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# *The Impact of Michigan's Prevailing Wage Law on Education Construction Expenditures*

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Commissioned by:  
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**Executive Summary**

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*Executive Summary*

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Most federal, state, and local construction projects in the U.S. require competitive bidding by law. The U.S. government, state, county, municipal or school district may stipulate their own set of varying bidder requirements. For example, some units of governments choose to only receive bids from prequalified bidders. Another concern for a contractor when estimating the cost of a project and putting together their proposal are prevailing wage laws. These complex labor laws dictate the minimum amount that workers laboring on certain types of public construction must be paid.<sup>1</sup> Prevailing wage rates vary depending on trade, occupation, and location.

There is a national prevailing wage statute, as well as many state statutes. The federal prevailing wage statute, which was enacted in 1931, is better known as the Davis-Bacon Act.<sup>2</sup> It applies to contracts with federal funding in excess of \$2,000. Federal prevailing wages are based on the U.S. Department of Labor and Industries survey of employers and unions according to trade and occupation within a locality.<sup>3</sup>

Today the majority of states (32 and the District of Columbia) have their own prevailing wage laws in place, with most being enacted following the New Deal. The State of Michigan passed its prevailing wage law in 1965. It was suspended for a short time from 1994 to 1997. Unlike the Davis-Bacon Act, which does not go into effect unless a minimum amount of funding is in place, Michigan's prevailing wage statute includes any local government projects that use state financial resources.<sup>4</sup> Additionally, by law, the prevailing wage rates in Michigan must be based on the rates contained in collective bargaining agreements of state projects.<sup>5</sup>

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1. Essentially, contractors may compete to produce the lowest bid on every other price term, except for wages.
  2. The Davis-Bacon and Related Acts (DBRA) apply to contractors and subcontractors working under federally funded or assisted contracts in excess of \$2,000 for construction and repair of public buildings. See "Prevailing Wage Law Background" on page 4 for additional discussion.
  3. For further discussion see <<cross-ref Prevailing Wage Background Law>>. For actual rates, regulations, and occupation classes see the U.S. Department of Labor's Prevailing Wage Resource Book, accessible at <http://www.dol.gov/whd/recovery/pwrb/toc.htm>.
  4. This has large implications for public school construction, including projects that are funded through local school districts, as the State of Michigan acts as a surety on most of the bonds used for public schools. See "Michigan's Prevailing Wage Law" on page 5.
  5. See Michigan Compiled Laws 408.554.

## Executive Summary

**PURPOSE OF REPORT** The purpose of this report is to estimate the average annual expenditures made for the construction of public K-12 and higher education facilities in Michigan in the past ten years, which has been due to Michigan's prevailing wage law.

**OVERVIEW OF APPROACH** Prevailing wage laws apply to many types of construction, including public buildings, roads, and schools. In this report, we focus on the capital expenditures of K-12 schools, community colleges, and public higher education institutions because data on these education expenditures is more uniform and readily available than other types of construction subject to the law.

We rely on data from the U.S. Census Bureau for government expenditures on the construction of public education facilities in Michigan. We used the most recent ten year data available (2002 through 2011) to estimate a typical annual expenditure amount for education construction in Michigan.<sup>1</sup>

We also surveyed the existing literature on prevailing wage laws, including studies of Michigan's experience in briefly suspending the law from 1994 to 1997. Using this data and research, we then estimated what cost savings could have been realized by state and local governments had the construction contracts for the same education buildings not been subject to the prevailing wage law.

### *Limitations*

We model a scenario of construction costs that are due to prevailing wage rates, and assume that those costs are passed on to the client, who in this case are state and local governments in Michigan. Our analysis does not consider changes in worker productivity, material costs, or labor share due to the absence of a prevailing wage. Lastly, our analysis does not attempt to project the behavioral responses of the consumer, such as choosing to build larger or higher-quality buildings when faced with lower overall costs. We recognize that in practice some communities may react differently, however, this is outside of our scope of analysis.

**SUMMARY OF FINDINGS** *1. We estimate that each year nearly \$3.0 billion in education construction expenditures are subject to Michigan's prevailing wage law.*

On average state and local governments in Michigan spend \$3.3 billion on the construction and repair of public K-12 schools, community colleges, and public higher education institutions each year. We estimate that 90%, or \$3.0, billion is subject to Michigan's prevailing wage law. From 2002 through 2011 this would

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1. Using a ten year average allowed us to consider changes in business cycles, as well as large fluctuations in demand. For further discussion see "Total Education Construction Expenditures in Michigan" on page 12.

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**Executive Summary**

amount to over \$30 billion expenditures being impacted. This is a very large expenditure by local government- in particular community college and K-12 schools, as the majority of funding is used

*2. In the absence of the state's prevailing wage law, we estimate that Michigan could have saved nearly \$225 million on average **each** of the past ten years.*

We estimate that of the \$225 million in annual savings, \$137 million would have gone back to K-12 schools, and \$87 million could have otherwise been spent by community colleges and public institutions of higher education. From 2002 to 2011, state and local governments could have saved an estimated \$2.2 billion. See Table 1 below.

**TABLE 1. Estimate of the Potential Savings in the Absence of Michigan's Prevailing Wage Law**

	Average Annual Savings	Total Savings (2002-2011)
K-12 School Expenditures	\$ 137.2 million	\$ 1.4 billion
Higher Education Expenditures	\$ 87.1 million	\$ 0.87 billion
<b>Estimate of Total Expenditures</b>	<b>\$ 224.3 million</b>	<b>\$ 2.2 billion</b>

*Sources: U.S. Census Bureau, Annual Surveys of State and Local Government Finances by State, 2002, 2004-2011  
Analysis: Anderson Economic Group, LLC*

## **ABOUT ANDERSON ECONOMIC GROUP**

Anderson Economic Group is a research and consulting firm specializing in economics, finance, business valuation, and industry analysis. Clients include industry associations, private companies, governments, universities, and others. The firm was founded in 1996, and has offices in East Lansing, Michigan, and Chicago, Illinois. See "Appendix B: About AEG" on page B-1.

## *I. Prevailing Wage Laws Impacting Michigan*

Prevailing wage is a complex labor law at both the national and state level, which sets a minimum wage for labor on certain types of public construction, such as public buildings, roads, and schools. In this section, we provide a brief discussion of the history behind both the national prevailing wage law and the statute enacted in Michigan. We then broadly describe the arguments for and against prevailing wage laws, as well as identify several studies that focused on Michigan's suspension of prevailing wage.

### **PREVAILING WAGE LAW BACKGROUND**

Enacted in 1931, the federal prevailing wage statute, 40 U.S. Code § 276, is better known as the Davis-Bacon Act. The Davis-Bacon and Related Acts (DBRA) apply to contractors and subcontractors working under federally funded or assisted contracts in excess of \$2,000 for the "construction, alteration, or repair (including painting and decorating) of public buildings or public works," which are funded through taxpayer dollars.<sup>1</sup> It requires that laborers be paid not less than the prevailing wage rates and fringe benefits, as those listed in corresponding classes of laborers and mechanics employed on similar projects in the area.

The federal government defines the prevailing wage rate as the average wage paid to similarly employed workers in a specific occupation in the area of intended employment. These rates are determined by the Department of Labor and Industries for each trade and occupation employed for each county in order to reflect local wage conditions.<sup>2</sup>

Prior to the federal prevailing wage, several states chose to enact their own type of prevailing wage laws. Kansas was the first to establish minimum labor standards for public works construction in 1891, followed by seven other states over the next thirty years: New York (1894), Oklahoma (1909), Idaho (1911), Arizona (1912), New Jersey (1913), Massachusetts (1914), and Nebraska (1923). During the Great Depression, beginning in 1931 and prior to the end of World War II, twenty additional states passed their own prevailing wage laws.

Today 32 states and the District of Columbia enforce prevailing wage laws, with most being in place following the New Deal. Nine states have never had their own prevailing wage laws: Georgia, Iowa, Mississippi, North Carolina, North Dakota, South Carolina, South Dakota, Vermont, and Virginia. Another nine

1. U.S. Department of Labor, accessible at <http://www.dol.gov/whd/govcontracts/dbra.htm>.
2. Rates vary and there are exceptions. For example, apprentices may be employed at less than predetermined rates, but only if they are in a state apprenticeship agency recognized by the Department of Labor or a program registered with the Department. For rates and further discussion see the Prevailing Wage Resource Book, U.S. Department of Labor, accessible at <http://www.dol.gov/whd/recovery/pwrb/toc.htm>.

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**Prevailing Wage Laws Impacting Michigan**

states have chosen to repeal their prevailing wage laws since enacting them: Florida, Alabama, Utah, Arizona, Colorado, Idaho, New Hampshire, Kansas, and Louisiana. In Oklahoma, the prevailing wage law was found to violate the state's constitution, and while it has not been repealed, it has not been enforced since.<sup>1</sup> In general, a state's prevailing wage laws vary according to how strong organized labor is within that state.

**MICHIGAN'S  
PREVAILING WAGE  
LAW**

Michigan's prevailing wage law, Act 166, P.A. of 1965, went into effect in March of 1966. The state defined the purpose of this law as to "provide rates of pay for workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state".<sup>2</sup> The statute includes projects undertaken by local governments that use state financial resources.

Unlike the Davis-Bacon Act, there is no minimum amount that needs to be contributed for a construction contract to be under the state's prevailing wage regulations. This has large implications for public school construction, including projects that are funded through local school districts, because the State of Michigan acts as a surety on most of the bonds used for public schools.<sup>3</sup> An estimated 90 percent of school construction is therefore affected by the prevailing wage law.<sup>4</sup>

In each construction bid requested by state agency or local government, the appropriate rate schedule must be part of its bid specifications. The Michigan Department of Licensing and Regulatory Affairs determines the state's prevailing wage rates, basing them on rates contained in collective bargaining agreements.<sup>5</sup> Neither the Davis-Bacon Act nor the majority of states with statutes explicitly require that its prevailing wage be based on rates found in collective

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1. In 1995, Oklahoma's prevailing wage law was found to violate its constitution on the grounds that "it impermissibly delegated authority to federal officials." See *Oklahoma City v. State ex rel. Department of Labor*, 918 P.2d 26.
  2. See the Michigan Department of Licensing and Regulatory Affairs website: [http://www.michigan.gov/lara/0,4601,7-154-61256\\_11407\\_59886\\_27706-39650--,00.html](http://www.michigan.gov/lara/0,4601,7-154-61256_11407_59886_27706-39650--,00.html).
  3. Michigan courts have ruled that this minimal state support for public school construction is enough to require the application of prevailing wages. See *West Ottawa Public Schools v. C. Patrick Babcock*, 107 Mich. App. 237, 309 N.W.2d 200 (1979).
  4. According to municipal funding expert Lou Schimmel, "nearly all" of school construction is at least partially funded by qualified bonds. Mike Alandt, director of the Municipal Advisory Council of Michigan, puts that figure at 80 to 90 percent. See Paul Kersey, "The Effect of Michigan's Prevailing Wage Law," The Mackinac Center, 2007, available at <http://www.michiganlegislature.com/archives/2007/s2007-09.pdf>.
  5. See Michigan Compiled Laws 408.554.

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**Prevailing Wage Laws Impacting Michigan**

bargaining agreements.<sup>1</sup> Most states with local prevailing wage statutes leave state or local officials some discretion to set prevailing wage rates.

Similarly to the Davis-Bacon Act, Michigan's prevailing wage rates provide an hourly rate for designated occupation classifications, including wage, fringe benefits, and overtime. Contracting agents and bidders are responsible for complying with the prescribed rates, and may face penalties if they do not do so.

In the mid 1990's, there was a 30 month time period when prevailing wage laws in Michigan were suspended: December 1994-June 1997. In 1994, a federal district court ruled that the law was in conflict with the federal Employee Retirement Income Security Act (*Associated Builders and Contractors v. Perry*, 869 F. Supp. 1239). However, that decision was overturned by the Sixth Circuit Court of Appeals in 1997 (*Associated Builders and Contractors v. Perry*, 115 F.3d 386).

Questioning existing prevailing wage laws during this time period was not uncommon, as several other states repealed prevailing wage or exempted certain types of construction. For example, Oklahoma's prevailing wage law was judicially annulled in November of 1995, and Ohio exempted public school construction from the state's prevailing wage law in July of 1997. However, Michigan is the only state to date that has suspended and reinstated its prevailing wage statute. As a result, Michigan became the focus of several studies focused on quantifying the effects of prevailing wage in terms of cost, income changes, jobs, and productivity. We discuss some of these studies and their findings below.

**EMPIRICAL  
RESEARCH ON THE  
EFFECTS OF  
PREVAILING WAGE**

There is a great deal of research and empirical studies that have tried to determine the effects of prevailing wage. Below we provide a brief summary of several well known studies that focus on how prevailing wage impacts costs. This is meant to provide the reader with some background and is no means exhaustive. We draw on the conclusions and findings from many of these studies to make assumptions in our own model, which estimates the additional construction costs associated with Michigan's prevailing wage.<sup>2</sup>

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1. Three other states (Massachusetts, Ohio, and New Jersey) require that the state prevailing wage be based on rates in collective bargaining agreements. See Massachusetts General Laws, Chapter 149 §§26 et seq.; New Jersey Statute §§34:11-56:25-34:11-56:44; Ohio Revised Code §4115.03. Other states that may not have this as a requirement, but may nevertheless use collective bargaining agreement rates. This practice is customary in Illinois.
  2. Not all of these studies specifically focused on education construction costs, and several examine the effects at a federal level or in other states. We discuss how we used these studies to inform our assumptions in "Fiscal Impact Model" on page A-1.

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## Prevailing Wage Laws Impacting Michigan

Researchers have taken several approaches to study the impact of prevailing wages on costs. One is the wage differential approach, which compares the wage rates in contracts subject to prevailing wage laws with wage rates in contracts not subject to the laws. Most studies assume that contractors pass on additional labor costs to the government. Another approach, called cross-sectional analysis, compares contracts that are subject to the prevailing wage and those that are not, but always during the same time period. Typically these studies compare the costs of government contracts in states with prevailing wage regulations with contracts from places without prevailing wage laws. The third approach, called time series analysis, compares the costs in contracts during time periods with a prevailing wage requirement with contract costs in time periods without one. We provide a few examples of each.

### *Wage Differential Approach*

In 1979, the Government Accountability Office (GAO), which was then the General Accounting Office, studied a sample of 30 federal projects subject to the Davis-Bacon act.<sup>1</sup> The GAO found that due to incorrect procedures by the Department of Labor, 12 projects were set at higher rates than the prevailing wage rate, and 18 projects were given rates lower than the prevailing wage rate. The study assumed that the higher prevailing wage rates were passed through in higher contract costs, and found it increased total construction costs by an average of 3.4 percent.

In a study by the Beacon Hill Institute, it was found that the Department of Labor's Wage and Hour Division again incorrectly set hourly wages too high. The authors found that the WHD set hourly wages an average of 22 percent above BLS average wages for nine major construction occupations. When these wage differences were applied to federal construction, the study estimated that government costs would increase by 9.9 percent.<sup>2</sup>

A study focusing on Michigan and its time with a suspended prevailing wage statute was done in 1999.<sup>3</sup> The study estimated the premium caused by prevailing wage to raise construction costs in Michigan by 10 percent.<sup>4</sup> The study also

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1. See 104th Congress, 1st Session, Senate Committee on Labor and Human Resources, Report 104-80, "Repeal of the Davis-Bacon Act."
  2. See Glassman, Sarah, Michael Head, David Tuerck, and Pal Backman. 2008. *The Federal Davis-Bacon Act: The Prevailing Mismeasure of Wages*. Boston, Mass.: Beacon Hill Institute for Public Policy Research, Suffolk University.
  3. See Vedder, Richard. 1999. *Michigan's Prevailing Wage Law and Its Effects on Government Spending and Construction Employment*. Midland, Mich.: Mackinac Center for Public Policy.
  4. We note that Vedder and the Mackinac Center have faced criticism for assuming that a wage differential in the Detroit suburbs would be the same in the rest of the state and did not test this assumption.

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## Prevailing Wage Laws Impacting Michigan

found that construction jobs in the state grew by over 11,000, or 13 percent, after the prevailing wage law was repealed in Michigan.

A subsequent study by the Mackinac Center examined the differences between Michigan's prevailing wage rates and the wages of workers in similar occupations reported to the U.S. Bureau of Labor and Statistics (BLS).<sup>1</sup> It found the state's prevailing wage rates to be 39 percent higher on average than the BLS'.

### *Cross Sectional Analysis*

The first econometric cross-sectional study of prevailing wage laws and government construction costs collected construction data in 1977 and 1978 through in-person interviews with contractors of 215 new non-residential buildings in rural areas throughout the U.S.<sup>2</sup> Nearly half of these projects (113) were subject to the Davis-Bacon Act, with the remaining projects being private. The study concluded that the public projects, which were all subject to prevailing wage rates, were 26.1 percent more expensive than private construction. The authors acknowledged this to be high considering labor costs to only be roughly a third of total construction costs.<sup>3</sup>

A study of California's construction of low-income residential projects concluded that the state's prevailing wage rates raised public costs between 9 percent and 37 percent.<sup>4</sup> The researchers were able to compare construction costs between public projects that were subject to prevailing wage regulation and public projects that were not, as some public projects are exempted.

### *Time Series Analysis*

A study of Michigan, Kentucky, and Ohio in the mid 1990s concluded that when prevailing wage laws were in effect, suspended or repealed, there was no statistically significant difference in the cost between schools built under prevailing law regulations and those that were not.<sup>5</sup> The study examined the time during which Michigan's prevailing wage law was judicially suspended, Ken-

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1. See Kersey, Paul. 2007. *The Effects of Michigan's Prevailing Wage Law*. Midland, Mich.: Mackinac Center for Public Policy.
  2. See Fraundorf, Martha, and Mason Farell. 1984. "The Effect of Davis-Bacon Act on Construction in Rural Areas." *Review of Economics and Statistics*. Vol. 142, No. 6.
  3. As the first econometric study of prevailing wages and federal construction costs, this study is one of the most cited in literature discussing prevailing wage. However, it is criticized for failing to control for cost differences between public and private construction.
  4. The researchers used two different models, which account for the wide variance. One model found an increase in contract costs of 9-11 percent, and the other, which used voter and union data, estimated construction costs increase by 19-37 percent. See Dunn, Sarah, John Quigley, and Larry Rosenthal. 2005. "The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing." *Industrial & Labor Relations Review*. Vol. 59, No. 1, pp. 141-57.

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**Prevailing Wage Laws Impacting Michigan**

tucky adopted prevailing wages for school construction, and Ohio exempted school construction from its prevailing wage statute.

In 2002, the State Legislature ordered the Ohio Legislative Service Committee to study the impact of suspending prevailing wage for school construction.<sup>1</sup> The study concluded that by allowing competitive bidding taxpayers saved 10.7 percent of construction spending.

**ARGUMENTS ABOUT  
PREVAILING WAGE  
LAWS**

Prevailing wage laws are highly complex, differ by state, and are controversial in many communities. Below we briefly summarize the most widely-cited arguments for and against prevailing wage laws, though we do not attempt to assess the theoretical or empirical merits of each.

*Rationale for Prevailing Wage Regulations*

When prevailing wage laws were enacted at a federal level during the Great Depression, it was consistent with President Hoover's theory that high wages caused prosperity. This is still argued by some proponents of prevailing wage, who maintain that strong action by public sector, in the case of prevailing wage by regulating private sector wages, can create and support a middle class, as higher incomes provide disposable income, as well as the opportunity to purchase a home, rather than rent. Higher wages can also mean additional tax revenue from purchased goods and owning property.

Another rationale for a prevailing wage is to keep the construction local. By ensuring that construction workers are paid at least the wages and benefits that "prevail" in that community, it can deter contractors from using cheaper labor in order to underbid their competition. At the time that the Davis-Bacon Act was enacted, the concern was not the effect of government construction on the overall labor market, but rather the effect that competition from outside firms might have on workers native to the region of a government-funded project. Prior to Davis-Bacon, it was not uncommon to bring workers from another region to a higher cost locality because they were willing to take lower wages that corresponded to their cost of living at home.

Today the concern is that contractors use substitute laborers that are unskilled or low-skilled, so that they don't have to pay them as much. Keeping those unskilled or low-skilled workers out of the construction site arguably can result in a more experienced and productive workforce that result in higher quality craftsmanship and fewer workplace injuries.

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5. Philips, Peter. 2001. "A Comparison of Public School Construction Costs in Three Midwestern States That Have Changed Their Prevailing Wage Laws in the 1990s: Kentucky, Ohio, and Michigan," Economics Department, University of Utah.

1. See Ohio Legislative Service Committee Senate Bill 102 Report: 22–25.

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**Prevailing Wage Laws Impacting Michigan**

It is also argued that the higher wages required under prevailing wage statutes can help retain a state's current skilled workforce and attract new entrants into the construction trades. These rates can allow contractors and unions to invest in continuing to train their workers, conduct apprenticeship programs, and build training facilities.

*Opposition of Prevailing Wage Regulations*

Prevailing wage is often argued against in the same manner that minimum wage laws are: they suppress competition and make it more expensive to hire workers, which can impact employment. Essentially, contractors can only compete on non-payroll expenses when they bid for public projects. Putting in place a minimum amount that someone must be paid often discourages employers from hiring additional employees because the cost to do so has artificially risen.

There are opportunity costs for a contractor to put together a bid and determine what rates apply to which workers for the work needed in each bid. This can be especially time consuming and costly for nonunion contractors who tend to be less familiar with the finely detailed classifications of prevailing wage rates, and smaller companies that rely less on specialization.

The requirement to categorize all tasks can also reduce a contractor's flexibility. To avoid extensive record keeping, workers may be regulated to one category of tasks, rather than be used as they are needed.

It is argued by proponents of prevailing wage that higher wages result in workers with better skills that can produce higher quality products. Opponents point out that all projects, regardless of whether prevailing wage rules are in force, are subject to the same construction codes (such as the Michigan Construction Code) that set standards for quality and safety of buildings. Furthermore, customers have the ability to evaluate the quality of construction projects, both at the contracting stage where materials and methods maybe by specified, and after completion when many aspects of quality are apparent. Finally, it is questionable whether the overall project would be of a higher quality. Sometimes paying someone more is just paying someone more. There is no clear incentive for workers that are paid at a higher wage to work harder, more efficiently, or ensure greater quality than those paid at a lower rate, unless pay is directly linked to performance.

Another consideration is the need for those highly skilled workers. Surely there are jobs that require workers with a special set of skills, but there are also jobs and tasks that do not. It is inefficient to pay someone more for a task that doesn't require a certain skill set, just because they happen to be a skilled worker. A contractor has the incentive to know the difference and pay his employees accordingly- if an unskilled worker makes a mistake in execution, it will likely impact his end profit.

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**Prevailing Wage Laws Impacting Michigan**

Additionally, as with most regulations, there is an administrative burden. Both determining prevailing wage rates and properly implementing them are a tough administrative burden at both the state and national level. Questions about fraud have surfaced in several states related to the submitted data on which prevailing wages are determined.<sup>1</sup> On a federal level, the Labor Department's method for determining "prevailing" rates has been widely criticized for giving far too little weight to lower, nonunion rates that many construction workers in the area receive.<sup>2</sup> As discussed in "Wage Differential Approach" on page 7, several empirical studies found errors in how prevailing wage rates were implemented, including examples of states assigning wage rates that were both higher and lower than the prevailing wage.

In particular, the way that Michigan's prevailing wage law is written makes it vulnerable to fraud. The prevailing wage rate is based on the rate appearing in collective bargaining agreements, which are determined by employers and union officials, who do not have an incentive to keep costs down. These costs can merely be passed along to local and state governments.

In the next section, we estimate the impact of prevailing wage laws in Michigan on the cost of education construction.

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1. In the 1990s, the Oklahoma Commissioner of Labor had uncovered widespread fraud in the submission of data on which prevailing wage determinations were made. See Cook, S. (2005) "Freedom in the Workplace: The Untold Story of Merit Shop Contracting's Crusade against Compulsory Trade Unionism." Washington: Regnery.
  2. Wage survey method in use "employs unrepresentative survey and measurement methods that produce wages estimates that are biased upward." See Glassman, S.; Head, M.; Tuerck, D.; and Bachman, P. (2008) "The Federal Davis-Bacon Act: The Prevailing Mismeasure of Wages." Beacon Hill Institute at Suffolk University. Available at [www.beaconhill.org/BHISTudies/PrevWage08/DavisBaconPrevWage080207Final.pdf](http://www.beaconhill.org/BHISTudies/PrevWage08/DavisBaconPrevWage080207Final.pdf).

## *II. Estimated Impact of Prevailing Wage on Education Construction*

Prevailing wage laws apply to many types of construction, including public buildings, roads, and schools. In this report, we focus on the capital expenditures of public education institutions in Michigan because data on these education expenditures is more uniform and readily available than other types of construction subject to the law. In this section, we discuss education construction expenditures in the state over the past ten years (2002 through 2011). Lastly, we describe how we estimated the amount of additional spending due to Michigan's prevailing wage law.

### **TOTAL EDUCATION CONSTRUCTION EXPENDITURES IN MICHIGAN**

The capital expenditures made by local and state governments on public education construction in Michigan from 2002 to 2011 totaled over \$28.4 billion.<sup>1</sup> In terms of 2013 dollars, over \$33.2 billion was spent. It is difficult to get a sense for what is spent on construction on an annual basis because it can fluctuate so greatly. This can be a result of the overall economy, a bad Michigan winter, and several other factors, including whether capital improvement bonds are approved by voters.

By using a ten year average of spending that is adjusted for inflation, rather than a single year, or several years, we were able to take into account changes in business cycles and large fluctuations in demand.<sup>2</sup> This is why we consider our average of \$3.3 billion to be a somewhat typical year of expenditures by Michigan on education construction projects.

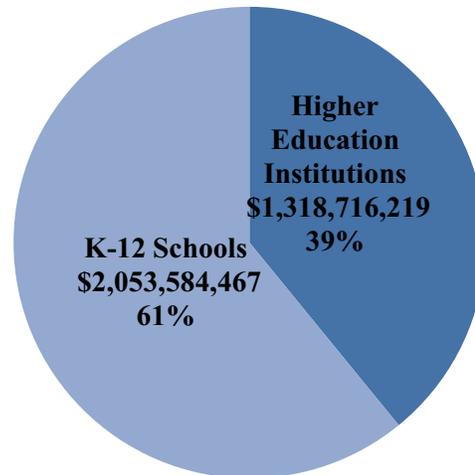
There are two components of education construction expenditures: K-12 public schools and higher education institutions, which include community colleges and public universities. As shown in Figure 1 on page 13, K-12 construction expenditures comprise \$2.4 billion, or nearly 60 percent of total spending on education construction projects annually. K-12 construction is primarily funded locally through tax revenue and bonds.

1. Due to issues with data submission and quality, the Census Bureau does not make 2003 state data available to the public. AEG estimated the 2003 expenditures by taking the average expenditures made in 2002 and 2003. See "Data Sources" on page A-1 for additional discussion.
2. Large fluctuations in demand created by government decisions to develop multiple projects at once and result in higher public costs are referred to as "cost storms." They are an example of the government's power to impact market conditions in the construction industry through large capital investments. See Azari-Rad, Hamid, Peter Philips, and Mark Prus. 2002. "Making Hay When It Rains: The Effect Prevailing Wage Regulations, Scale Economies, Seasonal, Cyclical and Local Business Patterns Have on School Construction Costs." *Journal of Education Finance*, Vol. 23, pp. 997-1012.

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**Estimated Impact of Prevailing Wage on Education Construction**
**FIGURE 1. Average Annual Expenditures on Education Construction Expenditures in Michigan, 2002-2011**


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**IMPACT ON  
EDUCATION  
CONSTRUCTION  
EXPENDITURES IN  
MICHIGAN**

As discussed above, Michigan has spent over \$33.3 billion on education construction expenditures over the past decade. The State of Michigan acts as a surety on most of the bonds used for public schools, which makes the vast majority of education capital expenditures subject to prevailing wage laws.

Of the \$3.3 billion spent by local and state governments on public education construction in Michigan annually, nearly \$3.0 billion are subject to prevailing wage regulations.<sup>1</sup> We estimate that less than a third of those total construction expenses, or nearly \$900 million, are due to the cost of labor. While each project varies in its labor costs, we created a conservative estimate of the proportion of costs created by labor.

We estimate that Michigan's prevailing wage rates are approximately 25% higher than the private market. We based this estimate on other empirical studies that have focused on quantifying the cost of prevailing wage regulations.<sup>2</sup> As shown in Table 2 on page 14, we estimate that nearly \$225 million in added education construction costs are created by Michigan's prevailing wage law each year. The estimated additional costs comprise 7.5 percent of the annual expenditures made by state and local governments on education construction projects. Applying this estimate to total expenditures from 2002 to 2011, Michigan taxpayers could have saved an estimated \$2.2 billion.

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1. See Table A-2, "Estimated Additional Annual Cost of Construction for Higher Education and K-12 Schools Under Prevailing Wage, 2002-2011," on page A-6.

2. See "Examining Total Cost Increases Due to Prevailing Wage" on page A-3.

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**Estimated Impact of Prevailing Wage on Education Construction**
**TABLE 2. Estimating the Additional Construction Costs Created by Michigan's Prevailing Wage Rates**

<b>Estimated Expenditures</b>	
Estimate of Expenditures Subject to Michigan's Prevailing Wage Laws <sup>a</sup>	\$ 3.0 billion
Proportion of Total Expenditures Due to Labor Costs <sup>b</sup>	<u>30%</u>
Estimate of Expenditures for Payroll Expenses	\$ 897.3 million
Rate Prevailing Wages Exceed Average Construction Labor Rates <sup>c</sup>	<u>25%</u>
<b>Estimate of Additional Cost Due to Michigan's Prevailing Wage</b>	<b>\$ 224.3 million</b>

*Sources: U.S. Census Bureau, Annual Surveys of State and Local Government Finances by State, 2002, 2004-2011  
Analysis: Anderson Economic Group, LLC*

- a. Estimated by multiplying total expenditures by the proportion of expenditures subject to prevailing wage laws. See Table A-2, "Estimated Additional Annual Cost of Construction for Higher Education and K-12 Schools Under Prevailing Wage, 2002-2011," on page A-6.
- b. See "Estimating Labor Costs as a Share of Total Construction Costs" on page A-2.
- c. See "Examining Prevailing Wage Rates Against Average Wages" on page A-3.

Of the nearly \$225 million in additional costs, over 60 percent comes from K-12 schools (\$137.2 million). Higher education institutions spend an additional \$87.1 million annually due to Michigan's prevailing wage statute.

For further discussion of our methodology and assumptions see "Fiscal Impact Model" on page A-1.

## *Appendix A. Data Sources and Methodology*

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### **DATA SOURCES**

Our primary data source for our analysis was the U.S. Census Bureau's Annual Survey of State and Local Government Finances, by State. The data we used from this survey include:

- Elementary & Secondary Capital Outlay expenditures, which we labeled K-12 Schools in our analysis, and
- Higher Education Capital Outlay expenditures, which include spending by community colleges and public universities.

Construction expenditures can fluctuate a great deal. In order to get a sense for what state and local governments spend on education construction, we decided to use a ten year average. The most recent data available from this survey of government finances is 2002 through 2011. However, the Census Bureau did not have 2003 data available by state. AEG called the Census Bureau and they stated that, due to issues with data submission and quality, the Census Bureau does not make 2003 state data available to the public. AEG estimated the 2003 expenditures by taking the average expenditures made in 2002 and 2004.

We then adjusted for inflation and put all expenditures in 2013 dollars. See Table A-1 "Education Capital Outlay Expenditures Made in Michigan in 2013 dollars, 2002-2011" on page A-5.

### **FISCAL IMPACT MODEL**

A number of factors can impact the cost of a construction project including the age and type of building, functions and amenities requested, the age of the building, materials, and building size, among others. The scope of this project did not allow us to consider individual education projects. We do not consider changes in worker productivity, material costs, or labor share that may occur in the absence of a prevailing wage. Lastly, our analysis does not attempt to project the behavioral responses of the consumer, such as choosing to build larger or higher-quality buildings when faced with lower overall costs.

There already exists a great deal of research and empirical studies on the effects of prevailing wage in terms of cost. Our scope of analysis is limited to estimating how much of what local and state governments spend on education construction is due to Michigan's prevailing wage law. However, in order to inform some of our assumptions, we draw on the conclusions and findings from many of these studies. We build our own set of assumptions keeping in mind these studies are not necessarily specific to Michigan or education construction costs.

We begin our model by using the inflation adjusted expenditures on education construction in Michigan. We then estimate the amount of expenditures (or contracted construction amounts), which are subject to prevailing wage in Michi-

gan. As discussed in “Michigan’s Prevailing Wage Law” on page 5, because the state acts as a surety on most of the bonds used for public schools, very few public projects are exempt from the state’s prevailing wage law. We decided to use 90% of total expenditures to represent total spending on education construction that is subject to prevailing wage.

We then needed to consider how much of this spending is due to labor costs, and the additional cost of having a prevailing wage rate in place. We estimated 30% of construction costs to come from labor, and the prevailing wage rate to be 25% higher than other wage rates. We discuss our reasoning behind these assumptions below in “Estimating Labor Costs as a Share of Total Construction Costs” and “Examining Prevailing Wage Rates Against Average Wages” on page A-3.

Our full analysis is shown in Table A-2 "Estimated Additional Annual Cost of Construction for Higher Education and K-12 Schools Under Prevailing Wage, 2002-2011" on page A-6. We estimate about 7.5% of education construction costs to be due to Michigan’s prevailing wage law. We discuss how our conclusion compares with other studies that have quantified the cost of prevailing wage laws in “Examining Total Cost Increases Due to Prevailing Wage” on page A-3.

#### *Estimating Labor Costs as a Share of Total Construction Costs*

AEG found several studies with estimates of labor costs in terms of total construction costs. Using professional judgment, we determined approximately 30 percent of total costs to be attributable to labor. We based our assumptions on the following empirical studies:

- A study of school construction costs in the Great Plains states estimated labor costs to comprise roughly 20-30 percent of construction contracts, which was attributed to the Census of Construction.<sup>1</sup> The total cost of construction contracts in this calculation excludes land acquisition, architectural design, or management fees. Additionally, the study ultimately concluded that new school construction costs were not statistically different in states with prevailing wage laws than in states without them.
- The first econometric study of federal construction costs related to Davis-Bacon estimated labor costs (including wages, benefits, and payroll taxes) to be no more than 30 percent of total construction costs. This study was based on construction data collected in 1977 and 1978.

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1. Philips, Peter. 1998. *Kansas and Prevailing Wage Legislation*. Report prepared for the Kansas Senate Labor Relations Committee.

### *Examining Prevailing Wage Rates Against Average Wages*

AEG found several studies that estimated how much higher prevailing wage rates are than average industry wages. Many of these studies compared state or federal prevailing wage rates with the Bureau of Labor and Statistics' data on wages.

- Estimates that prevailing wage rates were 22 percent above BLS average wages. There were several cases included that were given wrong wage rates under the Davis-Bacon Act.<sup>1</sup>
- A study on Michigan's experience with suspending its prevailing wage rate concluded that the state's prevailing wage rates were 39 percent higher on average than the BLS'.<sup>2</sup>

Using the findings from these studies and professional judgment, AEG estimates that Michigan's prevailing wage rate is 25 percent higher than the average industry wage, or the rate that would be paid if prevailing wage were not in effect.

### *Examining Total Cost Increases Due to Prevailing Wage*

There have been several studies on the impact of prevailing wage on the total cost of construction projects. Of the studies that found a statistical difference in cost, the estimates ranged from 3 percent to over 20 percent.<sup>3</sup> Our own Michigan-specific estimate is 7.5% (as discussed in "Fiscal Impact Model" on page A-1). Since we also used other findings and parameters of these studies to inform our assumptions in our model, it is not surprising that our estimate would be close to other studies. Below are the studies that we found, which created this range of estimates:

- In 1979, the U.S. General Accounting Office (now Government Accountability Office) found that the Davis Bacon Act increased construction costs by 3.4 percent.<sup>4</sup> This cost is attributed to incorrect procedures by the Department of Labor, which set higher rates than the prevailing wage rate for a number of projects. While this was an error, the additional cost was still caused by the legisla-

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1. See Glassman, S.; Head, M.; Tuerck, D.; and Bachman, P. (2008) "The Federal Davis-Bacon Act: The Prevailing Mismeasure of Wages." Beacon Hill Institute at Suffolk University.

2. Kersey, Paul. 2007. *The Effects of Michigan's Prevailing Wage Law*. Midland, Mich.: Mackinac Center for Public Policy.

3. We did see studies that concluded there was no statistical difference in the cost between schools built under prevailing wage laws and those that are not. See Philips, Peter. 2001. "A Comparison of Public School Construction Costs in Three Midwestern States That Have Changed Their Prevailing Wage Laws in the 1990s: Kentucky, Ohio, and Michigan," Economics Department, University of Utah.

4. See 104th Congress, 1st Session, Senate Committee on Labor and Human Resources, Report 104-80, "Repeal of the Davis-Bacon Act."

tion in that government agencies and offices are expected to determine and implement rates.

Another study that found incorrect wage rates set for federal construction projects estimated those errors to result in government costs increasing by 9.9 percent.<sup>1</sup>

- A study of Michigan during the time its prevailing wage was suspended estimated the legislation to add 10-15 percent to the cost of public construction.<sup>2</sup> This study has faced criticism for assuming that the wage differential in the Detroit suburbs would be the same in the rest of the state.

While the study did not test this assumption, we find it reasonable, as over half of the state's population resides in the region and due to this, a large share of construction occurs there.

- In 2002, Ohio's Legislative Service Committee studied the impact of suspending prevailing wage for school construction, they found that by allowing competitive bidding they saved 10.7 percent of construction spending.<sup>3</sup>

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1. See Glassman, Sarah, Michael Head, David Tuerck, and Pal Backman. 2008. *The Federal Davis-Bacon Act: The Prevailing Mismeasure of Wages*. Boston, Mass.: Beacon Hill Institute for Public Policy Research, Suffolk University.

2. See Vedder, Richard. 1999. *Michigan's Prevailing Wage Law and Its Effects on Government Spending and Construction Employment*. Midland, Mich.: Mackinac Center for Public Policy.

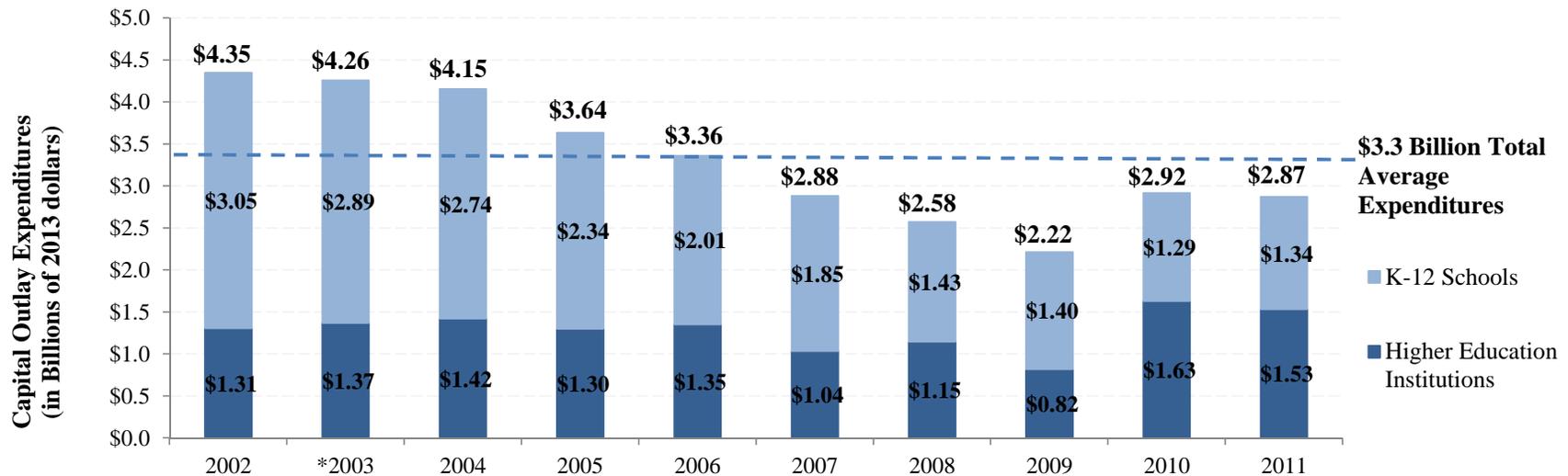
3. See Ohio Legislative Service Committee Senate Bill 102 Report: 22–25.

**Table A-1. Education Capital Outlay Expenditures Made in Michigan in 2013 dollars, 2002-2011**

Type of Expenditure	2002	*2003	2004	2005	2006	2007
Higher Education Institutions	\$ 1,306,063,186	\$ 1,367,004,121	\$ 1,419,356,408	\$ 1,298,852,293	\$ 1,351,030,086	\$ 1,035,199,948
K-12 Schools	\$ 3,045,771,334	\$ 2,893,002,028	\$ 2,735,498,412	\$ 2,337,774,674	\$ 2,011,792,336	\$ 1,848,373,870
Total Education Capital Outlay	\$ 4,351,834,520	\$ 4,260,006,149	\$ 4,154,854,820	\$ 3,636,626,967	\$ 3,362,822,422	\$ 2,883,573,818

Type of Expenditure	2008	2009	2010	2011	Total 2002-11	2002-11 Average
Higher Education Institutions	\$ 1,145,395,238	\$ 819,070,598	\$ 1,629,606,397	\$ 1,532,067,647	\$ 12,903,645,921	\$ 1,290,364,592
K-12 Schools	\$ 1,429,895,025	\$ 1,397,711,233	\$ 1,290,416,600	\$ 1,340,398,563	\$ 20,330,634,073	\$ 2,033,063,407
Total Education Capital Outlay	\$ 2,575,290,263	\$ 2,216,781,830	\$ 2,920,022,997	\$ 2,872,466,210	\$ 33,234,279,994	\$ 3,323,427,999



Source: U.S. Census Bureau, Annual Surveys of State and Local Government Finances, 2002-2011  
 Analysis: Anderson Economic Group, LLC

\*Note: There was not data available for 2003 at the state level. AEG estimated this value as the average expenditures in 2002 and 2004. See "Data Sources " on page A-1 for additional discussion.

## Exhibit A-2. Estimated Additional Annual Cost of Construction for Higher Education and K-12 Schools Under Prevailing Wage, 2002-2012

	Average Annual Spending from 2002-2011		
	Higher Education	K-12 Schools	Total
(a) State and Local Government Capital Outlay Expenditures	\$ 1,290,364,592	\$ 2,033,063,407	\$ 3,323,427,999
(b) Proportion of Expenditures Subject to Prevailing Wage Laws	90%	90%	90%
(c) Estimate of Expenditures Subject to Michigan's Prevailing Wage Laws	\$ 1,161,328,133	\$ 1,829,757,067	\$ 2,991,085,199
(d) Proportion of Total Expenditures Due to Labor Costs	30%	30%	30%
(e) Estimate of Expenditures for Payroll Expenses	\$ 348,398,440	\$ 548,927,120	\$ 897,325,560
(f) Rate Prevailing Wages Exceed Average Construction Labor Rates	25%	25%	25%
<b>(g) Estimate of Additional Cost Due to Michigan's Prevailing Wage</b>	<b>\$ 87,099,610</b>	<b>\$ 137,231,780</b>	<b>\$ 224,331,390</b>
(h) Memo: Additional Cost of Prevailing Wage as a Share of Total Construction Costs	7.5%		

Sources: U.S. Census Bureau, *Annual Surveys of State and Local Government Finances by State, 2002, 2004-2011*

Analysis: Anderson Economic Group, LLC

### Notes:

- (a) See AEG calculated average in Exhibit A-1 on page A-5.
- (b) The state acts as a surety on most of the bonds used for public school construction in Michigan, which makes construction projects with that funding to be under the state's prevailing wage regulations. According to municipal funding expert Lou Schimmel, "nearly all" of school construction is at least partially funded by qualified bonds. Mike Alandt, director of the Municipal Advisory Council of Michigan, puts that figure at 80% to 90%. See Paul Kersey, "The Effect of Michigan's Prevailing Wage Law," *The Mackinac Center*, 2007, available at <http://www.michigancapitolconfidential.com/archives/2007/s2007-09.pdf>.
- (c) Estimated by multiplying total expenditures by the proportion of expenditures subject to prevailing wage laws.
- (d) AEG professional judgment based on empirical studies of the effect of prevailing wage laws. See "Estimating Labor Costs as a Share of Total Construction Costs" on page A-1.
- (e) Estimated by multiplying the proportion of payroll expenditures and proportion of payroll expenditures subject to prevailing wage laws by total capital outlay expenditures.
- (f) AEG professional judgment based on empirical studies of the effect of prevailing wage law. See "Examining Prevailing Wage Rates Against Average Rates" on page A-1.
- (g) Estimated by multiplying the rate prevailing wages exceed average construction labor by the estimate of expenditures for payroll expenses.
- AEG's estimates of additional cost due to Michigan's prevailing wage law are 7.5% of total construction expenditures that are subject to prevailing wage regulations. This is within
- (h) the range of a large number of empirical studies that examined the effects of prevailing wage on total costs. We provide a brief discussion of these studies in "Examining Total Cost Increases Due to Prevailing Wage Statutes," on page A-2.

## *Appendix B: About AEG*

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Anderson Economic Group, LLC was founded in 1996 and today has offices in East Lansing, Michigan and Chicago, Illinois. AEG is a research and consulting firm that specializes in economics, public policy, financial valuation, and market research. AEG's past clients include:

- *Governments* such as the states of Michigan, North Carolina, and Wisconsin; the cities of Detroit, Cincinnati, Norfolk, and Fort Wayne; counties such as Oakland County, Michigan, and Collier County, Florida; and authorities such as the Detroit-Wayne County Port Authority.
- *Corporations* such as GM, Ford, Delphi, Honda, Taubman Centers, The Detroit Lions, PG&E Generating; SBC, Gambrinus, Labatt USA, and InBev USA; Spartan Stores, Nestle, automobile dealers and dealership groups representing Toyota, Honda, Chrysler, Mercedes-Benz, and other brands.
- *Nonprofit organizations* such as Michigan State University, Wayne State University, University of Michigan, Van Andel Institute, the Michigan Manufacturers Association, United Ways of Michigan, Service Employees International Union, Automation Alley, the Michigan Chamber of Commerce, and Detroit Renaissance.

Please visit [www.AndersonEconomicGroup.com](http://www.AndersonEconomicGroup.com) for more information.

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Mr. Rosaen is a Senior Consultant at Anderson Economic Group, and the Director of Public Policy and Economic Analysis. Mr. Rosaen's background is in applied economics and public finance.

Mr. Rosaen's recent work includes several economic and fiscal impact analyses, including of proposed real estate developments, power plants, and infrastructure projects; analysis of tax incentives; an analysis of the impact of federal tax incentives on the freight rail industry; and an analysis of the economic contribution that research universities make in the State of Michigan.

Prior to joining Anderson Economic Group, Mr. Rosaen worked for the Office of Retirement Services (part of the Michigan Department of Management and Budget) for the Benefit Plan Design group. He has also worked as a mechanical engineer for Williams International in Walled Lake, Michigan.

Mr. Rosaen holds a Masters in Public Policy from the Gerald R. Ford School of Public Policy at the University of Michigan. He also has a Masters of Science and a Bachelors of Science in mechanical engineering from the University of Michigan.