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Michigan's Overlapping Property Tax Limitations Create an Unsustainable Municipal Finance System

Key Takeaways

- States generally limit growth of property tax burdens in one of three ways – rate limit, assessment limit, or levy limit. Michigan uses all three, making it among the strictest property tax limitations of the states. Statutory tax rate limits, the Headlee Amendment's assessment limit, and the taxable value system created by Proposal A all work to limit the growth of tax burdens and constrain year-to-year changes.
- The Great Recession and its impact on property values led to the overlapping tax limits having a mitigating affect, keeping the tax base from declining further than it could have. Since the Great Recession, which was a unique event, tax bases have been growing at relative slow rates.
- The property tax system is not sustainable. Local government tax revenues are constrained in their growth unless they add new development to their tax bases or increase tax rates. Land is finite and cannot continue to be developed. Tax rates are statutorily limited. Local governments need revenue that can grow with their economies.

Overview of Property Tax Limitations

Michigan law places a heavy burden on the property tax to fund all forms of local government. As this burden grew over the years, taxpayers pushed back with limitations to lessen the impact on their wallets and to stifle the changes in year-to-year growth that made annual tax levies unpredictable.

States generally limit property taxes paid by one of three different ways:

1. A *rate limit* puts an upper boundary on the rate that a jurisdiction can levy.
2. An *assessment limit* provides a ceiling on the amount of annual assessment increases; that is, it limits how much a taxpayer's property value can increase year-to-year.
3. A *levy limit* restricts how much tax revenue a jurisdiction can take in year-over-year.

Michigan employs all three limitations in its property tax system.

Rate Limits

Michigan's first attempts to limit property tax burdens addressed tax rates. Laws authorizing the organization of cities and villages capped the rates they could levy. In 1932, the Michigan Constitution was amended to impose limits on the aggregate rate of property taxation. Those limits were carried forward into the 1963 Michigan Constitution, which provides for a 15-mill property tax limitation or an alternative "local option" of up to 18 mills, either of which may be increased by voters to a maximum of 50 mills for up to 20 years at any one time.[1] These rate limits would appear to provide some real constraints on property taxes, but court rulings have limited their application to certain local governments and to property taxes supporting general operations.

Headlee Amendment

Among other changes, the Headlee Amendment of 1978 added Article IX, Section 31 to the Michigan

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to increase the rate of an existing tax above what was authorized in 1978. Second, it limits total property tax revenue growth on a jurisdiction-wide basis (e.g., county, city, township, village, school district) to the rate of inflation. It does this by requiring local governments to downwardly adjust – rollback – the maximum authorized rate if the tax base increases by a larger percentage than the cost of living (i.e., inflation), as measured by the Consumer Price Index (CPI). New construction is excluded from the year-over-year tax base growth calculations.

The millage reduction fraction (MRF) was created to determine when changes to the tax rates are necessary. This fraction, which is applied to the previous year's maximum authorized rate, is the ratio between tax base growth and the growth in the price level, adjusted to exclude new construction.

Millage Reduction Fraction =

$$\frac{(\text{last year's total property value} - \text{losses}) * \text{CPI}}{(\text{current year's total property value} - \text{additions})}$$

Since the rollback mechanism applies to the average increase across all classes of property in the entire unit's jurisdiction, it was possible for substantial increases in residential assessments to offset decreases or modest increases in other classes of property. If increases in some property tax bills are offset by decreases in others, then the millage rate will not be rolled back (or at least not be rolled back as much).

Proposal A of 1994

While the Headlee Amendment created a check on the growth of property tax collections at the jurisdiction level, it failed to protect individual property owners from excessive increases in their tax bills. A law enacted in August 1993 repealed property taxes as the primary funding source for K-12 education. In response, a new funding approach was placed on the ballot for voter approval. Voters had the option of adopting the constitutional amendment titled Proposal A and increasing the sales tax rate or allowing a statutory plan with an increased income tax rate to take effect. In March 1994, Proposal A was adopted with 69 percent of the vote.[2]

In addition to the school finance reforms, Proposal A layered a new tax limitation onto the general property tax. It created a modified acquisition value system for determining the taxable value (TV) of a property and differential taxation of business and homestead residential property beginning with calendar year 1995. Unlike state equalized value (SEV), which is linked to market value, TV increases for each parcel of property are constitutionally limited to five percent or the rate of inflation in the previous year, whichever is less, excluding the value of new construction.[1] When a property is sold, the tax base reverts to SEV and annual changes to TV are then capped once again with the new owner.

The state legislature passed a law that eliminated local property taxes as the main funding source for the school finance system; this necessitated the adoption of Proposal A or some other way to fund public schools. The legislation also ended statutorily the ability for local governments to recoup taxing authority if the tax base grows slower than the rate of inflation by eliminating Headlee tax rate rollups.

Adoption of TV as the property tax base altered, but did not eliminate, the mechanism for reigning in jurisdiction-wide growth in property tax revenues. Instead of jurisdictions calculating growth of the tax base using SEV, they now use growth in TV. Because the appreciation of value for properties not transferred to new ownership is limited to inflation, tax rate rollbacks are triggered only by the change of value ("pop up") of the properties that did change ownership.

1 Inflation has been less than five percent every year since Proposal A was adopted in 1994.

Tax Limitation Analysis Model

At the most basic level, Michigan's two primary property tax limitations work to control taxes by very different means. The Headlee Amendment goes about this by limiting the unit-wide growth of the amount of taxes collected on existing property to the rate of inflation. Proposal A takes a different approach by limiting the growth in the value of individual parcels of property to the rate of inflation. Proposal A was layered on top of the Headlee Amendment rather than replace it. For many local government finance practitioners and analysts, a key question being asked now that both limitations have been in effect for many years is: Is the combination of the two limitations together more restrictive to property tax revenue growth compared to the limits imposed by each one individually?

Our report uses the benefit of 25 years of actual property value and tax data for various communities in six counties – Chippewa, Jackson, Leelanau, Lenawee, Oakland, and Ottawa – to better understand the interaction of the two tax limitations and their individual and combined effects on property tax bases and tax rates. It models how the tax limitations interacted retrospectively, holding constant important policy preferences, such as changes to the authorized tax rates in each community. In real life, the tax rates levied by many local governments have changed with voter approval of new property taxes, Headlee Amendment millage reduction overrides, or expiring millages that were not renewed.

Model of the Study

For this study, 41 local governments in six counties were sorted into one of five categories – counties, urban communities, suburbs, exurbs, and rural communities. While these cannot begin to represent all 1,856 general-purpose local governments in Michigan, there are sufficient commonalities in their characteristics and the findings to generalize beyond those studied. In the analysis, each unit's 1993 authorized property tax millage rate is applied to actual SEVs and TVs to quantify how the two tax limitations operate under three different scenarios:

1. **No tax limitations scenario** shows a property tax scenario based on market value (SEV) and the 1993 millage rate if neither the Headlee Amendment nor Proposal A would have been adopted. This scenario provides an upper bound for the model to show how much property tax revenue would be collected with no limitations to moderate the growth.
2. **Headlee Amendment scenario** shows how the Headlee limitations alone impact property taxes based on the 1993 millage rate and a yearly millage reduction fraction (MRF) as calculated based on SEV. This scenario examines what would have happened if Proposal A of 1994 had not included the creation of TV alongside the school finance reforms.
3. **Headlee Amendment and Proposal A scenario** reflects current law (using the 1993 millage rate) with levy and assessment limits that restrain property value growth and impact tax growth with a yearly MRF as calculated based on TV.

To focus on the affect Michigan's tax limitations have on existing property, additions (primarily new construction) and losses (properties taken off the tax rolls) are segregated from the appreciation of existing property values. Calculation of the MRF is based on the appreciation or depreciation of existing property values.

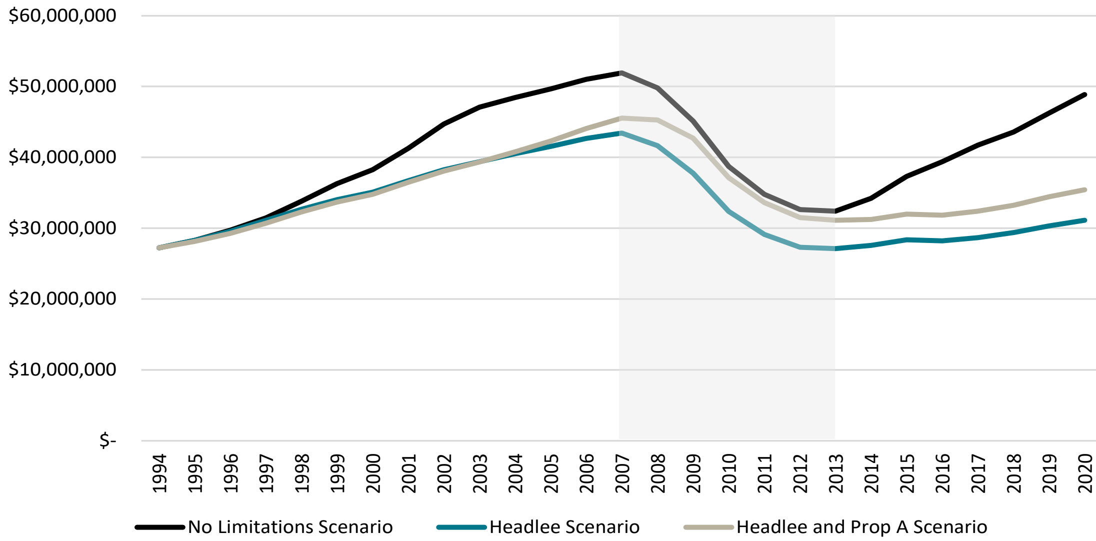
Farmington Hills

The analyses conducted for each county and municipality provide illustrative scenarios of how Section 31 of the Headlee Amendment and the use of TV created by Proposal A interact to impact the collection of property tax revenue. While these scenarios are based on actual property tax base and rate data from each community, they are hypothetical and do not reflect actual tax revenue collections. **Chart A** highlights the tax limitation scenarios in Farmington Hills, which is a suburban community in Oakland County.

Chart A, along with other charts in the full report, shows how the property tax limitations restrict tax revenue growth and keep revenues well below what

Chart A

Property Tax Scenarios in Farmington Hills (Oakland County), 1994 to 2020



Source: Michigan Department of Treasury, SEV and TV data from reports L-4028 and L-4029 and Ad Valorem Tax Levy Reports

Recession when the tan line (Headlee Amendment and Proposal A) surpasses the teal line (Headlee Amendment). This suggests that having Proposal A served to lessen the impact of the Great Recession and allowed TVs to keep increasing when market values were declining. The shaded gray area is the period when property revenues were declining in the scenario with both tax limitations. It is important to note that in Farmington Hills, revenues from a tax without limitations would have recovered to close to pre-Great Recession levels by 2020; the revenues in the tax limitation scenarios will not return to pre-Great Recession levels for many more years.

Instead of a compounding effect, **Chart A** suggests that Proposal A had a mitigating effect and lessened tax revenue decline after the Great Recession. Not only were property values kept lower due to the use of TV, but tax rates were kept higher because the MRF was calculated based on the TV, which grew slower than SEV. Once property values started declining during the Great Recession for TV and SEV, the scenario using both tax limitations could levy higher tax rates than the scenario using only the Headlee Amendment values. In Farmington Hills, for example, when the MRF is calculated based on SEV, the tax rate was rolled back 36.3 percent. When it was calculated based on TV, it was rolled back only 6.0 percent.

For more detailed revenue data and charts related to all the categories of government in the study, see the full report.

Criteria for Evaluating Effective Tax Policy

The effectiveness of property tax rates, limits, and revenues may be judged differently by taxpayers than by local government officials trying to fund services in their communities. The key to good tax policy is that it meets the needs of both taxpayers and government.

In general, effective tax policy for local government provides:

1. Revenues that can grow with the local economy;
2. Revenues that are stable and predictable; and
3. The ability to minimize the downside risk associated with declining property values.

Effective tax policy for taxpayers provides:

1. Limits on growth in tax burden;
2. Predictability in year-to-year tax bills;
3. Easily understandable process to determine property value and what taxes are owed; and
4. Equity with other taxpayers.

It is no easy feat to find a scenario where tax limitations work to constrain growth in the tax burden for taxpayers while also providing revenues that reflect the local economy. If tax revenues are not growing (or are even declining as they did during the Great Recession), local government budgets cannot be immediately decreased to reflect lower revenue levels. During times of fiscal hardship, less property tax burden is good for taxpayers, but it can be difficult for local government budgets to adjust quickly to declining revenues.

In general, tax limitations provide more predictability for local governments and taxpayers as revenues are not just responding to the market. However, if limitations restrain taxes too much, then they may not provide stability or adequacy. Michigan's tax limitations increased the difficulty in understanding the property tax system by instituting a modified acquisition value system with an assessment limit on top of a system that already has a levy limit. The tax limitation instituted with Proposal A has also impacted equity as it treats taxpayers in similar properties differently based on how long they have owned their properties.

Key Observations from Models

As is their intent, the tax limitations yield less revenue than no tax limitations. While the scenarios with both tax limitations sometimes grew at rates slower than the Headlee Amendment scenarios in the pre-recession years, the modified acquisition value system creates reservoirs of TV that lessened the impact of the lost property values during the Great Recession. This is most evident in rural communities where the Great Recession had little effect and TV growth never declined to reflect declining SEV.

In almost all cases, the scenario with the combination of the Headlee Amendment and Proposal A tax limitations yields more revenue in recent years than the scenario with just the Headlee Amendment.[1] With the length and depth of the Great Recession, the lessened tax rate rollbacks and reservoir of TV enable the additional tax limitation to have a mitigating effect on the Headlee Amendment limitation instead of a compounding effect.

For those local governments whose property values were adversely affected by the Great Recession, the annual growth rate for the scenario with both tax limitations in the post-recession period is slower than what was experienced in the pre-recession period. Those post-recession revenues are not keeping pace with the rate of inflation. The relationship between the appreciation of property values and tax revenues is diminishing.

The diminished relationship between property values and the tax base under the scenario with both tax limitations is most pronounced for rural communities. Ownership of agricultural property changes much less frequently than for residential, commercial, or industrial property, which is leading the TV of those properties to pop up to SEV less frequently. Local governments with more changes in ownership experience pop-ups for those properties causing tax rate rollbacks and less than inflationary growth from their existing tax bases.

Great Recession Was a Turning Point

Without the Great Recession and the property value declines that occurred during it, the numbers might look very different. In most scenarios, the projected property tax revenues are very similar no matter

1 The City of Sault Ste. Marie in Chippewa County in the Upper Peninsula had years when having both tax limitations led to more revenue collections, but most years, including 2014-2020, the Headlee Amendment line led to more revenue collections, and it led to more revenue collected over the entire period (by three percent). Pulaski Township (Jackson County) collected more revenue every year under the Headlee Amendment scenario than under the scenario with both limitations (collecting 18 percent more over the entire period with just Headlee Amendment limitations).

the limitation (Headlee Amendment, Proposal A, or both) before the Great Recession. This varied by community, but the Great Recession and its precipitous drop in property values led to the Headlee Amendment limitations being particularly severe. This is because property was growing so much before the recession causing millage rates to be rolled back; once property values fell, the millage rate was already rolled back so that local governments were collecting tax revenues at much lower rates. Within this system, the end of tax rate rollups enacted in 1993 had the strongest influence on limiting taxes.

The Great Recession was a unique situation. It was the only period in recent history that saw severe property value declines.[3] But for these rare circumstances, not experienced at any other time in recent history, then the combination of declining property values and Headlee Amendment tax rate rollbacks might not have been as severe. Even though the Great Recession could not have been predicted at the time that Proposal A was passed, Proposal A served to mitigate some of the effects of the recession on property values and tax revenues. That being said, Michigan should not base future tax policy on a once-in-a-century event like the Great Recession.

Growth is Defined as New Development

The limitations restrict local governments from increasing revenues beyond inflation for any reason except for new development. This has been evidenced by the fact that communities with land to develop and additions (i.e., new development) – largely the exurb and rural communities – have done the best and seen the most revenue growth over the last 25 years. This system is not sustainable because land is a limited commodity. Large portions of Southeast Michigan are built out with no new land for development. West Michigan is growing in population and witnessing new development, but it will reach the same point as Southeast Michigan eventually.

Many urban and suburban communities are largely built out, but they have redeveloped land and revitalized neighborhoods and downtowns to invest in their communities. The problem is that they do not see tax revenue growth from this type of investment because Proposal A restricts tax revenue growth to additions and sales; increases from investment in property cannot increase TV beyond inflation. When property is sold and it is reverted to SEV, the Headlee Amendment treats that pop-up as revenue growth and requires the millage rate to be rolled back. This is preventing communities with turnover in their properties from benefitting from those sales and increases in property values.

The overall point is that the system is not sustainable if the growth of property tax revenues relies on new development. This system leaves no room for revitalization and redevelopment and encourages urban sprawl. Vibrant communities depend on tax systems that allow the communities to benefit from their own revitalization while also protecting taxpayers from unlimited growth and unpredictability in their property taxes.

Tax Base Limitations Create Pressure on Tax Rates

The tax limitations have served their purpose of restraining the tax base and creating more stability and predictability for both taxpayers and local governments. Because tax revenues are generated by applying a tax rate to a tax base, it is possible that local governments have responded to restrained tax bases by requesting voter approval to increase tax rates or levy more property taxes. This study purposefully leaves the changing tax rate out of the equation to show what changes in the tax base do to revenues with a stable tax rate.

Over 80 percent of local units in Oakland County have increased their overall tax rate since 2007.[4] Furthermore, a 2019 Research Council report found that 731 cities, villages, and townships in Michigan levied dedicated property tax millages in support of roads.[5] In the May 2021 general election, 79 percent of the more than 140 local tax-raising proposals passed.[6] In Farmington Hills, the number of dedicated millages grew from three in 1996 to eight in 2020 and the actual tax rate grew from 9.8 mills to 17.0 mills in the same period. It appears, at least anecdotally, that suppression of the tax base has led to voters being asked more often to approve local tax rate increase proposals, including Headlee overrides and dedicated millages.

Property Tax Limitations and Policy Options

There are policy options that could ease Michigan's tax restrictions to allow local governments to see at least inflationary year-to-year growth in property tax revenues. It is important to remember, though, that property taxes are not the answer to all of Michigan's local governments' revenue problems and what local governments may need is more tax options to supplement property taxes, not greater growth in property tax revenues.

It is critical to evaluate what types of limitations and local government taxes would be the best tax policy for both taxpayers and local governments moving forward. This analysis has shown what happens to tax revenues with a stable tax rate and these different tax limitations. Analysis of the data can be helpful to provide some policy options:

1. Diversify local revenue sources and regionalize service provision
2. Eliminate Headlee Amendment limitation on tax revenue growth
3. Reinstate Headlee rollups
4. Change the method for measuring inflation for tax limitations

Diversify Local Revenue Sources and Regionalize Service Provision

One of the problems with the current system is that local governments are overly dependent on property taxes and no changes to the limitations are going to fix that.

An ideal tax structure produces revenue sufficient to provide services, with components that respond to economic growth and components that are stable through the economic fluctuations. It does not create administrative burdens and does not disrupt economic choices. Many other states afford their local units of government several tax options – general and selective sales, income, transportation, various tourism, and others – to capture economic activity and to create diverse revenue streams.[7] Providing local governments with more access to local-option taxes can be part of the solution to the problems inherent in the local government finance structure. A tax structure with options to add sales and income taxes would better achieve a more ideal tax structure. Each can raise significant revenues on its own. Diversity would allow for growth and stability.

The peril of a diversified tax structure is that the smaller the taxing jurisdiction, the greater the economic competition. Thus, state policymakers should consider reforming the state's revenue sharing program as a remedy to the woes of the property tax system.[8] Revenue sharing was originally adopted in place of local-option taxes. It served to provide local governments with revenues from diverse sources while centralizing the revenue raising function at the state level. This system works well when it is fully funded.

A diversified tax structure with or without state revenue sharing is not a panacea but could be combined with other reforms, like regionalizing service provision, to improve the local finance system.[9] Building off the idea of regionalizing services, any new local revenues should be authorized at a regional level to promote regional governance and tax base sharing.

Eliminate Headlee Amendment Limitation on Tax Revenue Growth

Once Proposal A was adopted with its cap on TV growth, the need for Headlee tax rate rollbacks became less clear. Growth in TV comes from three different sources: 1) appreciation, 2) uncapping TV at the time of sale, and 3) new construction. The modified acquisition value system constrains appreciation to the rate of inflation. When ownership of property is transferred, TV is uncapped and allowed to pop up to SEV. The pop-ups trigger tax rate rollbacks across a jurisdiction's tax roll. New construction is the real indicator of how much revenue can grow more than inflation. If no new construction has occurred in a local government, property tax revenue may not increase by more than inflation, no matter how much TV increases year-to-year.[10]

If the Headlee Amendment levy limit was eliminated, then individual property owners would still have their yearly tax bill limited to inflation, but property tax value). Property tax data from the report shows that using TV without the Headlee Amendment always leads to more revenue collection than both limitations together, though the difference is small in some communities.

Eliminating the Headlee Amendment is easier said than done. First, there is not a lot of political will to alter or eliminate the Headlee Amendment. Second, it is a constitutional restriction on the property tax and would require a statewide vote of the people to change it.

Reinstate Headlee Rollups

According to a study by the Lincoln Institute of Land Policy, Michigan is unique in the strictness of its levy limit. In most states with levy limits, the state restricts annual increases in a jurisdiction's property tax collections with exclusions for new development and debt service. These levy limits are operationalized by requiring local governments to adjust their millage rates when the property tax base increases rapidly (i.e., similar to Headlee rollbacks). But if the property tax base grows slowly or declines, local governments in most other states can raise their millage rates as long as their total collections do not grow faster than allowed under the state's levy limit.[11] Michigan's levy limit requires reductions in millage rates when the property tax base grows rapidly but does not allow for increases in millage rates when the property tax base grows slowly or declines without a Headlee override vote of the people.

Property tax data show that allowing for Headlee rollups, especially during the property value declines experienced during the Great Recession, would have allowed for rates to increase up to their originally authorized millage and would have brought in more property tax revenues during this period.

While rollups in the millage rate allow for more revenue to be collected overall, the difference is small in most of the units studied (under four percent in every unit except Ottawa County and Cambridge Township in Lenawee County). This is somewhat surprising since rollups are viewed as something that would provide local governments with more access to property tax revenue. The misconception may arise from the fact that when rollups were allowed before Proposal A and the use of TV, tax rates were levied on SEV, which varies with the market leading to greater growth and declines in property values over a period. So, when MRFs are based on SEV, they lead to both greater rollbacks during times of economic expansion and greater rollups during times of economic decline. The institution of Proposal A and TV have tempered the effect of both rollbacks and potential rollups.

Change Method of Measuring Taxpayers' Ability to Support Government

The idea to use a different measure of inflation to determine how much property tax revenues can increase year-to-year was introduced by the Lincoln Institute of Land Policy in their recent report on fiscally healthy local governments. According to the report, the CPI, which is the current measure of inflation, has grown slower than other measures, such as the cost of local governments' provision of public services and personal income.[12]

One option is to tie the levy limit to growth in state personal income. Tying tax limitations to the growth in state personal income may make sense for both taxpayers as it connects to taxpayers' ability to pay as well as local governments as it provides for growth in local revenues over time.

Another option is using the Bureau of Economic Analysis' implicit price deflator for state and local governments, which measures changes in the costs of goods and services purchased by state and local governments. This option would make more sense than CPI from a local government perspective, while CPI would make more sense from a taxpayer perspective.

Michigan can change the measure of inflation used and still maintain the five percent maximum increase to protect taxpayers during years of high inflation.[13] However, the current CPI inflation limit is written into the state Constitution, which makes changing it difficult.

Endnotes

1 1963 Michigan Constitution, Article IX, Section 6. Accessed March 30, 2021. http://www.legislature.mi.gov/(S(sr3h2twiqd2d22bx2toe0dde))/mileg.aspx?page=getObject&objectName=mcl-Article-IX-6.

2 Office of Revenue and Tax Analysis, Michigan Department of Treasury. "School Finance Reform in Michigan, Proposal A: A Retrospective," December 2002. Accessed February 17, 2021. https://www.michigan.gov/documents/propa_3172_7.pdf.

3 Citizens Research Council of Michigan. Blog: "Will Property Taxes be Immune to the Effects of COVID-19?" April 22, 2020. Accessed June 8, 2021. https://crcmich.org/will-property-taxes-be-immune-to-the-effects-of-covid-19.

4 Oakland County Equalization Department, https://www.oakgov.com/mgtbud/equal/Pages/default.aspx.

5 Citizens Research Council of Michigan. Memorandum 1158: "Seeking Property Tax Relief: Exploring Alternate Local Road Funding Options," September 2019. Accessed April 1, 2021. https://crcmich.org/wp-content/uploads/memo1158-Local_Road_Funding_Options.pdf.

6 "79% Local Proposals Pass Muster with Voters,"MIRS Capitol Capsule Headlines, May 4, 2021. Accessed May 5, 2021. https://mirsnews.com/capsule.php?gid=6084#65078.

7 Citizens Research Council of Michigan. Report 399: "Diversifying Local-Source Revenue Options in Michigan," February 2018. Accessed March 25, 2021. https://crcmich.org/publications/diversifying-local-source-revenue-options-in-michigan.

8 Citizens Research Council of Michigan. Report 387: "Reforming Statutory State Revenue Sharing," February 2015. Accessed March 25, 2021. https://crcmich.org/publications/reforming_michigan_statutory_state_revenue_sharing.

9 Citizens Research Council of Michigan. Report 396: "Counties in Michigan: An Exercise in Regional Government," March 2017. Accessed March 25, 2021. https://crcmich.org/publications/counties_regional_service_provider-2017.

10 Southeast Michigan Council of Governments. Blog: "Looking at Growth in SEV and Taxable Value: When numbers don't tell the whole story," October 22, 2018. Accessed January 9, 2020. https://semcog.org/blog/looking-at-growth-in-sev-and-taxable-value-when-numbers-dont-tell-the-whole-story-1.

11 Lincoln Institute of Land Policy. "Towards Fiscally Healthy Michigan Local Governments," October 2020. Accessed March 30, 2021. https://www.lincolninst.edu/publications/other/towards-fiscally-healthy-michigan-local-governments.

12 Lincoln Institute of Land Policy. "Towards Fiscally Healthy Michigan Local Governments," October 2020. Accessed March 30, 2021. https://www.lincolninst.edu/publications/other/towards-fiscally-healthy-michigan-local-governments.

13 Lincoln Institute of Land Policy. "Towards Fiscally Healthy Michigan Local Governments," October 2020. Accessed March 30, 2021. https://www.lincolninst.edu/publications/other/towards-fiscally-healthy-michigan-local-governments.