



**GOVERNMENT FINANCE
RESEARCH CENTER**

April 2021

State Infrastructure Program as a Countercyclical Tool

By Yonghong Wu

Acknowledgment

Financial support from the Joyce Foundation is gratefully acknowledged. Katherine Barrett and Richard Greene provided helpful synthesis of this work. Special thanks to Farhad Kaab-Omeyr in the Department of Public Administration at University of Illinois at Chicago for his research support.

Yonghong Wu is a Professor and Director of International Programs in the Department of Public Administration at University of Illinois at Chicago and a member of the Government Finance Research Center Faculty Advisory Panel

Table of Contents

Introduction	4
Should States Play an Economic Stabilization Function?	4
Conventional Wisdom and Critique	5
Empirical Evidence about Benefit Spillovers	5
Budget Stabilization vs. Economic Stabilization	6
Should States Play an Economic Stabilization Function?	7
Government Investment in Public Infrastructure	7
Infrastructure Investment as a Countercyclical Fiscal Policy	7
Short-run and Long-run Impact of Public Infrastructure Investment	8
Investment in Infrastructure in the United States	8
Trend of Annual State Capital Spending	9
How Do States Finance Infrastructure Projects?	10
Infrastructure Spending through Debt	10
Infrastructure Spending from Current Revenues	11
Infrastructure Funding through Public-Private Partnership	11
State Infrastructure Investment Fund as Countercyclical Tool	12
Barriers and Pathways for State Countercyclical Investment in Infrastructure	13
Findings and Recommendations	15
References	17
Appendix A: Direct General Capital Outlays per Capita for Six States	19
Appendix B: Individual State Balanced Budget Requirements and Debt Limits	23

Introduction

The COVID-19 pandemic has created and will continue to create unprecedented challenges to regional economic growth and government fiscal landscape. The states' stay-at-home orders shut down a significant portion of economic activities, leading to precipitous drops in employment across the country. The number of active employees dropped by about 35 and 25 percent in Michigan and Ohio in the middle of April 2020.¹ Although employment numbers rebounded after the end of stay-at-home orders, unemployment rates stayed high through December 2020 in some of the states: 4.3 percent in Indiana, 4.4 percent in Minnesota, 5.5 percent in Ohio, 5.5 percent in Wisconsin, 7.5 percent in Michigan, and 7.6 percent in Illinois.²

Although substantial budget gaps are anticipated during and shortly after the pandemic, governments at all levels are expected to play a stabilizing role during this downturn. According to orthodox macroeconomic theory, the federal government has the primary responsibility for stabilizing macroeconomic conditions using its unique fiscal and monetary policy instruments. While the new Biden Administration and Democrats' control of both the Senate and House raise the hope of more and stronger federal stimulus assistance,

the extraordinary situation still calls for state governments to play a more important role in stabilizing regional economies. Although state governments do not possess monetary policy instruments, they do have fiscal policy authority under state constitutions with regard to investing in public infrastructure. The unprecedented challenges require creative ideas beyond conventional or mainstream thinking about what states can do to promote growth and development.

This paper will explore if and how state governments can create a capital spending program as a deliberate countercyclical strategy to mitigate the devastating effects of an economic downturn. After a review of the classic theory of public finance with a focus on the appropriate economic role for state governments in a federal system, the paper focuses on a particular fiscal policy – investing in public infrastructure. After a discussion of public infrastructure investment in the U.S. and the trend of annual state capital spending, the paper explores various ways of financing state infrastructure projects. The last two sections examine institutional barriers to the creative implementation of state infrastructure programs, and conclude with a summary of key findings and discussion of major recommendations.

Should States Play an Economic Stabilization Function?

Richard Musgrave (1959) identified three traditional economic functions for government: (1) stabilizing macroeconomic conditions, (2) maintaining socially preferred distribution of resources, and (3) achieving efficient

allocation of resources. It is widely accepted that the cycles of aggregate economic activity require government intervention into the private marketplace to maintain employment and price stability, particularly to mitigate

¹ The employment data are from the Opportunity Insights Economic Tracker project. Accessed November 1, 2020 <https://www.tracktherecovery.org/>

² The data of unemployment rates are from U.S Bureau of Labor Statistics. Accessed January 28, 2021 <https://www.bls.gov/web/laus/laumstrk.htm>

the depth of economic downturns. However, it has become somewhat controversial regarding what level of government should be responsible for the economic stabilization function in a federal governance system. This section provides a theoretical discussion about whether state governments should play a significant role in stabilizing state and regional economies during recessionary periods.

Conventional Wisdom and Critique

As the founding authors of the “theory of fiscal federalism”, Musgrave (1959) and Oates (1972) argued that the stabilization function should be assigned to the federal or central government. State and local governments should not even attempt to conduct discretionary countercyclical fiscal policy (Oates, 1972). This conventional wisdom was derived directly from economic efficiency criterion. Because state economies are relatively small and economically open, any state fiscal stimulus policy inevitably creates substantial benefit spillovers to other states so that states may be reluctant to adopt their own fiscal policies. Therefore, Musgrave and Oates conclude that only the federal government can efficiently manage stimulative fiscal policies during economic recessions. Another often-cited justification is that federal or central government can effectively stabilize macroeconomic conditions using fiscal and monetary policy tools. State governments do not have monetary authority, and their access to fiscal policy instruments is also limited because of the balanced budget requirement (BBR).

Federal fiscal spending is generally an effective buffer to steep declines in the market economy. Measured by the dollar change in economic output caused by a \$1 additional fiscal spending, the multiplier is generally over 1 or even substantially exceeding 1 in some empirical studies. For example, according to a Moody’s report, the multiplier of infrastructure spending is 1.57, meaning that a \$1 additional federal spending on infrastructure led to \$1.57 increase in GDP (Zandi, 2009). One important

study finds that the long-run multiplier is 4.5 for total public investment spending, and about 2.0 for public investment in highways and streets (Pereira, 2000). In a latter study, Perotti (2004) reports a short-run multiplier of about 1.5, and a long-run multiplier of only 0.4. The small long-run multiplier is primarily due to substantial crowd-out effects of government spending on private investment.

Some scholars argue that state fiscal policies may be more effective than what is believed in conventional wisdom, and contend that changes in the economy may even make state countercyclical fiscal policies necessary. Gramlich (1987) is the first economist in modern history to make such an argument. He argues that state and local governments should conduct countercyclical fiscal policy by raising taxes or cutting spending in booms and lowering taxes or raising spending in recessions. Given the balanced budget requirement at state and local levels, this countercyclical strategy requires fiscal asset accumulation during expansionary periods and fiscal asset decumulation in recessionary times.

Gramlich (1997) furthermore notes that states, particularly large states, may be able to internalize a large share of the benefits of stimulating their economies when there are underutilized resources. However, another economist from University of Michigan, James Hines, Jr., could not find supporting evidence. Hines (2010) reports that larger states do not have spending and tax policies that more closely resemble federal countercyclical policies, whereas smaller states’ expenditure and revenue appear to more closely behave in a countercyclical fashion.

Empirical Evidence about Benefit Spillovers

There has been limited empirical evidence regarding benefit spillovers of state stimulus policies. Carlino and Inman (2013) conduct an empirical test and find evidence of significant fiscal spillovers. They examine how the annual growth of jobs and population in a

state are affected by its own deficit across all state funds, which is equal to aggregate state own expenditures minus aggregate state own revenues.^{3 4} To measure interstate fiscal spillovers, the states are divided into eight economic clusters according to their common business cycle patterns. The Great Lakes cluster includes Indiana, Illinois, Michigan, Minnesota, Ohio, Wisconsin, and West Virginia. Their results show that a state deficit can create new jobs within the state and other states in the region. For example, in the Great Lakes cluster, Illinois' deficit may create 63,294 jobs in Illinois and 43,356 jobs in the other states in the cluster, with the total job creation of 106,650 within the region. In other words, about 40 percent of new jobs are created in other states by Illinois' fiscal stimulus policy. The spillovers run in both directions. If all other states in the region adopt similar fiscal policies, about 38,907 additional jobs will be created in Illinois. This provides clear evidence of fiscal spillovers across states.

An important finding from Carlino and Inman (2013) is that a deficit policy that may not be attractive for any one state may become attractive when all states agree to cooperate and collectively adopt similar fiscal stimulus policies. For example, in the Great Lakes cluster, the own deficit cost to Illinois would be \$78,851 per job. But cooperating so that all seven states provide similar stimulus reduces the deficit cost per job to \$47,121. Therefore, stabilization fiscal policy works more efficiently at the regional or even national level than at the state level.

Budget Stabilization vs. Economic Stabilization

Some scholars distinguish economic stabilization from budget stabilization, and tend to believe that the function at the federal or national level is macroeconomic

stabilization, and at the subnational-level budget stabilization (Hou, 2013). Some studies have shown that state governments have used countercyclical fiscal policies to stabilize their budgets and service provisions during downturns (Sobel & Holcombe, 1996; Wagner, 2003; Hou, 2003; Knight & Levinson, 1999). Although tax revenue reductions during recessionary times generally discourage government spending no matter whether the balanced budget requirements are present or not, states rely on budget stabilization funds and general fund surpluses as their countercyclical policy tools for budget stabilization. According to the National Association of State Budget Officers (NASBO), nearly all states had some form of stabilization or rainy day fund as of fiscal year 2014 (NASBO, 2015).

If well designed and implemented, budget stabilization funds could function properly as a countercyclical fiscal device for state governments to bolster spending in lean years. Empirical analyses have shown that states with a budget stabilization fund (BSF) tend to save more than those without a BSF (Sobel & Holcombe, 1996), and they can better stabilize their outlays during recessionary periods than those without the fund (Douglas & Gaddie, 2002). Hou (2003) finds that budget stabilization funds are a countercyclical tool to stabilize state general fund expenditures, especially to minimize the negative gap in general fund expenditures. However, unreserved fund balances do not exert a countercyclical effect on state general fund expenditures during downturn years. This suggests that budget stabilization funds have become the primary countercyclical tool at the state level.

The distinction between economic stabilization and budget stabilization makes sense because they aim to achieve different policy objectives: The former targets on economic

3 State own expenditures include spending for current goods and services plus aid to local governments, capital spending for infrastructures, state pension benefit spending, and state spending for unemployment insurance and workmen's compensation (Carlino and Inman, 2013).

4 State own revenues include state taxes and fees, state and local employee contributions into the state pension plan, and employee and employer contributions into the unemployment and workmen's compensation trust funds (Carlino and Inman, 2013).

recovery, while the latter focuses on budget stabilization. They are also interrelated, as state countercyclical spending helps stabilize employment in both public and private sectors. The key bottleneck is that budget stabilization efforts may have limited macroeconomic impact because of the relatively modest size of state budget stabilization funds.⁵

Should States Play an Economic Stabilization Function?

The review of theoretical and empirical evidence does not preclude states from conducting discretionary economic stabilization policy. The benefit spillovers can be reduced by targeting fiscal stimulus to business and workers within the state, and can be further mitigated if all states in a region cooperate in their stabilization efforts. The lack of fiscal capacity is a major constraint at the state level because of limited resources in state budget stabilization funds. Given that balanced budget requirements only apply to operating budgets, state governments can use other sources of funding such as debt

issuance for capital investment to enhance their countercyclical fiscal capacity.

In summary, the classic theory of public finance does not support subnational efforts to stabilize economic conditions due to the presence of substantial economic spillovers and a lack of policy instrument and fiscal capacity. However, those limits do not preclude states from playing an economic stabilization function. The economic spillovers can be significantly reduced if all states or states within a particular region take similar stimulus actions, and when there are a large unemployed workforce. The lack of fiscal capacity cannot be addressed through innovative financing arrangements. State level stimulus efforts are necessary if political impasse prevents federal government from taking immediate and effective fiscal measures. Another advantage of state countercyclical fiscal policy is that states are generally more responsive to local needs and their stimulus programs can be tailored to local economic situations.

Government Investment in Public Infrastructure

Unlike other fiscal policies such as expanding government purchases, the construction and improvement of public infrastructure provides an opportunity for state fiscal policy to be effective. The economic values created by well-implemented government infrastructure investment are likely to be contained within the state jurisdiction. As an investment in productive capacity, investment in public infrastructure will likely generate long-term economic growth in the state as it provides the support for private economic activity. States have taken their economic development responsibilities seriously by making investments in major infrastructure projects such as railroads, canals, water, sewer, ports and roads.

Infrastructure Investment as a Countercyclical Fiscal Policy

High-quality public infrastructure is the bedrock of a thriving community. A healthy public capital infrastructure is critical to economic activities and outcomes. Krol (2020) elaborates several ways in which infrastructure investment can improve long-term economic outcomes. For example, highways increase the mobility of workers and help businesses deliver their products/services to customers and clients. Clean water and environment (as the result of a high-quality and functional sewer system) can have a positive impact on population health, reduce disease, lower infant mortality rates, and increase life expectancy.

Because it is perceived as being more

⁵ The average size of BSF as a ratio of state general fund expenditure was about 2% in 1980 and 1990, and rose to about 5% in 2000 and about 4.5% in 2007 (Wang, Zhan, & Hou, 2016).

effective than other types of spending, infrastructure investment has often been considered as a critical countercyclical fiscal policy tool for economic growth as well as during economic downturns (Haider, Crowley, & DiFrancesco, 2013; Ludec & Wilson, 2014). Germaschewski (2020) points out that public infrastructure spending tends to “enhance the productivity of the private sector and is thus likely to promote economic prosperity in normal times, while often offsetting falling private demand and stimulating the economy during recessions” (p. 322).

Many see infrastructure investment as an effective form of fiscal policy that can boost the economy and provide tangible benefits (e.g., employment of skilled and unskilled construction workers) in the long run as well as in shorter time periods (Haughwout, 2019). One of the main benefits of infrastructure investment is job creation potential. Although all forms of spending will produce jobs, infrastructure investment is considered to be a highly effective engine of job creation. According to one study, infrastructure spending in the United States would create 18,000 total jobs for every \$1 billion in new infrastructure spending, which would be 22 percent more jobs created by a rise in household spending levels generated by a tax cut (Heintz, Pollin, & Garrett-Peltier 2009).

Short-run and Long-run Impact of Public Infrastructure Investment

There is a near consensus in the literature about the positive long-run effects of public infrastructure investment. A meta-analysis conducted by the World Bank shows many more positive results than negative results related to the impacts of infrastructure stock and quality on long-run aggregate economic growth (Straub, 2008). Leduc and Wilson (2014) also suggest that studies of transportation infrastructure spending tend to find substantial impacts on real GDP, employment, population flows, and interregional trade.

There has been limited evidence regarding the short-run impact of public infrastructure

investment in the United States. Leduc and Wilson provide empirical estimates of the short-run economic impact of transportation spending during economic downturns. They report that highway spending between 1993 and 2010 positively affects GDP but not employment in the short-run. The lack of effect on employment is likely due to long delays between increases in infrastructure funding and actual spending, meaning that infrastructure spending is not capable of providing any meaningful short-term benefits (Ludec & Wilson, 2013, 2014). It may take a substantial amount of time for an infrastructure project to get planned, processed, and approved. Even more, an infrastructure project may get entangled in legal challenges associated with the environmental impact or neighborhood displacement effects that delay significant projects, thereby delaying capital outlays (Krol, 2020).

A review of the literature in this area shows that, overall, the infrastructure investment's impact on the economy *is* positive in the short-run, but the magnitude of its impact on the economy varies across various regions and can depend on economic conditions and type of infrastructures (Haider et al., 2013). Ramey (2020) confirms the earlier findings that delays in implementation that are inherent in any infrastructure project can reduce the short-term impacts of such projects. The author also finds that long-term effects of infrastructure projects tend to be sizeable as the long-run benefits are not affected by the implementation delays of projects.

Investment in Infrastructure in the United States

In the United States, programs such as the Public Works Administration (PWA) and Works Progress Administration (WPA) under President Franklin Roosevelt were key elements of the overall countercyclical fiscal investment that federal government adopted during the Great Depression of 1929. Similarly, capital and infrastructure investment programs were a major part of the American Recovery and Reinvestment Act (ARRA) of 2009 – a

massive fiscal policy adopted by the federal government in order to help stimulate the economy after the Great Recession of 2008.

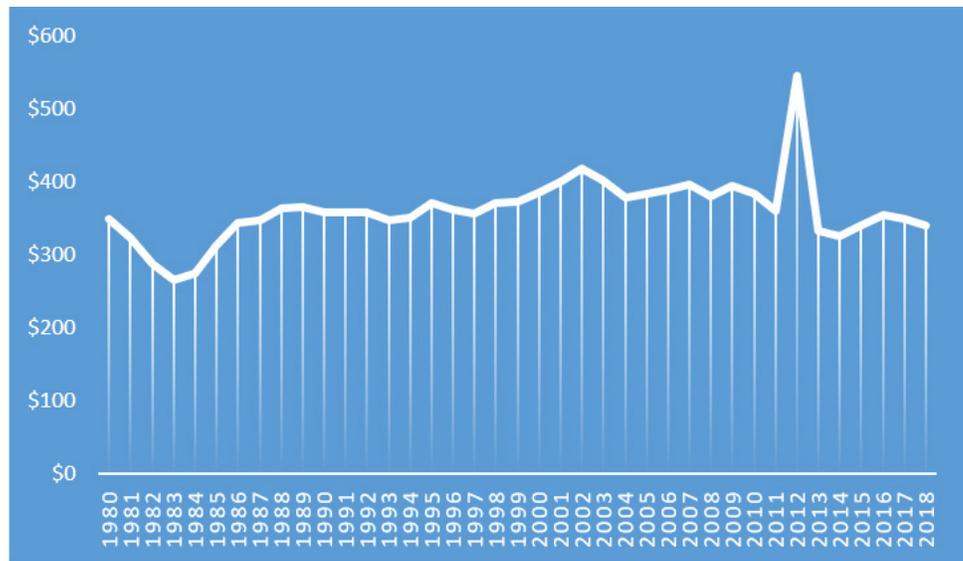
State governments have taken their economic development responsibilities seriously by making investments in major infrastructure projects such as canals and railways. According to Goodrich (1960), public funds financed about 70 percent of canal construction and between 25 and 30 percent of railway construction during the first half of the nineteenth century, and the investments were primarily made by states while the federal government commitment was much smaller. Despite critiques on public infrastructure investment, Goodrich (1960) believes that public investment in the construction of canals and railroads promoted economic development in nineteenth-century America.

State and local governments own and manage the majority of the nondefense public capital stock in the United States. In 2018, for instance, out of a total of \$522 billion in total nondefense capital spending, about three-quarters was invested by state and local governments (Haughwout, 2019). Furthermore, out of a total of \$107 billion in 2016 highway capital investment, state and local governments spent \$78 billion and \$28 billion, respectively, while the federal government’s direct expenditure was a mere \$500 million (Haughwout, 2019). It should be noted that a large segment of the state and local highway investment is transferred from the federal government.

Trend of Annual State Capital Spending

This section also examines the pattern and trend of annual state capital spending with a focus on its countercyclical role through recessionary periods since 1980. Table 1 presents all state direct general capital outlays per capita. The data are collected from U.S. Census Bureau’s Annual Survey of State and Local Government Finances. According to the U.S. Census Bureau, government capital outlay is defined as “Direct expenditure for purchase or construction, by contract or government employee, construction of buildings and other improvements; for purchase of land, equipment, and existing structures; and for payments on capital leases” (U.S. Census Bureau, 2006). The annual capital outlays are converted to real 2012 dollars using the Bureau of Economic Analysis price index for state and local government consumption expenditure and gross investment divided by state population.

Figure 1: Six state government direct general capital



The data show a clear spike of all state capital outlays in 2012, a 51 percent increase from 2011. This one-time big increase is attributable to the massive investment from the ARRA of 2009. During the Great Recession (December

2007–June 2009), all state capital outlays per capita dropped by 4.1 percent in 2008 and increased by 3.7 percent in 2009. For the 2001 recession (March–November 2001), all state capital outlays per capita increased by 3.8 and 4.7 percent in 2001 and 2002, respectively. During another recession from July 1990 to March 1991, all state capital outlays per capita dropped by 2.0 percent in 1990, and increased by 0.2 percent in 1991.

Figures 2-7 in the Appendix A show the trends of state direct general capital outlays per capita for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Similar to the all-state data, there was a clear spike of state capital outlays per capita in 2012 in five of the six states, with a range of increase from 22.5 percent in Indiana to 134.5 percent in Minnesota. Other increases during and shortly after the Great Recession occurred in both 2009 and 2010 for Illinois, in both 2008 and 2009 for Indiana and Minnesota, and in 2010 only for Michigan and Ohio. Unlike the other five states, the Wisconsin state capital outlays per capita increased for four consecutive years from 2008 to 2011, but declined in 2012.

In the 2001 recession, four of the six state governments (Illinois, Indiana, Michigan, and Wisconsin) increased their capital outlays

per capita in 2001. The state capital outlays per capita dropped by 3.6 percent in 2001 but increased by 3.6 percent in 2002 for Minnesota. During the early 1990s recession (July 1990–March 1991), the state capital outlays per capita declined in 1990 for all the states, but increased in 1991 for Illinois, Indiana, Ohio, and Wisconsin.

The data do not show a clear countercyclical pattern in state capital spending for the six Upper Midwest states during the three recent recessions. The state capital outlays not only fluctuated during and shortly after the economic recessions. Moreover, there exist substantial delays in state capital outlays, especially during the Great Recession, when federal government made enormous investment in public infrastructure projects (Leeper, Walker & Yang, 2010; Ludec & Wilson, 2013, 2014; Ramey, 2020). Although the ARRA funds were intended to support “shovel-ready” capital projects, the spike of the six-state capital spending occurred three years after ARRA was passed and the recession was officially over in 2009. The delayed capital outlays mitigated the stabilization function of government fiscal policies. In other words, capital planning and engineering were not advanced enough to spend the funds when the economy needed it most.

How Do States Finance Infrastructure Projects?

State infrastructure projects are traditionally financed by state own current revenues, funds provided by federal government, and borrowed funds that are repaid using future tax revenues or user charges. Private funding of public infrastructure projects increased both in value and number in late 2000s, particularly through highway public-private partnerships (PPPs), although it still remains a small part of total infrastructure spending in the U.S (Congressional Budget Office, 2020). State governments pay for infrastructure spending through a combination of proceeds from municipal bonds and special fund revenues. For example, over 60 percent of infrastructure

spending in California was borrowed using bonds in the period 2008–2017. Roughly 41 percent of capital spending in Illinois was funded through municipal bonds (Mattoon & Wetmore, 2019).

Infrastructure Spending through Debt

State governments can sell municipal bonds to receive up-front funding for infrastructure projects and then repay the investors, with interest, over a certain period of maturity. The two main types of bonds are general obligation (guaranteed) bonds and revenue bonds (non-guaranteed). States repay general

obligation bonds using the revenue from their general funds, while revenue bonds are typically repaid using the revenue from fees and charges paid by the users of the facility. In some cases, certain revenue bonds are paid using state general fund revenue. For example, lease revenue bonds are a special kind of revenue bond that a state repays with the rent payments made by the department that occupies the facility.

Debt financing has been one of the primary sources of funding for state infrastructure. Because of high price tags for infrastructure projects, state governments can avoid undue pressure on their current revenues by financing the projects using borrowed funds. By matching the term of debt maturity with the useful life of the funded capital project, debt financing meets the criterion of inter-generational equity because the cost of repaying the debt will fall on the users who will benefit from the facility.⁶ Another advantage of debt financing is that interest rates charged on borrowing for infrastructure are often lower than those on borrowing for other purposes because the interest received from municipal bonds is tax-exempt to the holder of debt. The interest subsidies help lower the borrowing cost of state governments if they issue general obligation bonds or qualified private activity bonds.

There are some drawbacks associated with government debt financing of capital projects. First, it requires a variety of expenses to issue a bond because the issuing government needs to pay for necessary legal, financial, and underwriting costs. Second, the debt service for general obligation bonds and some revenue bonds comes from government general funds, and substantial debt service payments may compete with financial resources that would otherwise be available for other programs. Debt financing commits government resources for extended periods of time, and therefore can be misused by public

officials who may postpone a significant part of the borrowing cost beyond their terms in office.

Infrastructure Spending from Current Revenues

Concerned with excessive debt burden, the requirement of cash payment for large expenditures emerged under the name “pay as you go”. The cash payment is from current special fund revenues that are usually reserved or designated for capital use only. Dedicated revenues include state gasoline taxes, tolls or fees from bridges, or other facilities.

Compared with debt financing, cash payment avoids immediate costs of issuing bonds and long-term commitment of interest payments so that state governments will have more resources available for operating purposes. In addition, cash payment reduces the need for issuing debt and thereby helps control the debt burden, which is critical to maintain desirable credit ratings and preserve flexibility in future financing of capital projects. However, the mismatch between cost bearers and service beneficiaries is a major shortcoming of the pay-as-you-go system, which violates the criterion of inter-generational equity. Another potential issue is that the cash payment is likely insufficient to meet the need of capital spending. For example, Illinois revenues from the motor fuel tax only increased by 6 percent between 2012 and 2018 due in part to more fuel-efficient vehicles (Mattoon & Wetmore, 2019). Taking inflation into account, the motor fuel tax revenues in constant dollars actually declined during that period.

Infrastructure Funding through Public-Private Partnership

State governments often hire private contractors for constructing or maintaining public infrastructure. PPPs have been increasingly used recently as an alternate way of financing public infrastructure projects. For example, Florida, Texas, and

⁶ Inter-generational equity means that each generation should pay fully for the cost of its use of public capital assets.

Virginia implemented most of their highway partnerships with private financing in recent years (Congressional Budget Office, 2020). PPPs are usually structured so that the private partners share risks and benefits from a capital project and have incentives to minimize potential risks such as cost overrun and schedule delays and to maximize potential benefits like increased return on investment. Private financing can expedite capital projects because various legal and fiscal rules restrict state governments' ability to spend their current revenues or issue new debt.

If private partners provide financing, they are expected to be repaid by collecting user charges from the financed project and/or receiving installments of direct payment from state government. The receipt of government direct payment is often guaranteed, while the collection of user charges is subject to demand fluctuation. A review of recent PPPs indicates a trend of reducing the risk borne by private partners. For partnerships with private financing before 2008, 17 percent of the private investment was guaranteed by direct payments. That percentage increased to about 44 percent after 2008 (Congressional Budget Office, 2020).

PPPs are still uncommon for transportation infrastructure in the U.S. and quite rare in the six Upper Midwest states. Private financing of public infrastructure projects can help address the delay of government funding due to various institutional and fiscal limits. Studies also show that PPPs can reduce the average length of design and building phases and the lifecycle costs of public infrastructure projects (Congressional Budget Office, 2020). However, PPPs can also result in a reduction of public control and, in some cases, higher costs for users of the infrastructure.

State Infrastructure Investment Fund as Countercyclical Tool

Government infrastructure projects are normally financed by debt issuance, cash payment, private funding, and federal assistance. Federal assistance is out of

state control. State debt issuance and cash payment are constrained by various rules and limits. Private financing is limited by risk aversion of private investors and state laws governing the extent and form of private financing. All funding sources may become even more insufficient during recessionary years. **In other words, without necessary policy adjustment, the conventional sources of funding cannot sufficiently meet the economic stabilization function at the state level.**

A new funding mechanism is needed for states to play a meaningful role in stabilizing their economic conditions. One option is to establish a state *infrastructure stabilization fund*. Almost all states use specialized and formalized BSFs as their major countercyclical mechanism, and studies have shown that BSFs have been effective in stabilizing state budget outlays (Sobel & Holcombe, 1996; Douglas & Gaddie, 2002). A separate infrastructure investment fund could be established to play economic stabilization function by saving cash during expansionary periods and investing in infrastructure projects during recessionary periods.

The presence of a BSF does not necessarily stabilize government budgets because its effectiveness depends on specific structure of the fund. Douglas and Gaddie (2002) report that the BSFs in many states are not large enough to have the expected effects. Sobel and Holcombe (1996) point out that the deposit rules also make a difference. Unlike smoothing state budget expenditures, the infrastructure investment fund is designed to stabilize economic condition through infrastructure investment. The high price tags of capital projects require substantial savings during good economic years. Deposit and withdraw rules must also meet the expected economic stabilization function. The deposit should be closely tied to a state's economic condition and infrastructure need. The release of the fund can only be triggered by precipitous decline of statewide employment, and can only be used for investment in

productive capital assets.

A countercyclical infrastructure investment fund can reduce the need to borrow and serves a stabilization function during both economic recession and expansion through the acceleration of capital spending during recessionary periods and the deceleration of

capital spending during expansionary periods. This does not mean that states need to spend more than they should on public infrastructure. It calls for a restructuring of the state capital financing mechanism so that state investment in infrastructure can also help stabilize its and regional economies, especially during economic recession.

Barriers and Pathways for State Countercyclical Investment in Infrastructure

As discussed in the prior section, state governments may use a combination of debt issuance and cash payment to pay for their share of infrastructure cost. However, state fiscal policies are made within the confinement of relevant legal limits and prevailing political culture. For example, most of the states face BBRs when they decide on operating expenditures. There are also constitutional or statutory limits on states' capacity to issue general obligation or other types of debt. Therefore, the implementation of the proposed state countercyclical infrastructure program requires mitigating some of the legal and institutional barriers that restrict states' capacity to finance a fiscally countercyclical and economically stimulative infrastructure program.

BBRs are constitutional or statutory rules that prevent state government from spending more than their revenues. The rules vary in design and stringency across states. Some states only require the proposed or enacted budget to be balanced. A more stringent rule requires that the budget must be balanced when the fiscal year is over. Rueben, Randall and Boddupalli (2018) classify a strong BBR as one that meets at least one of the following requirements: (1) the governor must sign a balanced budget; (2) the state is prohibited from carrying over a deficit into the following fiscal year or biennium; or (3) the legislature must pass a balanced budget accompanied by

either limits on supplementary appropriations or within fiscal-year controls to avoid a deficit. According to this classification, Illinois, Michigan, Minnesota, Ohio and Wisconsin have strong BBRs whereas Indiana has a weak BBR.⁷

Appendix B presents the details of BBRs for the six states. For example, Article 8, Section 2 of the Illinois State Constitution requires the governor to submit a balanced budget to the assembly for appropriation. The same article also requires the state legislative body to pass a balanced budget. The state of Indiana amended Article 10, Section 5 of the Indiana Constitution to introduce a weak BBR that went into effect for the 2019-2020 biennial state budget. As the amendment stipulates, if costs exceed revenue at the end of a biennial budget period, then the next biennial budget has to subtract the shortfall from the projected revenue for the next budget period. Unlike the other five states, the amended Indiana Constitution allows for the balanced budget requirement to be suspended if at least two-thirds of both state legislative houses vote to do so.

The legally binding BBRs limit a state's capacity of using its current revenues to finance capital projects. The restricting effects are particularly troublesome for the proposed state countercyclical infrastructure program because states are not able to make

7 "What are state balanced budget requirements and how do they work?" <https://www.taxpolicycenter.org/briefing-book>

important infrastructure investment due to revenue shortfalls during economic downturn. The reality is even worse as some state governments often postpone their capital spending plan as a strategy to balance their budgets. In this sense, the BBRs play a pro-cyclical rather than countercyclical role because the delayed capital expenditures likely further drag the economy down when economic stability is much needed during recessionary times.

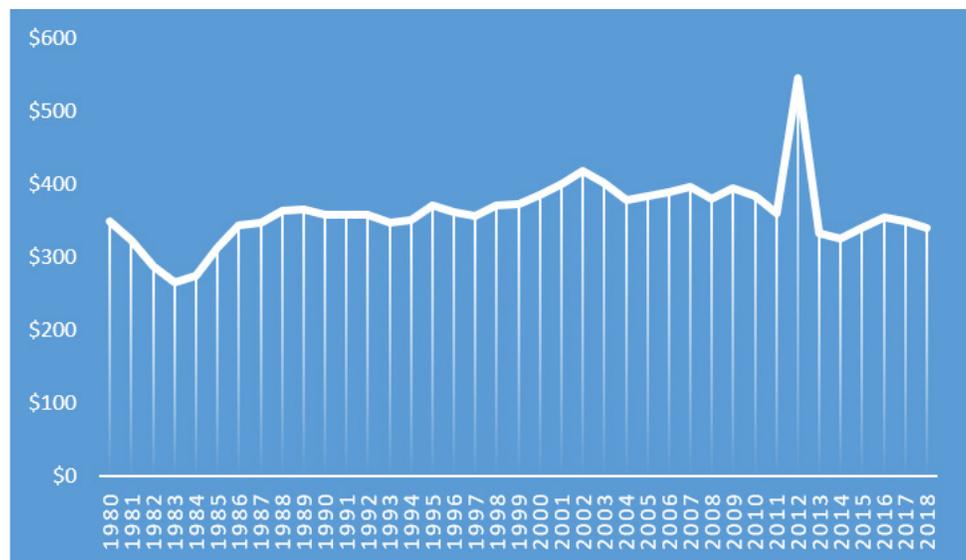
In order to effectively implement the state infrastructure program, the pro-cyclical nature of BBRs should be addressed. The primary intent of BBRs is to control government spending within its available resources. However, to balance government budget annually or biennially may not in the best interest of a state. The state economy expands and contracts through business cycles. So it is more sensible to balance a state budget over a multi-year cycle. At least it does more harm than good to require a balanced budget in every year during a recession. Therefore we suggest that the BBRs be suspended if needed to provide necessary funding for states to stabilize economic condition through investing in public infrastructure. Some states would need to rewrite their constitutions or statutes to allow temporary suspension of BBRs similar to the newly enacted BBR in Indiana's Constitution.

States' BBRs do not apply to capital projects financed through bonded debt. However, most states face other limits on their capacity to issue general obligation bonds. The limits on state general obligation debt are either tied to the total personal income or the taxable property

values in a state. For example, in Minnesota, the total tax-supported principal outstanding shall be 3.25 percent or less of total state personal income. Wisconsin State Constitution limits the aggregate state debt in any calendar year to a certain percent of the aggregate value of all taxable property in the state. The debt limits in Illinois, Michigan and Minnesota can be overridden with a supermajority of the state legislature. The Ohio State Constitution limits the annual debt service to 5 percent of the estimated total general fund revenues. Indiana does not have a debt limit on state general obligation debt. Appendix B includes the details of debt limits for the six states.

Figure 8 shows state general obligation debt as percent of personal income for the Upper Midwest states except Indiana. It shows that four of the five states (MI, MN, OH and WI) have relatively low debt burden, and their general obligation debt was below 3 percent of state personal income. In 2019, Minnesota's state general obligation debt was about 2.1 percent of state personal income, well below the limit of 3.25 percent. The figure also indicates that state general obligation debt has been declining relative to state's total personal income in recent years. This suggests that the six states of the Upper Midwest should

Figure 8: State government general obligation debt as percent of personal income



have sufficient space within their legal debt limits to issue general obligation debt for countercyclical infrastructure investment immediately without changing their constitutions or statutes.

This section examines relevant institutional barriers to the implementation of a countercyclical infrastructure program. The focus is on BBRs and debt limits that may constrain necessary state countercyclical policy responses during economic recessions. We suggest that BBRs be made responsive to business cycles through temporary suspension of the requirements if needed. The temporary measure provides necessary funding for the proposed state infrastructure program during

economic downturn and still maintains BBRs' spirit of controlling excessive government spending. The deficits during recessionary periods can be balanced by raising additional revenues during expansionary periods. As a result, state budgets will be in balance over a multi-year timeframe although the annual or biennial budgets may not necessarily be balanced. The debt limits can be made flexible in a similar way by allowing government debt to be temporarily over the limits if economy condition requires and achieving the control of debt level over a multi-year period. Since many state governments are well below their current debt limits, there is no urgent need to make adjustment to the current debt limit policy.

Findings and Recommendations

The paper is motivated by the practical need for states to play a significant role in economic stabilization by establishing a countercyclical infrastructure investment program. The state role can be complimentary to federal fiscal stimulus program, or fill in the gap of government action if federal policy-making is absent or delayed. Compared with federal policies that apply to the entire country, state level countercyclical fiscal policies can be customized to address specific regional and state economic issues and challenges.

The orthodox public finance theorists are suspicious about the role states play in stabilizing economic conditions because of substantial fiscal spillovers and limited fiscal capacity at the state level. We agree that it is theoretically sound to assign economic stabilization function only to federal or national government, and it is suboptimal that subnational governments take discretionary countercyclical fiscal actions. However, economic efficiency is one of several criteria in government policymaking, and there are ways to mitigate the potential efficiency loss.

First, the spillover effects can be substantially curtailed if all states or states in a particular

region cooperate their stimulus efforts. The underutilized workforce during an economic recession may also help contain the fiscal spillovers within the state boundaries. Second, states can enhance their fiscal capacity by utilizing funding from multiple sources including private financing and a proposed state infrastructure investment fund. The temporary suspension of state institutional limits can enhance state revenue generating capacity. This does not change the nature of those institutional arrangements. We propose a flexible way to implement those control mechanisms in order to stabilize economic conditions and control government spending over a multi-year timeframe.

The reason why the countercyclical state program focuses on public infrastructure is twofold. First, well-implemented infrastructure investment can stimulate the economy and generate sustained benefits to a diverse workforce including skilled and unskilled workers. Infrastructure investment is generally considered to be a highly effective engine of job creation that is much needed during recessionary periods. Second, there has been a substantial gap between the condition

of and investment in critical infrastructure in the United States. The American Society of Civil Engineers estimated an infrastructure investment gap of \$2 trillion in 2016-2025; failing to close this gap could have serious economic consequences.⁸ Substantial government investment is required to improve public infrastructure, which is a major determinant of economic competitiveness. The proposed infrastructure program does not mean states should make excessive investment in public infrastructure. What we propose is to adjust the timing of state infrastructure investment in response to business cycles.

Following are specific actions for state governments to consider in order to play their part in stabilizing state economies. We recommend:

- Each state to incorporate economic stabilization into their capital planning as an important policy goal. The countercyclical capital budget should direct more capital spending during recessionary periods and less capital spending during expansionary periods. In particular, state investment in infrastructure should be substantially increased to serve as a meaningful buffer to economic downturns.
- Each state to establish an infrastructure investment fund in addition to the existing budget stabilization fund. State governments take responsible actions to stabilize both their budgets and economies. Necessary deposit rules should be enacted to accumulate sufficient resources in the infrastructure investment fund, which can only be released under certain conditions such as precipitous decline of statewide employment.
- Each state to alternate their BBRs and debt limits, and make the rules

applicable to a multi-year period. Flexible BBRs and debt limits will provide state governments necessary resources to stabilize their economies in case of economic recession.

⁸ Please see <http://www.infrastructurereportcard.org/the-impact/economic-impact/>

References

- Carlino, Gerald, and Robert P. Inman. 2013. "Local Deficits and Local Jobs: Can US States Stabilize Their Own Economies?" *Journal of Monetary Economics* 60 (July): 517-30.
- Congressional Budget Office. 2020. *Public-Private Partnerships for Transportation and Water Infrastructure*. Available at <https://www.cbo.gov/publication/56044>
- Denison, Dwight V., Merl Hackbart, and Michael Moody. 2006. "State Debt Limits: How Many Are Enough?" *Public Budgeting & Finance* 26(4): 22-39.
- Douglas, James W., and Ronald K. Gaddie. 2002. "State Rainy Day Funds and Fiscal Crises: Rainy Day Funds and the 1990–1991 Recession Revisited." *Public Budgeting & Finance* 22(1): 19-30.
- Germaschewski, Yin. 2020. "Stabilization Policy, Infrastructure Investment, and Welfare in a Small Open Economy." *Economic Modelling* 84: 322-339.
- Goodrich, Carter. 1960. *Government Promotion of American Canals and Railroads, 1800–1890*. New York: Columbia University Press.
- Gramlich, Edward M. 1987. "Subnational Fiscal Policy." *Perspectives on Local Public Finance and Public Policy* 3: 3-27.
- Gramlich, Edward M. 1997. "Subnational Fiscal Policy." In *Financing Federal Systems: The Selected Essays of Edward M. Gramlich*. Cheltenham, U.K.: Edward Elgar
- Haider, Murtaza, David Crowley, and Richard DiFrancesco. 2013. "Investing in Ontario's Infrastructure for Economic Growth and Prosperity." Available at SSRN 2288379.
- Haughwout, Andrew. 2019. "Infrastructure Investment as an Automatic Stabilizer." *The Hamilton Project*. https://www.hamiltonproject.org/assets/files/Haughwout_web_20190506.pdf
- Heintz, James, Robert Pollin, and Heidi Garrett-Peltier. 2009. "How Infrastructure Investments Support the US Economy: Employment, Productivity and Growth." Political Economy Research Institute (PERI), University of Massachusetts-Amherst.
- Hines, James R. 2010. "State Fiscal Policies and Transitory Income Fluctuations." *Brookings Papers on Economic Activity* (Fall 2010): 313-337.
- Hou, Yilin. 2003. "What Stabilizes State General Fund Expenditures in Downturn Years—Budget Stabilization Fund or General Fund Unreserved Undesignated Balance?" *Public Budgeting & Finance* 23(3): 64-91.
- Hou, Yilin. 2013. *State Government Budget Stabilization: Policy, Tools, and Impacts*. New York, NY: Springer.
- Kiewiet, D. Roderick, and Kristin Szakaty. 1996. "Constitutional Limitations on Borrowing: An Analysis of State Bonded Indebtedness." *The Journal of Law, Economics, and Organization* 12(1): 62-97.
- Knight, Brian, and Arik Levinson. 1999. "Rainy Day Funds and State Government Savings." *National Tax Journal* 52(3): 459-472.
- Krol, Robert. 2020. "Will a Burst in Federal Infrastructure Spending Accelerate the Recovery from the COVID-19 Recession?" Mercatus Center Policy Brief, George Mason University. <https://www.mercatus.org/publications/covid-19-economic-recovery/will-burst-federal-infrastructure-spending-accelerate>
- Leduc, Sylvain, and Daniel Wilson. 2013. "Roads to Prosperity or Bridges to Nowhere? Theory and Evidence on the Impact of Public Infrastructure Investment." *NBER Macroeconomics Annual* 27(1): 89-142.
- Leduc, Sylvain, and Daniel Wilson. 2014. "Infrastructure Spending as Fiscal Stimulus:

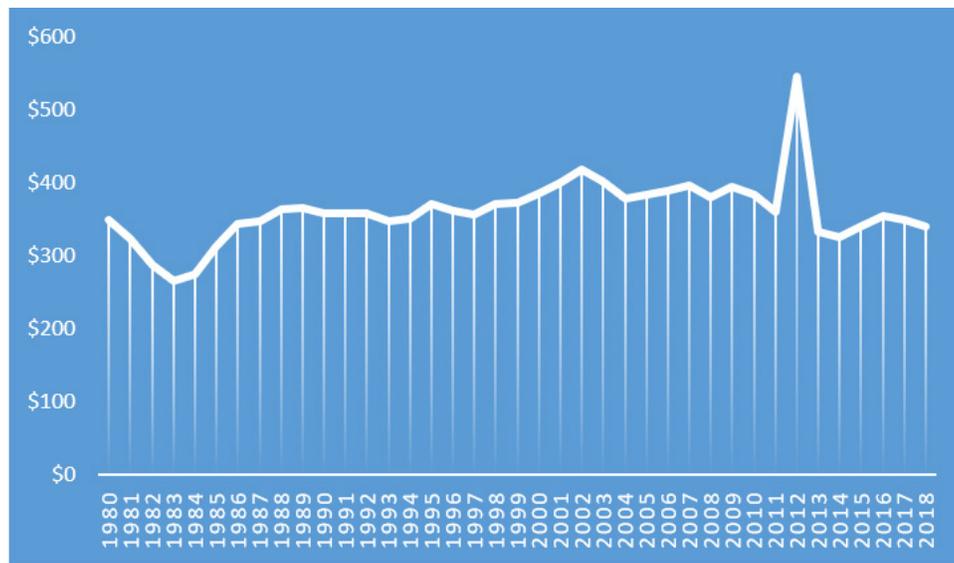
- Assessing the Evidence.” *Review of Economics and Institutions* 5(1): 1-24.
- Leeper, Eric M., Todd B. Walker, and Shu-Chun Susan Yang. 2010. “Government Investment and Fiscal Stimulus.” *Journal of Monetary Economics* 57(8): 1000–1012.
- Mattoon, Richard H., and Sarah Wetmore. 2019. *Best Practices for Financing Illinois Infrastructure: A Conference Summary*. Available from <https://www.chicagofed.org/publications/chicago-fed-letter/2019/414>
- Moody, Michael, and Merl Hackbart. 2005. *The Impact of State Road Fund Debt Limits: An Empirical Analysis*. Kentucky Transportation Center Research Report. Available from https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1169&context=ktc_researchreports
- Musgrave, Richard. 1959. *The Theory of Public Finance*. New York: McGraw-Hill.
- National Association of State Budget Officers, 2015. *Budget Processes In The States: Spring 2015*. Washington, DC: National Association of State Budget Officers. Available from https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Budget%20Processess/2015_Budget_Processes_-_S.pdf
- Oates, Wallace. 1972. *Fiscal Federalism*. New York: Harcourt, Brace, Jovanovich.
- Pereira, Alfredo M. 2000. “Is All Public Capital Created Equal?” *Review of Economics and Statistics* 82(3): 513-518.
- Perotti, Roberto. 2004. *Public Investment: Another (different) Look*. Working Paper at IGER – Università Bocconi.
- Ramey, Valerie A. 2020. “The Macroeconomic Consequences of Infrastructure Investment.” National Bureau of Economic Research Working Paper No. w27625.
- Rueben, Kim, Megan Randall, and Aravind Boddupalli. 2018. *Budget Processes and the Great Recession: How State Fiscal Institutions Shape Tax and Spending Decisions*. Available from <https://www.urban.org/research/publication/budget-processes-and-great-recession>
- Sobel, Russell S., and Randall G. Holcombe. 1996. “The Impact of State Rainy Day Funds in Easing State Fiscal Crises during the 1990–1991 Recession.” *Public Budgeting & Finance* 16(3): 28-48.
- Straub, Stéphane. 2008. “Infrastructure and Growth in Developing Countries: Recent Advances and Research Challenges.” World Bank Policy Research Working Paper No. 4460.
- U.S. Census Bureau. 2006. *Government Finance and Employment Classification Manual*. <https://www.census.gov/govs/classification/>
- Wagner, Gary A. 2003. “Are State Budget Stabilization Funds only the Illusion of Savings? Evidence from Stationary Panel Data.” *The Quarterly Review of Economics and Finance* 43(2): 213-238.
- Zandi, Mark. 2009. “The Impact of the Recovery Act on Economic Growth.” Written Testimony before the Joint Economic Committee. Available from <https://www.economy.com/mark-zandi/documents/JEC-Fiscal-Stimulus-102909.pdf>

Appendix A: Direct General Capital Outlays per Capita for Six States¹

Illinois State Capital Outlays

The Illinois state capital outlays per capita show a clear spike in 2012, with an 83 percent increase from 2011. During the Great Recession (December 2007–June 2009), Illinois state capital outlays per capita dropped by 14.1 percent in 2008 and increased by 19 and 20.3 percent in 2009 and 2010, respectively. In the 2001 recession (March–November 2001), Illinois state capital outlays per capita increased by 32.2 and 15.6 percent in 2001 and 2002, respectively. During the early 1990s recession (July 1990–March 1991), Illinois state capital outlays per capita dropped by 3.4 percent in 1990 and increased by 7.1 percent in 1991.

Figure 2: Illinois state direct general capital outlays per capita

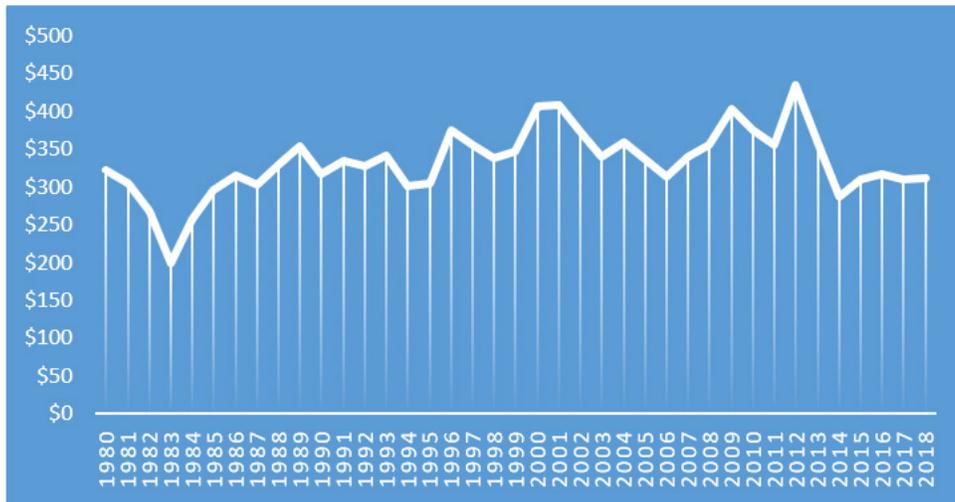


Indiana State Capital Outlays

The Indiana state capital outlays per capita show a clear spike in 2012, with a 22.5 percent increase from 2011. During the Great Recession (December 2007–June 2009), Indiana state capital outlays per capita increased by 4.8 and 13.3 percent in 2008 and 2009, respectively. In the 2001 recession (March–November 2001), Indiana state capital outlays per capita increased by 0.2 percent in 2001, and dropped by 8.6 percent in 2002. During the recession of July 1990–March 1991, Indiana state capital outlays per capita dropped by 10.6 percent in 1990 and increased by 5.6 percent in 1991.

¹ The data of state capital outlays are from U.S. Census Bureau’s Annual Survey of State and Local Government Finances. The annual capital outlays are converted to real 2012 dollars using the Bureau of Economic Analysis price index for state and local government consumption expenditure and gross investment divided by state population.

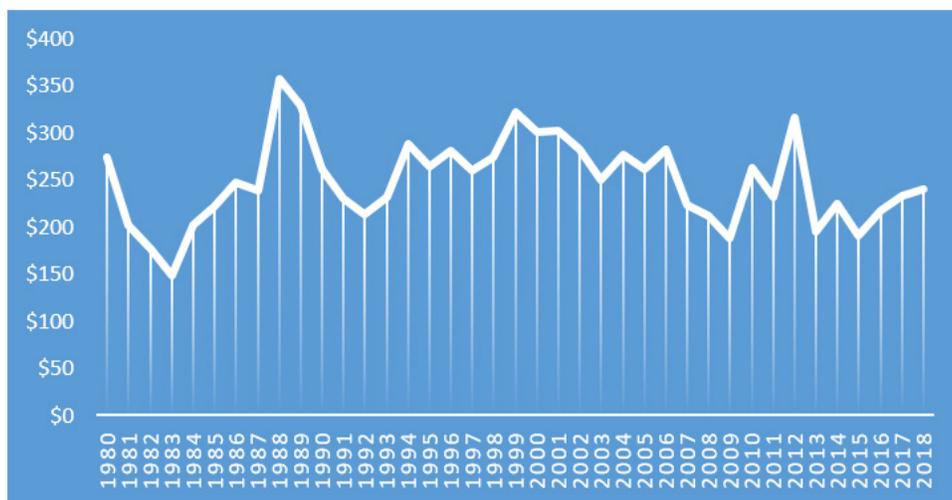
Figure 3: Indiana state direct general capital outlays per capita



Michigan State Capital Outlays

The Michigan state capital outlays per capita show a clear spike in 2012, with a 36.4 percent increase from 2011. During the Great Recession (December 2007–June 2009), Michigan state capital outlays per capita declined by 5.1 and 11 percent in 2008 and 2009, respectively. However, the per capita measure increased by 39.5 percent in 2010. In the 2001 recession (March–November 2001), Michigan state capital outlays per capita increased by 0.5 percent in 2001 and dropped by 6.6 percent in 2002. During the early 1990s recession (July 1990–March 1991), Michigan state capital outlays per capita dropped by 20.6 and 12 percent in 1990 and 1991, respectively.

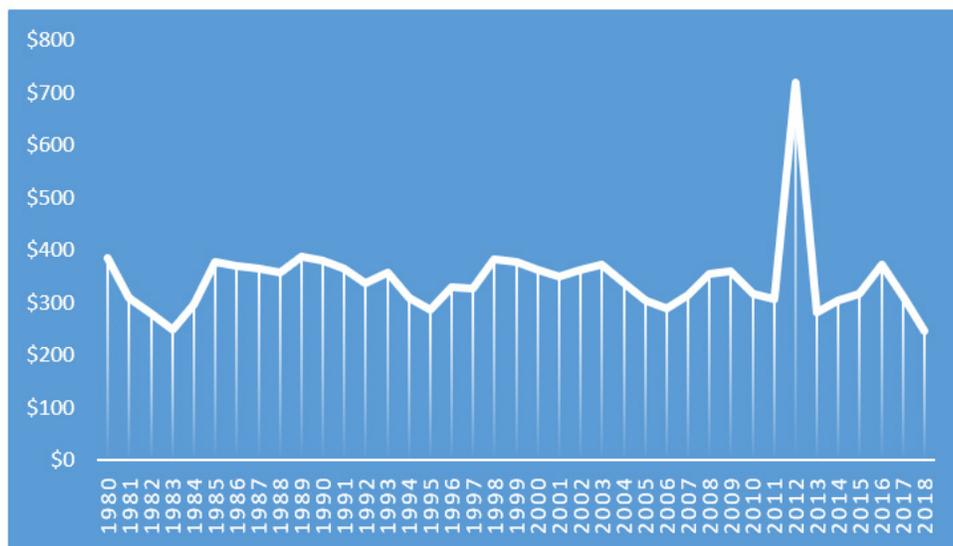
Figure 4: Michigan state direct general capital outlays per capita



Minnesota State Capital Outlays

The Minnesota state capital outlays per capita show a huge spike in 2012, with a 134.5 percent increase from 2011. During the Great Recession (December 2007–June 2009), Minnesota state capital outlays per capita increased by 12.7 and 1.4 percent in 2008 and 2009, respectively. In the 2001 recession (March–November 2001), Minnesota state capital outlays per capita decreased by 3.6 percent in 2001, and then increased by 3.6 percent in 2002. During the early 1990s recession (July 1990–March 1991), Minnesota state capital outlays per capita dropped by 2.3 and 3.9 percent in 1990 and 1991, respectively.

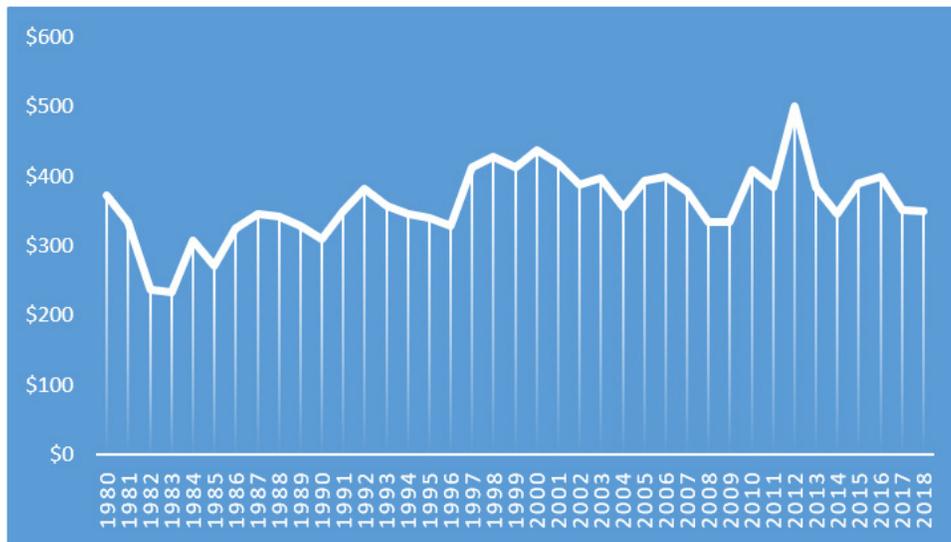
Figure 5: Minnesota state direct general capital outlays per capita



Ohio State Capital Outlays

The Ohio state capital outlays per capita show a clear spike in 2012, with a 30.5 percent increase from 2011. During the Great Recession (December 2007–June 2009), Ohio state capital outlays per capita decreased by 11.3 and 0.1 percent in 2008 and 2009, respectively. However, the per capita measure increased by 22.1 percent in 2010. In the 2001 recession (March–November 2001), Ohio state capital outlays per capita decreased by 4.4 and 7.5 percent in 2001 and 2002, respectively. During the early 1990s recession (July 1990–March 1991), Ohio state capital outlays per capita dropped by 5.8 percent in 1990 and increased by 13.4 percent in 1991.

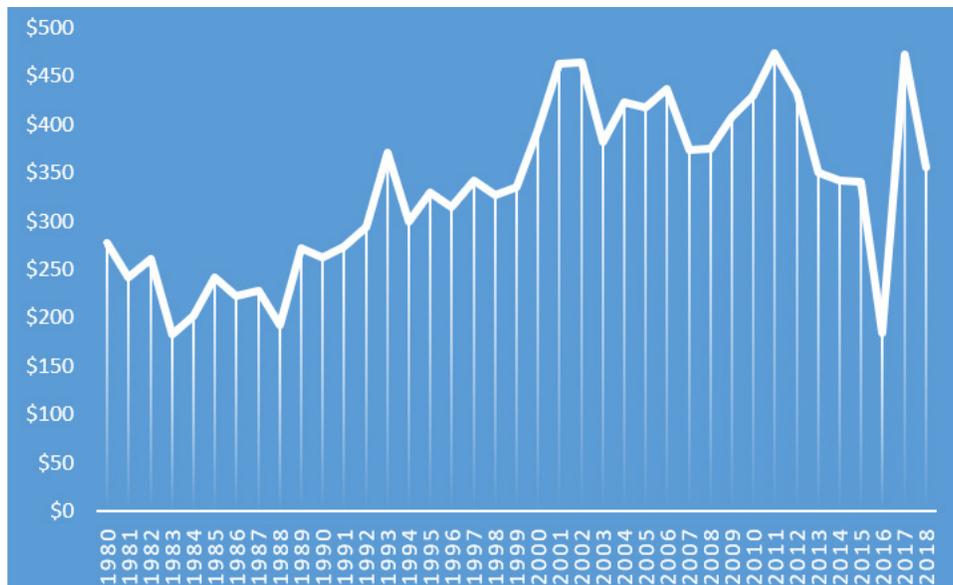
Figure 6: Ohio state direct general capital outlays per capita



Wisconsin State Capital Outlays

The Wisconsin state capital outlays per capita increased for four consecutive years from 2008 to 2011 with 0.5, 9.0, 5.4, and 10.2 percent increases in 2008, 2009, 2010, and 2011, respectively. Unlike the other states, the Wisconsin state capital outlays per capita declined by 8.7 percent in 2012. In the 2001 recession (March–November 2001), Wisconsin state capital outlays per capita increased by 17.2 and 03 percent in 2001 and 2002, respectively. During the early 1990s recession (July 1990–March 1991), Wisconsin state capital outlays per capita dropped by 3.4 percent in 1990 and increased by 4.4 percent in 1991.

Figure 7: Wisconsin state direct general capital outlays per capita



Appendix B: Individual State Balanced Budget Requirements and Debt Limits

Illinois Balanced Budget Requirement

The state of Illinois' balanced budget requirement is constitutional. Article 8, Section 2 of the state constitution requires the governor to submit a balanced budget to the assembly for appropriation:

“The Governor shall prepare and submit to the General Assembly, at a time prescribed by law, a State budget for the ensuing fiscal year. The budget shall set forth the estimated balance of funds available for appropriation at the beginning of the fiscal year, the estimated receipts, and a plan for expenditures and obligations during the fiscal year of every department, authority, public corporation and quasi-public corporation of the State, every State college and university, and every other public agency created by the State, but not of units of local government or school districts. The budget shall also set forth the indebtedness and contingent liabilities of the State and such other information as may be required by law. Proposed expenditures shall not exceed funds estimated to be available for the fiscal year as shown in the budget.”²

The same article also requires the state legislative body to pass a balanced budget and notes that:

“The General Assembly by law shall make appropriations for all expenditures of public funds by the State. Appropriations for a fiscal year shall not exceed funds estimated by the General Assembly to be available during that year”.³

Illinois General Obligation Debt Limits

The state of Illinois' general obligation (GO) debt limit is constitutional according to Article 9, Section 9 of the state constitution. However, the state constitution provides certain conditions under which the said GO debt limitation could be overridden. The limit could be overturned if a supermajority of the state legislature (3/5ths of the members) approve increase in state debt limit or if such increase is approved in a referendum by the state residents (National Association of State Budget Officers, 2015; Kiewiet & Szakaty, 1996).

The state of Illinois also has a transportation debt limit. Denison, Hackbart, and Moody collected survey data on all state governments and found that the state of Illinois has a Road Fund Debt limit (Denison, Hackbart & Moody, 2006). A similar survey conducted by University of Kentucky Transportation Center also found that the state of Illinois has a limit on the amount of debt the state can issue for transportation purposes (Moody & Hackbart, 2005). No further information was found regarding the details of the debt limit the state places on transportation.

² Illinois Constitution, Article VIII, Section 2 (n.d.)

³ *ibid*

Indiana Balanced Budget Requirement

The state recently introduced a constitutional amendment for the balanced budget requirement. The new measure amended Article 10, Section 5 of the Indiana Constitution. The following subsections of (b) through (f) were added to Section 5 of Article 10 of Indiana Constitution in 2018:

“Section 5 (a) No law shall authorize any debt to be contracted, on behalf of the State, except in the following cases: to meet casual deficits in the revenue; to pay the interest on the State Debt; to repel invasion, suppress insurrection, or, if hostilities be threatened, provide for the public defense.

(b) The following definitions apply to this section only for purposes of the limits on the State budget under this section:

(1) “Revenue” means all income received by the state general fund and all other state funds, excluding the proceeds of bonds or other loans.

(2) “Expense” means the ordinary operating costs of state government, including any debt service payments made during the biennial budget period.

(c) The total amount of expense appropriations enacted by the General Assembly for a biennial budget may not exceed the estimated revenue of the state in the biennial budget period.

(d) A State budget enacted by the General Assembly must appropriate money for the State’s prefunded pension funds in the amount necessary to actuarially fund the accrued liability of all such pension funds during the budget period.

(e) If expenses exceed actual revenue received by the state when reconciled at the close of a biennial budget period, the subsequent biennial budget must subtract any shortfall from the projected revenue available for that subsequent biennial budget.

(f) The requirements under subsections (c) and (d) may be suspended if at least two-thirds of the members of the House of Representatives and at least two-thirds of the members of the Senate vote to suspend the requirement.

(g) A court that orders a remedy pursuant to any case or controversy arising under this section may not order any remedies other than a declaratory judgment or such other remedies that are specifically authorized by the General Assembly in a law implementing this section.”⁴

The amendment was approved via a public referendum and went into effect for the 2019-2020 biennial state budget. As the amendment states, if costs exceed revenue at the end of a biennial budget period, then the next biennial budget has to subtract the shortfall from the projected revenue for the next budget period.

4 Indiana Constitution, Article 10, Section 5 (n.d.)

Additionally, as part (f) notes, this amendment allows for the balanced budget requirement to be overturned (suspended in this case), if at least two-thirds of both state legislative houses vote to suspend the requirement.

Indiana State General Obligation Debt Limits

The state of Indiana does not have any General Obligation debt limits.

Michigan Balanced Budget Requirement

Balanced budget requirement is a constitutional requirement in the state of Michigan. A review of Article 4, Section 31 of the state constitution shows that a balanced budget shall be passed by the legislature. The said article mentions:

“The general appropriation bills for the succeeding fiscal period covering items set forth in the budget shall be passed or rejected in either house of the legislature before that house passes any appropriation bill for items not in the budget except bills supplementing appropriations for the current fiscal year’s operation. Any bill requiring an appropriation to carry out its purpose shall be considered an appropriation bill. One of the general appropriation bills as passed by the legislature shall contain an itemized statement of estimated revenue by major source in each operating fund for the ensuing fiscal period, the total of which shall not be less than the total of all appropriations made from each fund in the general appropriation bills as passed.”⁵

Article 5, Section 18 of the state constitution allows for the “carry-over” of different fund deficit and surplus to the next period. This article notes that

“The amount of any surplus created or deficit incurred in any fund during the last preceding fiscal period shall be entered as an item in the budget and in one of the appropriation bills. The governor may submit amendments to appropriation bills to be offered in either house during consideration of the bill by that house, and shall submit bills to meet deficiencies in current appropriations.”⁶

Finally, Article 5, Section 20 of the state constitution clearly rules out any possibility for an exception to the state’s balanced budget requirements. The said article notes that

“No appropriation shall be a mandate to spend. The governor, with the approval of the appropriating committees of the house and senate, shall reduce expenditures authorized by appropriations whenever it appears that actual revenues for a fiscal period will fall below the revenue estimates on which appropriations for that period were based. Reductions in expenditures shall be made in accordance with procedures prescribed by law. The governor may not reduce expenditures of the legislative and judicial branches

5 Michigan Constitution, Article IV, Section 31 (n.d.)

6 Michigan Constitution, Article V, Section 18 (n.d.)

or from funds constitutionally dedicated for specific purposes.”⁷

Michigan General Obligation Debt Limits

The state of Michigan has a general obligation debt limit, and the limit is constitutional. However, the state constitution provides certain conditions under which the said GO debt limitation could be overridden. The limit could be overturned if a supermajority of the state legislature (3/5ths of the members) approve increase in state debt limit (National Association of State Budget Officers, 2015; Kiewiet & Szakaly, 1996).

The state of Michigan also has a transportation debt limit. Denison, Hackbart, and Moody collected survey data on all state governments and found that the state of Michigan has a Road Fund Debt limit (Denison, Hackbart & Moody, 2006). A similar survey conducted by University of Kentucky Transportation Center also found that the state of Michigan has a limit on the amount of debt the state can issue for transportation purposes (Moody & Hackbart, 2005). No further information was found regarding the details of the debt limit the state places on transportation.

Minnesota Balanced Budget Requirement

The state of Minnesota’s balanced budget requirement is very strict, but the requirement is not constitutional and, rather, is statutory. State statute Section 16A.15, Subdivision 1 notes that

“If the commissioner determines that probable receipts for the general fund will be less than anticipated, and that the amount available for the remainder of the biennium will be less than needed, the commissioner shall, with the approval of the governor, and after consulting the legislative advisory commission, reduce the amount in the budget and cash flow reserve account established in subdivision 6 as needed to balance expenditures with revenue.”⁸

As stated in the state statute, the state does not allow for any deficit to be carried over to the next fiscal year and also does not allow for any exemption regarding overturning the balanced budget requirement and this makes such requirement in Minnesota one of the strictest in the Midwest.

Minnesota General Obligation Debt Limits

The state of Minnesota’s general obligation debt limit is constitutional. However, the state constitution provides certain conditions under which the said GO debt limitation could be overridden. The limit could be overturned if a supermajority of the state legislature approve increase in state debt limit (National Association of State Budget Officers, 2015; Kiewiet & Szakaly, 1996).

Similar to its balanced budget requirement, the state of Minnesota also has a very strict set of rules for its GO debt limits. A report by the National Association of State Budget Officers (2015) enumerates the following three specific guidelines for the state’s debt limits:

⁷ Michigan Constitution, Article V, Section 20 (n.d.)

⁸ “Accounting System; Allotment and Encumbrance” Minnesota Statutes § 16A.15, Subdivision 1 (n.d.)

- Guideline #1: total tax-supported principal outstanding shall be 3.25% or less of total state personal income.
- Guideline #2: total amount of principal (both issued, and authorized but unissued) for state GOs, state moral obligations, equipment capital leases, and real estate capital leases are not to exceed 6% of state personal income.
- Guideline #3: 40% of GO debt shall be due within 5 years and 70% within ten years, if consistent with the useful life of the financed assets and/or market conditions.

The state of Minnesota also has a transportation debt limit. Denison, Hackbart and Moody (2006) collected survey data on all state governments and found that the state of Minnesota has a Road Fund Debt limit. A similar survey conducted by University of Kentucky Transportation Center also found that the state of Minnesota has a limit on the amount of debt the state can issue for transportation purposes (Moody & Hackbart, 2005). No further information was found regarding the details of the debt limit the state places on transportation.

Ohio Balanced Budget Requirement

The state of Ohio has one of the strictest balanced budget requirement. The requirement in Ohio is both statutory and constitutional. Title 1, Section 126.05 of the Ohio Revised Code holds the governor of the state to the strictest standard regarding proposing a balanced budget to the legislative body. The aforementioned section holds that

“If the governor ascertains that the available revenue receipts and balances for the general revenue fund for the current fiscal year will in all probability be less than the appropriations for the year, the governor shall issue such orders to the state agencies as will prevent their expenditures and incurred obligations from exceeding such revenue receipts and balances. If the governor ascertains that the available revenue receipts and balances for any fund other than the general revenue fund for the current fiscal year will in all probability be less than the appropriations for the year, the governor may issue such orders to the state agencies as will prevent their expenditures and incurred obligations from exceeding such revenue receipts and balances. If the governor determines that the available revenue receipts and balances in any fund or across funds will likely be less than the appropriations for the year, the governor may declare a fiscal emergency and may issue such orders as necessary to the director of budget and management to reduce expenditures, or to the director of administrative services to implement personnel actions consistent therewith, including, but not limited to, mandatory cost savings days.”⁹

Although the BBR cannot be overridden, Article 8, Section 1 of Ohio Constitution allows for issuance of debt (although limited in scope) to balance the budget shortfalls and notes:

“The State may contract debts, to supply casual deficits or failures in revenues, or to meet expenses not otherwise provided for; but the aggregate amount of such debts, direct and contingent, whether contracted

⁹ “Monthly statements showing condition of general revenue fund” Ohio Revised Code, Title 1, Section 126.05 (n.d.)

by virtue of one or more acts of the General Assembly, or at different periods of time, shall never exceed seven hundred and fifty thousand dollars; and the money, arising from the creation of such debts, shall be applied to the purpose for which it was obtained, or to repay the debts so contracted, and to no other purpose whatever.”¹⁰

Section 2 of the same article of the constitution also notes:

“In addition to the above limited power, the State may contract debts to repel invasion, suppress insurrection, defend the State in war, or to redeem the present outstanding indebtedness of the State; but the money, arising from the contracting of such debts, shall be applied to the purpose for which it was raised, or to repay such debts, and to no other purpose whatever; and all debts, incurred to redeem the present.”¹¹

Ohio General Obligation Debt Limits

The state of Ohio’s general obligation debt limit is constitutional. The Ohio Constitution prohibits the incurrence of debt by the state without a popular vote. Ohio voters have approved 20 constitutional amendments to authorize the incurrence of state general obligation (GO) debt since 1921. Issuance of state debt paid from the state’s general fund is subject to the constitutional 5% debt service limitation. Article 8, Section 17 of Ohio Constitution notes:

“Direct obligations of the state may not be issued under this article if the amount required to be applied or set aside in any future fiscal year for payment of debt service on direct obligations of the state to be outstanding in accordance with their terms during such future fiscal year would exceed five per cent of the total estimated revenues of the state for the General Revenue Fund and from net state lottery proceeds during the fiscal year in which the particular obligations are to be issued.”¹²

The state of Ohio also has a transportation debt limit. Denison, Hackbart and Moody (2006) collected survey data on all state governments and found that the state of Ohio has a Road Fund Debt limit. A similar survey conducted by University of Kentucky Transportation Center also found that the state of Ohio has a limit on the amount of debt the state can issue for transportation purposes (Moody & Hackbart, 2005). No further information was found regarding the details of the debt limit the state places on transportation.

Wisconsin Balanced Budget Requirement

The state of Wisconsin’s balanced budget requirement is both constitutional and statutory. Article 8, Section 5 of the state constitution requires the legislative body to pass a balanced budget and notes that

“The legislature shall provide for an annual tax sufficient to defray the

¹⁰ Ohio Constitution, Article VIII, Section 1 (n.d.)

¹¹ Ohio Constitution, Article VIII, Section 2 (n.d.)

¹² Ohio Constitution, Article VIII, Section 17 (n.d.)

estimated expenses of the state for each year; and whenever the expenses of any year shall exceed the income, the legislature shall provide for levying a tax for the ensuing year, sufficient, with other sources of income, to pay the deficiency as well as the estimated expenses of such ensuing year.”¹³

Although the state has balanced budget requirement in place, the constitution allows for debt to be issued for the purposes of defraying extraordinary expenditures during the fiscal year. Article 8, Section 6 of the state constitution mentions that

“For the purpose of defraying extraordinary expenditures the state may contract public debts (but such debts shall never in the aggregate exceed one hundred thousand dollars). Every such debt shall be authorized by law, for some purpose or purposes to be distinctly specified therein; and the vote of a majority of all the members elected to each house, to be taken by yeas and nays, shall be necessary to the passage of such law; and every such law shall provide for levying an annual tax sufficient to pay the annual interest of such debt and the principal within five years from the passage of such law, and shall specially appropriate the proceeds of such taxes to the payment of such principal and interest; and such appropriation shall not be repealed, nor the taxes be postponed or diminished, until the principal and interest of such debt shall have been wholly paid.”¹⁴

Wisconsin’s balanced budget requirement is also statutory. State statute number S. 20.003(4) holds that

“No bill directly or indirectly affecting general purpose revenues as defined in S. 20.001(2)(a) may be enacted by the legislature if the bill would cause the estimated general fund balance on June 30 of any fiscal year as projected under S. 20.005(1) to be an amount equal to less than one percent of the total general purpose revenue appropriations for that fiscal year.”¹⁵

Wisconsin General Obligation Debt Limits

The state of Wisconsin has a general obligation debt limit, and the limit is constitutional. According to Section 7, Article VIII of Wisconsin Constitution, the aggregate public debt contracted by the state in any calendar year shall not exceed an amount equal to the lesser of (1) Three-fourths of one percent of the aggregate value of all taxable property in the state, or (2) Five percent of the aggregate value of all taxable property in the state less the sum of: a). the aggregate public debt of the state contracted outstanding and, b). the outstanding indebtedness of certain entities to the extent that such indebtedness is supported by or payable from payments out of the treasury of the state.

The state debt limit cannot be overridden. The state of Wisconsin does not have a transportation debt limit.

13 Wisconsin Constitution, Article VIII, Section 5 (n.d.)

14 Wisconsin Constitution, Article VIII, Section 6 (n.d.)

15 “Required general fund balance.” Wisconsin Statute § 126.05, Title 1 (n.d.)