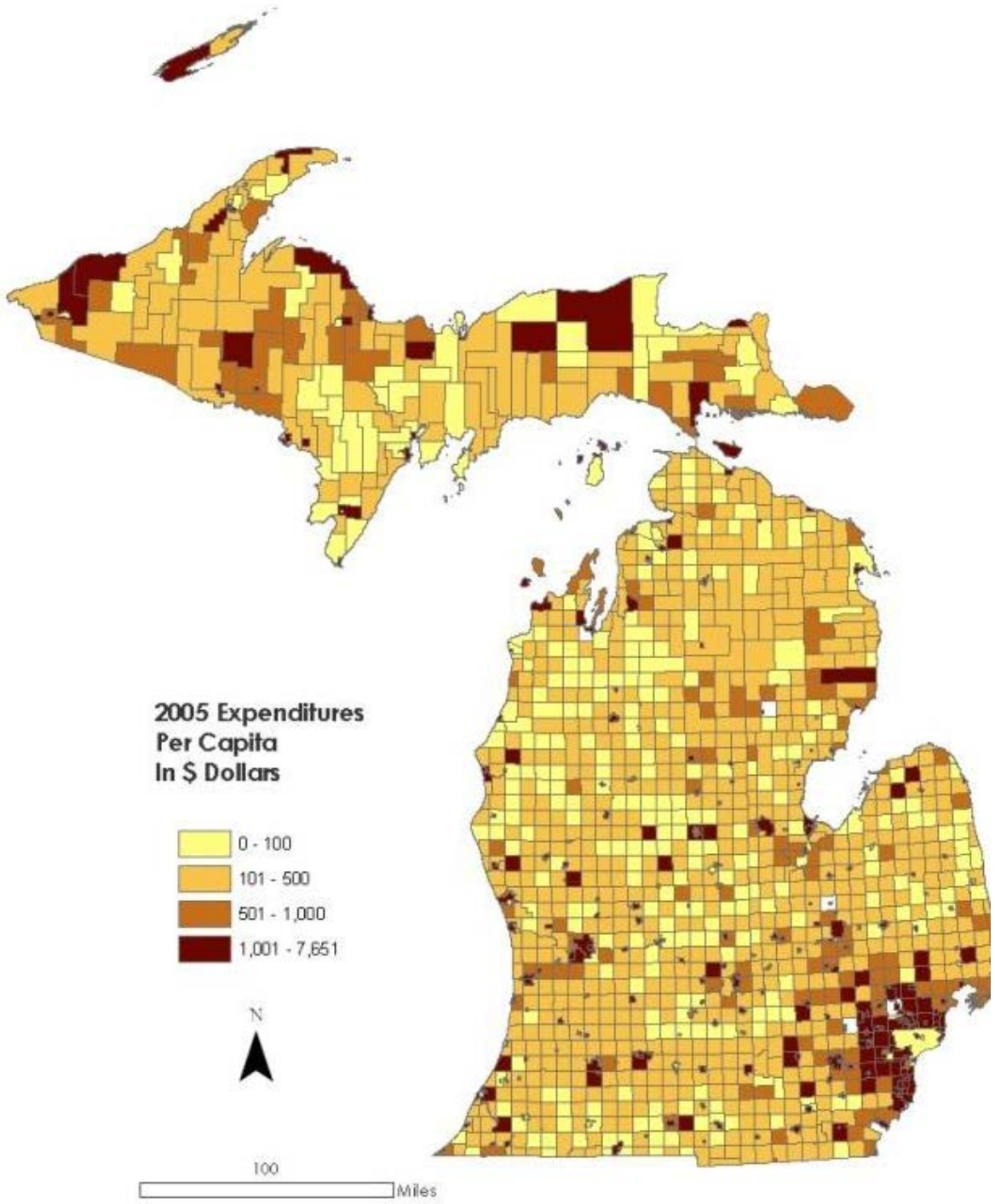


Figure 25: 2005 Expenditures Per Capita

General fund expenditures typically include capital projects like facilities, additional police and fire service, and the equipment that helps deliver those services. If these areas had increases in their service needs, this could explain why there was an increase in spending. Infrastructure costs can also show in expenditures, which would be affected if additional utilities or roads were supplied. More people in a community usually means more cars using the roads,

more police and fire service hours, and the higher rate at which water mains could wear down or break due to higher use. Maintaining and providing more of just these examples is expensive and can be related to population movements from area to area.

The change in expenditures per capita from 2005 to 2010 shown in figure 26 looks messy but there is some significance here.

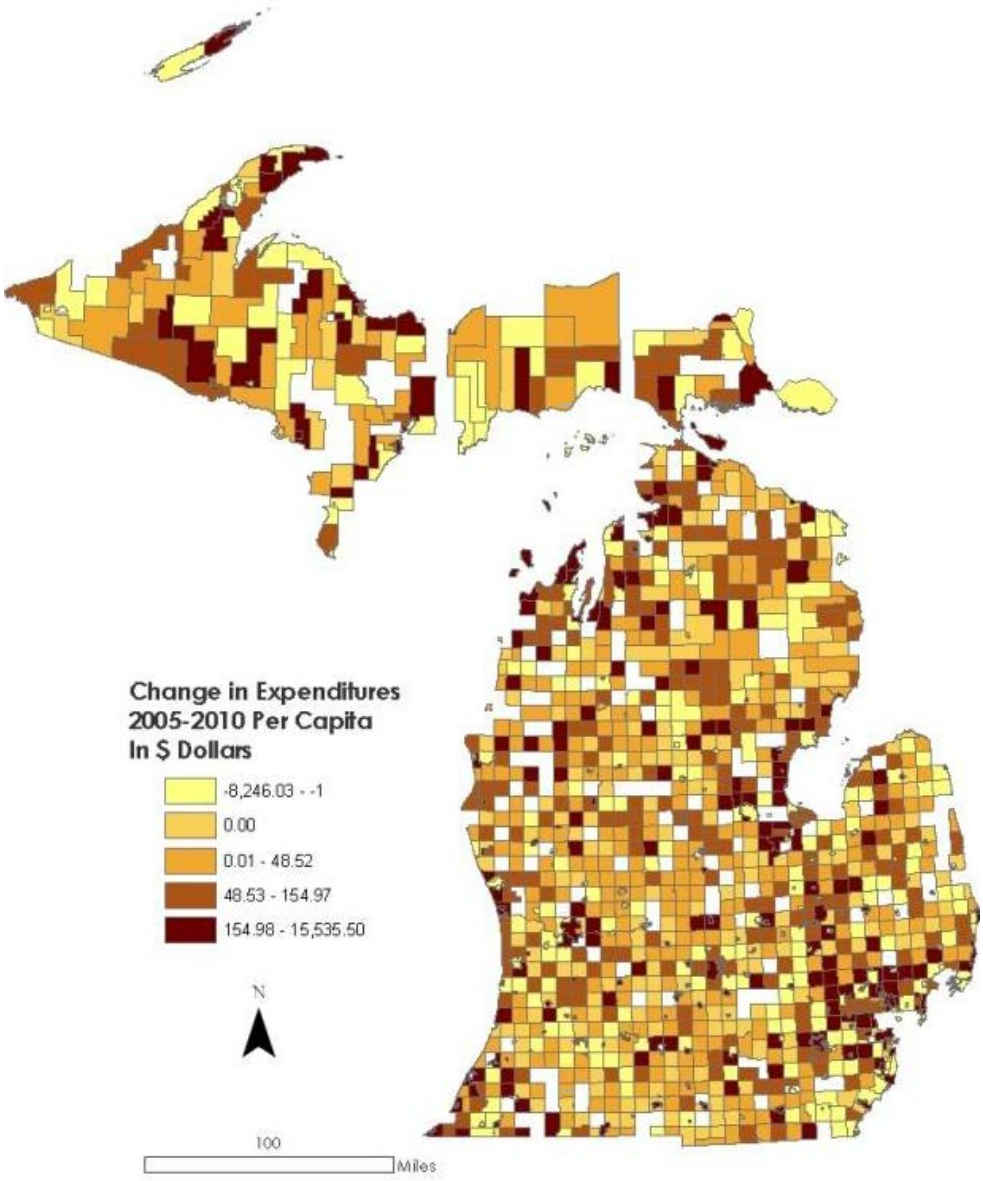


Figure 26: Change in Expenditures Per Capita 2005-2010

Even though it seems there are differences in levels all over the state, the upper and outer regions, away from the metropolitan areas, also have high per capita spending through the time period. Again, this could be the result of moving populations and delayed adjustments to budgets and operational costs. Also, the housing crisis that the United States has been going through for the past seven to eight years could have had a significant per capita spending impact all over the state as communities have had to absorb persons facing lower incomes, losing their homes, and encountering difficulty affording food and other goods to support their families.

In figures 26 and 27, comparisons can be drawn between variables including constitutional revenue sharing distributions. The southern Michigan metropolitan areas (Flint, Grand Rapids, Detroit, etc.) shown in figure 27 have lower proportions of shared revenues in comparison to the more rural-based, central and northern expanses. The most reliance for spending of revenues in relation to revenue sharing exists in the Upper Peninsula's Isle Royal and the Keweenaw/Copper Country region, both low populated areas.

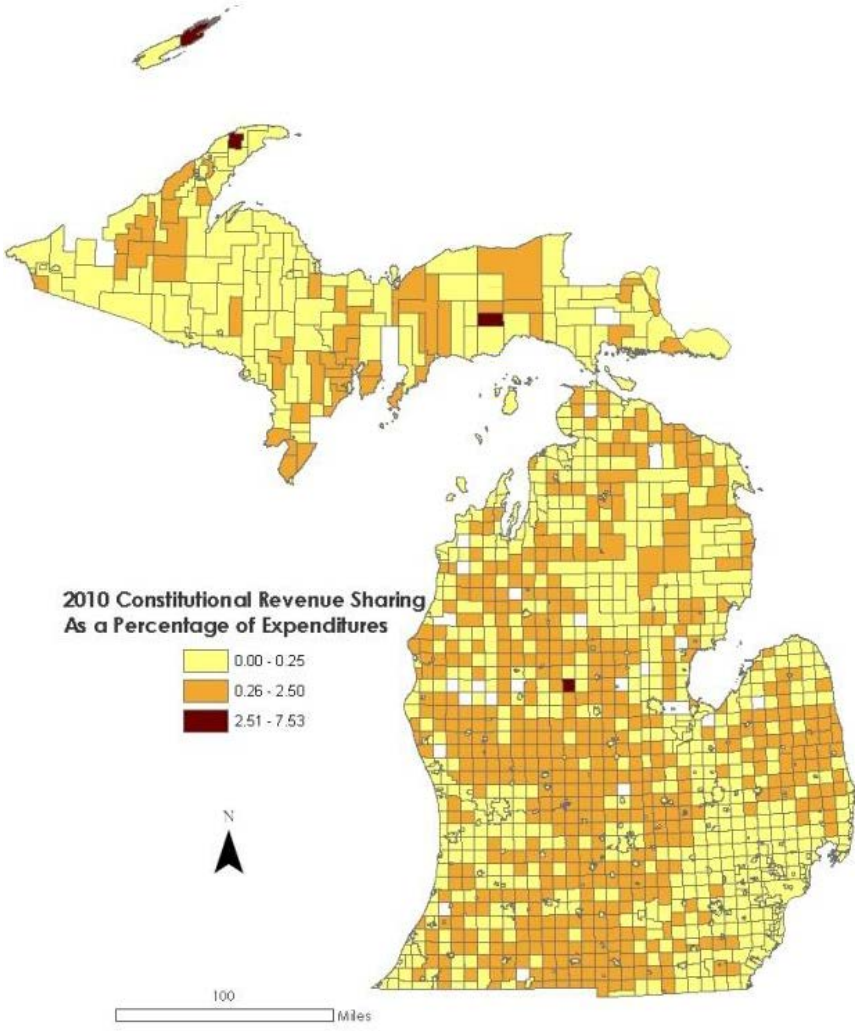


Figure 27: 2010 Constitutional Revenue Sharing as a Percentage of Expenditures

One of the most telling maps is the Dollars of Taxable Value per $1.00 of Expenditure Map in figure 28.

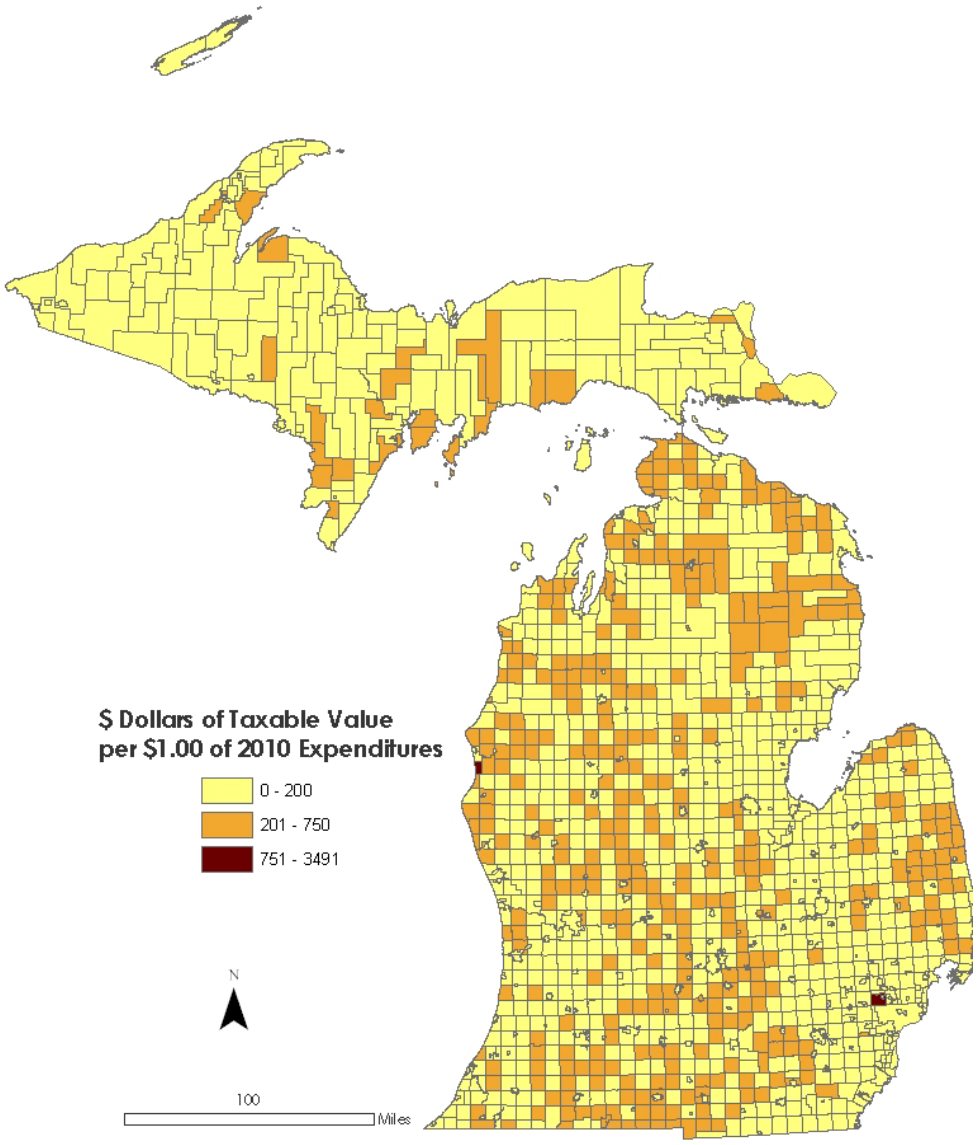


Figure 28: Taxable Value to Expenditures 2010

Not only does this map's visual analysis follow a similar pattern to the revenue sharing to expenditure map in figure 27, but it also points to a deeper issue. The darker colored regions represent places that may be able to generate more revenue from their property tax than others, while simultaneously paying less to service those properties and their residents. This is also important considering that in general, cities and urban townships located in denser metropolitan

areas tend to provide more services for themselves and sometimes for those around them. General law and charter townships in many cases provide comparatively fewer services, but can have sizable populations, thereby reducing their expenditures.

In areas where the expenditures still remain high but populations may be diminishing, may have higher tax rates, shown in figure 29.

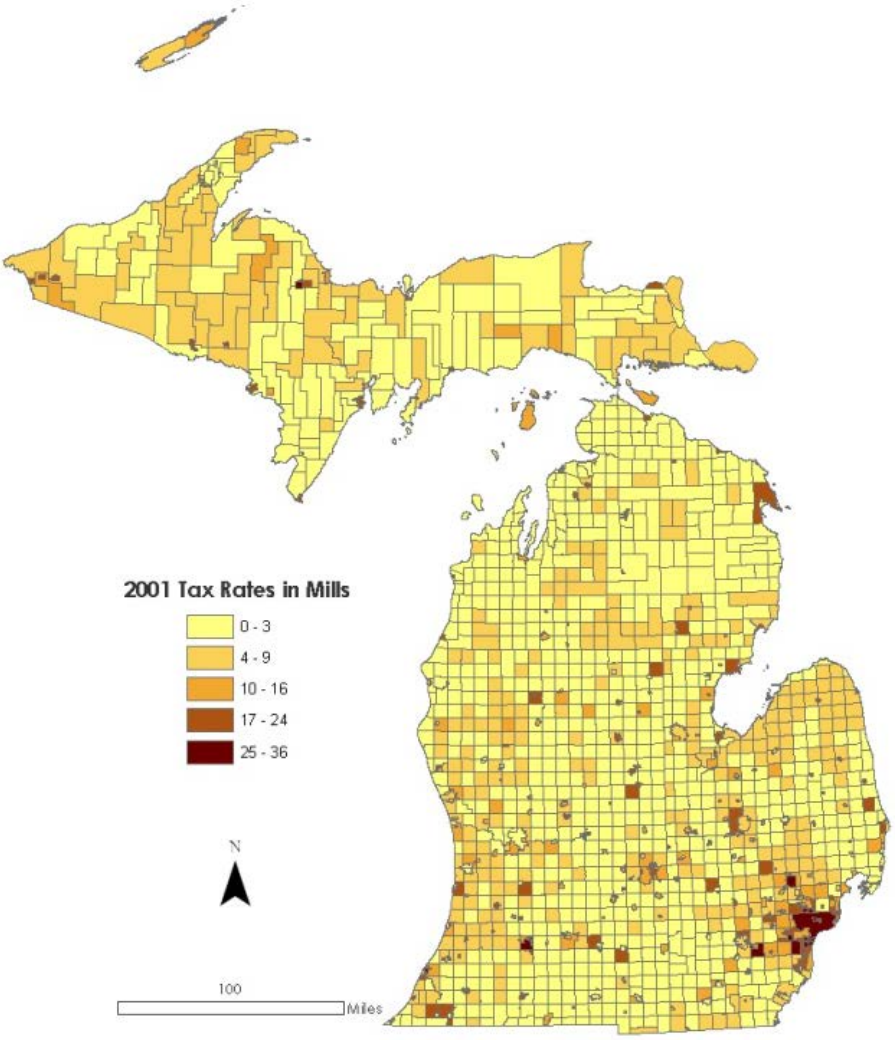


Figure 29: 2001 Tax Rates in Mills

Older municipalities also have old facilities and infrastructure, for which maintenance is necessary even after population declines in order to provide service to the remaining citizens and businesses. Rate increases are then required to cover costs. Even when revenues are higher in comparison to other communities, capital costs can be staggering; Detroit for instance has a very high revenue level, but also takes care of systems that are geographically challenging. Their

water system spans a wide area even as there are fewer Detroiters to support it. As a matter of municipality type, townships are limited to how many mills they can levy.

Figures 30 and 31 show an increase in total revenues specifically in the Upper Peninsula. There is also a rise in the outskirts of the Grand Rapids area and the Metro Detroit region. This, along with increases in expenditures and taxable values, shows a strong indication that there is movement of populations away from the older, established urban areas.

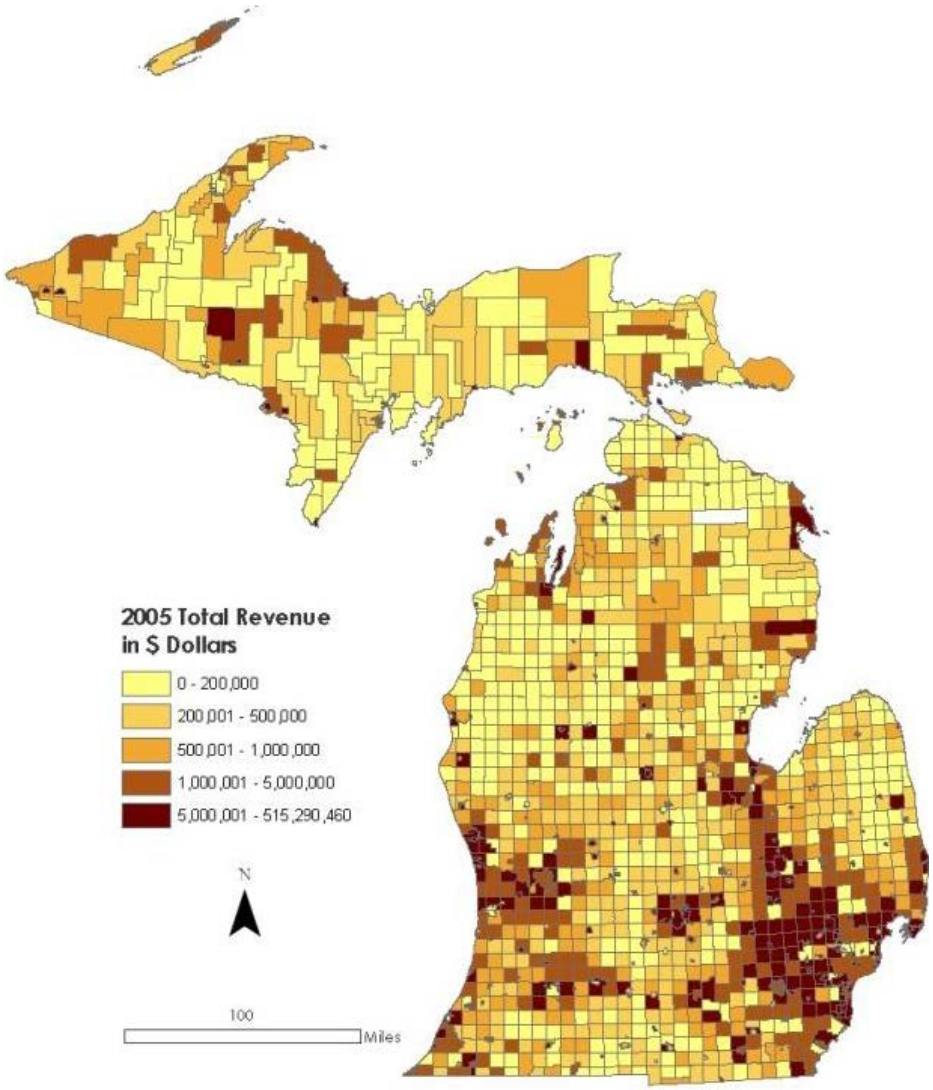


Figure 10: 2005 Total Revenue

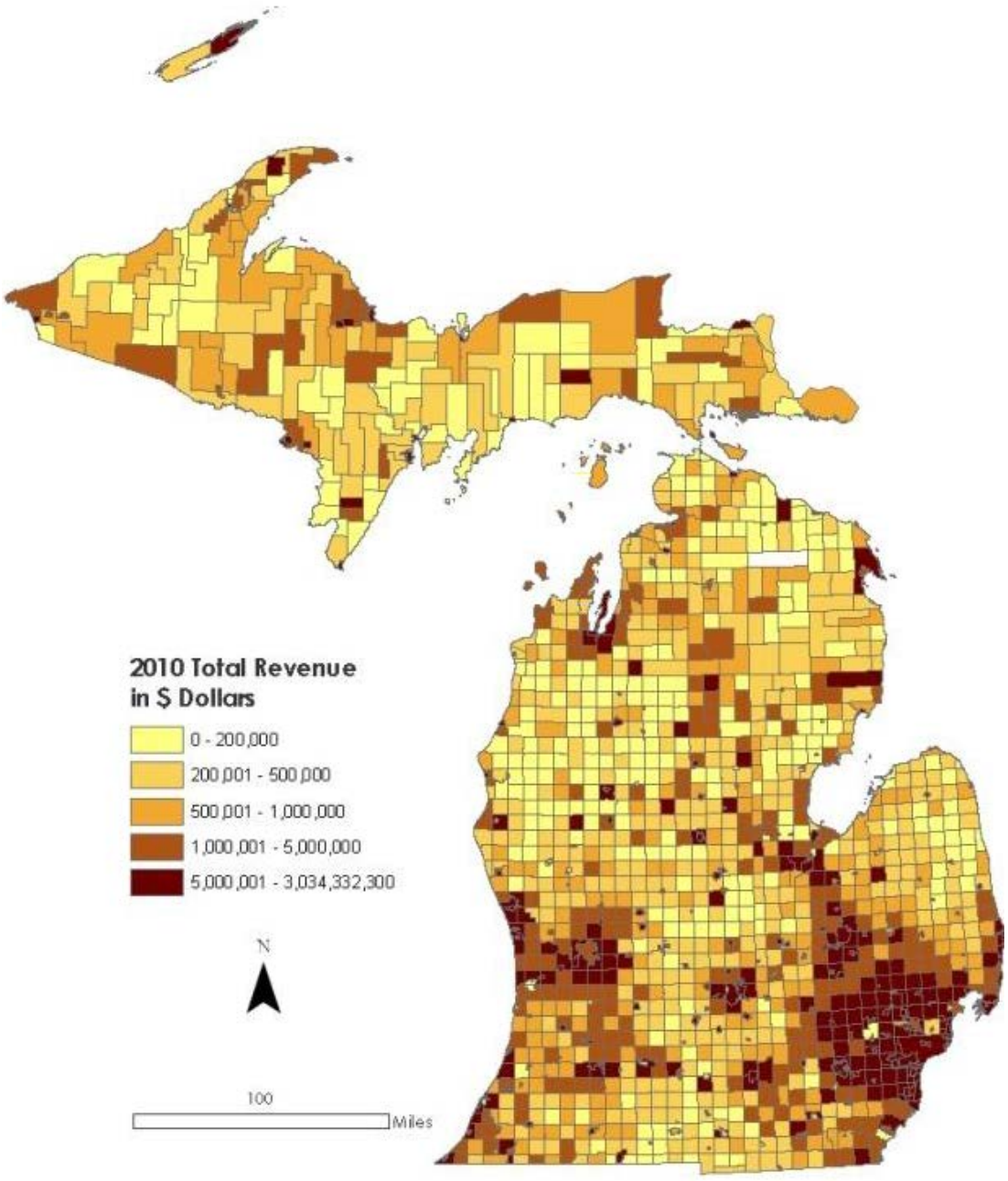


Figure31: 2010 Total Revenue

If there was a drop in population, the total and the per capita revenues shown in figures 30 and 31would reflect a drop. This is due to the fact that the primary source of revenues stems from property taxes as stated previously. The overall state drop in population of almost 2.2% during this time period affected some areas more than others.

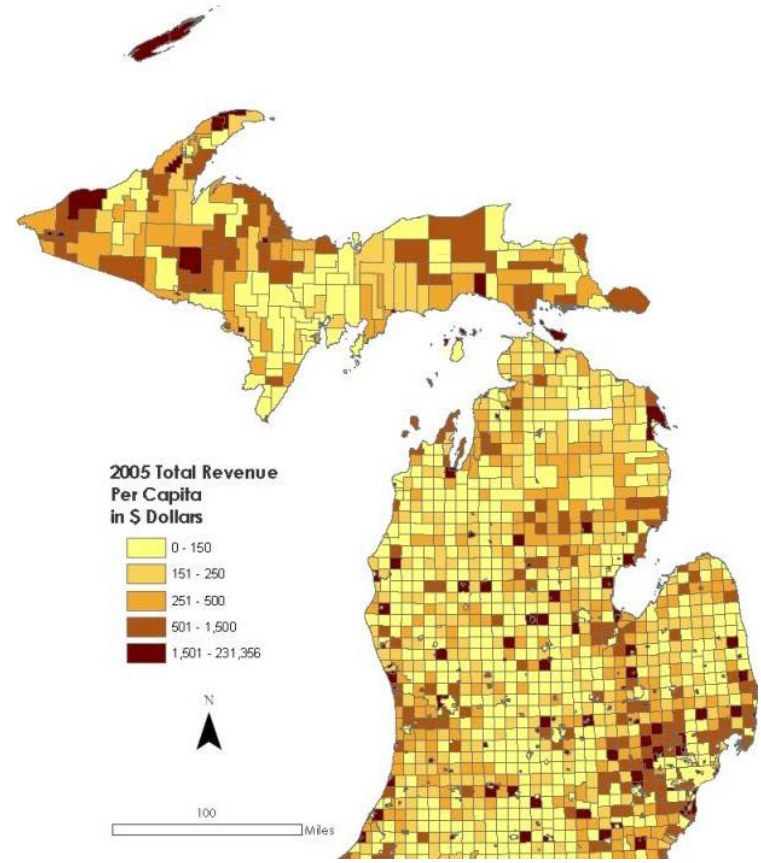


Figure 32: 2005 Total Revenue Per Capita

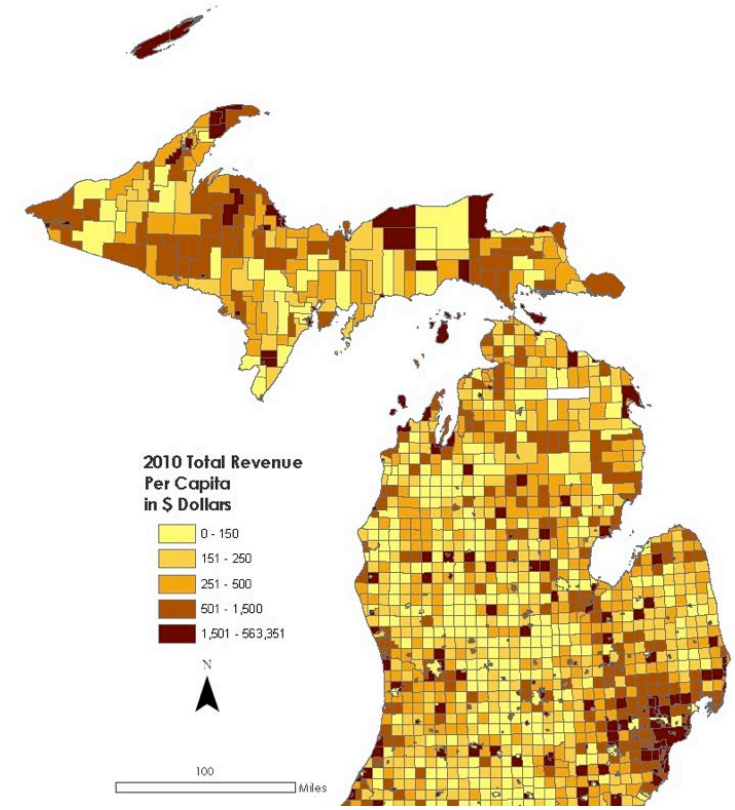


Figure33: 2010 Total Revenue

What does this all mean with regard to constitutional revenue sharing distributions? Here are some observations. In the urban centers or metropolitan areas in central and south Lower Peninsula, the overall taxable values, expenditures, and total revenues are higher than the remainder of the state. Tax rates in some of the older cities (Detroit and Flint) are also higher. For per capita figures, taxable value is higher in the north Lower Peninsula and Upper Peninsula; expenditures are higher per person in the southern/central cities but show some elevation in the Upper Peninsula; and the revenues per person have been higher in the metropolitan areas but seem to be evening out into the more central and northern expanses (shown in figure 32 and 33).

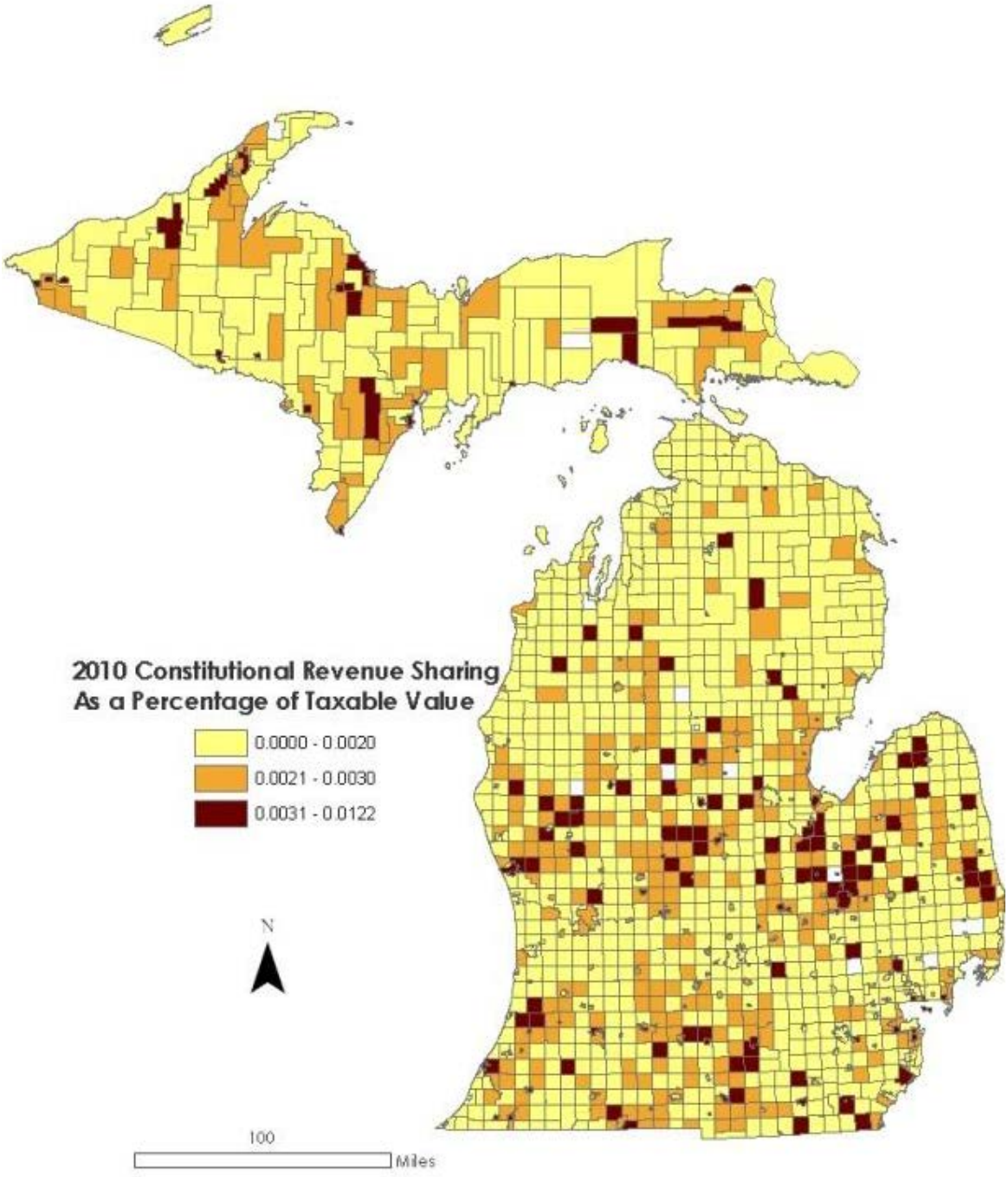


Figure 34: 2010 Constitutional Revenue Sharing as a Percentage of Taxable Value

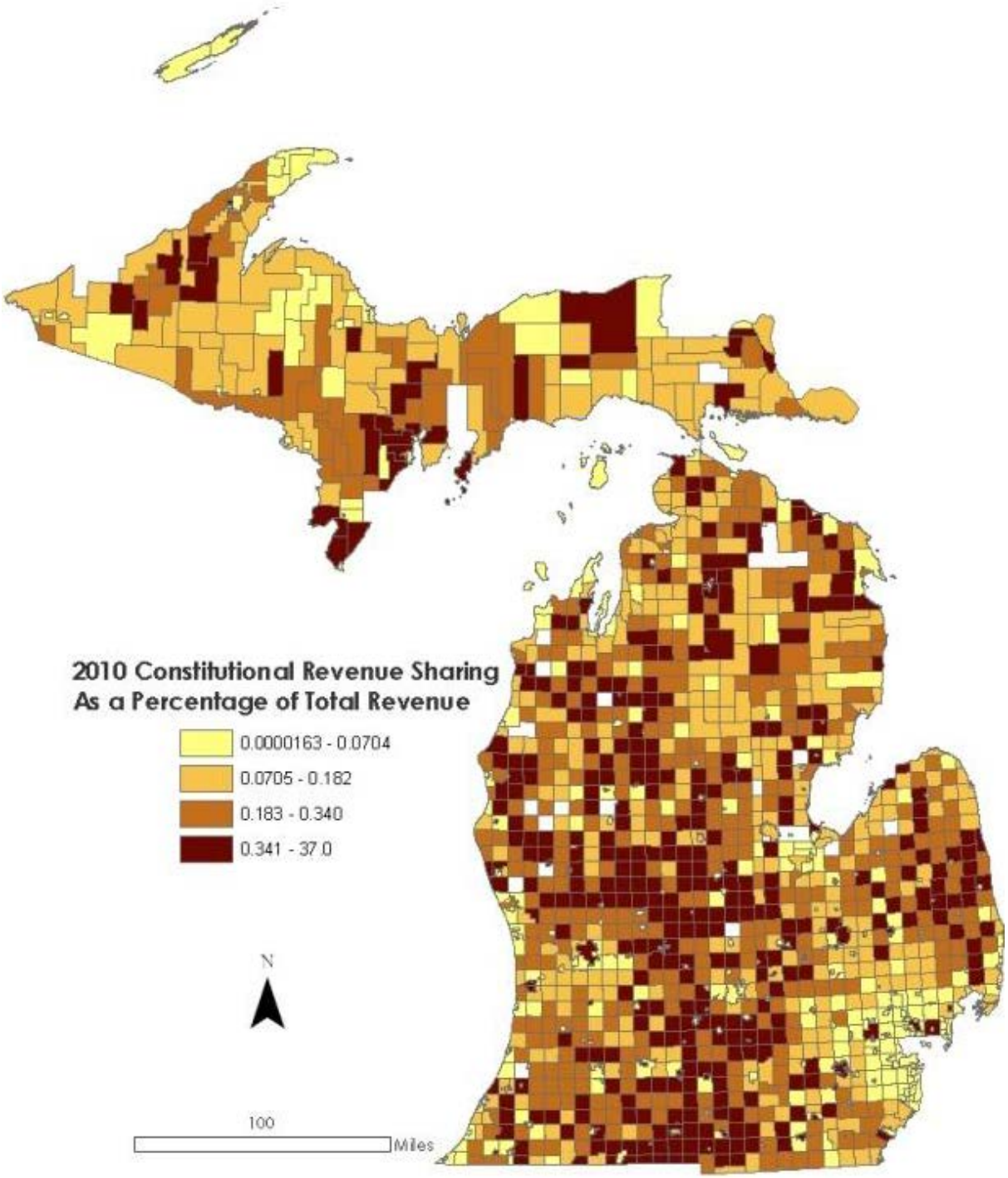


Figure 35: 2010 Constitutional Revenue Sharing as a Percentage of Total Revenue

There are some areas dominated by townships that have lower expenses and more possible revenue. Because they have more taxable value per every dollar of expenditure, it would seem these places have an easier time paying for the services they provide.

On the other hand, Detroit, Flint, Saginaw and Grand Rapids have a smaller ratio of taxable value to expenditures. These communities have many costs tied to older and failing infrastructure, many more people to serve, and the same or less revenues and property values than they did before.

Visually throughout the series of maps in this section, most display an “S” pattern that stretches from the Mackinaw area down the northwest coast toward the Traverse City area that then cuts toward the middle of the state; before it reaches Flint it starts to curve back toward the Indiana border. This area commonly has less population; growing taxable value, expenditures and total revenues; lower tax rates; more taxable value to expenditure dollars; and has a higher percentage of constitutional revenue sharing distributions to their total revenues. This area also exists on the periphery of the older cities of the Lower Peninsula. The Upper Peninsula shares a similar pattern of movement away from areas around and south of Marquette and around and north of St. Ignace.

This information shows a strong indication that the population is drawing away from the metropolitan areas. Perhaps the low tax rates are a draw for residents and developers to build new projects on greenfield locations. Older persons may be purchasing their “retirement” homes and do not wish to be a part of the activities often found in urban and suburban neighborhoods. Whatever the case, it brings up the question of whether some communities really need the revenue sharing they are currently receiving. Figures 33&34 show a definite flow of constitutional revenue sharing distributions in greater percentage to areas not in metropolitan regions.

Jobs

This section presents an analysis of the distribution of jobs in Michigan as it relates to the state's practice of revenue sharing. In particular, we examine the following questions: Is there any correlation, positive or negative, between “employment centers,” or communities with high concentrations of jobs per population, and revenue sharing dollars? Is there a correlation between municipalities with low concentrations of jobs per population—i.e., “bedroom communities”—and revenue sharing dollars?

These variables were selected to illustrate nuances in the concept of “population.” As defined by the Census, and therefore as used by the State of Michigan to calculate per-capita revenue sharing allocation, a community's population consists of the number of persons who reside within its geographic borders—the number of people who sleep there. However, there are many communities with a “daytime population” (standard population + jobs within community – workers who commute to a job outside the municipality's borders) that differs significantly from its standard population. Furthermore, the standard definition of population places exclusive emphasis on the portion of the community which is residential; no consideration is given to its commercial, industrial, or agricultural sections.

Little direct job data is available on the municipal level: the Federal Bureau of Labor Statistics, Bureau of Economic Analysis, and State of Michigan Current Employment Statistics all aggregate to the county level. However, the 2000 Census provides commuting data by minor

civil division which includes both the municipality of residence and the municipality of employment, and these data was used for the bulk of the analysis in this section. SPSS statistical software was used to calculate the number of workers in each community, the number of jobs in each community, and the number of persons who both live and work in the same community. An equivalent dataset from the 2010 Census appears to be in progress, but output as of March 2012 is limited to the number of workers in each community and the number of persons who both live and work in the same community. Data was missing from three townships: Green Oak, Grand Blanc, and Weare. Because detailed Constitutional revenue sharing data for each municipality was available directly from the State of Michigan only as far back as 2005, Constitutional revenue sharing payments for 2000 were estimated by multiplying the total FY2001 per-capita payment amount ($66.99) by the 2000 population in each municipality.

Figure 36 presents the distribution of jobs in Michigan in 2000 alongside the population distribution (figure 37). Most communities have fewer than 10,000 jobs, with pockets of concentration scattered fairly evenly throughout the state. This makes sense given that the majority of communities in Michigan have fewer than 10,000 residents and that places of employment are found in commercial and industrial centers, which tend to cluster together both for convenience and as a result of zoning classifications that exclude them from residential areas. Such tendency for “clustering” is particularly pronounced when viewing the maps side by side.

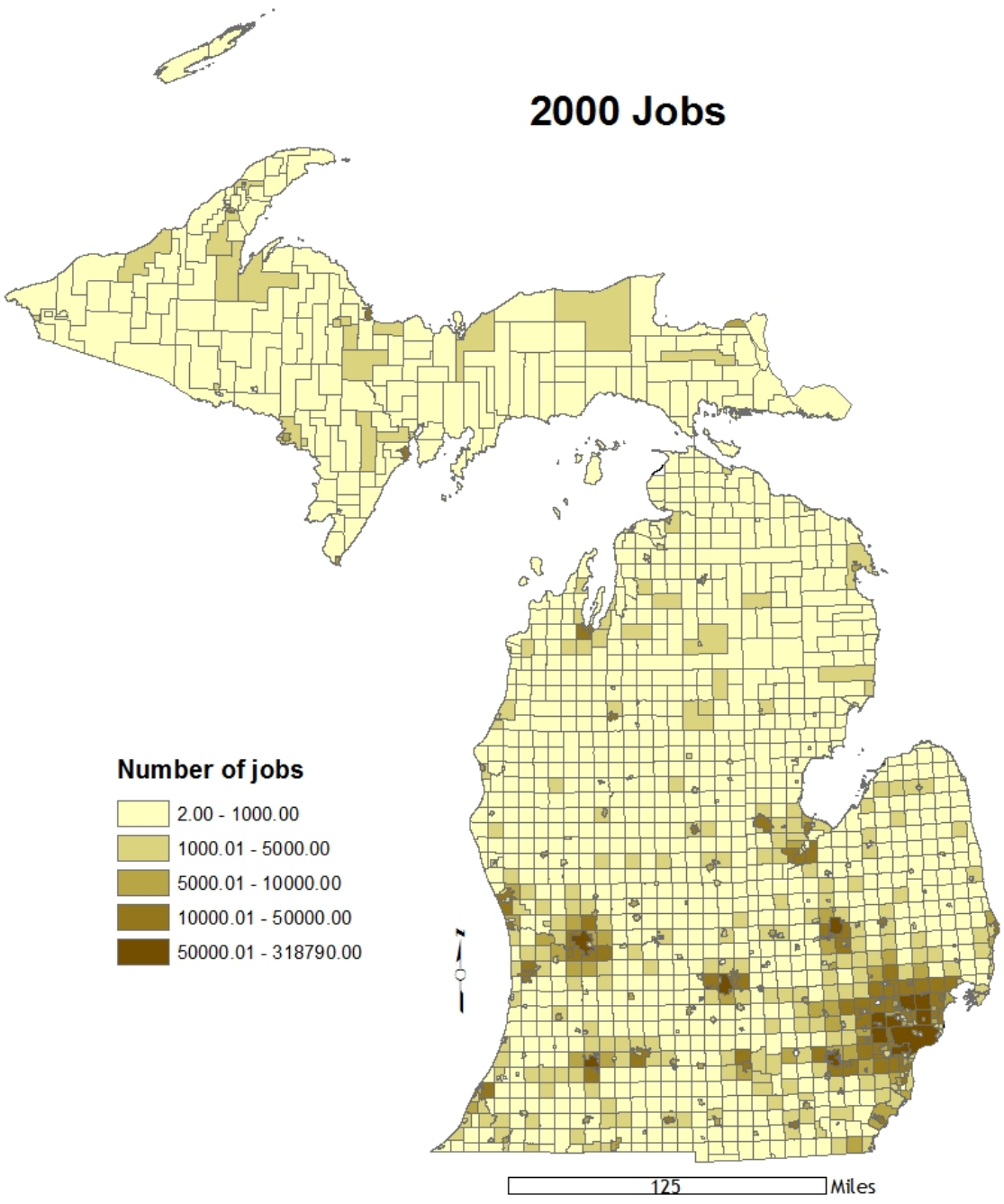


Figure 36: Number of Jobs 2000

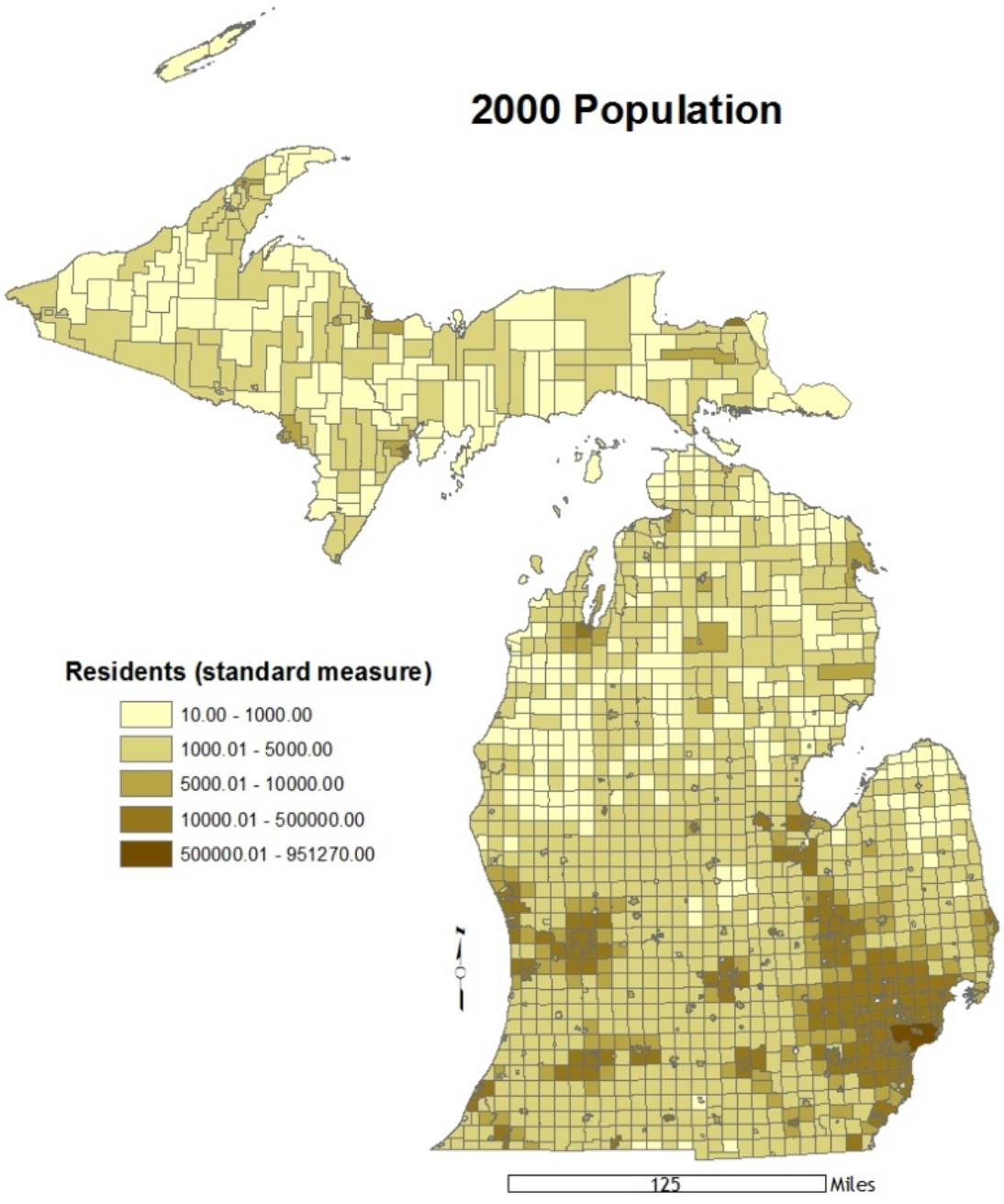


Figure 37: 2000 Population

Figure 38 presents the number of jobs in each municipality divided its population, yielding the jobs-to-population ratio or jobs per person. Municipalities with more than one job per resident, the greenest communities on the map, are considered by the White House Office of Management and Budget as "principal cities." For the purposes of comparison, we classified municipalities with fewer than 5 jobs per 100 residents – a jobs to population ratio of less than 0.05 – as "bedroom communities," shown on this map in dark blue.

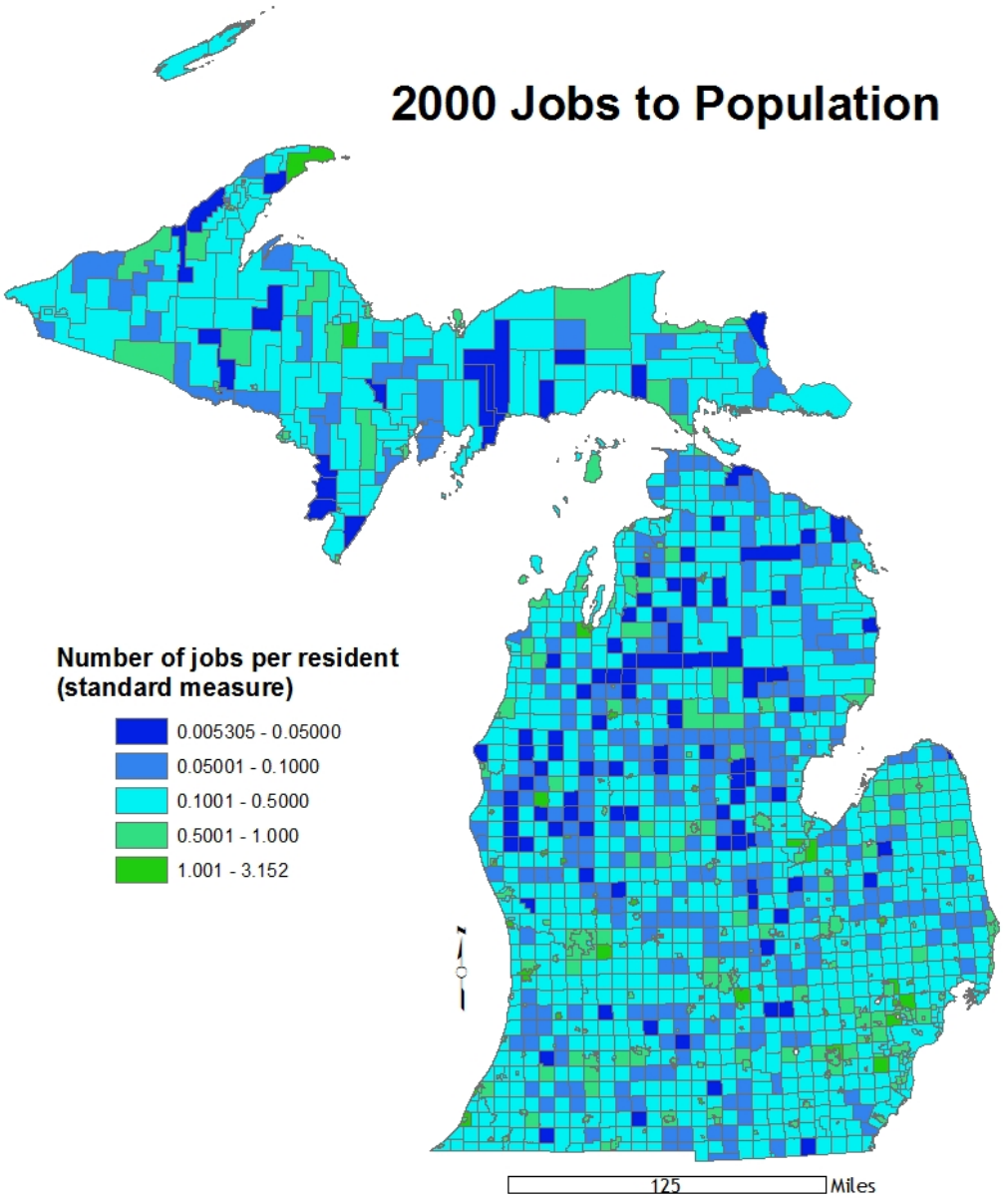


Figure 38: Number of Jobs Per Resident

To create the map in figure 39, these two categories were isolated and overlaid onto a grayscale map of Constitutional revenue sharing payments for FY2000, with greater payments represented by darker shading.

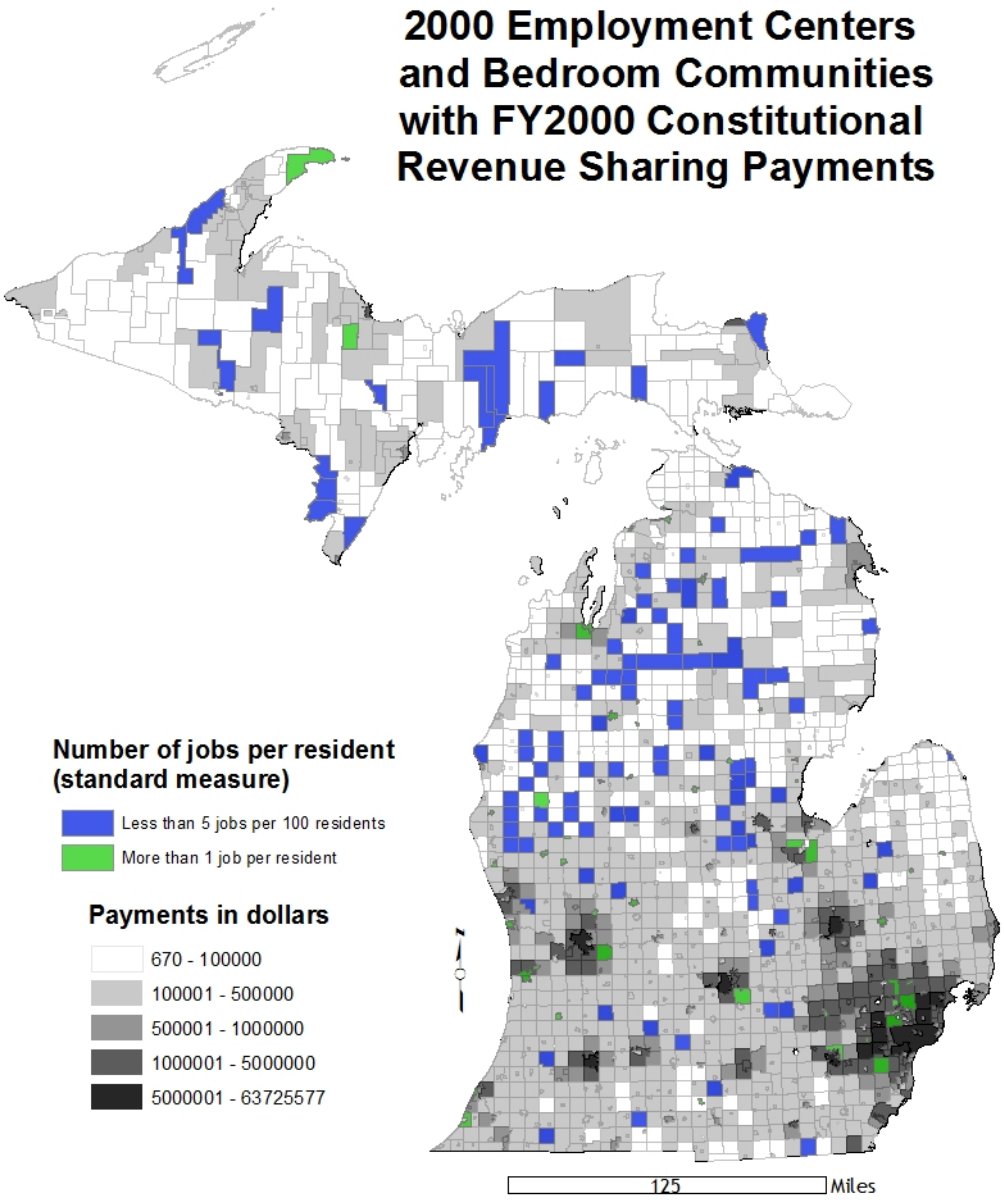


Figure 39: Bedroom Communities and Employment Centers with Constitutional Revenue Sharing Payments

We see here that each of the dark clusters of higher revenue sharing payments (and thus higher population) contains at least one green employment center. Of these 59 communities, 48 (82%) are cities. In contrast, the bedroom communities are decidedly exurban in relation to the

population centers, occurring just outside the population concentration. By far the greatest number appears in the northern lower peninsula, with a good representation in the upper peninsula as well, suggesting that these might also be fairly classified as "retirement communities." One hundred and six of the 107 of these are townships – a ratio of over 99%.

What does this mean in terms of constitutional revenue sharing payments? Figure 40 shows these payments divided among the number of jobs in each municipality. It is really a restatement of the jobs to population figure (or more accurately, its inverse), but it serves to emphasize the point that these dollars are following people's bedrooms and not their workplaces.

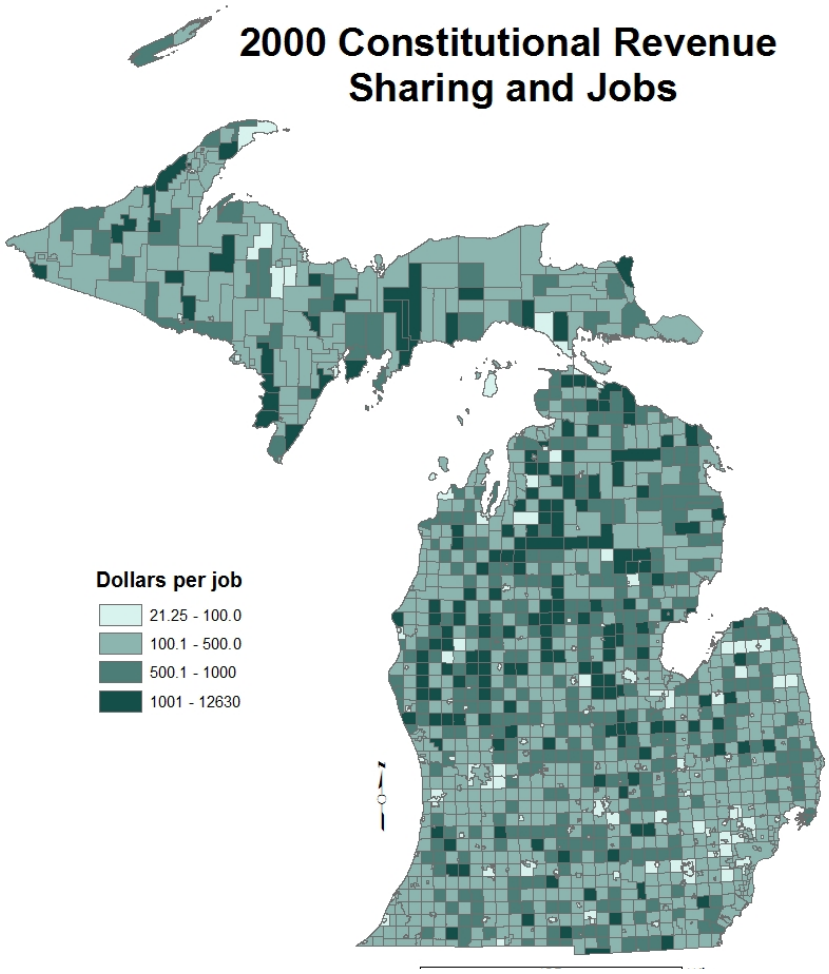


Figure 40: Payments Divided by the Number of Jobs

In Figure 41, the daytime population of each community was calculated by taking the standard population, adding the total number of jobs in the community, and subtracting the

number of workers in order to account for those who travel to another community for employment.

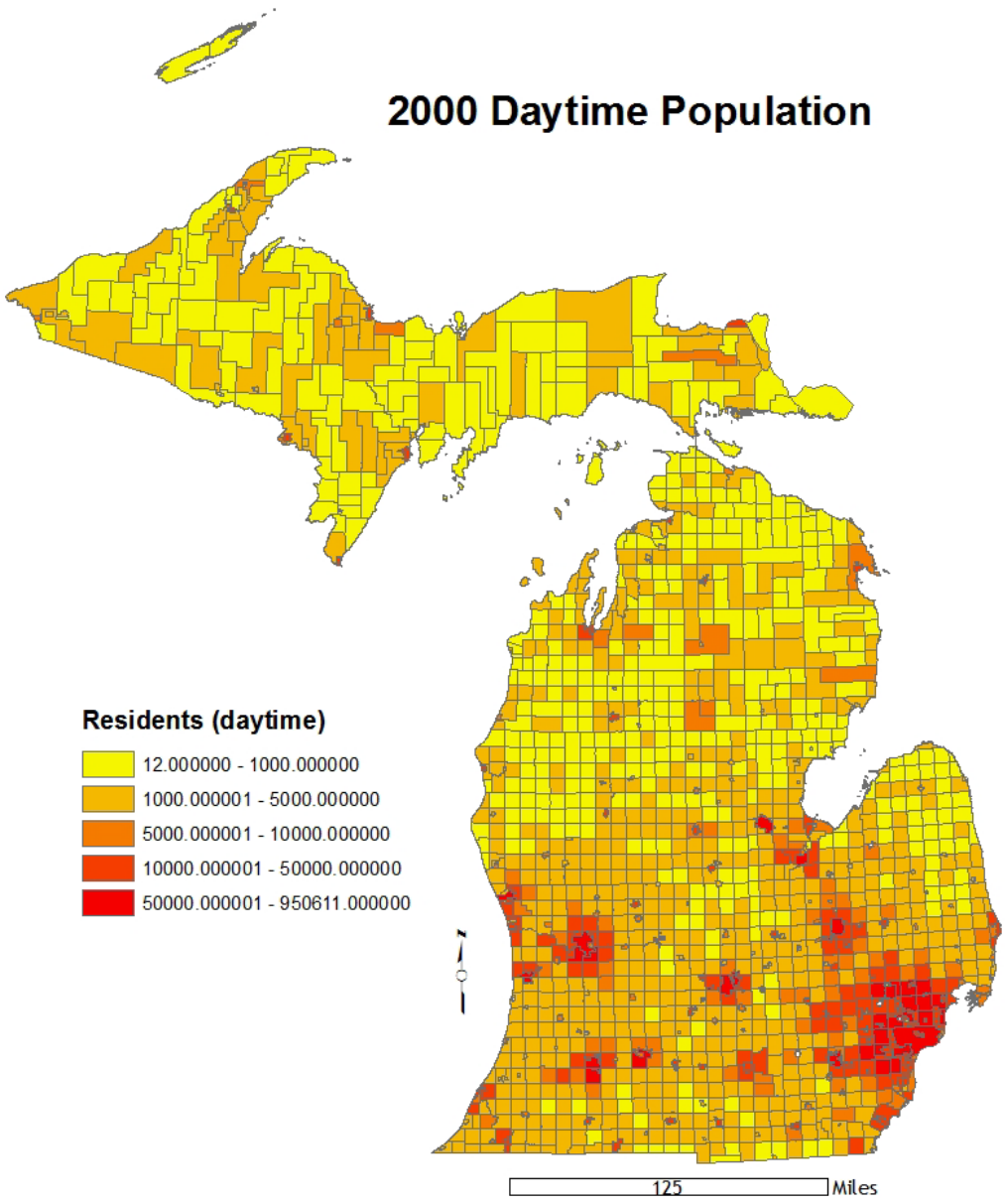


Figure 41: Daytime Population

In this form, it closely resembles the standard population map presented in Figure 37. The daytime population is slightly lower in the fringe townships surrounding each of the highly

concentrated population centers, but this change is so small that it is best detected using the layering feature in geographic information systems software.

However, the ratio of daytime residents to "standard" residents of a community (those who sleep there) presents a very different picture in Figure 42.

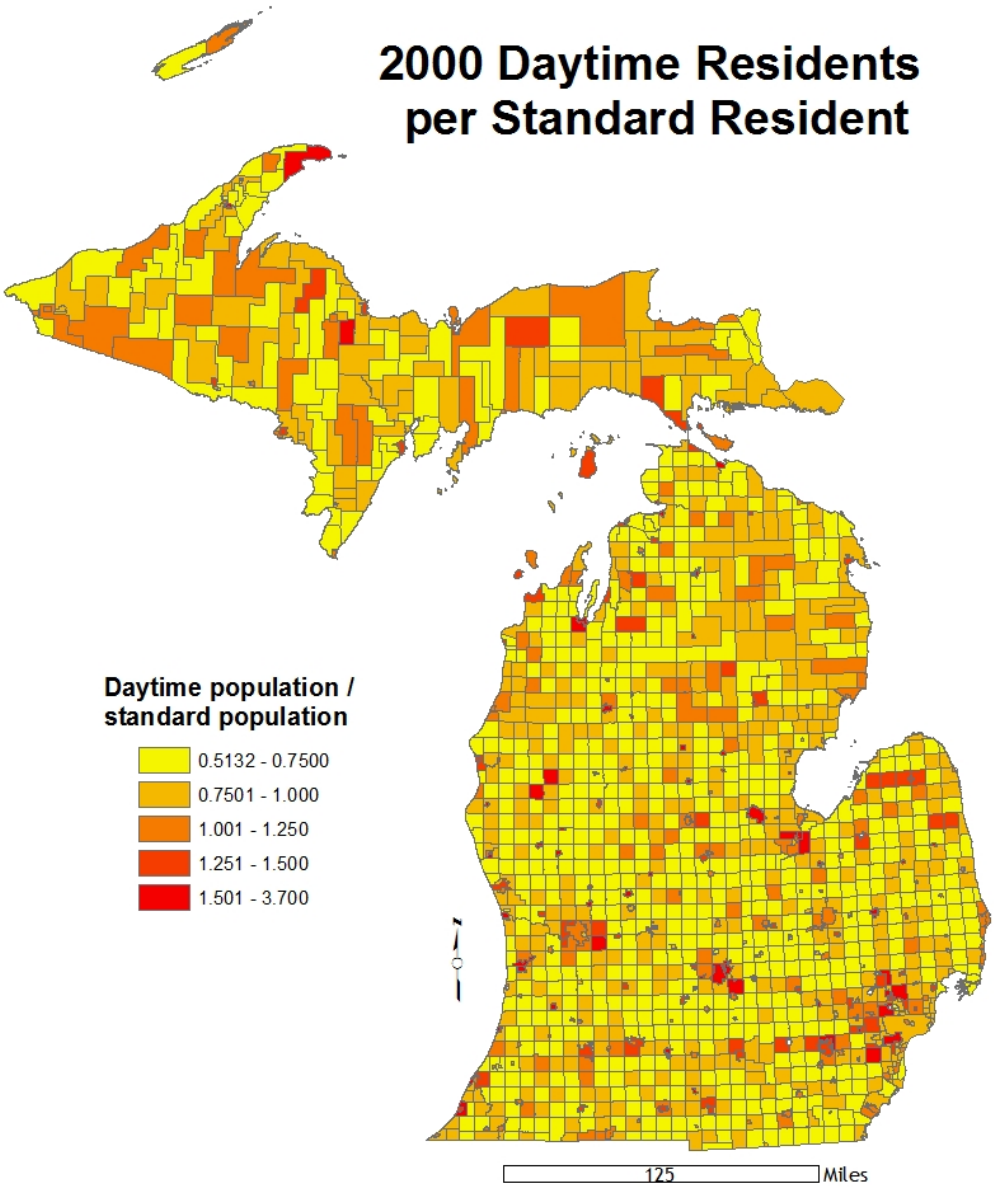


Figure 42: Daytime Population Per Standard Resident

Although there is some overlap between those communities identified in Figure 38 as principal cities and those with high daytime-to-standard ratios, the correlation is in no way direct. Furthermore, overlaying this image onto the constitutional revenue sharing map in Figure 42 shows no close association between those payments and the communities which receive a large influx of people, proportional to their standard population, on a daily basis.

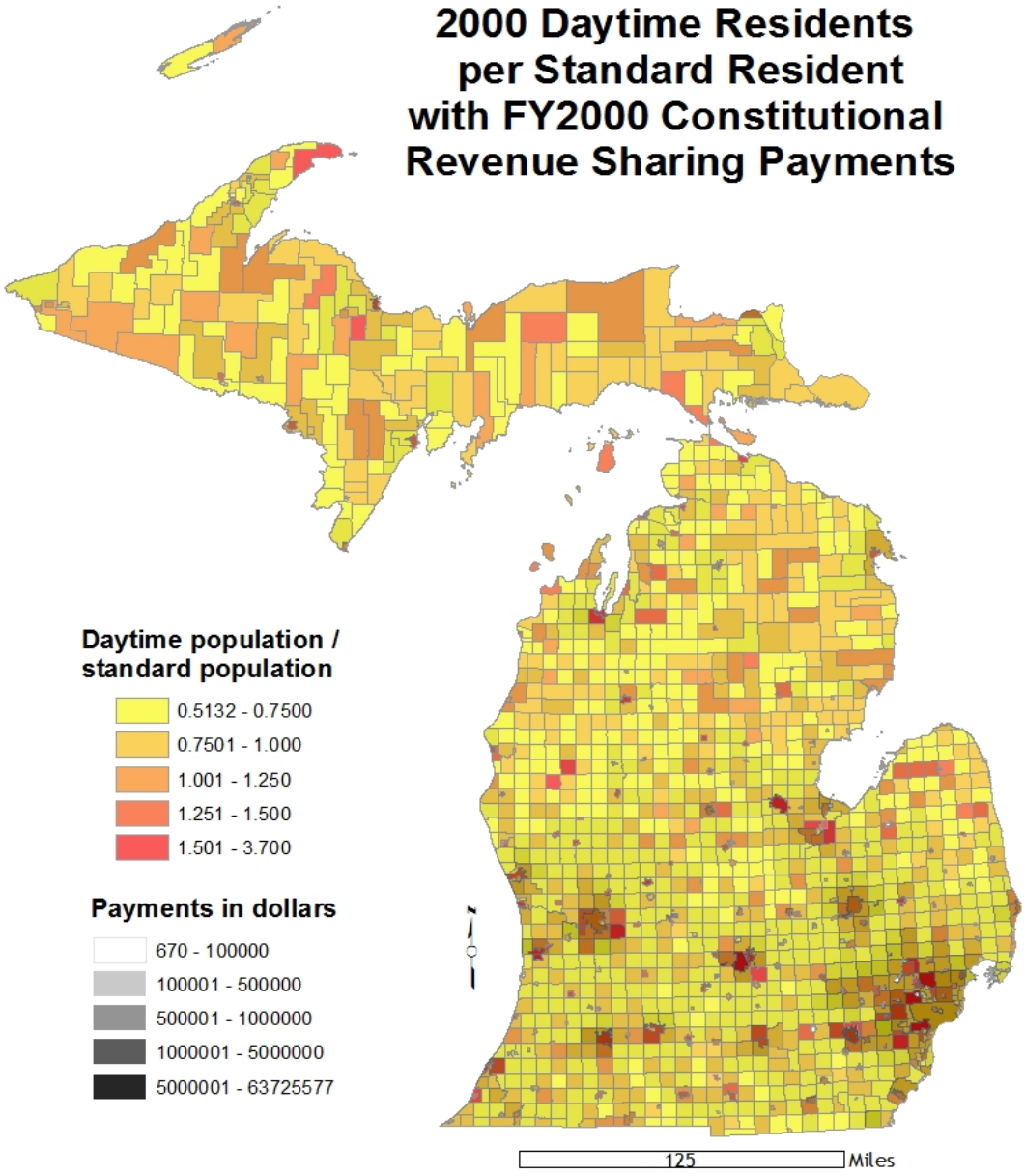


Figure 43: 2000 Daytime Population Per Standard Population with Constitutional Revenue Sharing Payments

This nuance in definition highlights the fact that the somewhat abstract "jobs" numbers represent actual people who spend about half of their waking lives in that municipality, whether they are counted as residents of it by the standard definition or not. Communities with high daytime to standard population ratios are still expected to provide services to all within their borders, even though their budget may have been calculated using a per-capita base number that is not representative of the actual number of persons within their borders on a regular basis. We can see from these figures that the per-capita revenue sharing formula offers no way to address the needs of communities required to provide services for a population that differs significantly from its standard population – that is, the number of person who sleep within its borders.

Ideally, these calculations would be repeated using 2010 data to note whether changes in the number of jobs in a municipality is correlated in any way with changes in its revenue sharing payment; that is, to see whether this gap has widened or narrowed over the past ten years. Unfortunately, the unavailability of jobs data makes this impossible.

These correlations imply a fuller conception of "population" than the one which is captured by the Census and used for the distribution of revenue sharing dollars. Municipalities are certainly responsible for providing basic protective services to all persons and places within their borders. When the number of persons actually present regularly differs significantly from the number accounted for in the distribution formula, the potential exists for a shortfall in the ability of the municipality to provide services to everyone. It also raises questions about which goals are furthered by the use of per-capita distribution of funds. Michigan has placed increasing emphasis on the need for jobs over the past ten years, yet this powerful tool is not designed in any way to support that endeavor. In fact, the formula could even be characterized as punitive toward communities with extensive non-residential populations.

Income and Poverty

In this analysis, we explore whether levels of income and poverty are related to how constitutional revenue sharing is distributed.

Income and poverty levels are good indicators of need assuming that municipalities with higher levels of poverty rates and lower income levels will have more needs than those communities with high income levels and low poverty rates. Examining a community's poverty level can show the possible need for more social services and programs, thus requiring more municipal expenditures. Income levels and distributions can show the percentage of population within a community that may be hovering just above the poverty level or those communities that have a high median income and therefore not as many financial needs. Funds for state revenue sharing are collected through sales tax contributions, which are directly affected by how much people are able to spend. Income and poverty levels might have an impact on sales tax generated as well.

A population's financial condition is an important consideration in the distribution of state revenue sharing funds because the process of revenue sharing is designed to equalize resources. For this analysis, we used the 2010 American Community Survey to collect data on the percentage of households living in poverty and the median household income for all cities and townships. We chose to analyze data at the household level because a household represents a cohesive unit whose members are interdependent on one another. Processing of this data

included geographic information systems mapping, analysis, and comparison with 2010 data on constitutional revenue sharing gathered from the State of Michigan.

The University of Michigan National Poverty Center's federal guidelines were used to determine the poverty threshold. The relevant thresholds for pretax income are shown below.

Table 5: Federal Poverty Levels by Household Size and Family Characteristics

Household size	Family characteristics	Poverty threshold
Single Individual	Under 65 years	$11,344
	65 years and older	$10,458
Single Parent	One child	$15,000
	Two children	$17,568
Two adults	No children	$14,602
	One child	$17,552
	Two children	$22,113

Using these thresholds, figures 44 and 45 illustrate poverty percentages across townships and cities in the state of Michigan in 2010.

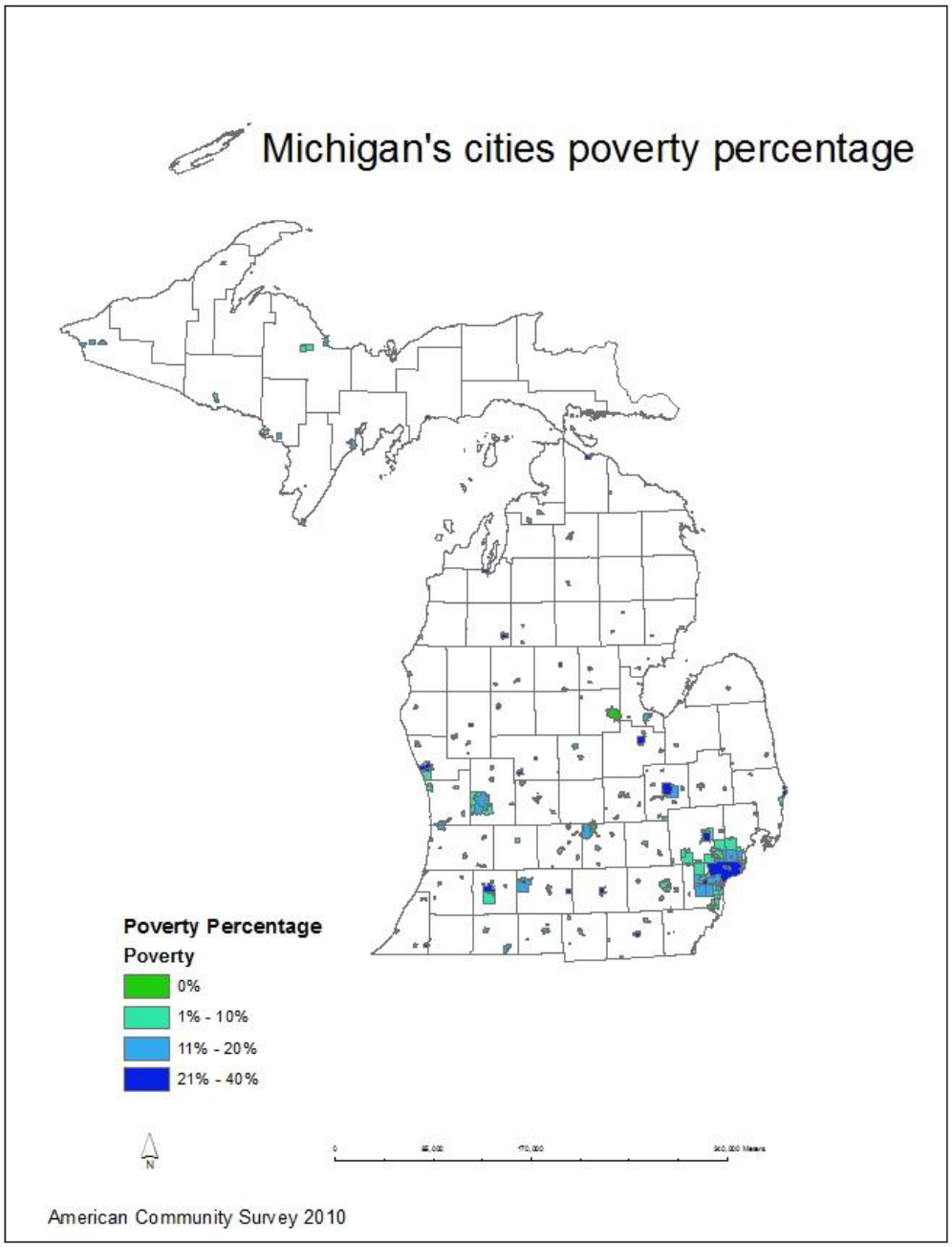


Figure 44: Percentage of Households in Cities with Incomes Below the Poverty Line

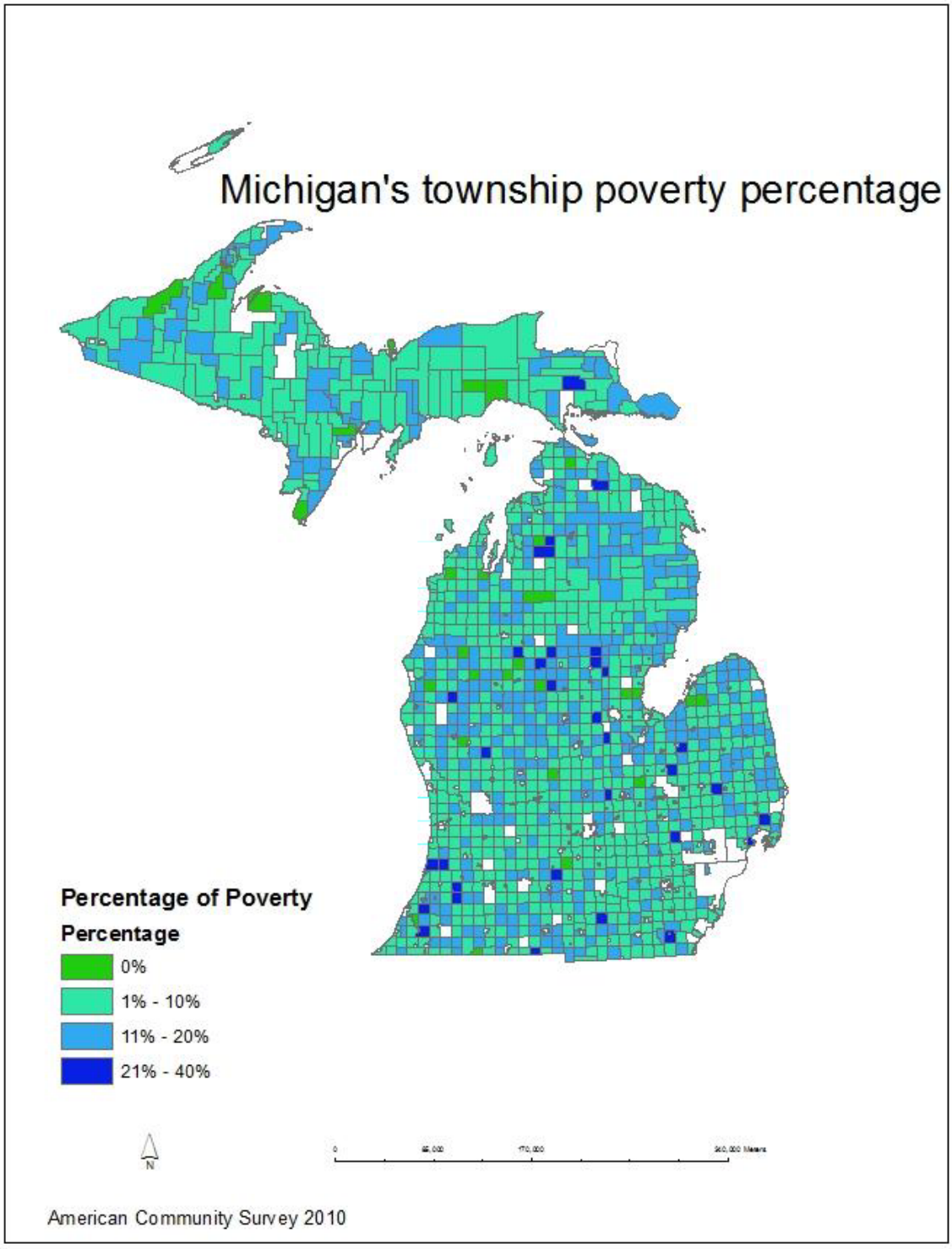


Figure 45: Percentage of Households in Townships with Incomes Below the Poverty Line

Comparing the poverty rates by municipality type (city or township) provides important evidence of whether townships and cities deal with the same needs fiscally. These figures show that higher rates of poverty in townships are scattered fairly randomly across the state, with small clusters in the north-central lower peninsula and at the southwest corner. The highest rates of poverty within cities, however, are concentrated in southeast Michigan. The majority of townships within the state have poverty rates between 1-10%, while the average city has a higher rate of 11-20%. Residents of high poverty areas often earn incomes that are significantly low such that municipalities have a lot more responsibility for filling the gap through services (Scorsone 2010).

Shown in figures 46 and 47 are the median income levels for cities and townships within Michigan. In both maps, we see that the highest median incomes are centered in the southeast portion of the state.

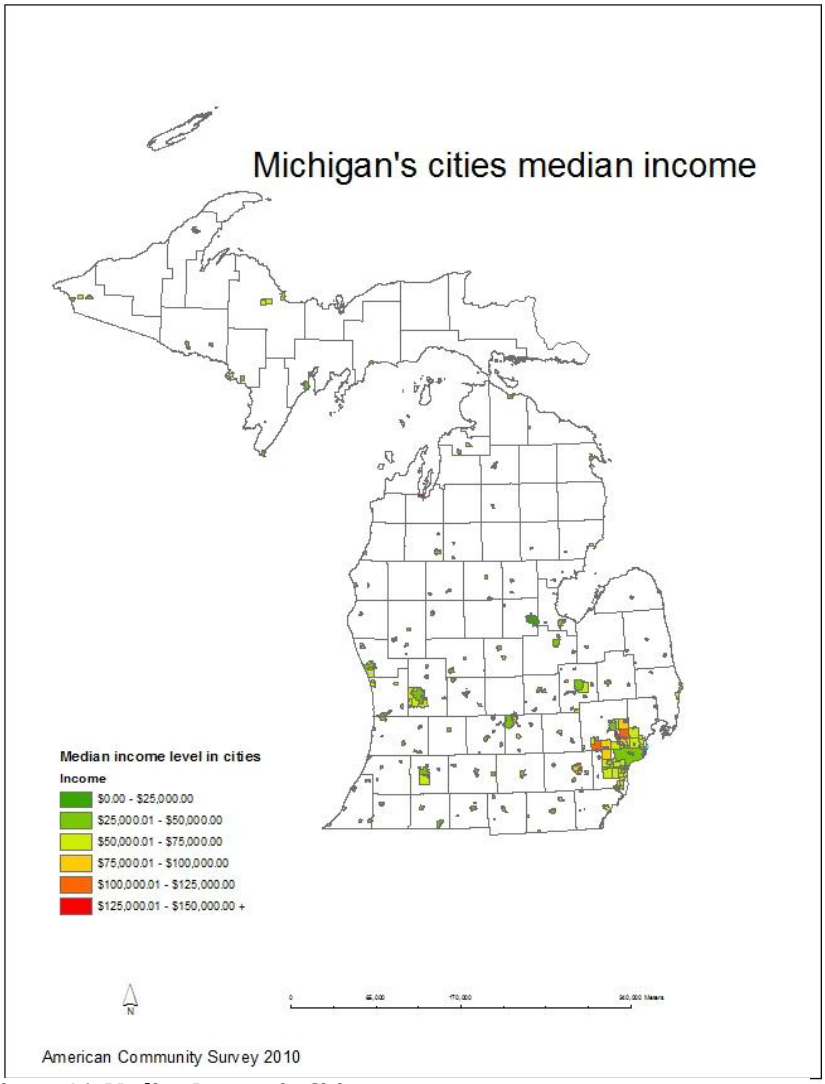


Figure 46: Median Income in Cities

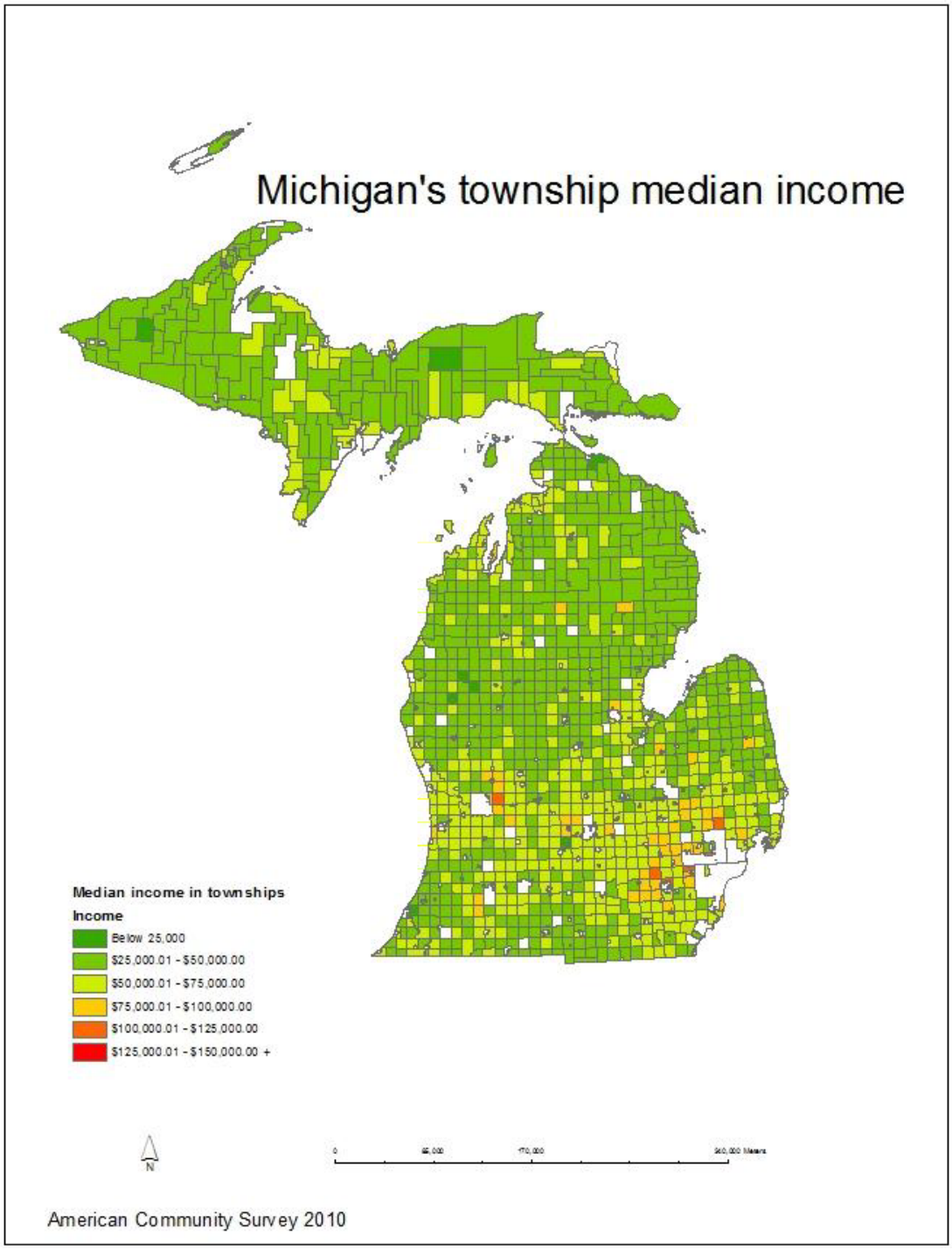


Figure 47: Median Income in Townships

According to our analysis, there is some parallel between the cities with the lowest median income and highest poverty rates. This pattern is not strongly pronounced as our study compares the top twenty lowest income areas with the top twenty highest poverty level areas in figure 48. Here, highest poverty rates and lowest income levels of the top twenty municipalities for each variable are overlaid onto a map of Constitutional revenue sharing payments for 2010.

Only one municipality, Highland Park, has one of the highest poverty percentages and

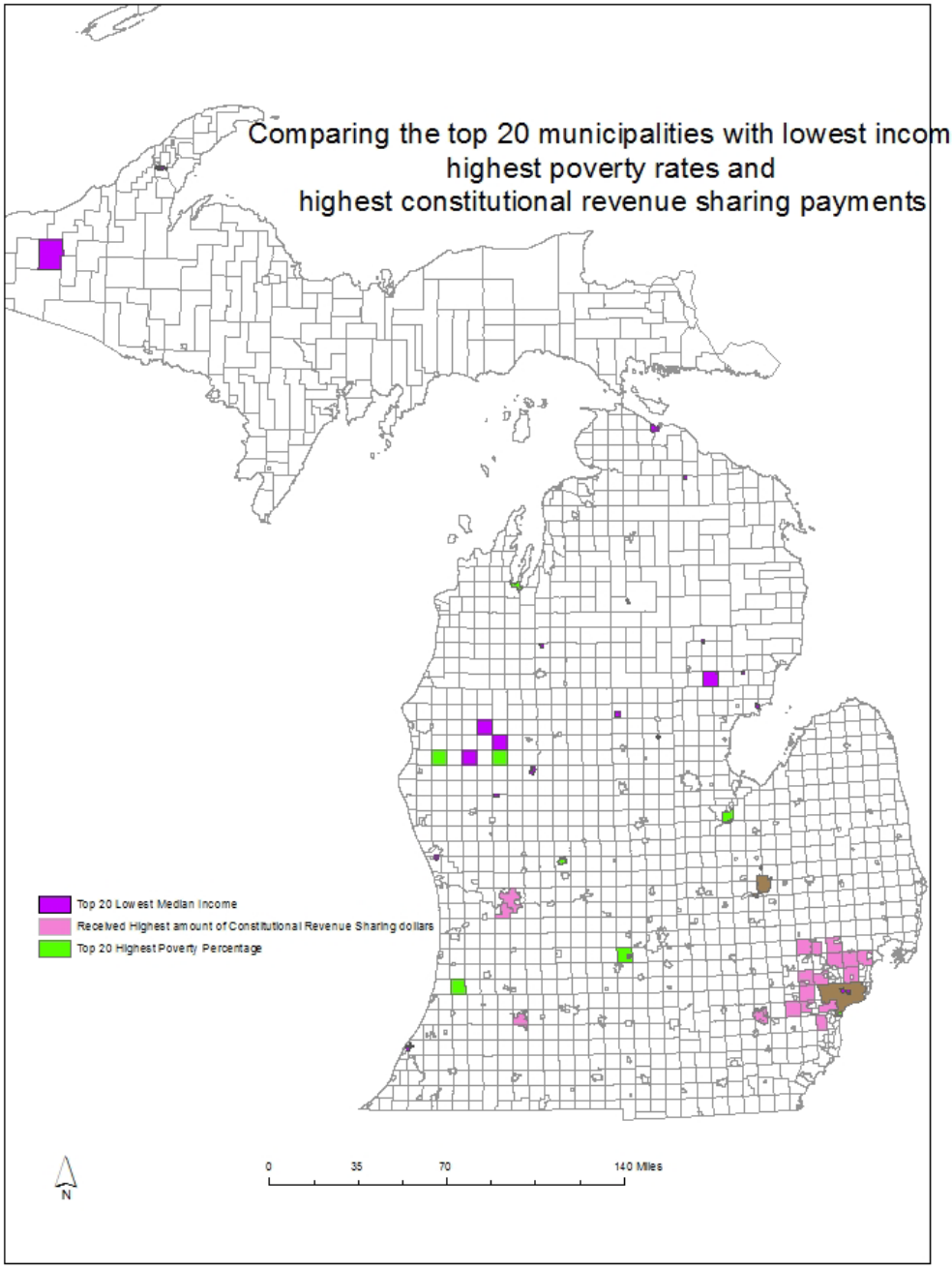


Figure 48: High Poverty and Low Income Municipalities with High Constitutional Revenue Sharing Payments

was also included in the lowest median income list. Many of the communities with high poverty and low income are in close proximity. Also included in figure 48 are the municipalities that receive the highest payment from the state through Constitutional revenue sharing based on the per capita system. Based on these calculations, Detroit and Flint are the only two municipalities that received high Constitutional revenue sharing payments and also have high levels of poverty percentage. There were no municipalities that were included in on the top end of both variables (poverty percentage, and low median income) and also received one of the highest payments of Constitutional revenue sharing.

Several conclusions can be drawn based on this analysis. First, high percentages of poverty and low median incomes occasionally coincide, but there is not a strong correlation between the two. Second, cities have much higher poverty percentage rates and low median incomes across the state than townships. Finally, the majority of municipalities with the highest poverty percentages and lowest median incomes are not among the top receivers of constitutional revenue sharing. Constitutional revenue sharing as it is currently practiced does not address need as represented by either low median income or high household poverty.

Sprawl

The following analysis pertains to how the constitutional portion of Michigan's revenue sharing system impacts growth in the state of Michigan, specifically with regard to whether allocation of revenue sharing on a per-capita basis is related to the phenomenon of sprawl. The change in population between 2000 and 2010 was used to determine several key variables: largest municipalities, fastest growing municipalities, and municipalities facing a decline in population. For these municipalities, we also examined the type of local government and the percentage of municipal budget supported by constitutional revenue sharing. These specific variables were chosen because they help determine whether or not per-capita revenue sharing is related to sprawl.

Change in Population

Figure 49 illustrates the change in population for each municipality derived by subtracting its population at the 2000 census from its population at the 2010 census. Because Michigan distributes constitutional revenue sharing on a per-capita basis, this also has bearing on the change in a community's revenue sharing payments over time. By noting the geographic distribution of this change, we can see whether our revenue sharing dollars are supporting growth in urban, suburban, or rural areas. Most communities remained relatively stable. The biggest population change was in the City of Detroit.

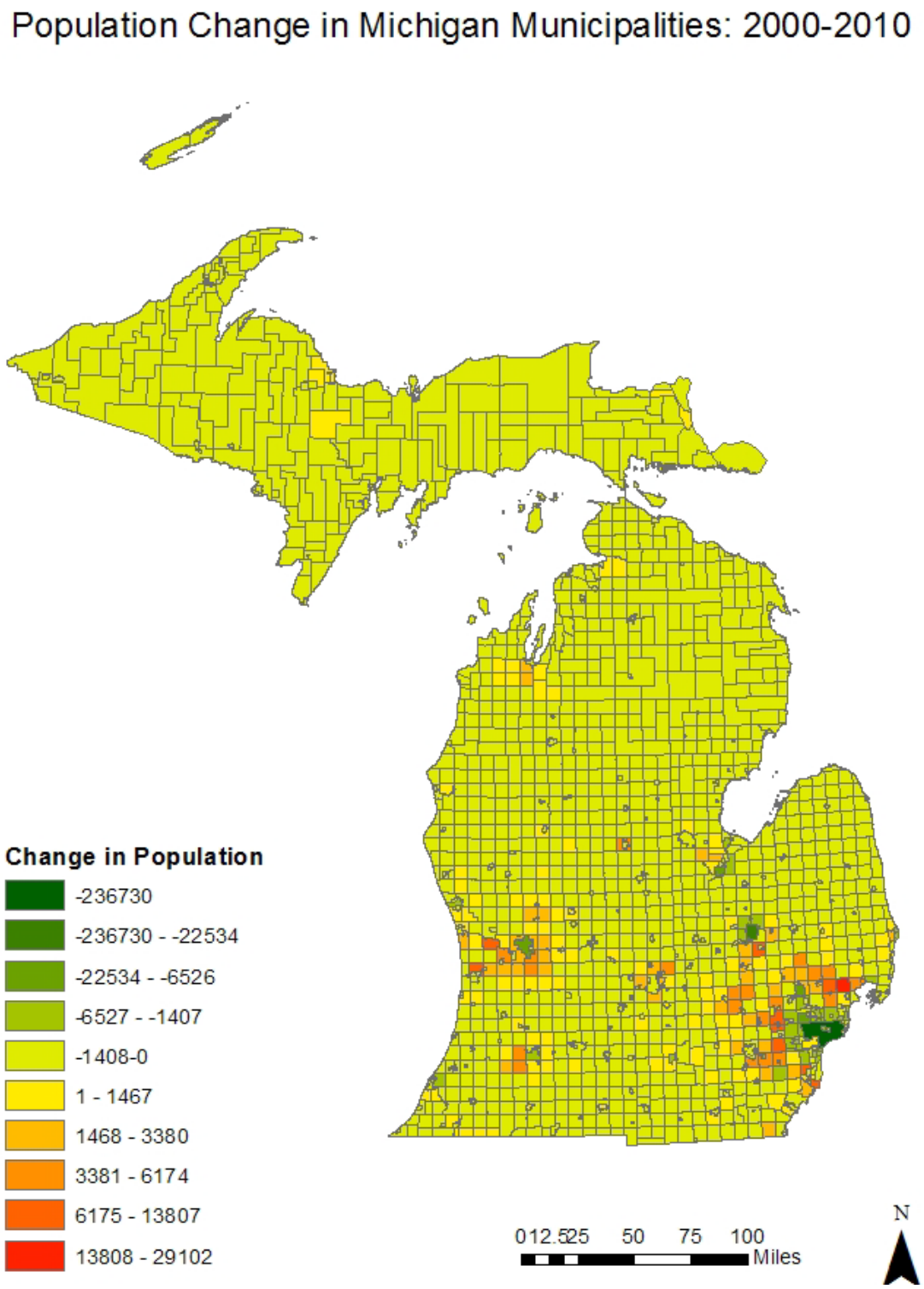


Figure 49: Population Change by Municipality, 2000-2010

Twenty Largest Municipalities in Michigan

The municipalities with the largest population are also those that receive the largest amount of revenue sharing dollars. Table 6, and figure 50 shows us that most of these communities are in southeast Michigan, namely Detroit and its surrounding suburbs.

Table 6: 20 Largest Municipalities by Population

Municipality	Population
Detroit	712501
Grand Rapids	187536
Warren	134056
Sterling Heights	129699
Ann Arbor	113932
Flint	102112
Dearborn	98153
Livonia	96942
Clinton Township	96796
Canton Township	90173
Westland	83979
Troy	80980
Farmington Hills	79740
Macomb Township	79580
Kalamazoo	74037
Shelby Township	73804
Wyoming	72125
Southfield	71739
Waterford Township	71707
Rochester Hills	70995

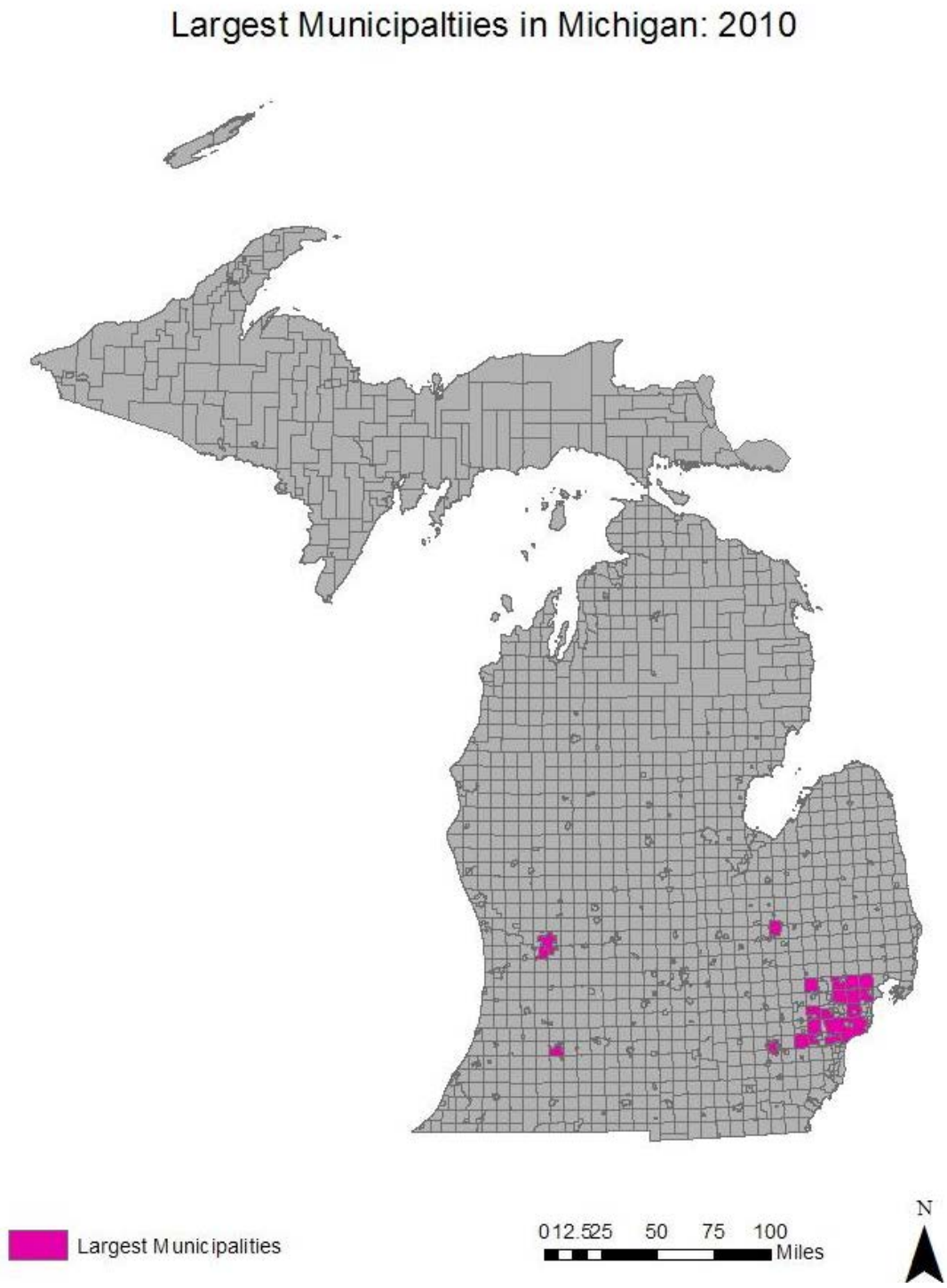


Figure 50: Largest Municipalities

Fastest Growing Municipalities

By subtracting the 2010 census population from the 2000 and dividing that number by the 2010 census data and multiplying it by 100, we were able to isolate the 20 fastest-growing communities in Michigan. The fastest growing communities are scattered throughout the state, with a small concentration in southeast Michigan. None are close to a city center, implying the development of land that was previously used for other purposes.

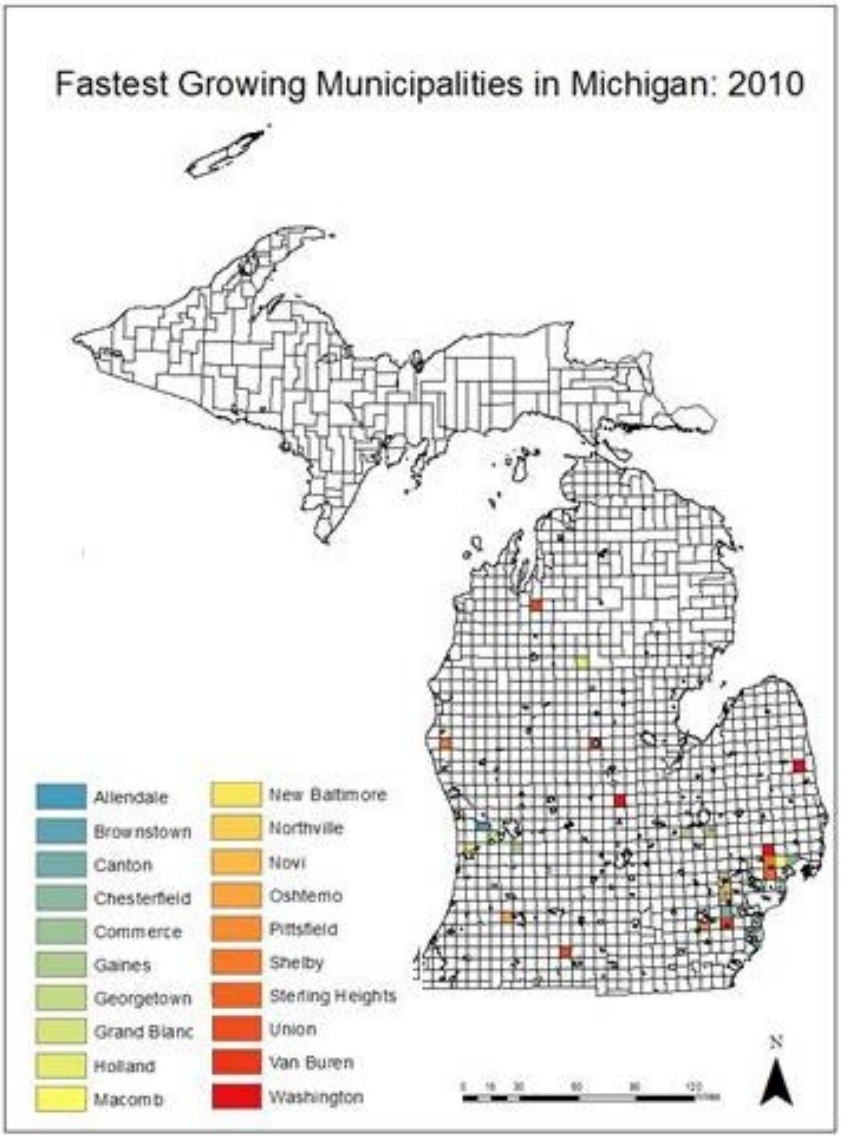


Figure 11: Fastest Growing Municipalities

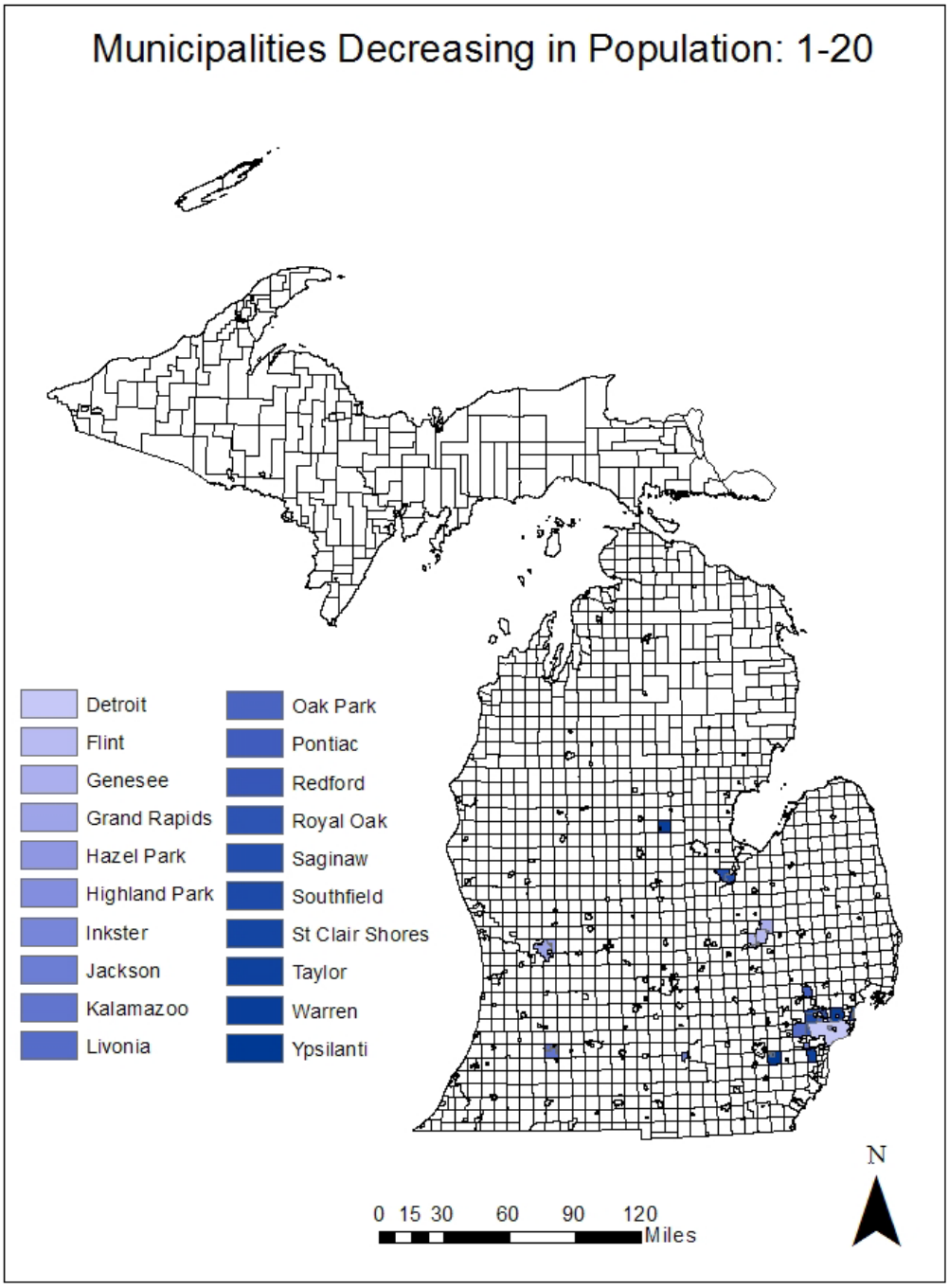


Figure 12: 20 Municipalities with the Largest Population Decline

Decrease in Population

Municipalities with decreasing populations are located in southeast Michigan, in proximity to Detroit, although a few are in the middle of the state.

City vs. Township

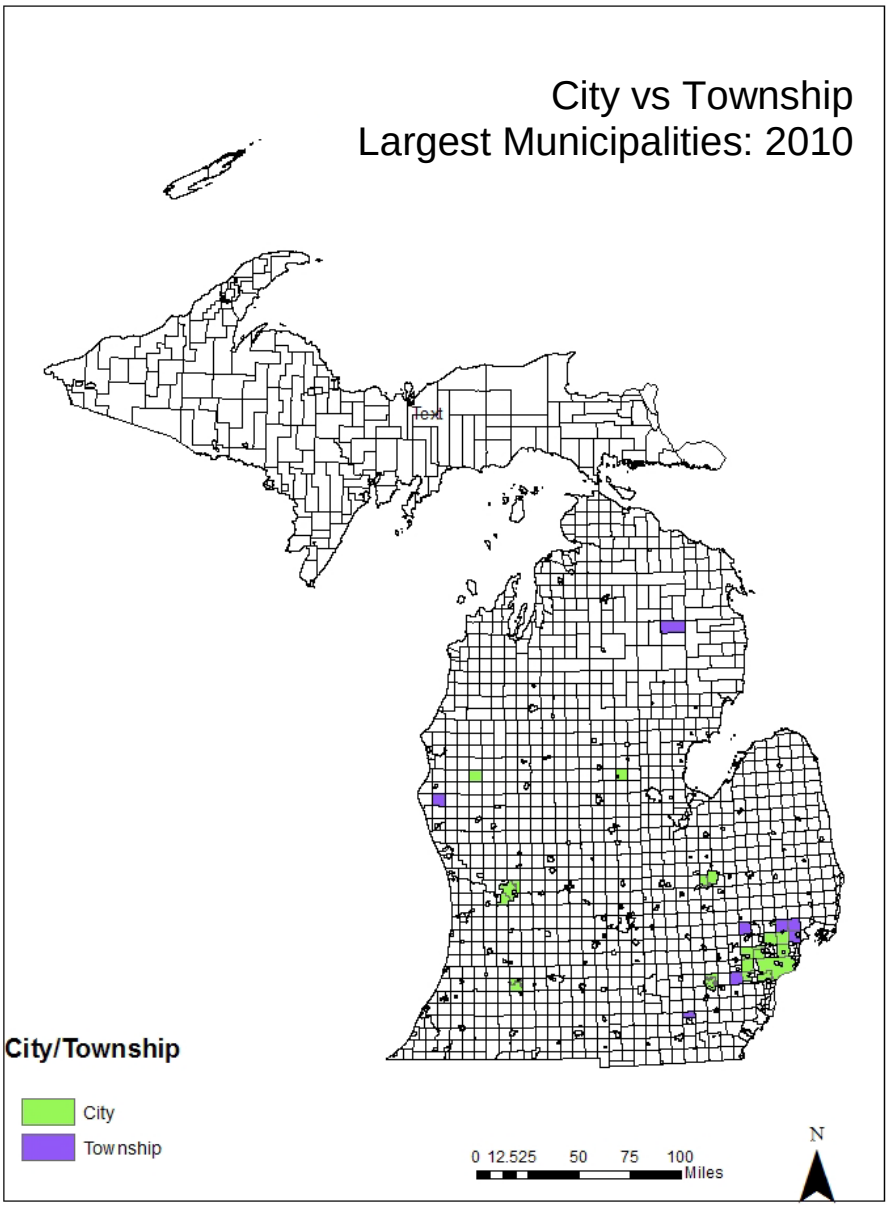


Figure 13: Largest Municipalities by Government Type

We next determined the municipality type of the largest and fastest-growing communities. The 20 largest communities were split fairly evenly between cities and townships. However, there were only two cities among the fastest-growing municipalities; the rest were all townships. This means that our already-developed urban cores are not receiving the bulk of Michigan's growth, and it implies that this growth may be taking place on previously undeveloped Greenfields. As the populations of these townships increase, they receive larger revenue sharing payments. This migration of development away from the urban cores and toward greenfields is one characterization of the term "sprawl."

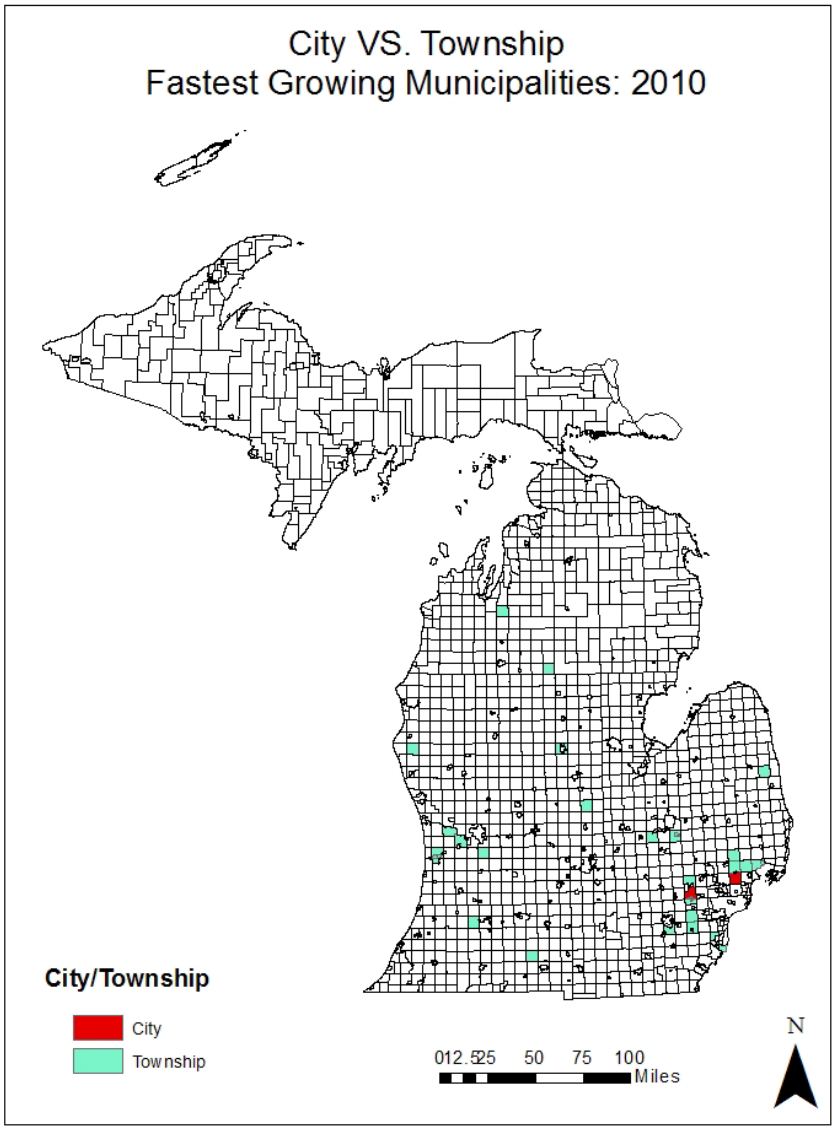


Figure 14: Fastest Growing Municipalities: 2010

This chart demonstrates the average percentage of Michigan local revenues that comes

from constitution revenue sharing. We see that although cities receive the largest portion of the revenue sharing "pot," this portion still only makes up a little less than a third of their expenditures. In the case of townships, however, revenue sharing accounts for over 40% of their general fund budgets. Combining this information with the discovery that nearly all of the fastest-growing communities are townships, it is fair to say that a substantial portion of the constitutional revenue sharing allocation is being used specifically to fund development and infrastructure that is migrating steadily away from the urban cores.

EXHIBIT 2. Revenue-Sharing Distribution and Portion of Local Budgets, Percentage Share, FY 1994–95

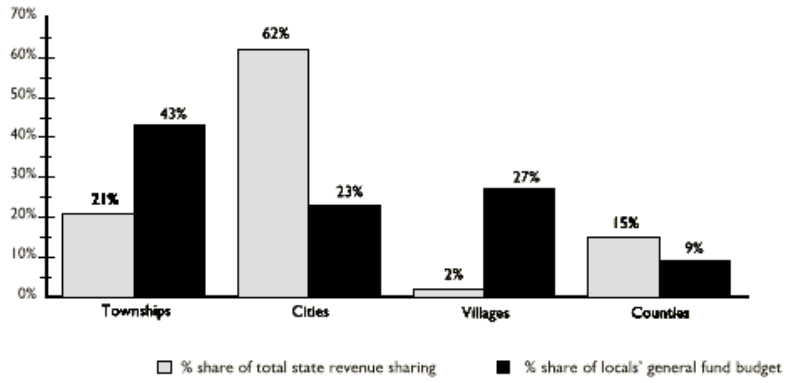


Figure 15: Revenue Sharing Distribution and Portion of Local Budgets FY 1994-1995

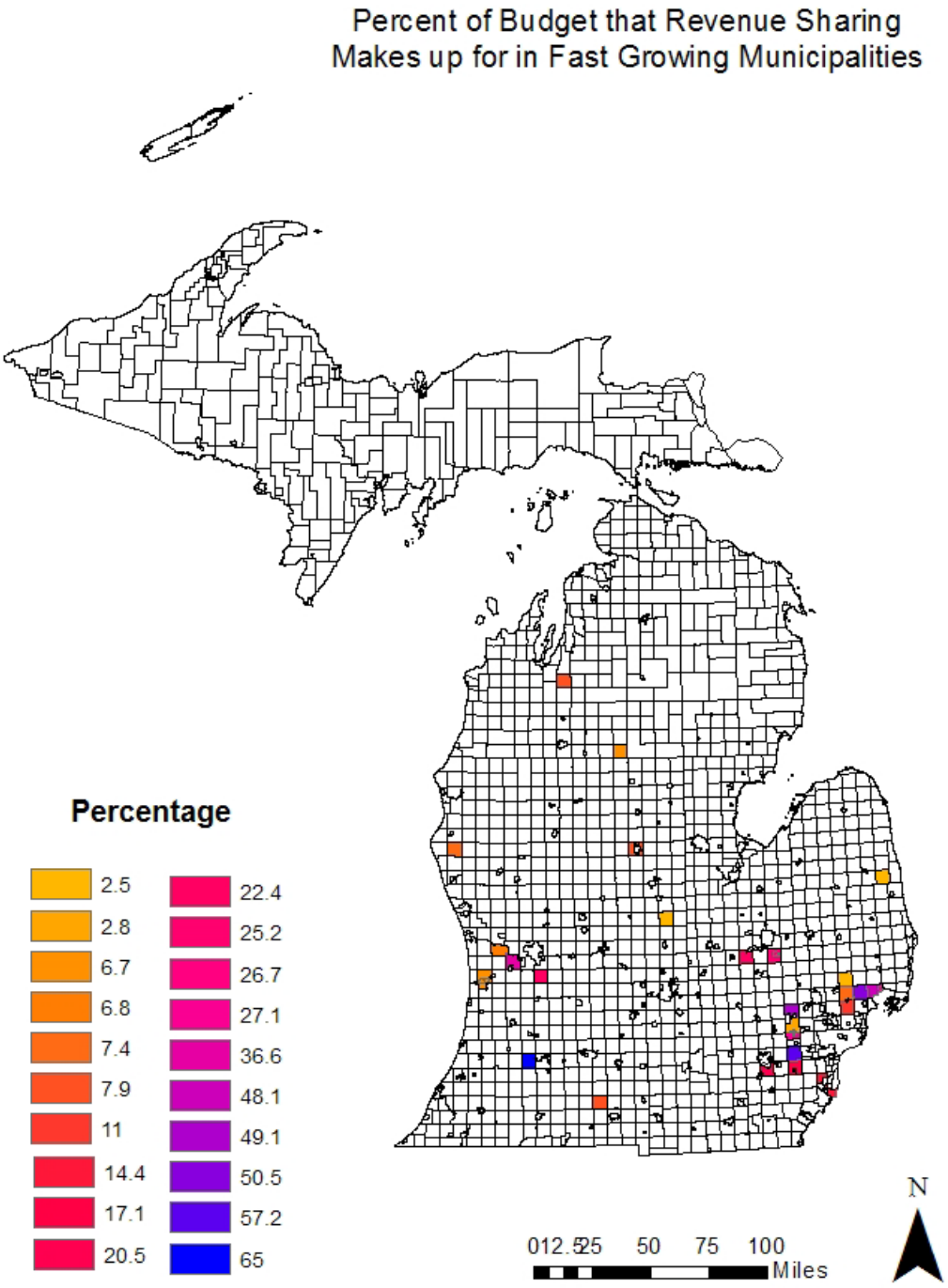


Figure 16: Portion of Budget Supplied by Constitutional Revenue Sharing Dollars in Fast-Growing Municipalities

Conclusion

This chapter presents an analysis of constitutional revenue sharing in terms of several key variables: local unit sales tax contributions, services provided, taxable value, jobs, poverty rate, income, and sprawl. We found a disparity between the amount contributed by municipalities (organized by county) to the constitutional revenue sharing pot and the amount that they receive in return. We also found that although cities receive a greater amount of money through the per-capita revenue sharing allocations than do general law or charter townships, this amount makes up a smaller proportion of their overall budgets. We noted that general law and charter townships have greater limitations with regard to the revenue that they can raise themselves. Our discussion of the relationship between jobs and revenue sharing explored the definition of "population," finding that employment centers receive a smaller revenue share while the standard definition of the term appears to favor bedroom communities. With regard to income and poverty, we found that constitutional revenue sharing does not address need as determined by income or poverty. Finally, our examination of the fastest-growing communities highlighted the fact that the greatest growth is happening in the state's townships and away from its urban cores, where it is followed by the per-capita distribution dollars and arguably contributing to sprawl.

Chapter 4: Policy Alternatives

This chapter provides a further examination of some of the previously mentioned variables. The variables selected for further analysis are: taxable values and expenditures, millage rates and taxable values, day time populations and how they are impacted by per-capita revenue sharing, municipalities with the highest and lowest density, poverty rates and their correlation to per-capita revenue sharing, and lastly, Michigan's land use system. Through our analysis we contemplate alternatives to the current constitutional revenue sharing system. Short of devising an actual formula for a modified revenue sharing system, we explore how incorporating our selected variables might alter distribution patterns.

Taxes and Expenditures

In this section, we specifically analyze the relationships between taxable value and population; taxable value and expenditures; and how these relate to municipality type and constitutional revenue sharing distributions. Could there be a relationship between how many people live in a community and the overall taxable value? How do cities compare in these categories versus townships? Can we see how much municipalities are spending and whether that spending is supported by the community's property tax base?

Analysis reveals (Figure 56) a strong correlation between taxable values and population ($r=0.84$). The municipalities with the highest taxable values are shown in table 1 below. It is not surprising that cities top this list since cities have higher concentrations of population and therefore follow the correlation. A cursory look at the table suggests that cities seem to be doing quite well in terms of their taxable value. Is it because there are large populations or denser concentrations? Could it be that cities may have more established infrastructure and amenities that support the higher taxable value?

There is a crucial point to consider. According to Michigan state law, townships are required to include the taxable values for the villages within the township jurisdiction as a part of the total township taxable value. Therefore, village data was not used for comparisons or calculations for this section to ensure that the values were not used twice.

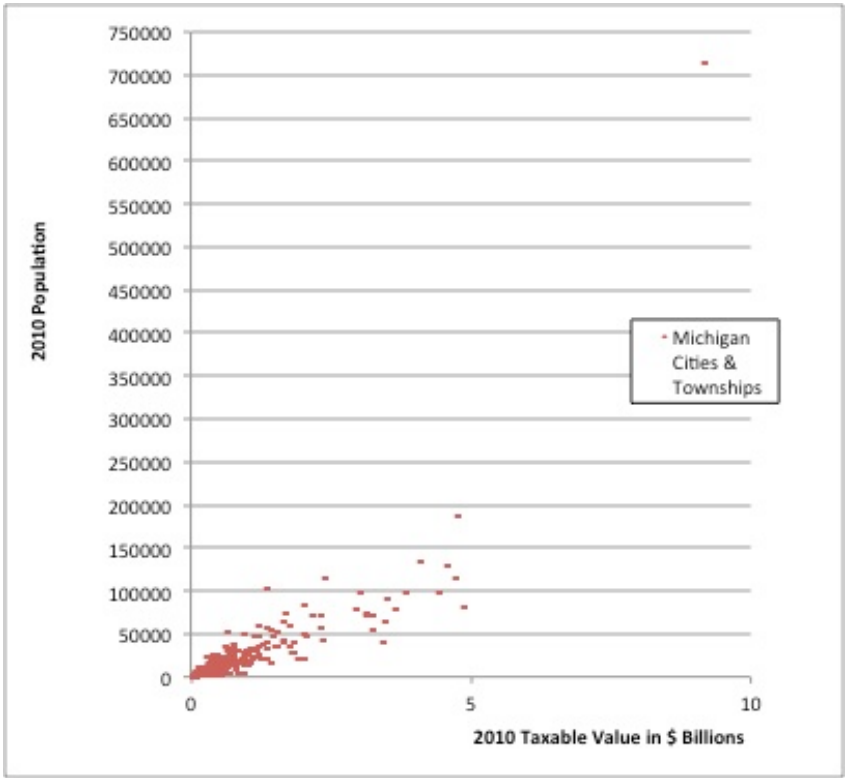


Figure 57: 2010 Population to Taxable Value

Table 6

Top 20 by Total Taxable Value Dollars

NAME	Population 2010	Taxable Value 2010
DETROIT	713,777	9,111,881,179
TROY	80,980	4,843,613,012
GRAND RAPIDS	188,040	4,722,366,946
ANN ARBOR	113,934	4,691,761,673
STERLING HEIGHTS	129,699	4,517,873,330
LIVONIA	96,942	4,393,300,210
WARREN	134,056	4,071,119,156
DEARBORN	98,153	3,778,216,829
FARMINGTON HILLS	79,740	3,619,696,470
CANTON – TWP	90,173	3,460,157,098
WEST BLOOMFIELD – TWP	64,690	3,421,492,960
BLOOMFIELD – TWP	41,070	3,404,549,680
NOVI	55,224	3,204,568,420
ROCHESTER HILLS	70,995	3,194,661,270
SOUTHFIELD	71,739	3,105,202,030
SHELBY- TWP	73,804	3,091,857,401
CLINTON – TWP	96,796	2,961,657,506
MACOMB – TWP	79,580	2,916,076,220
LANSING	114,297	2,345,554,884
MIDLAND	41,863	2,303,108,341

Table 7

Top 20 by Constitutional Revenue Sharing Receipts In $ Dollars

Detroit	60,295,723
Grand Rapids	12,532,107
Warren	8,781,532
Flint	7,917,588
Sterling Heights	7,906,472
Ann Arbor	7,279,795
Livonia	6,386,678
Dearborn	6,210,727
Clinton – Twp	6,075,618
Westland	5,493,451
Farmington Hills	5,215,741
Troy	5,142,563
Southfield	4,971,438
Kalamazoo	4,884,291
Canton – Twp	4,850,814
Waterford – Twp	4,566,623
Wyoming	4,406,298
Rochester Hills	4,371,805
Pontiac	4,250,926
Taylor	4,183,974

A closer look at the relationship between population and taxable value reveal that some highly populated areas had low taxable value. Since only two communities were over the 150,000 population mark in 2010, a look at three key groupings at 35,000, 50,000 and 100,000

revealed three municipalities that did not fare as well as others in their range. Bay City had a 34,932 population with a taxable value of $582,847,838 while similarly populated Grand Bland Township (37,508) has a taxable value of $1,235,423,790 and Independence Township (34,681) was valued at $1,443,197,370. Saginaw, with a population of 51,508 and valued at $607,971,876, was lowest in value when compared to places like the cities of Portage (46,292 & $2,013,993,665) and Battle Creek (52347 & 1,515,770,124). Lastly, observation of the 100,000-group Flint, boasting a 102,434 population and $1,305,121,403 taxable value, was low next to Clinton Township (96,796 & $2,961,657,506) and Livonia (96942 & $4,393,300,210).

Top and Bottom Twenty Places Based on Per Capita Taxable Value

Next, we analyzed the top and bottom 20 municipalities in terms of taxable value per capita. This is a more nuanced approach because it considers both assumptions i.e., that need increases with population size and taxable value reflects the ability of government to provide for/satisfy those needs. Tables 8 & 9 show the top and bottom twenty municipalities in terms of their per capita taxable value. What we find is that cities don't fare so well when taxable value is measured on a per capita basis.

Table 8

Top 20 by Per Capita Taxable Value

Name	Population	Taxable Value - TV	TV Per Capita	Type
POINTE AUX BARQUES	10	13,672,003	1,367,200.30	Township
GLEN ARBOR	859	378,631,529	440,781.76	Township
MACKINAC ISLAND	492	194,882,629	396,102.90	City
LAKE	2972	915,645,584	308,090.71	Township
BOIS BLANC ISLAND	95	28,218,909	297,041.15	Township
BLUE LAKE	387	113,007,968	292,010.25	Township
LAKE	759	204,861,284	269,909.47	Township
PEAINE	292	69,186,934	236,941.55	Township
LAKE ANGELUS	290	65,558,680	226,064.41	City
EDENVILLE	413	89,886,954	217,643.96	Township
NEW BUFFALO	2386	513,265,379	215,115.41	Township
BLOOMFIELD HILLS	3869	807,342,590	208,669.58	City
COVERT	2888	568,439,815	196,828.19	Township
CROSS VILLAGE	281	54,031,744	192,283.79	Township
HARBOR SPRINGS	1194	228,709,485	191,548.98	City
TORCH LAKE	1194	226,714,699	189,878.31	Township
BURT	680	126,291,510	185,722.81	Township
WEST TRAVERSE	1606	297,838,795	185,453.80	Township
LELAND	2043	377,967,194	185,005.97	Township
GRANT	219	40,389,982	184,429.14	Township

Table 9

Bottom 20 by Per Capita Taxable Value

Name	Population	Taxable Value - TV	TV Per Capita	Type
KINROSS	7561	43,070,582	5,696.41	Township
ST. LOUIS	7482	52,027,623	6,953.71	City
BLOOMER	3904	36,230,726	9,280.41	Township
BELLEVILLE	10038	95,200,687	9,484.03	City
OLIVET	1605	16,566,531	10,321.83	City
IONIA	11394	118,691,047	10,416.98	City
INDIANFIELDS	6048	64,028,177	10,586.67	Township
HAMTRAMCK	22423	241,348,988	10,763.46	City
GAASTRA	347	3,940,680	11,356.43	City
SAGINAW	51508	607,971,876	11,803.45	City
READING	1078	12,891,935	11,959.12	City
WAKEFIELD	1851	22,276,223	12,034.70	City
MOUNT MORRIS	3086	37,223,982	12,062.21	City
MUSKEGON HEIGHTS	10856	133,618,412	12,308.25	City
FLINT	102434	1,305,121,403	12,741.10	City
BENTON HARBOR	10038	128,073,769	12,758.89	City
DETROIT	713777	9,111,881,179	12,765.73	City
MANTON	1287	16,637,132	12,927.06	City
CALUMET	6489	84,218,668	12,978.68	Township
HARTFORD	2,688	35,409,119	13,173.00	City

You can't look at population or taxable value in isolation – because if you looked at population alone you will be unable to differentiate between two municipalities that have a similar population but different taxable values (one high and one low) – yet this will have implications on need and vice versa.

If there are municipalities with significant needs, and low means through their taxable value to satisfy these needs, then either the amount or quality of services go down or tax rate goes up; this is why it is important to look at the municipality's expenditures and the ability of the municipality to raise revenues to meet these expenditures as displayed in the next set of tables (Table 10 & 11).

Table 10

Bottom 20 by Taxable Value Dollars per $1 of 2010 Expenditures

Name	Type	Population	Taxable Value - TV	2010 Constitutional Shared Revenue Portion	$ of TV Per $1 of 2010 Expenditures
FLINT	City	102,434	1,305,121,403	2,137,849	2.36
DETROIT	City	713,777	9,111,881,179	60,295,723	2.90
STURGIS	City	10,994	258,190,441	716,829	3.19
RICHMOND	Township	882	15,720,343	216,985	3.49
GRANT	City	894	15,683,223	55,962	4.02
NORWAY	City	2,845	55,540,848	187,958	4.24
DOWAGIAC	City	5,879	93,255,696	381,695	4.95
ST. LOUIS	City	7,482	52,027,623	285,589	5.40
NEGAUNEE	City	4,568	80,002,818	290,670	5.73
CROSWELL	City	2,447	44,799,456	156,705	6.24
WAKEFIELD	City	1,851	22,276,223	132,441	6.38
BAY CITY	City	34,932	582,847,838	2,332,986	6.45
READING	City	1,078	12,891,935	72,030	6.59
HILLSDALE	City	8,305	151,054,635	521,058	6.86
NILES	City	11,600	210,665,555	775,205	6.92
LAPEER	City	8,841	250,703,325	541,958	6.98
EATON RAPIDS	City	5,214	127,511,984	338,565	7.05
WYANDOTTE	City	25,883	631,008,303	1,778,957	7.27
SAGINAW	City	51,508	607,971,876	3,910,964	7.39
HIGHLAND PARK	City	11,776	161,707,163	1,063,716	7.43
		Total =	$13,790,861,867	$76,193,845	

Table 11

Top 20 by Taxable Value Dollars per $1 of 2010 Expenditures

Name	Type	Population	Taxable Value - TV	2010 Constitutional Shared Revenue	$ of TV Per $1 of 2010 Expenditures
SUMMIT	Township	22508	614,779,523.00	1,367,853	3,490.65
SOUTHFIELD	Township	14547	984,083,330.00	1,653	1,457.84
DETOUR	Township	807	49,771,859.00	30,046	724.77
ROGERS	Township	984	51,188,502.00	60,282	671.51
OWOSSO	Township	4821	138,304,419.00	296,641	667.27
HADLEY	Township	4528	196,884,290.00	295,688	661.07
LAKE	Township	759	204,861,284.00	40,335	626.77
MACKINAW	Township	539	92,441,890.00	16,324	592.20
MUNRO	Township	571	49,376,755.00	43,132	571.44
KINDERHOOK	Township	1497	96,143,495.00	102,521	547.48
GRANT	Township	1066	50,880,472.00	60,154	546.64
SHERMAN	Township	3205	119,631,780.00	206,315	541.46
MUELLER	Township	234	36,141,290.00	15,562	538.30
WHITE RIVER	Township	1335	89,675,922.00	84,990	530.76
CRYSTAL LAKE	Township	957	138,367,377.00	60,981	526.19
LOGAN	Township	551	28,893,753.00	20,898	520.34
WELLS	Township	4885	246,528,803.00	320,398	507.53
EVELINE	Township	1484	262,662,630.00	99,093	505.50
PORT SHELDON	Township	4240	636,322,456.00	286,032	489.91
FAYETTE	Township	3326	98,644,157.00	64,346	484.43
		Total=	$4,185,583,987	$3,473,244	

Several of Michigan's central and northern townships seem to fare better than their southeastern and southwestern counterparts in terms of available fiscal capacity to meet needs (expenditures). Spending is necessary for services, operating and maintaining a community and is more difficult with less revenue.

The total numbers for the top and bottom twenty municipalities in terms of taxable value and revenue sharing allotments are staggering; $13,790,861,867 in taxable value for the bottom twenty municipalities which are mainly cities compared to a taxable value of $4,185,583,987 for the top twenty municipalities which are all townships. This disparity is due to the huge physical nature of Detroit (its old infrastructure and expansive geography are issues in themselves). Removing Detroit from the list results in similar taxable values for both groups; $4,678,980,688 in taxable value for the bottom municipalities compared to a taxable value of $4,185,583,987 for the top twenty municipalities. In considering this close variable with the low TV to expenditures of the bottom twenty that are mainly cities, it may be said that cities have more services or more expensive services than the top-twenty group that are all townships. The following maps show where these communities exist throughout the state.

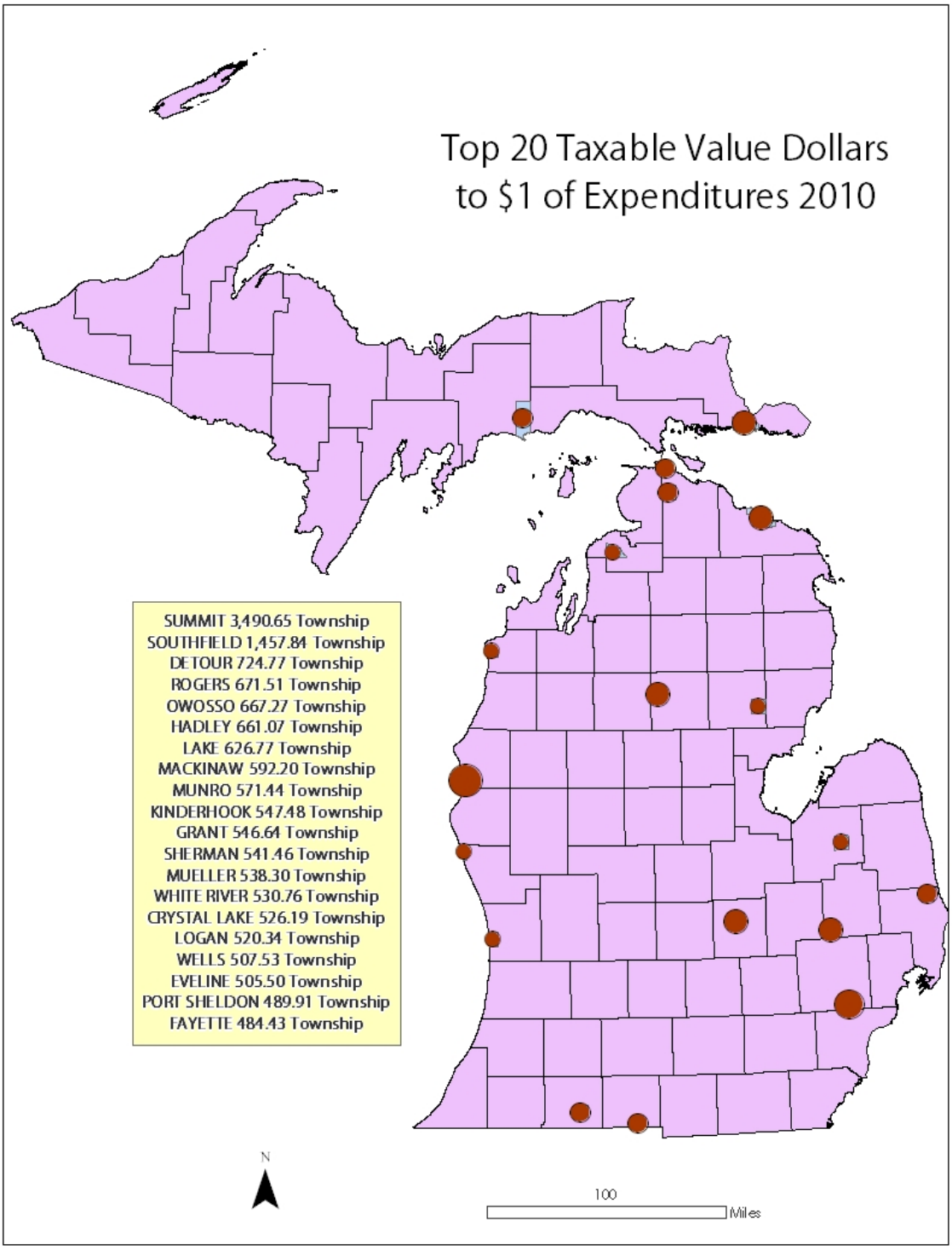


Figure 58: Top 20 Municipalities in 2010 Taxable Value to Expenditures

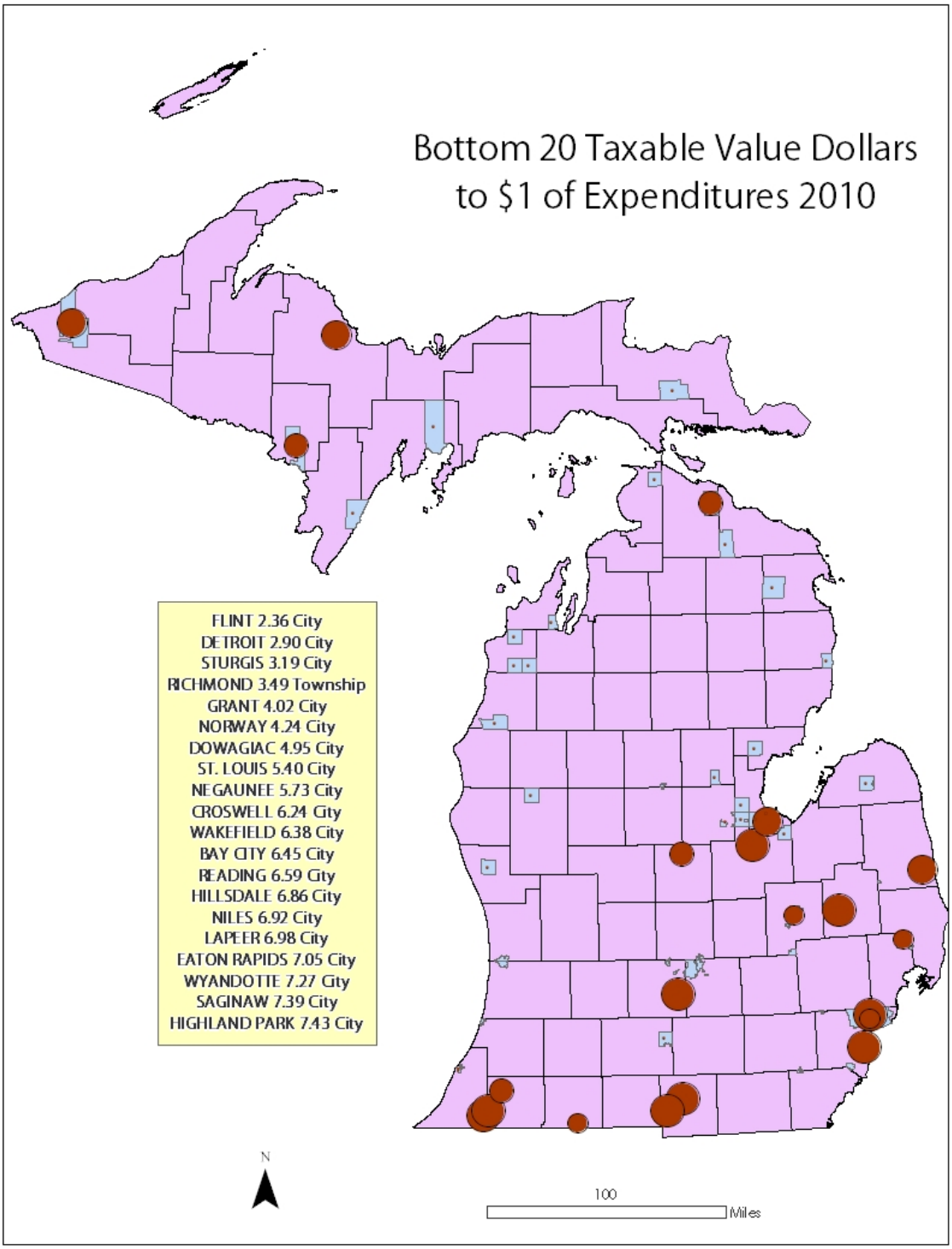


Figure 59: Bottom 20 Municipalities in 2010 Taxable Value to Expenditures

Looking at the 2010 revenue sharing distributions, it does not seem that the townships in the top twenty are getting much shared revenue. The problem here is that the villages, as mentioned at the beginning of this section, are not included in the analysis but have an affect anyway. There are some townships that follow the approximate per person distribution of the constitutional revenue distribution and others that do not (Mackinaw for example). The state may require the village TVs to be reported through the township but may not require the distributions to be counted this way. Further investigation could reveal a higher revenue sharing figure for the top twenty townships than what is shown here, as drawn from the state treasury reports.

Knowing that the village revenue sharing receipts could be affecting townships indirectly can we assume this benefits the townships? How many services do villages supply for themselves or ask of the township? Could neighboring cities that provide services to villages further decrease the need to rely on the townships that house the villages? And lastly, what improvements of townships actually result from revenue sharing being given to villages?

This analysis does not respond to the above questions. There are things we can see, for instance, the amount of total TV and revenue sharing dollars as compared to the number of people served. If the state is going to continue to assist communities through a per capita system, the state should consider more variables that can affect every person's "needs." Only then might we begin to see more of a balance and a more need-based application of the constitutional revenue sharing process.

In the next section we will examine similar variables but rather than analyzing taxable values and expenditures, we will be looking more at taxable values and millage rates.

Highest Millage Rates above Average Compared to the Lowest Millage Rates below Average

Municipalities with millage rates above and below average are analyzed here for indicators that may be relevant to the distribution of state constitutional revenue sharing.

Since local governments in the State of Michigan are limited to the maximum amount of millages levied depending on type of local government, (as discussed previously in the data analysis section of this report) it is necessary to examine average tax rates per type of local government. In this case, cities and townships will be examined. The millage rate information comes from the State of Michigan Department of Treasury 2010 Ad Valorem Property Tax Report and the report does not distinguish between general law and charter townships. Therefore general law townships and charter townships are also merged in this analysis to produce a combined average millage rate. Furthermore, the tax rate used in this analysis also reflects the combined total of both the operational and voted amounts as documented in the ad valorem report.

Cities

The average millage rate for cities is 17.21 with 132 cities above average and 144 below average (none at average).

Of the top 20 cities above the average millage rate, four are traditional cities (Ypsilanti, Detroit, Flint and Kalamazoo), one is located in Michigan's Upper Peninsula and the remaining fifteen are mainly inner-ring suburbs. Of the bottom twenty cities below the average millage rate, with the exception of the City of Grand Rapids, the remaining nineteen are mainly outer-ring suburbs and beyond. (See Table 12)

Townships

The average millage rate for combined general law and charter townships is 3.41 with 532 townships above average, 706 below average and 2 at average.

Of the top twenty townships above the average millage rate, four are general law townships and sixteen are charter townships. The majority being charter townships is relevant due to their ability to levy a higher tax rate than general law townships. In regards to location, similar to the majority of cities with the highest millage rates, eleven are arguably inner-ring suburbs while the remaining nine are outer-ring suburban and beyond. Of the bottom twenty-one townships below average (twenty-one opposed to twenty because two have the same millage rate), all twenty-one are rural general law townships. (See Table 13)

It should be noted that neither Menominee nor Wells (Delta County) townships impose a millage, as documented in the State of Michigan Department of Treasury F65 database, and both rely almost entirely on revenue sharing funds for revenue. Analyzing only the highest and lowest millage rates above and below average, however, ignores other relevant variables to the revenue and constitutional revenue sharing relationship of each local government such as taxable value and revenue sharing amounts.

Table 12: Cities Above and Below Average Millage Rate

20 Cities Highest Above Average				20 Cities Lowest Below Average			
City	2010 Millage Rate	City	2010 Millage Rate	City	2010 Millage Rate	City	2010 Millage Rate
River Rouge	43.23	Eastpoint	26.03	Troy	10.30	Whittmore	9.42
Highland Park	38.19	Center Line	25.81	Lake Angelus	10.27	Bloomfield Hills	9.36
Ypsilanti	34.04	Ferndale	25.78	Ferrysburg	10.24	Swartz Creek	9.21
Detroit	33.22	Kalamazoo	25.66	Harrisville	10.20	Grand Rapids	9.17
Ecorse	32.92	Taylor	25.66	Galesburg	10.19	Burton	8.78
Inkster	32.44	Oak Park	25.42	Rochester Hills	10.01	Mackinac Island	8.05
Ironwood	29.31	Hazel Park	24.68	Norton Shores	9.98	Stephenson	7.50
Harper Woods	29.30	Huntington Woods	24.46	Frankenmuth	9.94	Harbor Springs	5.84
Melvindale	27.60	Lincoln Park	24.31	Orchard Lake	9.80	Carson City	5.33
Flint	26.66	East Lansing	23.53	Ionia	9.72	Walker	3.26

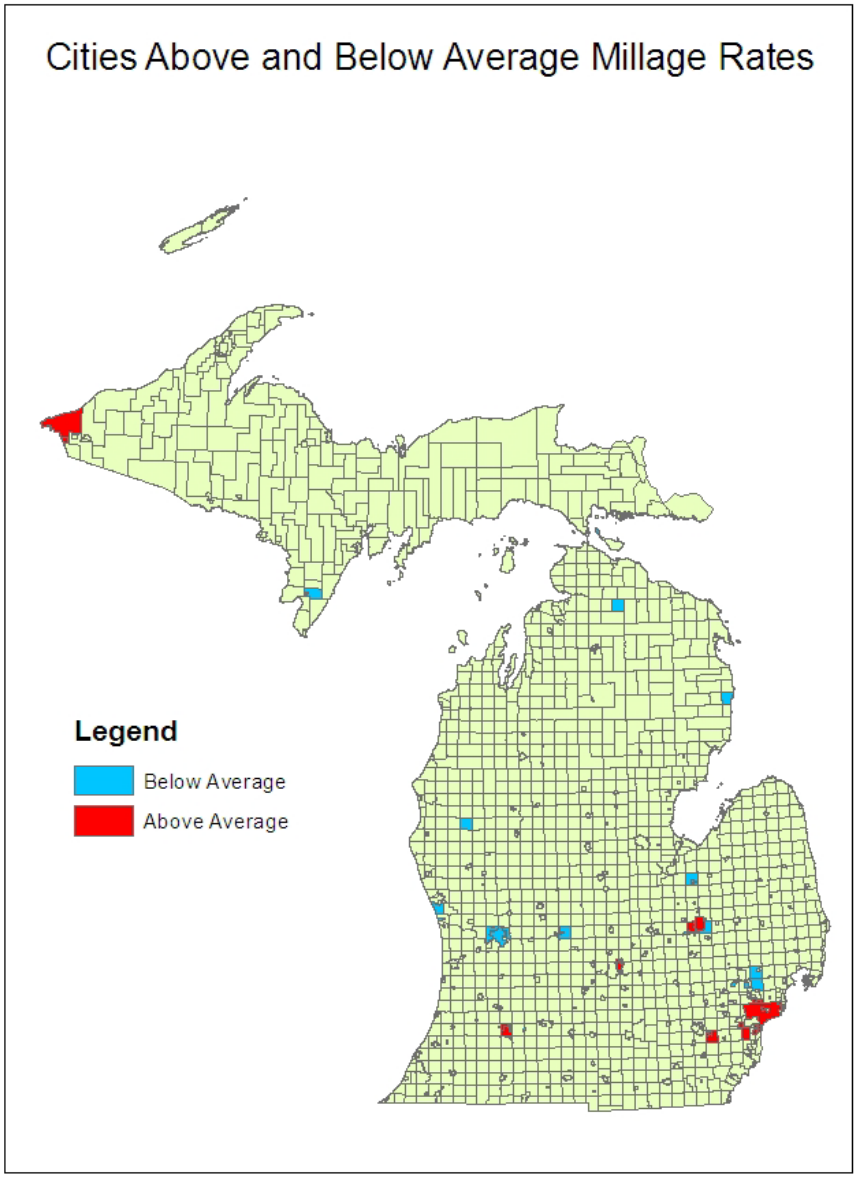


Figure 60: Cities Above and Below Average Millage Rates

Table 13: **Townships Above and Below**

Average Millage Rage

20 Townships Highest Above Average **20 Townships Lowest Below Average**

Township	2010 Millage Rate	Township	Millage Rate	Township	2010 Millage Rate	Township	Millage Rate
Redford	18.57	Mount Morris	12.06	Ronald	0.76	Cottrellville	0.71
Ypsilanti	14.16	Beuna Vista	11.93	St. Clair	0.76	Keene	0.70
Lansing	13.70	Waterford	11.20	Kimball	0.75	Convis	0.58
Bloomfield	13.49	Shelby	10.18	Redding	0.74	Clay	0.55
Kalamazoo	13.09	Oxford	9.93	Columbus	0.73	Pierson	0.54
St. James	13.08	West Bloomfield	9.91	Fabius	0.72	Limestone	0.42
Delhi	13.04	Michigamme	9.74	Garfield	0.72	Bagley	0.40
Bois Blanc	12.84	Frenchtown	9.72	Reading	0.72	Hiawatha	0.15
Meridian	12.15	Royal Oak	9.61	Riley	0.72	Sheridan	0.10
Grosse Ile	12.08	Benton	9.57	Woodbridge	0.72	Menominee	0.00
						Wells	0.00

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

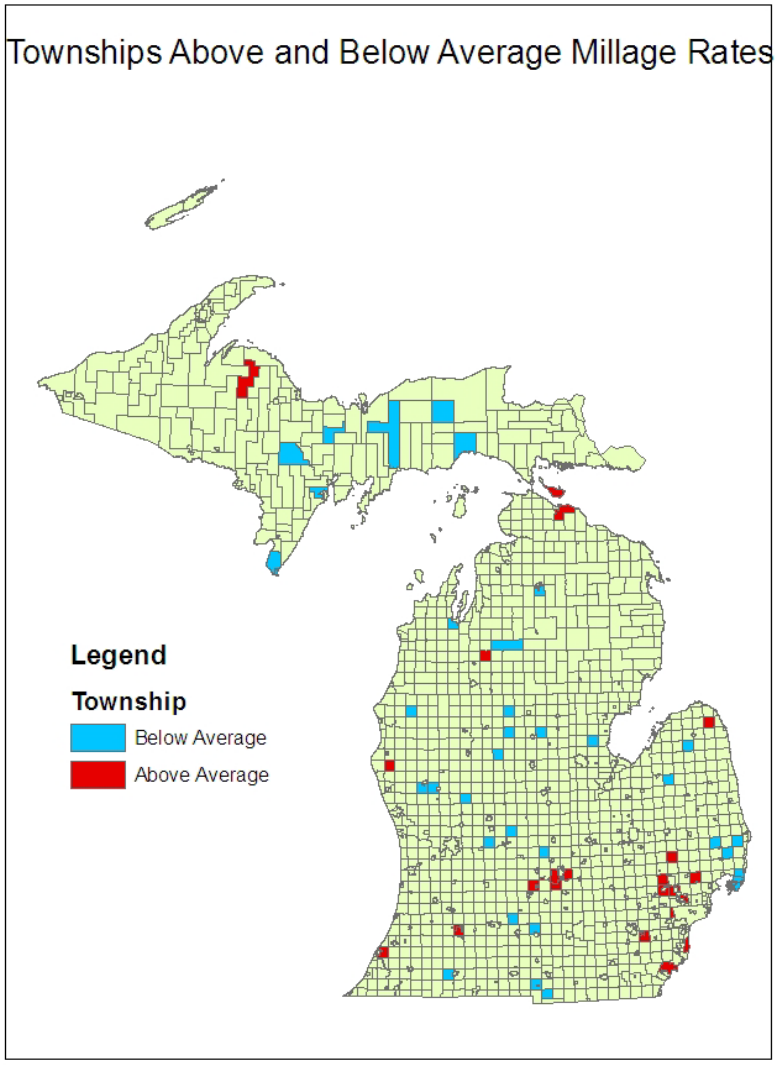


Figure 617: Townships and Below Average Millage Rates

Villages

The average millage rate for villages is 8.98 with 78 villages above average and 179 below average (none at average). Of the top twenty villages above the average millage rate about half are located in the east side of the state throughout the "thumb" area while the remaining villages are sporadically spread throughout west, mid and upper regions of the state. In contrast, of the bottom twenty villages below the average millage rate none are located in the east side of the state and are all sporadically located throughout west, mid and upper Michigan (See Table 14).

Table 14: Villages Above and Below Average

20 Villages Above Average				20 Villages below Average			
Village	2010 Millage Rate	Village	2010 Millage Rate	Village	2010 Millage Rate	Village	2010 Millage Rate
Gagetown	21.60	Alpha	18.05	Parma	4.83	Rosebush	3.00
Calumet	20.59	Shelby	17.95	Oakley	4.58	Custer	2.95
Clifford	19.17	Breckenridge	17.60	Birch Run	4.57	Powers	2.94
Marion	19.17	Elkton	17.50	Mulliken	4.46	Daggett	2.50
Newberry	19.09	Cassopolis	17.30	New Era	4.44	McBride	2.49
Capac	18.64	Cass City	17.10	Mattawan	4.33	Sanford	2.00
Sand Lake	18.58	Vandalia	16.94	Fountain	4.21	Allen	1.92
Deckerville	18.55	New Haven	16.75	Freesoil	4.19	Lake Ann	1.02
Pigeon	18.50	Almont	16.62	Posen	4.17	Shoreham	1.00
Laurium	18.12	Springport	16.45	Chatham	3.99	Lake Isabella	0.85

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

Analyzing the Relationship between Millage Rates and Taxable Value

Tax rate alone does not indicate the capacity of a municipality to generate its own revenues. The taxable value of the municipality must be taken in to account as it indicates the total value of property that taxes can be levied on. Therefore a high tax rate does not necessarily equate high revenues for a municipality if the municipality has a low taxable value. As analyzed in this section, it can be argued that higher tax rates are in fact compensation for lower taxable value therefore creating a high relative tax burden.

To do this analysis, millage rate and taxable value data from the State of Michigan Department of Treasury 2010 Ad Valorem Property Tax Report were entered in to a scatter plot to identify the top municipalities with correlating high millage rates and low taxable values as well as the top municipalities with correlating high taxable values and low millage rates. (See Figure 59)

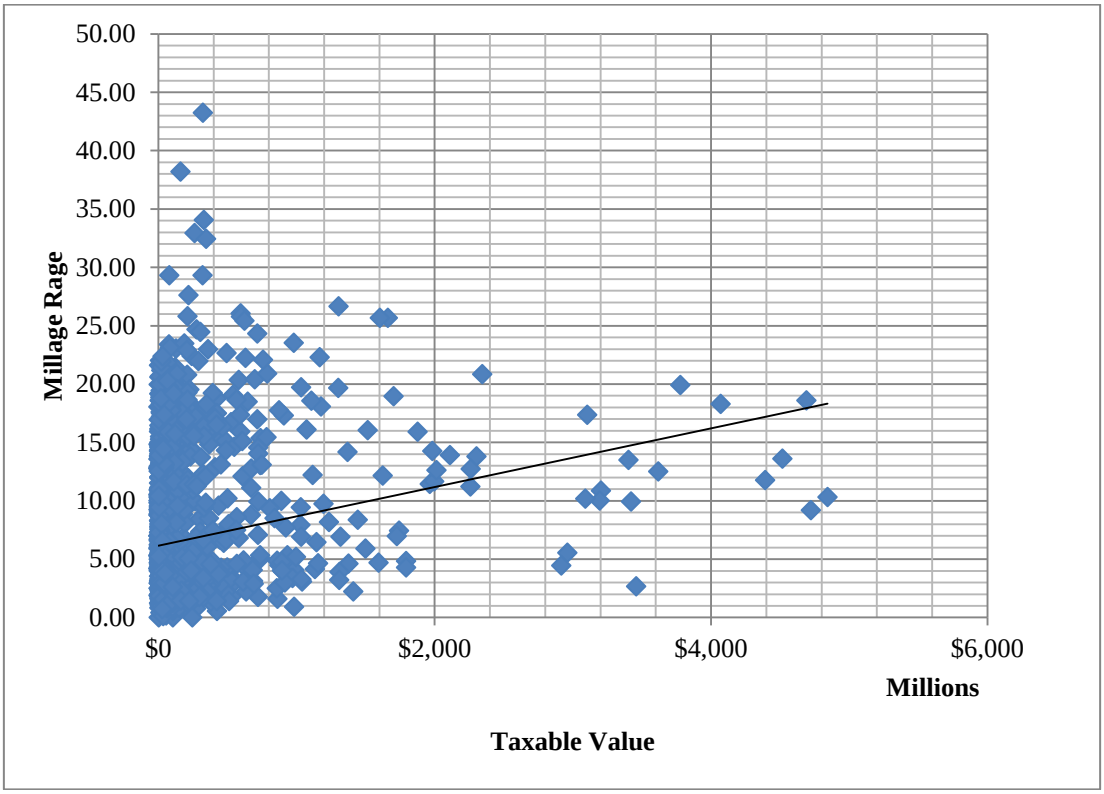


Figure 59: Scatter Plot Correlation of Millage Rates to Taxable Values

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

Municipalities with the High Millage Rates and Low Taxable Value

Of the top twenty municipalities with high millage rates and low taxable value it is worth noting all are cities and several are inner- ring suburbs (See Figure 60). It is further worth noting 14 of the cities are among the top 20 cities with above average millage rates identified earlier in *Table 12*. This is significant because the cities identified as having the highest above average millage rates do not include taxable value as a variable yet the two lists share fourteen cities; thus indicating a correlation between high millage rates and lower taxable values (See Figure 61). The high millage rate and low taxable value also indicates a high relative tax burden for these cities.

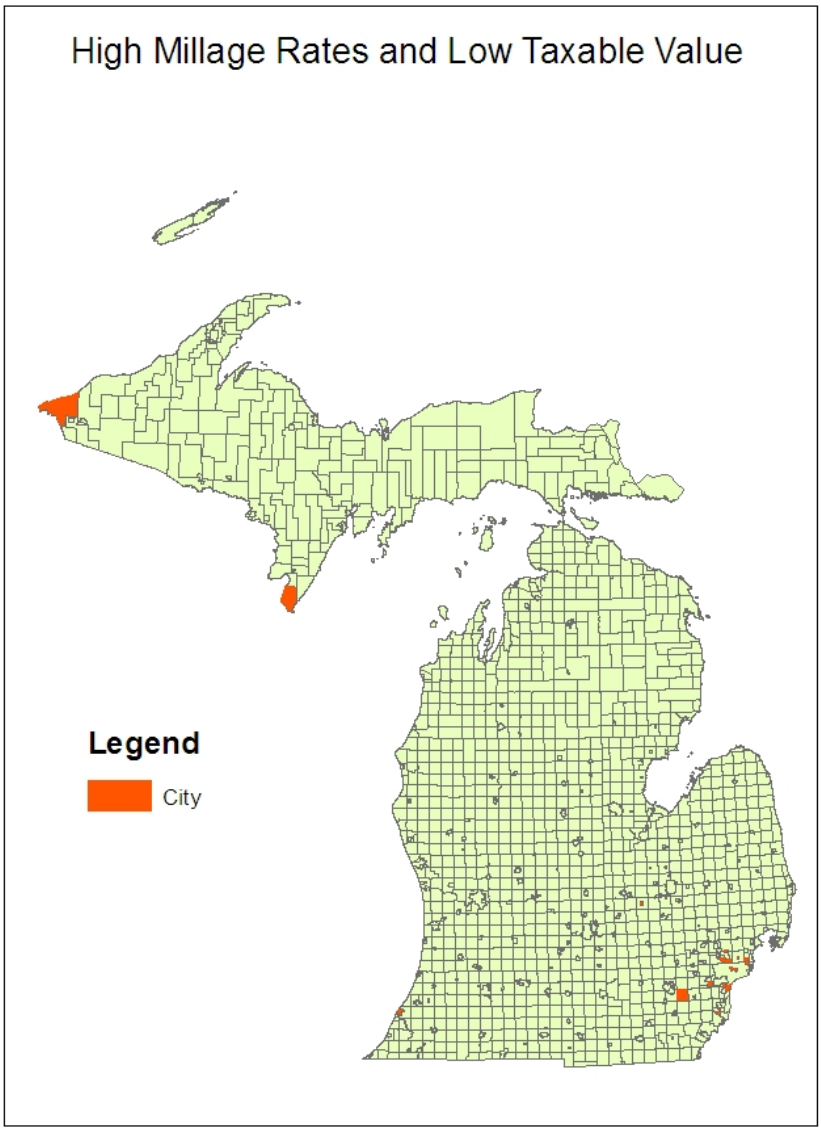


Figure 60: High Millage Rate and Low Taxable Value Municipalities

Table 15:

Municipalities with High Millage Rates and Low TV

Municipality	Type	2010 Taxable Value	2010 Millage Rate
River Rouge*	CITY	$323,261,285	43.23
Highland Park*	CITY	$161,707,163	38.19
Ypsilanti*	CITY	$329,993,209	34.04
Ecorse*	CITY	$264,256,682	32.92
Inkster*	CITY	$347,296,966	32.44
Ironwood*	CITY	$81,275,170	29.31
Harper Woods*	CITY	$320,293,949	29.30
Melvindale*	CITY	$219,627,280	27.60
Eastpointe*	CITY	$596,224,469	26.03
Center Line*	CITY	$212,169,241	25.81
Ferndale*	CITY	$598,997,910	25.78
Oak Park*	CITY	$623,819,490	25.42
Hazel Park*	CITY	$276,987,130	24.68
Huntington Woods*	CITY	$306,037,730	24.46
Menominee	CITY	$188,039,337	23.46
Durand	CITY	$78,329,626	23.38
Rockwood	CITY	$84,349,503	23.10
Benton Harbor	CITY	$128,073,769	23.02
Clawson	CITY	$359,873,780	22.96
Hamtramck	CITY	$241,348,988	22.39

20 Cities Above Average Millage Rate

Cities	2010 Millage Rate
River Rouge	43.23
Highland Park	38.19
Ypsilanti	34.04
Detroit	33.22
Ecorse	32.92
Inkster	32.44
Ironwood	29.31
Harper Woods	29.30
Melvindale	27.60
Flint	26.66
Eastpoint	26.03
Center Line	25.81
Ferndale	25.78
Kalamazoo	25.66
Taylor	25.66
Oak Park	25.42
Hazel Park	24.68
Huntington Woods	24.46
Lincoln Park	24.31
East Lansing	23.53

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

Municipalities with High Taxable Value and Low Millage Rates

In stark contrast to the analysis of high millage rates and low taxable value where all are cities, analysis of the top 20 municipalities with high taxable value and low tax rates indicates 13 are townships, 7 are cities and none are villages. It is worth noting the majority of these municipalities are located on the fringes of the inner-ring and outer-ring suburbs, this is indicative of sprawl and the outward mobility of wealth (See Figure 61).

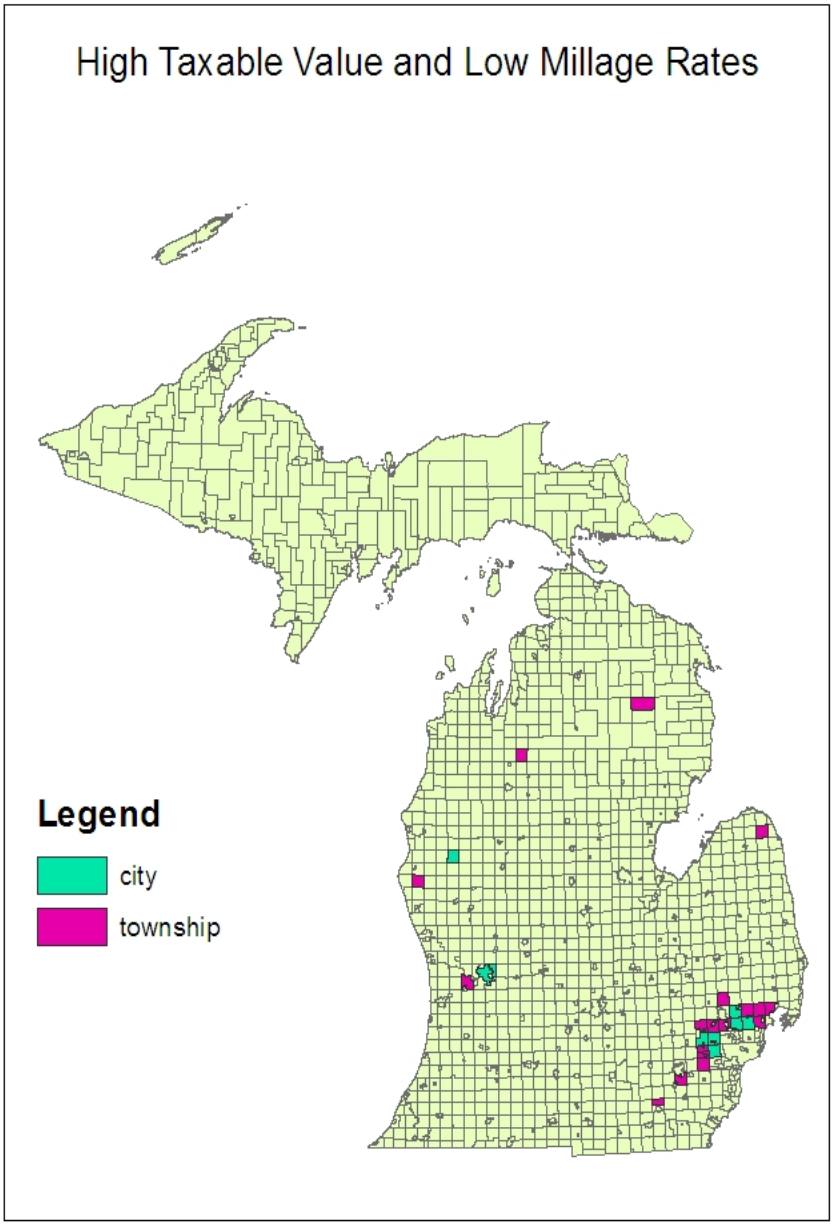


Figure 61: High Taxable Value and Low Millage Rate Municipalities

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

Municipalities with High Millage Rates/Low TV and High TV/Low Millage Rates: How They Fare Under the State Constitutional Revenue System

As seen in Table 16 below, the top twenty municipalities with high millage rates and low taxable value rank lower in terms of state constitutional revenue sharing allocation than those municipalities with high taxable value and low tax rates. Due to the disparity, it can be argued municipalities should receive a higher amount of constitutional revenue sharing funds to ease their high tax burden. It is also worth noting that thirteen townships are ranked high in amount of received constitutional revenue sharing funds, yet those townships levy a lower millage than cities ranked lower in amount of received revenue sharing. In other words, in this analysis, townships rank higher in amounts of revenue sharing received and levy a relatively low millage while cities rank lower in amounts of revenue sharing received and levy a higher millage.

Table 16: Constitutional Revenue Sharing Rank

High Taxable Value/Low Millage Rate

Municipality	Type	2010 Taxable Value	2010 Millage Rate	2010 Constitutional Revenue Sharing Amount	Rank of 1517
Grand Rapids	CITY	$4,722,366,946	9.17	$12,532,107	2
Sterling Heights	CITY	$4,517,873,330	13.59	$7,906,472	5
Livonia	CITY	$4,393,300,210	11.75	$6,386,678	8
Farmington Hills	CITY	$3,619,696,470	12.50	$5,215,741	12
Troy	CITY	$4,843,613,012	10.30	$5,142,563	13
Canton	TOWNSHIP	$3,460,157,098	2.66	$4,850,814	16
Rochester Hills	CITY	$3,194,661,270	10.01	$4,371,805	19
West Bloomfield	TOWNSHIP	$3,421,492,960	9.91	$4,119,945	23
Macomb	TOWNSHIP	$2,916,076,220	4.43	$3,206,393	30
Novi	CITY	$3,204,568,420	10.86	$3,009,987	33
Bloomfield	TOWNSHIP	$3,404,549,680	13.49	$2,732,847	37
Georgetown	TOWNSHIP	$1,411,947,218	2.23	$2,646,141	38
Chesterfield	TOWNSHIP	$1,595,045,337	4.70	$2,375,988	44
Orion	TOWNSHIP	$1,498,867,900	5.88	$1,953,131	53
Commerce	TOWNSHIP	$1,794,368,630	4.83	$1,927,788	54
Pittsfield	TOWNSHIP	$1,726,850,356	6.95	$1,861,344	63
Plymouth	TOWNSHIP	$1,793,223,680	4.28	$1,736,146	69
Northville	TOWNSHIP	$1,742,126,090	7.42	$1,294,296	89
Shelby	TOWNSHIP	$3,091,857,401	10.18	$103,921	892
Clinton	TOWNSHIP	$2,961,657,506	5.55	$32,459	1391

High Millage Rate/Low Taxable Value

Municipality	Type	2010 Taxable Value	2010 Millage Rate	2010 Constitutional Revenue Sharing Amount	Rank of 1517
Eastpointe	CITY	$596,224,469	26.03	$2,164,592	47
Oak Park	CITY	$623,819,490	25.42	$2,058,004	50
Inkster	CITY	$347,296,966	32.44	$1,912,923	57
Hamtramck	CITY	$241,348,988	22.39	$1,435,946	77
Ypsilanti	CITY	$329,993,209	34.04	$1,412,507	80
Ferndale	CITY	$598,997,910	25.78	$1,404,123	81
Hazel Park	CITY	$276,987,130	24.68	$1,204,541	98
Highland Park	CITY	$161,707,163	38.19	$1,063,716	107
Harper Woods	CITY	$320,293,949	29.30	$905,423	120
Clawson	CITY	$359,873,780	22.96	$808,745	141
Ecorse	CITY	$264,256,682	32.92	$713,273	157
Benton Harbor	CITY	$128,073,769	23.02	$710,287	158
Melvindale	CITY	$219,627,280	27.60	$681,893	167
River Rouge	CITY	$323,261,285	43.23	$629,934	180
Menominee	CITY	$188,039,337	23.46	$578,991	193
Center Line	CITY	$212,169,241	25.81	$541,895	205
Ironwood	CITY	$81,275,170	29.31	$399,736	265
Huntington Woods	CITY	$306,037,730	24.46	$390,715	268
Durand	CITY	$78,329,626	23.38	$249,826	408
Rockwood	CITY	$84,349,503	23.10	$218,638	461

Source: Department of Treasury 2010 Ad Valorem Property Tax Report

Daytime and Job Populations

Daytime population refers to the number of people who are present in a municipality during normal business hours, including the people working within the municipality. Job population refers to the amount of jobs being offered within the municipality. Both of these variables are important when looking at the fluctuation between the daytime/ job population in comparison to a municipality's total population. This section looks at the differences in job populations and total populations; identifies the municipalities with the highest daytime population, and jobs; and examines how well these municipalities fare in the current constitutional revenue sharing system.

Day Time Populations

Figure 62 shows the top twenty daytime populations based on the raw amount of people in the area during day time hours. Most of the municipalities are located in the Detroit metro region.

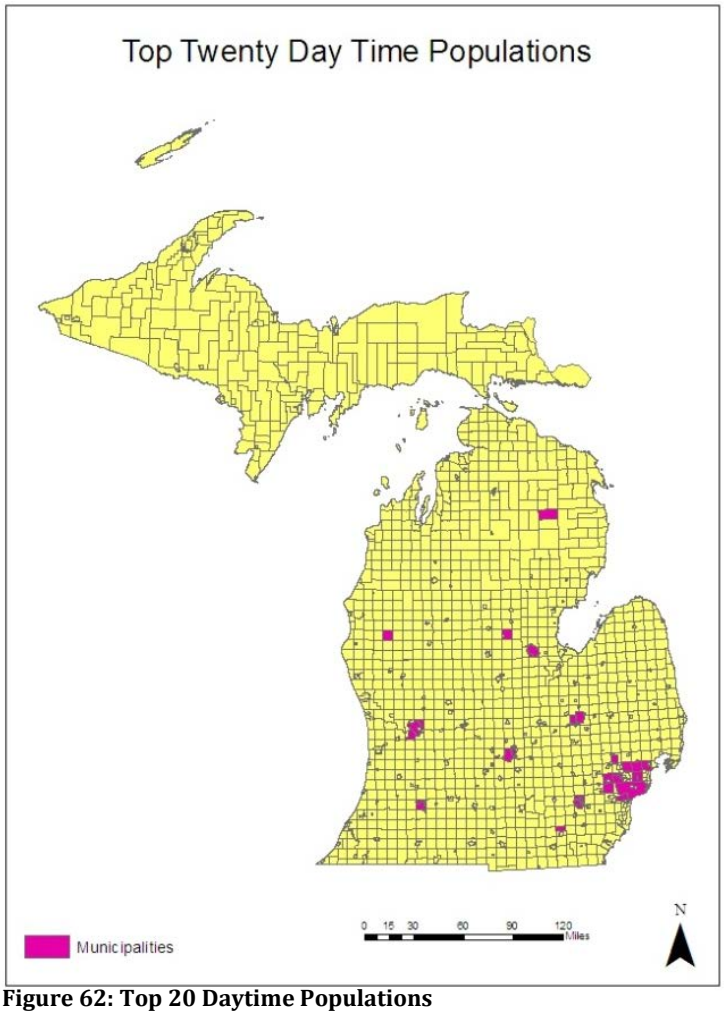


Figure 62: Top 20 Daytime Populations

Table 17 below reveals municipalities that have the highest daytime populations are predominately cities.

Table 17: Top Twenty Highest Daytime Populations

LABEL	TYPE	POP	# OF JOBS	WORKERS(live in community, may work elsewhere)	JOBS/ POP	DAY POP	DAY POP/ POP	REV SHARE $	RANK
Detroit	City	951270	318790	319449	0.33512	950611	0.999307	63725577	1
Grand Rapids	City	197800	124193	90663	0.627872	231330	1.16951	13250622	2
Lansing	City	119128	88742	2314	0.74493	205556	1.72551	7980385	7
Warren	City	138247	90939	62810	0.657801	166376	1.20347	9261167	3
Ann Arbor	City	114024	98480	60188	0.863678	152316	1.33582	7638468	8
Flint	City	124943	68257	44114	0.546305	149086	1.19323	8369932	4
Dearborn	City	97775	87946	37881	0.899473	147840	1.51204	6549947	10
Troy	City	80959	105445	41434	1.30245	144970	1.79066	5423443	14
Livonia	City	100545	83368	48856	0.829161	135057	1.34325	6735510	9
Southfield	City	78296	94386	38877	1.2055	133805	1.70896	5245049	15
Sterling Heights	City	124471	59434	63247	0.477493	120658	0.969366	8338312	5
Kalamazoo	City	77145	56640	36122	0.734202	97663	1.26597	5167944	16
Farmington Hills	City	82111	56072	41626	0.682881	96557	1.17593	5500616	13
Pontiac	City	66337	49451	25808	0.745451	89980	1.35641	4443916	21
Clinton	Township	95648	34485	48068	0.360541	82065	0.85799	6407460	11
East Lansing	City	46525	32632	17	0.701386	79140	1.70102	3116710	36
Wyoming	City	69368	42957	35777	0.619262	76548	1.10351	4646962	19
Midland	City	41685	32926	128	0.789876	74483	1.78681	2792478	40

Job Populations

Figure 63 shows the top twenty job populations divided by the total population of the municipality.

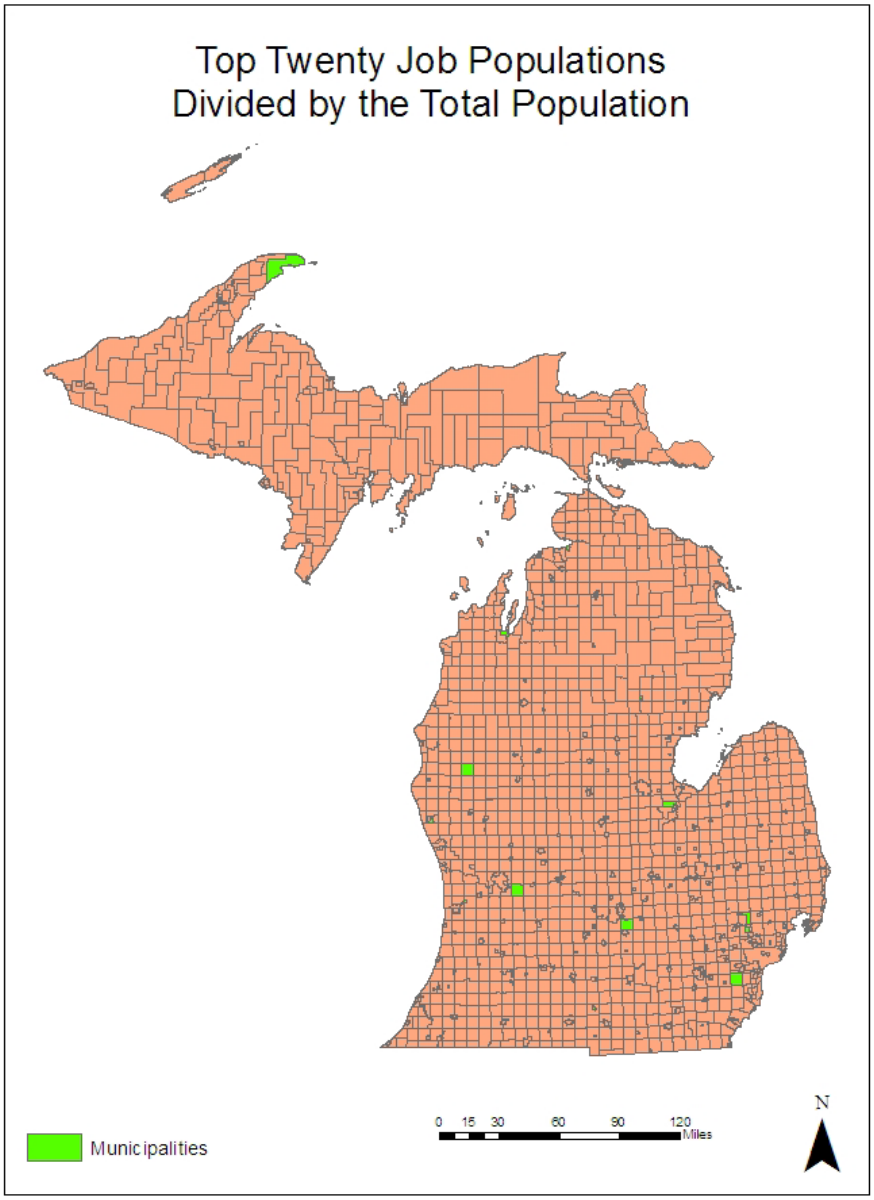


Figure 63: Top Twenty Job Populations Divided by the Total Population

Table 18 identifies the rank order of municipalities based on highest job population divided by the total population. Most of the municipalities with a high amount of jobs in comparison to the municipality's total population receive a low amount of money through the per-capita revenue sharing system, with a few exceptions. Most of these municipalities are cities.

Table 18: Job Populations Divided by Total Population

NAME	TYPE	POP	# of JOBS	WORKERS (live in community, may work elsewhere)	JOBS/ POP	DAY POP	DAY POP/POP	REV. SHARE $	RANK
Troy	Township	243	766	110	3.15226	899	3.69959	16279	1494
Gaylord	City	3681	9425	1590	2.56045	11516	3.1285	246590	481
Auburn Hills	City	19837	48672	10752	2.4536	57757	2.91158	1328881	96
Bloomfield Hills	City	3940	8237	1762	2.09061	10415	2.6434	263941	449
Novi	Township	193	355	99	1.83938	449	2.32642	12929	1508
Grant	Township	172	296	62	1.72093	406	2.36047	11522	1512
Litchfield	City	1458	2452	672	1.68176	3238	2.22085	97671	1022
Romulus	City	22979	38358	10254	1.66926	51083	2.22303	1539363	80
West Branch	City	1926	3179	858	1.65057	4247	2.20509	129023	860
Petoskey	City	6080	9820	3095	1.61513	12805	2.10609	407299	305
Kochville	Township	3241	5234	1822	1.61493	6653	2.05276	217115	547
Zeeland	City	5805	9214	2693	1.58725	12326	2.12334	388877	315
Traverse City	City	14532	22996	31	1.58244	37497	2.58031	973499	128
Whitehall	City	2884	4359	1281	1.51144	5962	2.06727	193199	618
Harbor Springs	City	1567	2309	688	1.47352	3188	2.03446	104973	993
McBain	City	584	844	288	1.44521	1140	1.95205	39122	1378
Alaiedon	Township	3498	4966	1581	1.41967	6883	1.9677	234331	509
Reed City	City	2430	3410	997	1.40329	4843	1.993	162786	718
Cascade	Township	15107	21190	7579	1.40266	28718	1.90097	1012018	125

Figure 64 shows the municipalities with the top twenty job populations. Most of the municipalities are located in the Detroit metro region. The rest of the municipalities are located throughout in middle and southern michigan.

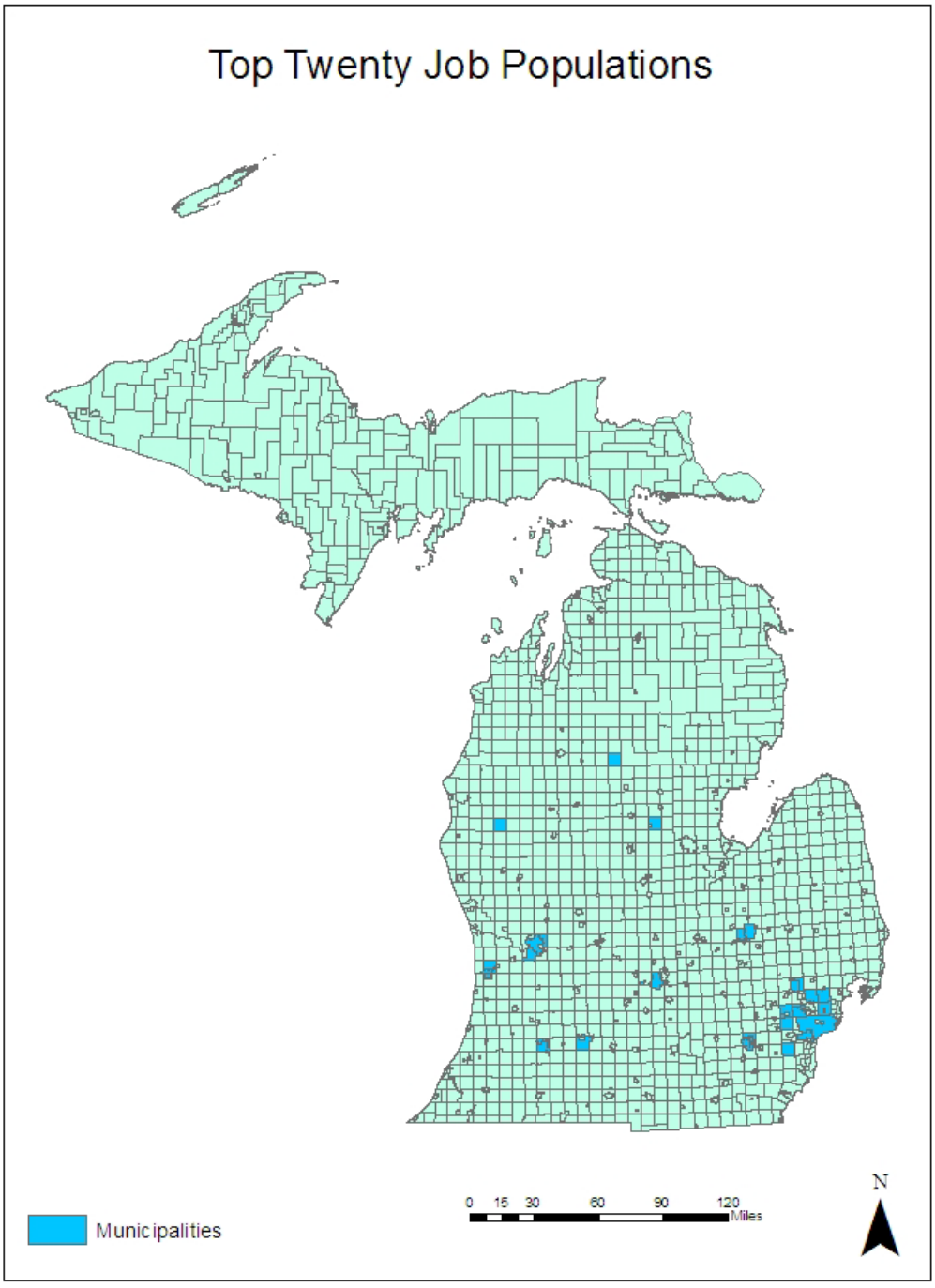


Figure 64: Top Twenty Job Populations

Table 19 shows the municipalities that have the highest job populations. All of the top twenty municipalities are cities. There is a strong correlation between job population and the amount of money the municipality receives through the per-capita revenue sharing system.

Table 19: Top Twenty Job Populations

NAME	TYPE	POP	# of JOBS	WORKERS (live in community, may work elsewhere)	JOBS/ POP	DAY POP	DAY POP/POP	REV. SHARE $	RANK
Detroit	City	951270	318790	319449	0.33512	950611	0.999307	63725577	1
Grand Rapids	City	197800	124193	90663	0.627872	231330	1.16951	13250622	2
Troy	City	80959	105445	41434	1.30245	144970	1.79066	5423443	14
Ann Arbor	City	114024	98480	60188	0.863678	152316	1.33582	7638468	8
Southfield	City	78296	94386	38877	1.2055	133805	1.70896	5245049	15
Warren	City	138247	90939	62810	0.657801	166376	1.20347	9261167	3
Lansing	City	119128	88742	2314	0.74493	205556	1.72551	7980385	6
Lansing	City	119128	88742	2314	0.74493	205556	1.72551	7980385	7
Dearborn	City	97775	87946	37881	0.899473	147840	1.51204	6549947	10
Livonia	City	100545	83368	48856	0.829161	135057	1.34325	6735510	9
Flint	City	124943	68257	44114	0.546305	149086	1.19323	8369932	4
Sterling Heights	City	124471	59434	63247	0.477493	120658	0.969366	8338312	5
Kalamazoo	City	77145	56640	36122	0.734202	97663	1.26597	5167944	16
Farmington Hills	City	82111	56072	41626	0.682881	96557	1.17593	5500616	13
Pontiac	City	66337	49451	25808	0.745451	89980	1.35641	4443916	21
Auburn Hills	City	19837	48672	10752	2.4536	57757	2.91158	1328881	96
Wyoming	City	69368	42957	35777	0.619262	76548	1.10351	4646962	19
Romulus	City	22979	38358	10254	1.66926	51083	2.22303	1539363	80
Battle Creek	City	53364	37911	22482	0.710423	68793	1.28913	3574854	29
Holland	City	35048	35213	3150	1.00471	67111	1.91483	2347866	50

When comparing the table for both the highest daytime and job populations there are several municipalities that appear in both tables. The municipalities that have a high job to total population ratio, rank low in terms of the amount of money received through the per-capita revenue sharing system.

In this section we looked at the municipalities with high daytime and job populations and how they are impacted by per-capita revenue sharing. In the next section we will look at Michigan municipalities with the highest and lowest population density and poverty rates, and the amount of constitutional revenue sharing dollars these municipalities currently receive.

Population Density

The current constitutional revenue sharing system in the state of Michigan distributes funds solely on a per capita basis. The per capita distribution system does not take into account poverty rates of municipalities or actual population density, both of which could have implications on what constitutes "need." In order to show other means of distributing constitutional revenue sharing dollars, 2010 population density and poverty rate data for municipalities in the state of Michigan have been calculated and displayed. Population density is one way of measuring the concentration of infrastructure provision and service delivery in particular areas, while poverty rates show how high the needs for particular types of services are within different municipalities.

Data used in this section consists of census data from 2010, American Community Survey statistical data from 2010, and GIS data. The top twenty cities, townships, and villages with the highest poverty rates and population density were chosen along with the bottom twenty i.e., cities, townships and villages with the lowest poverty rates and population density.

Population density was calculated using population and land area data of townships and cities in square miles. Poverty rates were calculated using the percentage of households living at the federal poverty level or below within the last 12 months. The density method is simple; the municipality's total population according 2010 census data divided by the total square miles of the municipality.

The calculation shows that the densest municipalities are cities, with the densest city being Hamtramck with a population density of approximately 10,751 people per square mile. In comparison, West Bloomfield Township has the highest population density for townships with approximately 2,369 people per square mile. This population density method shows that there is a large difference between city density, township density, and village density and offers a different method for calculating need.

The top twenty municipalities with the highest population density are all located in the southern and central areas of the state as seen in Figure 65. The information on population density shows that the southern portion, particularly the southeastern part of Michigan would receive the majority of constitutional revenue sharing if population density was used as an alternative method.

All top twenty cities with the highest population density are located in southeast Michigan. Comparatively, Figure 66 shows that the least densely populated areas, are primarily located in the northern parts of the state. Table 21 reveals that the population density for the entire bottom twenty (least dense) list of townships consists of townships with 2 or less people per square mile, compared to the cities where the least dense city has 113 people per square mile.

Table 20: Data for population density among townships, cities, and villages with highest amounts of density per square mile.

Top 20 Municipalities with Highest Population Density							
Cities			**Townships**			**Villages**	
	Density per square mile	Constitutional Revenue Sharing Received		Density per square mile	Constitutional Revenue Sharing Received		Density per square mile
Hamtramck city	10,751	1,435,946	West Bloomfield Township	2,369	4,119,945	Lake Orion village	3,764
Lincoln Park city	6,478	2,541,332	Waterford Township	2,290	3,206,393	Calumet village	3,691
Eastpointe city	6,308	2,164,592	Macomb Township	2,192	3,206,393	Wolverine Lake village	3,398
Keego Harbor city	5,891	175,889	Shelby Township	2,123	103,921	Laurium village	3,036
Hazel Park city	5,829	942,927	Carrollton Township	1,907	419,363	Oxford village	2,745
Berkley city	5,725	986,539	Kalamazoo Township	1,873	1,376,808	Beverly Hills village	2,567
Oak Park city	5,677	2,058,004	Ypsilanti Township	1,772	3,124,070	Milford village	2,544
Harper Woods city	5,455	905,423	Plymouth Township	1,731	1,736,146	Carleton village	2,365
Clawson city	5,377	808,745	Northville Township	1,727	1,294,296	Armada village	2,274
Grosse Pointe Park city	5,328	790,387	Harrison Township	1,719	1,553,777	Lake Odessa village	2,261
Detroit city	5,144	60,295,723	Saginaw Township	1,660	2,519,036	Copper City village	2,254
St. Clair Shores city	5,139	4,007,895	Lansing Township	1,658	537,257	Holly village	2,202
Ferndale city	5,130	1,404,123	Bloomfield Township	1,649	2,732,847	Dexter village	2,179
Grosse Pointe city	5,118	360,161	Chesterfield Township	1,554	2,375,988	Ahmeek village	2,131
Grosse Pointe Woods city	4,966	1,084,931	Novi Township	1,500	12,260	South Range village	2,088
Dearborn Heights city	4,920	6,210,727	Georgetown Township	1,402	2,646,141	Marcellus village	2,056
Wyandotte city	4,908	1,778,957	St. Joseph Township	1,368	583,246	Spring Lake village	1,969
Royal Oak city	4,857	3,815,174	Brownstown Township	1,367	1,460,276	Berrien Springs village	1,919
Roseville city	4,814	3,057,183	Flint Township	1,352	2,137,849	Almont village	1,878
Center Line city	4,743	541,895	Holland Township	1,310	1,836,445	New Haven village	1,832

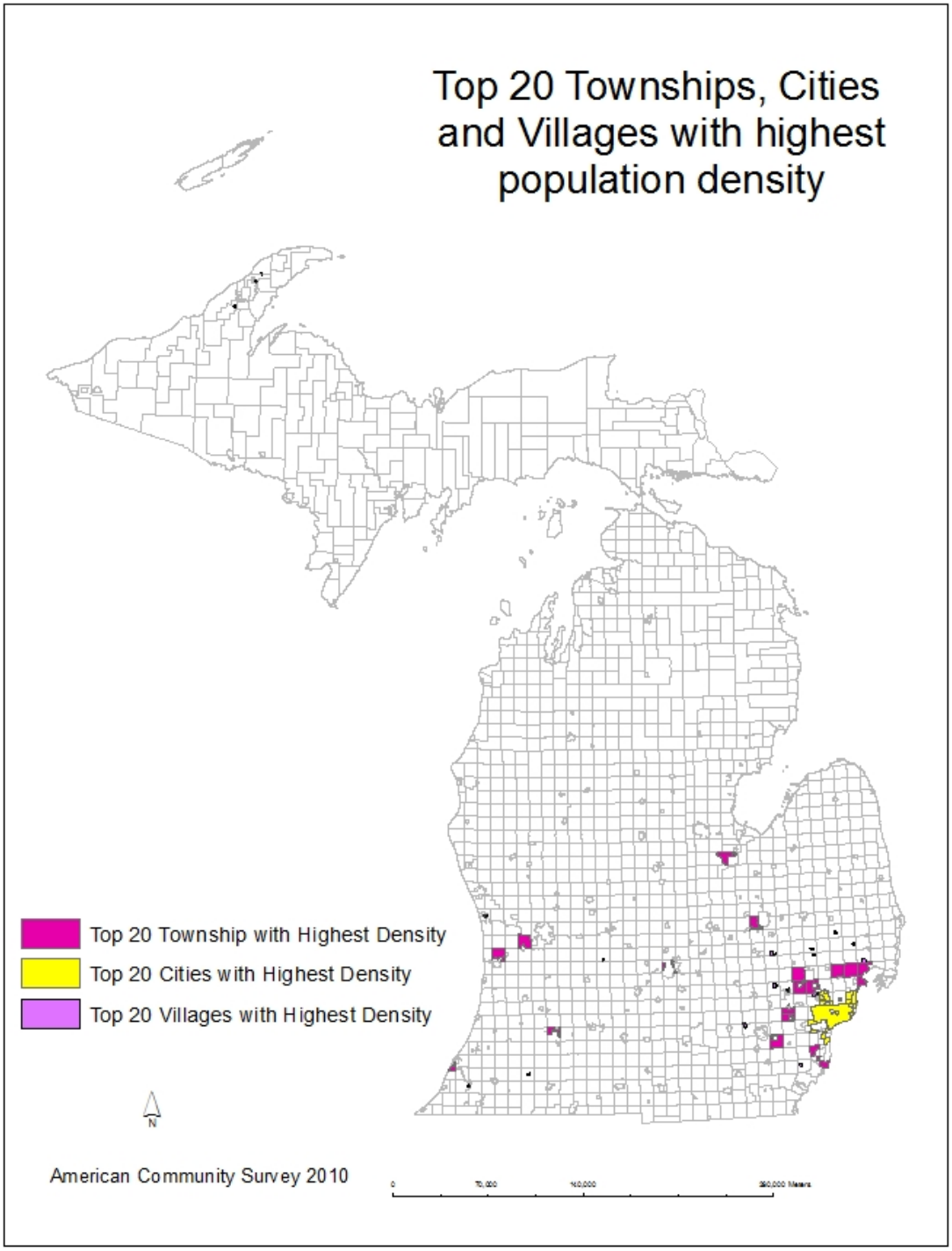


Figure 65 Top 20 Townships Cities, Villages with Highest population densities according to calculations from 2010 census bureau data

Table 21: Bottom 20 Townships, Cities, and Villages with Lowest population densities according to calculations from 2010 census bureau data

Bottom 20 Municipalities with Lowest Population Density							
Cities			**Townships**			**Villages**	
	Density per square mile	Constitutional Revenue Received		Density per square mile	Constitutional Revenue Received		Density per square mile
Mackinac Island city	113	$33,221	Seney Township	0.55	$11,433	Chatham village	90
Gaastra city	212	$21,533	West Branch Township	0.56	$33,809	De Tour Village village	92
Wakefield city	231	$132,441	Houghton Township	0.65	$7,877	Turner village	111
Lake Angelus city	272	$20,709	Matchwood Township	0.85	$7,305	Free Soil village	139
Omer city	276	$21,406	Bohemia Township	0.89	$4,891	Harrietta village	153
Norway city	326	$187,958	Sherman Township	1.02	$3,810	Alpha village	154
Negaunee city	337	$290,670	Eagle Harbor Township	1.2	$22,805	Forestville village	171
Bessemer city	349	$135,553	Duncan Township	1.33	$17,785	Emmett village	178
Whittemore city	390	$30,236	Columbus Township	1.44	$128,122	Minden City village	180
Au Gres city	398	$65,300	Wells Township	1.49	$110,717	Melvin village	185
Crystal Falls city	423	$112,559	Wakefield Township	1.69	$23,121	Twining village	186
Munising city	448	$161,026	Turin Township	1.81	$8,321	Fountain village	191
Iron River city	450	$215,082	Spurr Township	1.81	$14,419	Carney village	192
McBain city	524	$37,097	Grant Township	1.83	$43,194	Millersburg village	208
Newaygo city	528	$106,079	Grim Township	1.92	$8,195	Copemish village	208
Litchfield city	548	$92,613	Hendricks Township	1.93	$11,624	Clifford village	215
Ithaca city	556	$194,945	Elm River Township	1.93	$10,735	Walkervile village	228
Onaway city	562	$63,075	McMillan Township	1.98	$38,175	Daggett village	234
Harrison city	568	$128,375	Haight Township	2	$14,482	Posen village	234
Rose City city	607	$45,798	Grand Island Township	2.1	$2,858	Mackinaw City village	238

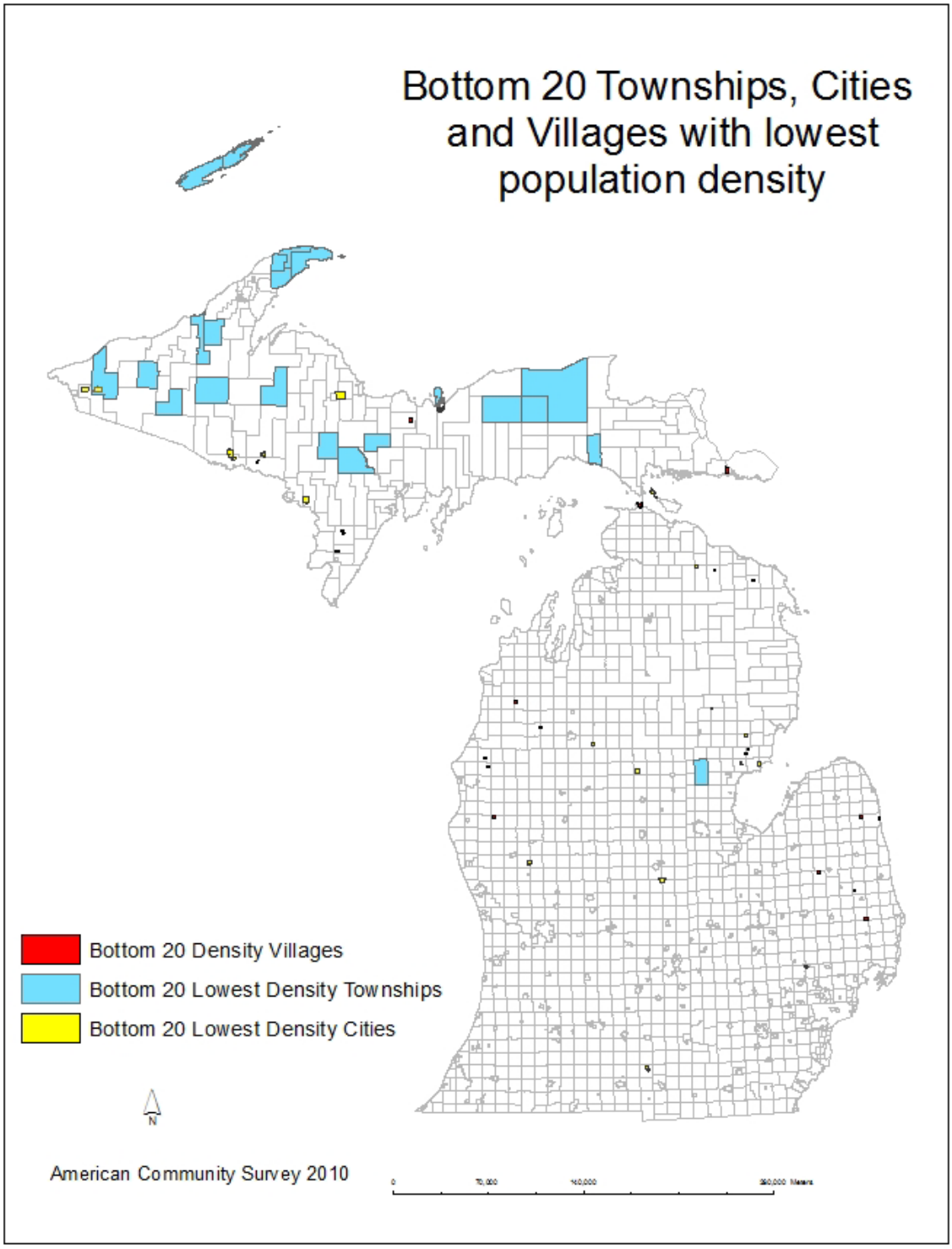


Figure 66. Bottom 20 Townships, Cities, and Villages with Lowest population densities according to calculations from 2010 census bureau

Table 22 displays the municipalities with the highest percentage of poverty. There is a mixture of cities, townships, and villages but cities dominate the chart with 13 of the 20 being cities.

Table 22 Municipalities with highest % of Poverty among households who are at or below the poverty level

Top 20 Municipalities with Highest % of poverty	Poverty %	Constitutional Revenue Received
Benton Harbor city	44.9	$710,287
Crystal Township	41.7	$179,383
Muskegon Heights city	38	$765,359
Highland Park city	37.8	$1,063,716
Hamtramck city	37.5	$1,435,946
Troy township	35.6	$15,436
River Rouge city	34.5	$629,934
Mills township	33.7	$118,847
Home township	33.3	$73,620
Lee township	32.3	$261,323
Flint city	32.1	$7,917,588
Saginaw city	31.8	$3,910,964
White Cloud city	30.1	$84,102
Mount Morris city	29.8	$202,885
Detroit city	29.4	$60,295,723
Greenville city	29	$504,035
Big Rapids city	28.9	$747,867
Benton charter township	28.8	$677,214
Grayling city	28.3	$132,030
West Branch township	28	$120,880

In Figure 67 population density and poverty rates are displayed together, highlighting the highest of both variables. By using both highest population density in cities, villages and townships alongside the highest percentage of poverty this map shows overlapping areas and key regions of the state where higher population density does correlate with higher poverty rates.

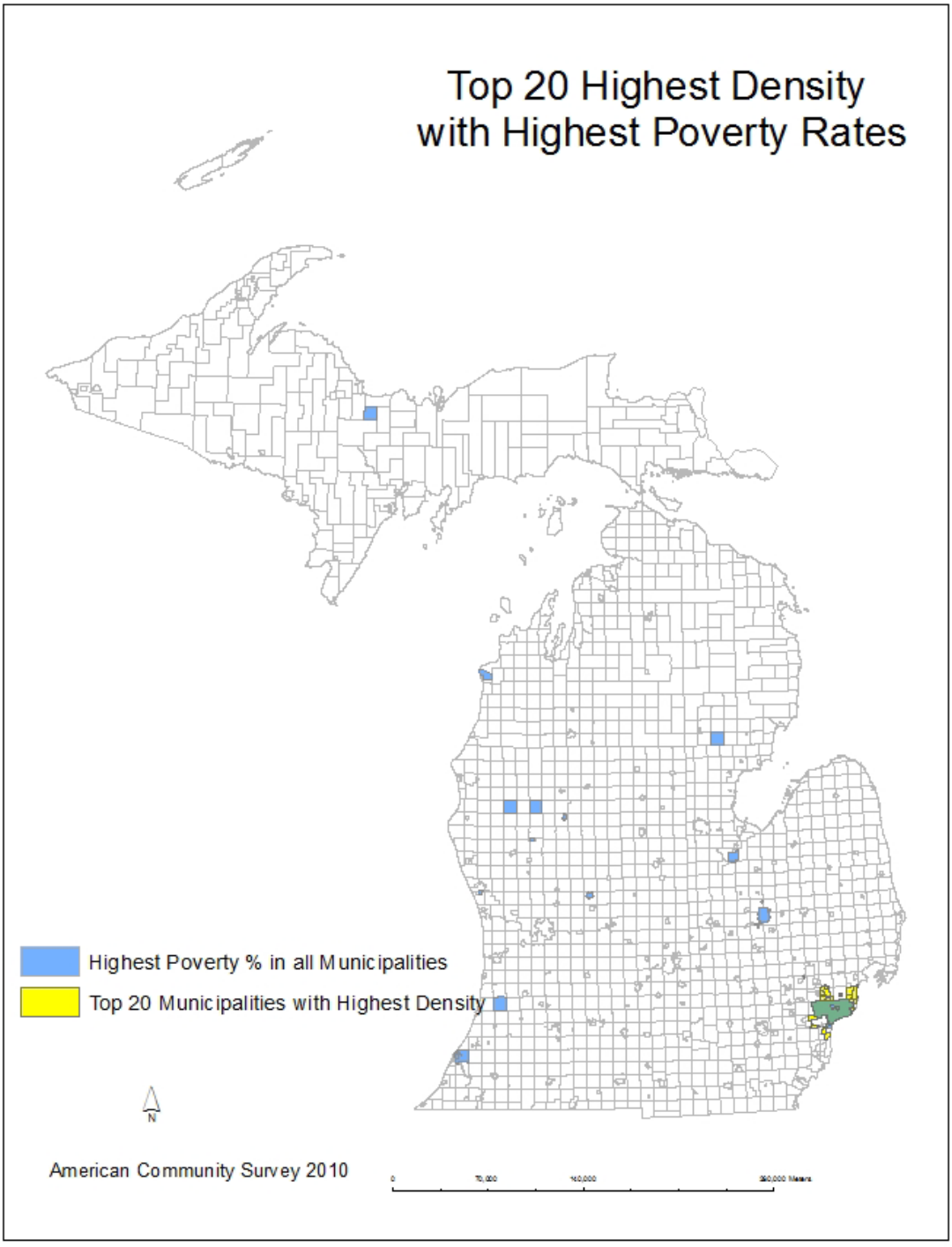


Figure 67: Top 20 Highest Density Municipalities with Highest Poverty Rates

Table 23 shows the municipalities that receive the most constitutional revenue sharing dollars. Figure 68 visually shows the municipalities receiving the most constitutional revenue sharing dollars alongside the municipalities with the highest poverty rates, and population densities. We can see here that the municipalities with the highest poverty rates, and the highest population densities, are for the most part (with some exceptions) not the municipalities receiving the most constitutional revenue sharing dollars.

Table 23 Municipalities to receive the highest constitutional revenue sharing dollars

Top 20 Municipalities to receive highest constitutional revenue sharing dollars	Dollars Received
City of Detroit	$60,295,723
City of Grand Rapids	$12,532,107
City of Warren	$8,781,532
City of Flint	$7,917,588
City of Sterling Heights	$7,906,472
City of Ann Arbor	$7,279,795
City of Livonia	$6,386,678
City of Dearborn	$6,210,727
Clinton Township	$6,075,618
City of Westland	$5,493,451
City of Farmington Hills	$5,215,741
City of Troy	$5,142,563
City of Southfield	$4,971,438
City of Kalamazoo	$4,884,291
Canton Township	$4,850,814
Waterford Township	$4,566,623
City of Wyoming	$4,406,298
City of Rochester Hills	$4,371,805
City of Pontiac	$4,250,926
City of Taylor	$4,183,974

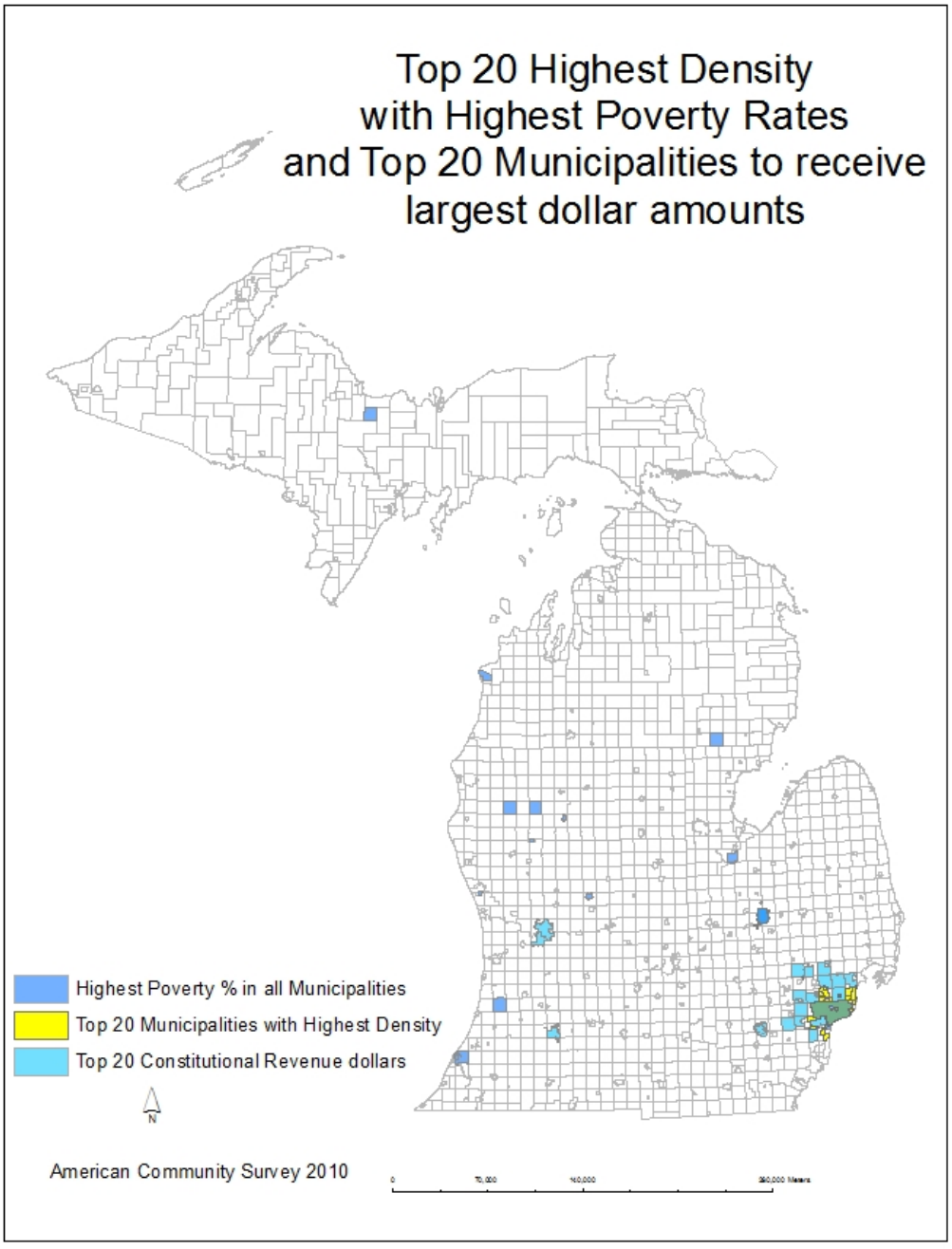


Figure 68: Top 20 Municipalities in Highest Density, Highest Poverty Rates, and Highest Constitutional Revenue Sharing Receipts 2010

In the next section we will look at Michigan's land use system and examine whether Michigan's revenue sharing system could be used as a vehicle to promote coordinated land use planning and growth management, greater intergovernmental coordination, and efficient infrastructure and service delivery.

Michigan's Current Land Use System: Current Status/Issues

Land Use Planning & Growth Management:

Michigan does not currently have a statewide coordinated land use planning and zoning system that mandates, or incentivizes growth management. Michigan cities large and small have been substantially affected by urban sprawl over the last four decades. Many older urban areas have lost and continue to lose population, employment opportunities, private investment, and tax base. "Residents who remain in these areas face higher costs for public services, fewer accessible well-paying jobs, decreasing property values, deteriorating neighborhoods, low-quality schools, and a general impairment of their quality of life" (MLULC 2003).

Refocusing growth and development to Michigan's urban cores and protecting rural Michigan from the impact of growth and development requires not just a change in policies that subsidize sprawl and the creation of a coordinated state level land use system but also a commitment of state resources to incentivize coordinated action.

Regional Planning:

Regionalism has received greater notice lately. "Recent literature has shown that the lack of cooperation, regionalist thinking, and collective action among jurisdictions has fuelled sprawling development patterns; fragmented natural resources; and social, economic, racial, and territorial inequality at the regional scale" (see David 2011; also see Rusk 1993; Porter 1997; Judd and Swanstrom 1998).

In Michigan, more than 1,800 units of local government have legal authority to engage in land use planning and/or zoning. However, apart from the recent legislation enabling joint municipal planning, and programmatic changes through EVIP to encourage service related cooperation, there has been little state- level institutional activity to mandate, incentivize or institutionalize the idea of cooperation among Michigan local governments. Moreover, there is very little planning coordination among Michigan municipalities currently, and the extent of coordination varies significantly across municipalities with some municipalities simply engaging in informal talks, and others establishing joint planning commissions to implement joint master plans (David 2011). As a result of inconsistent coordination across jurisdiction and between governmental entities, a checkerboard pattern of development can be seen across state; providing the basis for calls for more and better coordinated land use planning and regional cooperation (MLULC 2003; David 2011).

Infrastructure & Service Delivery:

When investment shifts from cities to the suburbs and beyond, the city's tax base shrinks; and the city's roads, sewers, buildings, police and fire service, and public institutions deteriorate. Increased costs of providing public utility services, housing, and roads are consequences that accompany population loss, declining employment opportunities, aging infrastructure, and declining schools in urban centers. Detroit is a prime example of this. Detroit has more than 50,000 abandoned properties, fostering images of blight and criminal activity. In the 1950s, the city had installed infrastructure sufficient to support a population of 2.2 million persons. Now, fewer than one million residents must pay the costs of that infrastructure (MLULC 2003). Costs increase because services are being provided to larger areas with lower population densities; making it difficult for these communities to be economically sustainable.

Michigan has a long tradition of home rule. "The State has created the basic structure within which local governments are organized, interact, determine what services to provide, and raise revenues to pay for those services. There is a wide variation in the types of services provided and the levels of services provided, from the smallest township in Keweenaw County in the Upper Peninsula to the City of Detroit with a population over 800,000" (Lupher 2007). However, there is also a significant overlap of services as municipalities develop and maintain their own infrastructure and service delivery systems. This has resulted in calls for cooperative service delivery in order to minimize overlap, save costs, and capitalize on economies of scale.

The connections between infrastructure planning and service delivery, and land use planning are well documented. Could the resounding, yet separate, calls for greater land use cooperation and consolidated/cooperative service delivery in Michigan be married to result in an overall system that promotes both coordinated land use planning and infrastructure/service delivery? The Citizens Research Council of Michigan recommends using revenue sharing as a tool for intergovernmental cooperation. Specifically, could constitutional revenue sharing be used to promote this overall approach of incentivizing cooperation among municipalities in the areas of infrastructure development, service delivery, and land use planning? If so, how would these incentives be designed or articulated?

Promoting Sustainability: Alternatives that Bring About Reform

Changing the system:

The Michigan Land Use Leadership Council offered several recommendations to reform Michigan's land use planning system. These recommendations could be explored again in the context of connecting revenue sharing to land use planning. Comprehensive reform could include the following:

- Creating state level omnibus packages focusing on comprehensive growth management
- Creating a state land use plan or statewide land use goals
- Using a portion of constitutional revenue sharing as an incentive for compliance or disincentive for non-compliance with the state land use plan or state land use goals e.g., Florida's growth management system uses revenue sharing as a disincentive for non-compliance with the state of Florida's growth management mandate
- Strengthening the roles of regional planning agencies and counties to enable them to carry out the following responsibilities: preparation of general regional and countywide land use plans that respect and represent community needs while promoting consistency with state land use goals; the provision of maps, data, education, and technical assistance

to local units of government; the preparation of composite local future land use maps and local zoning maps for all jurisdictions in the region; annual compilation and reporting of all community capital improvement programs within the region; establishing centralized data repositories that will contain information pertaining to several of the variables selected for analysis in this study for which data is currently meager; and prioritizing and distributing a portion of constitutional revenue sharing dollars based on a more complex assessment of "need."

An alternative to comprehensive reform might include:

- Using a portion of constitutional revenue sharing to fund and provide priority funding for locally created regional entities that cooperate on not just service delivery but also land use planning through the creation and implementation of joint master plans, joint zoning boards, joint planning commissions, and joint zoning ordinances.
- Using regional planning agencies and / or counties in the process of distributing revenue sharing funds by enabling these agencies to play a role in assessing and fully defining "need."

The alternatives listed above would help manage growth and development, effectively distribute revenue sharing funds based on more nuanced assessments of need while providing greater opportunities for regional cooperation on both land use planning, and infrastructure and service delivery.

In this chapter, we isolated and analyzed several variables to develop an understanding on how revenue distribution patterns would change were constitutional revenue sharing to include several key variables. In the next chapter, we offer conclusions and recommendations for further consideration.

Chapter 5: Recommendations

1. Defining need and developing new formula components

There are several conclusions that can be drawn from our analysis. The constitutional revenue sharing per capita distribution system is not executed in a vacuum. There are many factors that differentiate local governments with the same population numbers and other larger issues to consider. For example, larger older cities of southern Michigan are losing population; population numbers and taxable values are growing outside of metropolitan areas; and job centers service high populations during the day but have a low bedtime population.

Where do the contributors and receivers fare in this distribution of sales tax revenue? Are there winners and losers? Does it matter? Simply drawing sales tax proceeds, splitting up a portion of those proceeds, and giving it back to municipalities based primarily on their population with no reference to other factors may not be the best application of the revenue sharing system for the betterment of those communities or the state of Michigan. Could there be a better formula for distributions? Why would maintaining the status quo still remain the most viable choice?

Keep it Simple

A recommendation could be that the per capita system is the simplest available system and should remain as the means of determining distribution. This system is based on the assumption that where many people live there are also many needs i.e., people have needs and therefore the greater number of people, the greater the need; and that all people and municipalities are equal. This type of need calculation has been in operation for a long time; is easy to calculate during the census years and even in its current format quite complicated to calculate during the non-census years; requires a constitutional amendment if changes are suggested; has been a relatively reliable source of revenues for local governments during tough economic times; and is part of Michigan's local government structure. The easiest option, therefore, is to leave this system as is.

Tough Times Call

In some ways, not all people or municipalities are equal or in the same standing, fiscally or otherwise. Need therefore cannot be a simple calculation based on the quantity of people - all else being equal. As our data demonstrates, "need" is far more complex than a per capita system can capture. If two communities of 25,000 persons are compared, and one community has a large taxable value while the other has a very low taxable value then the distribution of shared revenue may have differing impacts for those similarly populated places.

Our recommendation is to develop a more complicated formula of distribution in order to address the complex variables that play a role in municipal health and wellbeing. There are at least six essential variables identified in this study (more could certainly be explored) that should be used to further develop a new distribution formula.

- **Poverty** – Poverty rates capture the types of basic essential and supportive services needed in a municipality e.g., access to food, education, jobs, job training, healthcare and housing. Poverty rates also impact a municipality's basic infrastructure (e.g., housing), economic engine, tax base, and quality of life (e.g., schools and crime).
- **Taxable Value dollars per every Expenditure dollar -** This shows how a community can raise revenues from property tax in comparison to what they spend on services for their community and sometimes the surrounding area.
- **Population Density** – Higher density can help facilitate more efficient services while lower density communities stretch out services and make provisions more costly (e.g., more sewer pipes, longer emergency response times, etc.).
- **Job Centers/Daytime Populations** – Some areas support a large workforce but have a low night time population. These centers should not be penalized for providing jobs to a regional workforce.
- **Population to Taxable Value** – Although taxable values and population levels are highly correlated, some areas with many residents in comparison have low taxable values and essentially less funds to provide services overall.
- **Taxable Value to Tax Rate** – Many of the older cities in Michigan have lost population but need to sustain or maintain services and infrastructure. Some communities are forced to raise tax rates to cover losses in population.

This more nuanced approach could capture the needs of communities and further reinforce the justification of why communities get their distribution. It is more complicated and would take more time and data to develop. However, if the hard work is done now, it may make the longer haul easier and help Michigan stabilize more communities rather than reward communities based solely on growing populations. This would be easier if a central database could be created to house the data necessary to develop the formula and run the calculations to determine the distribution figures.

2. Data

Throughout the course of this project we encountered difficulties finding data for several of the variables selected for analysis. In keeping with the underlying principles of and state level action toward government transparency and accountability (e.g., Michigan's Performance Dashboards), we offer several recommendations to address the data deficiencies and hardships that we encountered.

- **Data availability:** In this report, we reviewed the literature, offered conceptualizations, and defined several variables that could be used to determine "local need." The identified variables included building permit data (residential and non-residential); local millage; assessed value; constitutional revenue sharing data (e.g., for the year 2000); land use change; municipalities with comprehensive plans and zoning ordinances; infrastructure locations; extent of local services; shared services including service agreements; locally generated sales tax dollars;

municipal budget data; and local commuting patterns (e.g., daytime population, and population that lives and works in the same community). However, we were unable to obtain longitudinal, consistent, comparable data for all of the above variables for all Michigan municipalities. We encountered problems with the availability of data for our variables (e.g., we could not find data on local services), the level of detail of the available data (e.g., some building permit data was available for selected years but this data only addressed residential permits), and the time range of data (e.g., not all data was available for 2000 or 2010 or the years between).

- **Format**: We encountered multiple data formats during our analysis (e.g., word and pdf files had to be painstakingly converted into excel files for analysis). Municipalities should have their data accessible in a standard format or in multiple formats so that data can be downloaded into statistical software for further analysis. In addition, Geographic Information Systems data for spatial analysis should also be included.
- **Consistency:** Our project team encountered several issues with data consistency. For example, municipalities often used different municipal names to identify themselves in different databases. Some data was available in only consolidated format for townships and villages, while other data recorded townships and villages as separate entities. Some municipalities reported certain budget categories while others did not. We recommend that all data delivery formats be standardized (e.g., budget reporting categories) to make the numbers comparable across municipalities. Unique codes should be assigned to all types of data, to make it easy to identify municipalities individually.
- **Data currency:** Municipalities should be asked to provide the most current and updated data pertaining to several of the previously mentioned variables by certain deadlines, such that all available data sets are made available for the same time periods across the state.
- **Data centralization and access**: We recommend that the state create a centralized database accessible to all Michigan municipalities for data entry and updates. Municipalities should be asked to enter local level data (e.g., building permit related information) directly into this centralized database and to update it when changes occur at the local level. For areas in Michigan where local capacity to make such data available might be called into question, counties and / or regional planning agencies should be called into action to perform these tasks. This centralized database should contain information pertaining to all of the previously mentioned variables.

3. Comprehensive Reform

Our exploration of Michigan's constitutional revenue sharing system reveals that future research should consider whether constitutional revenue sharing, in conjunction with the EVIP could be used as a vehicle to promote coordinated land use planning and growth management, greater intergovernmental coordination, and efficient infrastructure and service delivery. A review of the literature suggests that infrastructure and land use are inextricably linked and have

tremendous impacts on overall statewide growth and development patterns, economic vitality, and local government fiscal health. In this section, we offer some suggestions for future studies that evaluate whether Michigan's revenue sharing system could be reformed in a comprehensive manner. Future studies should do the following:

- Evaluate whether Michigan's revenue sharing system could be used as an incentive for statewide land use and infrastructure planning.
- Evaluate whether Michigan's constitutional revenue sharing system could be used to incentivize cooperative land use and infrastructure planning at the local level. This reformed system could help sustain the cooperative efforts that have resulted from the EVIP. For example, studies should explore whether revenue sharing could be used to sustain and increase the capacity (e.g., through dedicated annual funding) of those local cooperative efforts that focus on integrating land use, infrastructure, and service delivery decisions. This would mean that those communities that received grants to develop cooperative arrangements would be able to sustain those cooperative efforts over time. Future studies should also focus on whether service related cooperation could be enhanced to not only produce cost savings but also better land use and infrastructure related decision making; and whether revenue sharing could serve as an incentive to promote local cooperative efforts that go beyond service delivery agreements and toward the creation of joint entities that will jointly plan, zone, and deliver services.

4. Regional Revenue Sharing

Our project thus far has been primarily exploratory. Our literature reviews revealed that revenue sharing as a concept originated in order for state governments to equalize resources across local governments based on need. Our project team primarily focused on identifying and analyzing key variables that could be used to measure "need." We also explored, primarily through our interviews of several Michigan policy experts, whether state revenue sharing should be restricted or unrestricted. While the overwhelming response from our interviewees was to preserve the unrestricted nature of Michigan's revenue sharing system, we do not have a definitive answer to this question. Further, we have been unable to explore other process related questions of revenue distribution. This section provides recommendations for future studies that might contemplate process related changes to constitutional revenue sharing.

- Michigan has 14 statewide planning regions. Future studies should evaluate whether state aid to municipalities could be based on these planning regions. Similarly, studies could explore whether distributions could be based on the geographic scale of a county. Such a system might consist of a weighted formula created using population, geography, taxable value, services, and several of the previously mentioned measures of need evaluated at the regional scale such that geographic variations in the State are factored into the system. Such regional assessments of need are currently used in New Jersey, to evaluate the need for fair shares of regional affordable housing; and in Minnesota, to evaluate need for the regional tax base sharing system. We recommend that future studies evaluate various permutations and combinations including distributing a portion of constitutional

revenues per capita (as the system exists currently) and distributing the rest of the revenues based on a more complex assessment of needs.

- We anticipate that any changes to the current system will receive mixed responses. If an expanded definition of need (to include our suggested variables) provides cause for concern, we suggest that such a redistribution might be more palatable if need is calculated and revenues are redistributed regionally. The case could be made and supported by the literature that a municipality will benefit if the region benefits. The individual municipal benefit from redistribution might be easier calculated at the regional scale. This comports well with recommendations from the Michigan Land Use Leadership Council Report to emphasize regional economic development and the subsequent efforts to promote commerce centers in Michigan.
- Allocating revenues based on a needs assessment at the regional scale will also provide for easier assessment and rewards to municipalities for engaging in regional cooperation on service delivery and other planning and zoning related functions. This will complement recent reforms to the statutory revenue sharing system through the creation of the Economic Vitality Incentive Program and arguably minimize competition among neighboring municipalities for growth, resources, and development.
- Population movements are predominantly regional in nature. A repeated concern, highlighted through our interviews with policy experts and through our data analysis, is that a simple per capita system rewards the "sleeping" rather than the "daytime" population. Many Michigan municipalities provide not only their citizens but also citizens from the neighboring communities with services and facilities while these populations move back and forth through the region. The current system does not provide funds for this floating population. A new system that distributes revenues based on a regional needs assessment might easier account for commuting patterns.
- The Michigan Association of Planning is currently working with policymakers to reform and consolidate Michigan's regional planning legislation. Our recommendation is to explore whether regional planning agencies should play a role in either the above suggested regional needs assessment or serve as procedural vehicles for the distribution of constitutional revenue sharing dollars.

A revenue sharing system that assesses need based on variables suggested in this report will be much more complex than the current per capita system. Regional revenue sharing could reduce the scale of this system.

Limitations of Analysis

Although our report analyzes many variables such as budgets, services, taxable value, population, jobs and poverty levels and offers a comparative analysis of some of these variables at the municipal level, we acknowledge that the report is also stymied by several limitations. Since this document is a product of a class project, we were bound by the time limitation of a semester (approximately 15 weeks) to complete this work. We were also limited to a lack of capacity such as the ability to run complex statistical analyses as well as the lack of available data. Some data issues include the lack of data on sales tax revenues and the limited availability of other data on commuting patterns, shared services, building permits etc. Further, data format was limiting in various ways. Some data such as township data did not indicate general law or

charter status and villages were sometimes included as city data, while in other data sets included in township data. In some instances data was simply not reported, making it difficult to cross-analyze variables. For example, some variable data was only reported or recorded for year 2000, whereas other variable data was only available for 2010. This limited effective cross-analysis of data since data sources were from different years.

Due to our limitations, our study resulted in constrained inputs, outputs, and methods of analysis. We did not attempt to input any of our variables in a formula to modify the existing per-capita revenue sharing method or to create a more nuanced and complex formula. In this same manner, our search for variables that effectively capture need was not exhaustive. We did not collect any primary data which limited our data input sources. Our study also lacks an in-depth analysis of a large range of municipalities as only a few were selected for comparative in-depth analyses. An expanded in-depth analysis would have yielded a clearer picture of how municipalities are using revenue sharing funds and might have exposed or clarified other indicators of need.

Recommended Future Studies

Considering the limitations of this report, to gain a deeper understanding and a more concise picture of the efficacy of the constitutional revenue sharing system the following future studies are recommended.

- **A survey of municipalities to understand the impacts of revenue sharing.** Primary survey data should be collected for each municipality.
- **An in-depth study of a larger sample of municipalities.** This analysis can be performed using key variables identified in this report such as budgets, services, taxable value, population, jobs and poverty levels in an effort to develop rich stories of how each municipality uses revenue sharing funds.
- **An expanded survey of experts and policymakers.** While this report does survey a number of experts and officials, responses were limited and so was response time. With more time, a larger sample of experts and policymakers should be surveyed to gain a deeper understanding of how they view the constitutional per-capita revenue sharing system.
- **More detailed case studies of other states.** Since each state has its own system of revenue sharing, an extensive examination of how other states share revenue (revenue sources and distribution methods) might reveal variables used by other states that were overlooked by this report and/or reveal concepts for a more effective and equitable system.
- **Use of the identified key variables in a formula.** Our report analyzes each of the identified variables individually. Further studies should use our variables in combination to understand their combined impact on municipalities and evaluate how the constitutional revenue sharing system would be impacted if funds were distributed based on a combination of our newly identified variables.

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