

SCHOOL CHOICE

IN THE STATE

# The High Cost of Wisconsin's Dropout Rate



**School Choice for Wisconsin:** Many agree with the concept. Some disagree. And some simply want more information. As the public debate continues to grow about how best to provide a quality education to all Wisconsin children, it is important to know the facts about parent choice, and how parent choice programs have had an impact on communities, parents and students around the country. with one goal in mind: The best possible education for all of Wisconsin's children.

# Prepared By: Emily Anne House Fellow Friedman Foundation for Educational Choice

April 2009

Study released jointly by the Friedman Foundation for Educational Choice and the John K. MacIver Institute for Public Policy A MESSAGE FROM THE FRIEDMAN FOUNDATION:

### **OUR CHALLENGE TO YOU**

Our research adheres to the highest standards of scientific rigor. We know that one reason the school choice movement has achieved such great success is because the empirical evidence really does show that school choice works. More and more people are dropping their opposition to school choice as they become familiar with the large body of high-quality scientific studies that supports it. Having racked up a steady record of success through good science, why would we sabotage our credibility with junk science?

This is our answer to those who say we can't produce credible research because we aren't neutral about school choice. Some people think that good science can only be produced by researchers who have no opinions about the things they study. Like robots, these neutral researchers are supposed to carry out their analyses without actually thinking or caring about the subjects they study.

But what's the point of doing science in the first place if we're never allowed to come to any conclusions? Why would we want to stay neutral when some policies are solidly proven to work, and others are proven to fail?

That's why it's foolish to dismiss all the studies showing that school choice works on grounds that they were conducted by researchers who think that school choice works. If we take that approach, we would have to dismiss all the studies showing that smoking causes cancer, because all of them were conducted by researchers who think that smoking causes cancer. We would end up rejecting all science across the board.

The sensible approach is to accept studies that follow sound scientific methods, and reject those that don't. Science produces reliable empirical information, not because scientists are devoid of opinions and motives, but because the rigorous procedural rules of science prevent the researchers' opinions and motives from determining their results. If research adheres to scientific standards, its results can be relied upon no matter who conducted it. If not, then the biases of the researcher do become relevant, because lack of scientific rigor opens the door for those biases to affect the results.

So if you're skeptical about our research on school choice, this is our challenge to you: prove us wrong. Judge our work by scientific standards and see how it measures up. If you can find anything in our work that doesn't follow sound empirical methods, by all means say so. We welcome any and all scientific critique of our work. But if you can't find anything scientifically wrong with it, don't complain that our findings can't be true just because we're not neutral. That may make a good sound bite, but what lurks behind it is a flat rejection of science.

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### **Executive Summary**

This study presents the public costs of high school dropouts in Wisconsin. We examine how dropouts in the state dramatically impact state finances through reduced tax revenues, increased Medicaid costs, and high incarceration rates. This study examines just how much high school dropouts cost Wisconsin's taxpayers each year, and how much could be saved through increasing the state's graduation rate.

Though Wisconsin boasts one of the nation's highest graduation rates, there is still room for improvement. The achievement gap between races in the state is staggering, as 86 percent of white students earn high school diplomas while only 44 percent of African Americans and 48 percent of Hispanic students graduate. This cohort of dropouts costs Wisconsin hundreds of millions of dollars each year.

#### Key findings of this study include:

Over 7,000 high school seniors did not complete high school during the 2006-07 school year. Estimates of Wisconsin's total high school graduation rate range from 80 percent to 90 percent, as independent estimates tend to be lower than those released by the state.

- On average, working-age dropouts in Wisconsin earn \$10,000 less each year than those who graduate from high school, reducing overall state income by almost \$5 billion each year.
- At 14.1 percent, the unemployment rate of high school dropouts is almost three times higher than those who have graduated from high school or college.
- Approximately \$121 million in tax revenues is lost each year due to the decreased earnings of high school dropouts.
- Wisconsin's dropouts are almost 2.5 times more likely to require Medicaid assistance than high school graduates. Approximately 40 percent of high school dropouts receive Medicaid benefits.
- High school dropouts cost the state \$209,385,000 in Medicaid costs in 2007.
- High school dropouts are twice as likely to be incarcerated as high school graduates. African American male dropouts are four times more likely to be incarcerated than African Americans who have graduated from high school.
- This gap in incarceration rates leads to over 5,000 additional inmates than there would be if Wisconsin's graduation rate was 100 percent. Approximately \$154 million each year is spent to incarcerate these additional criminals.

# About the Author

Emily Anne House will graduate with her Master of Public Policy degree from Vanderbilt University this spring. Her academic focus is on issues pertaining to state-level P-16 initiatives to ensure postsecondary success. She has worked extensively with the Tennessee Higher Education Commission on analyses related to the Tennessee Education Lottery Scholarship program. House is a graduate of Cornell University and taught Special Education as a Teach for America corps member in Saint Louis, Missouri.

### Friedman Foundation for Educational Choice

FOUNDATION Educational The Friedman Foundation for Educational Choice, dubbed "the nation's leading voucher advocates" by the Wall Street Journal, is a nonprofit organization established in 1996. The origins of the foundation lie in the Friedmans' long-standing concern about the serious deficiencies in America's elementary and secondary public schools. The best way to improve the quality of education, they believe, is to enable all parents with the freedom to choose the schools that their children attend. The Friedman Foundation builds upon this vision, clarifies its meaning to the public and amplifies the national call for true education reform through school choice.

### John K. MacIver Institute for Public Policy



The John K. MacIver Institute for Public Policy is a Wisconsin based think tank that believes in free markets, individual freedom and responsible government. For more information, please visit www.maciverinstitute.com or email us at bhealy@maciverinstitute.com.

### Acknowledgements

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# Introduction

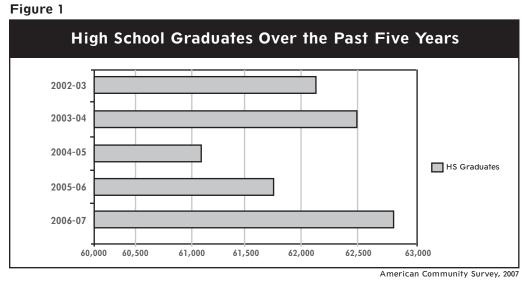
Education reform is as critical an issue in Wisconsin as it is throughout the rest of the nation. During the 2008 legislative session, many bills were proposed to improve student outcomes and institutional accountability in both public and private education. Through improving Wisconsin's public education programs, the state seeks to ensure stability and prosperity for future generations of residents.

While the personal consequences of dropping out of high school are clear (lower wages, higher unemployment, etc.) less emphasis has been placed on the public costs of decreasing graduation rates. High school dropouts have direct and indirect fiscal effects on taxpayers throughout Wisconsin. Lower rates of labor force participation, higher rates of unemployment, and lower earnings and salaries are all consequences of citizens' failure to earn a high school diploma. These consequences have a detrimental effect on all residents of Wisconsin, negatively impacting overall wage and job growth while imposing a fiscal drag on state expenditures allocated to social programs. Higher levels of education lead to positive effects on society in the form of the reduced need for public welfare programs, better health, and lower crime rates.

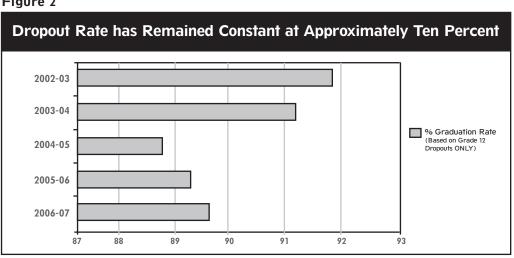
This study focuses on the tangible costs of dropouts in Wisconsin. By estimating the public costs associated with declining graduation rates, this paper will inform education reform initiatives.

### The Size and Scope of the Dropout Problem in Wisconsin

High school graduation is a critical predictor of an individual's future earning potential and economic success. It is also a key indicator of the performance of school districts and of the state's future workforce. Figure 1 shows the number of Wisconsin residents who have earned a high school diploma over the past five years.<sup>1</sup>



Over the past five years, however, approximately 10 percent of high school seniors have not graduated each year. This rate has remained relatively consistent, as can be seen in Figure 2.

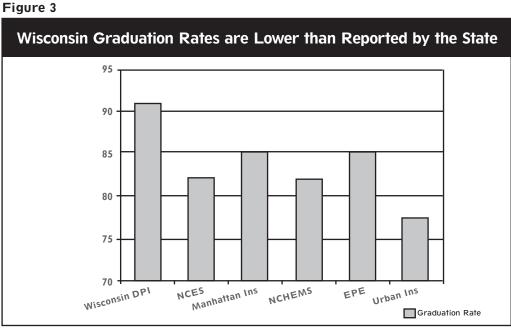


#### Figure 2

Wisconsin Department of Public Instruction, 2007

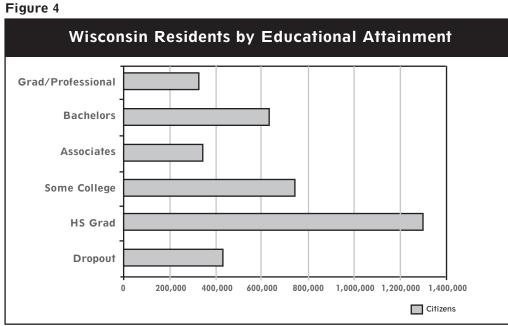
Many states tend to underreport dropout rates, and Wisconsin is no exception. Thus, it is likely that the numbers presented in Figures 1 and 2 are overstated and understated, respectively.

Figure 3 compares Wisconsin's officially reported high school graduation rate for the 2005-2006 school year with those of various independent educational research groups. Estimates by the National Center for Education Statistics, the Manhattan Institute, the National Center for Education Management Systems, the Editorial Projects in Education Research Center, and the Urban Institute all indicate that Wisconsin's graduation rate is much lower than officially reported. On average, these estimates put Wisconsin's graduation rate closer to 80 percent, between five and ten percentage points lower than the rate officially reported by Wisconsin's Department of Public Instruction.<sup>2</sup>



Various Educational Research Institutions

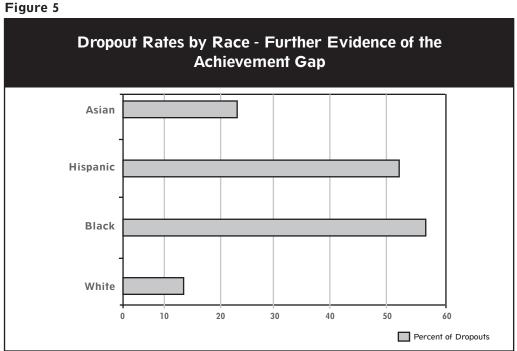
Nearly half a million working age adults in Wisconsin do not hold a high school diploma. According to the American Community Survey, 11.5 percent of Wisconsin residents over the age of 25 have not earned a high school diploma. Figure 4 shows the number of Wisconsin residents over the age of 25 by educational attainment. This chart indicates that 424,627 such adults did not complete high school.<sup>3</sup>



American Community Survey, 2007

The racial demographics of high school dropouts in Wisconsin are similar to those around the nation, and are indicative of the much discussed achievement gap. Research conducted by the Alliance for Excellent Education shows that 14 percent of white students fail to graduate from high school. Conversely, 56 percent of African-American students and 52 percent of Hispanic students

do not graduate. This can be seen in Figure 5 below. Note that the percentages do not add up to 100 percent, as each racial group is being examined – not the total population of dropouts.<sup>4</sup>



Wisconsin Department of Public Instruction, 2007.

## **Dropouts Cost Taxpayers Millions Every Year**

It is clear that one's level of education is a fairly accurate predictor of future economic success, as well as involvement in the labor force, rate of incarceration, and need for public benefits. Table 1 summarizes the effect of differing levels of education on the life outcomes of Wisconsin residents ages 20-64. The table demonstrates that those who do not finish high school are less likely to be in the workforce and are more likely to be unemployed. High school dropouts earn much less each year than their peers who completed high school, and are more likely to collect Medicaid benefits. Dropouts are also more likely than high school graduates to be incarcerated.<sup>5</sup>

#### Table 1

Wisconsin Life Outcomes by Educational Attainment (Age 20-64)							
	Dropouts	HS Grads	Some College	Assoc. Degree	Bachelor's Degree	Master's Degree	Ph.D./ Prof.
Percent in labor force	68	82.1	79.7	89.4	87.7	87.4	93.6
Unemployment rate	14.1	5.4	5.6	2.9	2.4	3.2	0
Annual earnings, total (gross)	19,183	29,724	28,933	38,844	51,766	81,176	81,176
Percent on Medicaid or with child on Medicaid	40.4	16.9	17	10.8	6.5	4.1	6.9
Incarceration rates (males only)							
White	0.93%	0.93%	0.93%	0.93%			
Hispanic	2.00%	2.00%	2.00%	2.00%		ALL CO GRADS CO	-
African-American	4.11%	4.11%	4.11%	4.11%			

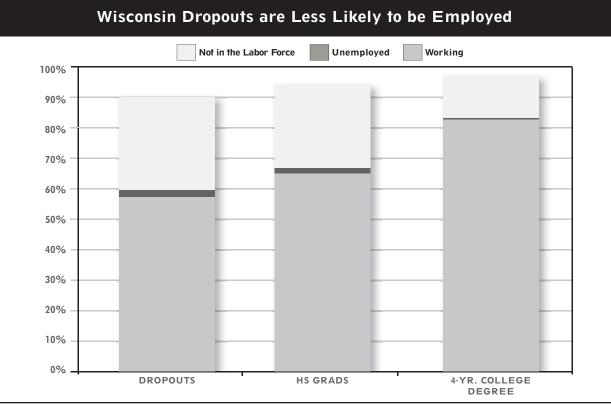
Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations

### Employment

Figure 6 demonstrates that high school dropouts in Wisconsin are less likely to be in the labor force (working or looking for work) than those with greater educational attainment. Only 68 percent of these individuals are employed, as compared to 82.1 and

87.7 percent of high school and 4-year college graduates, respectively.

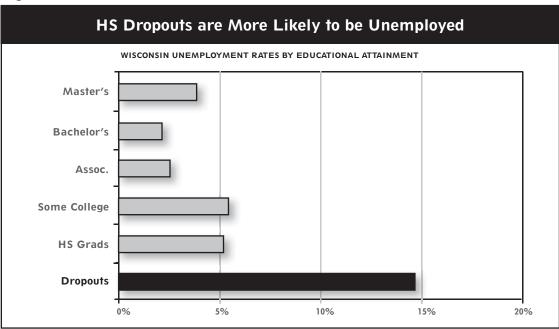
Furthermore, as can be seen in Figure 7, high school dropouts have the highest unemployment rates when compared to the population of high school and college graduates. At 14.1 percent, their unemployment rate is almost three times that of those who have graduated from high school or college.<sup>6</sup>



#### Figure 6

Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations



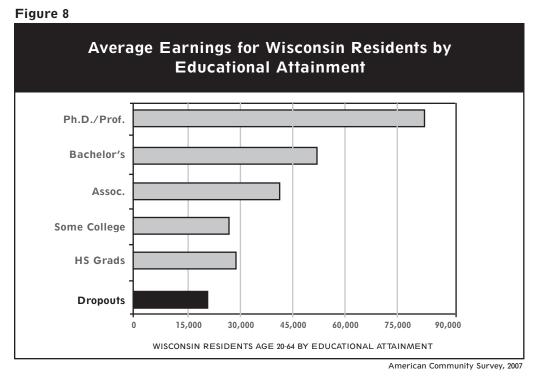


Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations

### Dropout Earnings

On average, high school dropouts in Wisconsin make almost \$10,000 less each year than high school graduates. The average annual earnings of dropouts are far lower than those of high school graduates due to lower paying jobs, lower workforce participation,

and lower employment rates. Figure 8 highlights the impact of dropouts in terms of annual earnings in 2007. Figure 8 shows that dropouts earn, on average, \$10,000 less than high school graduates each year.<sup>7</sup>



The impact of high school dropouts on the state economy of Wisconsin is profound when considering lost income. Table 2 details the impact of the \$10,000 lost each year by each of those who fail to complete high school. Assuming that all high school dropouts did graduate from high school, earnings in the state of Wisconsin would increase by almost \$4.5 billion. This increase in earnings could then be reinvested into the Wisconsin economy, resulting in job and wage growth, as well as increased productivity and revenue from taxation.

Impact of V	Visconsin Hig	h School Drop	outs on State Inc	ome (Age 20-64)
Education Level	Population	Average Earr	nings Total Earnings	If No Dropouts
Dropouts	424,627	\$19,183	\$8,145,407,428	\$0
HS Grads	1,277,573	\$29,724	\$37,975,090,881	\$50,596,873,680
Some College	738,482	\$28,933	\$21,366,721,251	\$21,366,721,251
Associate's Degree	321,239	\$38,844	\$12,478,175,592	\$12,478,175,592
Bachelor's Degree	620,325	\$51,766	\$32,111,433,788	\$32,111,433,788
M.A./Ph.D./Prof.	306,470	\$81,176	\$24,878,131,308	\$24,878,131,308
	Total 3,688,716	\$41,604	\$136,954,960,247	\$141,431,335,618
			Differe	nce \$4,476,375,371

#### Table 2

Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations

### **Reduction of Tax Revenues**

In addition to personal benefits, the public benefits of high school graduates are significant. Individuals with higher levels of education improve the productivity of Wisconsin's economy and aid in the creation of a larger tax base. Greater graduation rates in Wisconsin would lead to increased tax revenues to state and local government.

Data on the earnings of working-age high school dropouts and graduates were collected from the March CPS supplements for the

past three years. This information was used to calculate hypothetical tax liabilities using the TAXSIM model developed by the National Bureau of Economic Research. For the purpose of this analysis, various simplifying assumptions were made to direct this analysis.

All taxpayers were treated as single taxpayers, and it was assumed that taxpayers were not eligible for various, specific exemptions. All income was treated as wage income, and taxpayers were not assumed to be homeowners.

State tax liabilities were calculated for taxpayers with and without dependent children, and were weighted by the percentage of dropouts with or without children, as per the Current Population Survey data. Table 3 summarizes the tax revenue lost as a result of Wisconsin's dropouts. The income tax figure was calculated by determining the difference between graduate and non-graduate tax liabilities, and multiplying the difference by the number of high school dropouts. As can be seen below, the state of Wisconsin loses approximately \$121 million in tax revenues each year due to the earnings of high school dropouts.<sup>8</sup>

#### Table 3

Cost of Wisconsin's High School Dropouts on State Tax Revenues							
				D	ependent Exempt	tions	
	Population	Total Income	No Children	1 Child	2 Childre	en 3 Children	
HS Grads	1,277,573	\$29,724	\$1,122	\$1,049	\$775	\$202	
Dropouts	424,627	\$19,183	\$633	\$517	\$84	-\$916	
		Difference X	489	532	691	1118	
		Dropouts	124,928	44,876	27,895	15,023	
L	ost Income Ta	ax Revenue	-\$61,089,792	-\$23,874,032	-\$19,275,445	-\$16,795,714	
	Total Lost Income Tax Revenue: \$121,034,983						

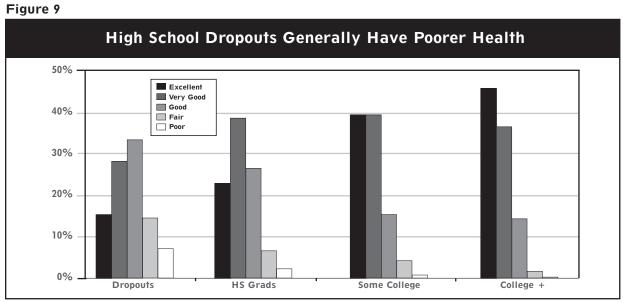
Source: National Bureau of Economic Research TAXSIM model and author's calculations

### Cost of Health Care

High school dropouts in Wisconsin are much more likely to rely on public programs such as Medicaid, Temporary Assistance to Needy Families, and food stamps. The likelihood of needing one or more public-assistance programs increases greatly for those without a high school diploma.

These costs increase as dropouts are more likely to be unemployed. In addition, those dropouts who are employed are less likely to hold a position that provides health care coverage, which increases their dependence on Medicaid programs.

Figure 9 displays data on the general health of citizens of Wisconsin by educational attainment. Dropouts are, generally speaking and according to data presented in the Census Current Population Survey, in poorer health than those who have graduated from high school. As these individuals are more likely to use public welfare programs, the general ill health of this population translates into higher costs of the state of Wisconsin at large.<sup>9</sup>



Perhaps the greatest cost of dropout health care in Wisconsin is that of the state's share of Medicaid costs. In 2007, approximately 410,566 residents received some form of Medicaid benefit, for a total cost exceeding \$4 billion (almost \$5000 per recipient). The state of Wisconsin is responsible for approximately fifty percent of the cost of this coverage.

CPS data was used to estimate Medicaid costs by educational attainment in Wisconsin. As can be seen in Figure 10 below, approximately 40 percent of high school dropouts receive Medicaid benefits. This is more than twice the rate of those who did graduate from high school, and approximately seven times the rate of those with a 4-year degree.

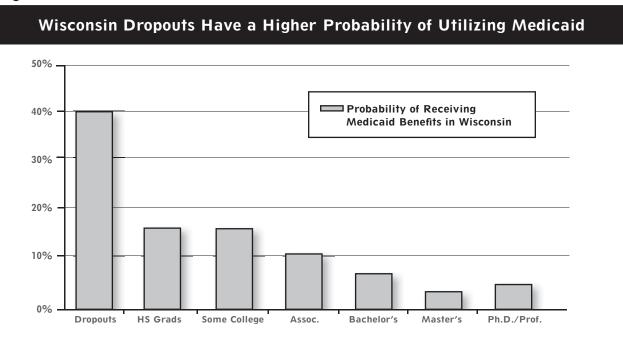


Figure 10

Table 4 presents the assumptions surrounding a dropout rate of zero percent in the state of Wisconsin. The data suggests that if all working-age residents of Wisconsin graduate from high school, Medicaid costs to the state will decrease by over \$121 million. It is important to note that this is a conservative estimate, as the CPS does not always accurately survey those who are benefiting from Medicaid.<sup>10</sup>

#### Table 4

Cost of Wisconsin High School Dropouts on State Medicaid Costs (all dollar figures in millions)								
	Population	Percent On or w/ Child on Medicaid	Number On or w/Child on Medicaid	Total Cost = Recipients x Average Cost	State Share of Costs	Number on Medicaid if All Graduated	Total Cost = Recipients x Average Cost	State Share of Medicaid Costs
Dropouts	220,424	40.4%	89,100	\$418,770,000	\$209,385,000	0	\$0	\$0
HS Grads	1,148,987	16.9%	193,828	\$910,991,600	\$455,495,800	213,430	\$1,087,721,000	\$543,860,500
Some College	620,478	17%	105,431	\$495,525,700	\$247,762,850	105,431	\$495,525,700	\$247,762,850
Associate's Degree	437,738	10.8%	47,163	\$221,666,100	\$110,833,050	47,163	\$221,666,100	\$110,833,050
Bachelor's Degree	617,492	6.5%	39,912	\$187,586,400	\$93,793,200	39,912	\$187,586,400	\$93,793,200
Post-graduate degree	248,655	15.9%	12,999	\$61,095,300	\$30,547,650	12,999	\$61,095,300	\$30,547,650
Total	3,329,774		488,433	\$2,295,635,100	\$1,147,817,550	436,935	\$2,053,594,500	\$41,026,797,250
	Annual N	Nedicaid Cost	of Dropouts				\$242,040,600	\$121,020,300

Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations

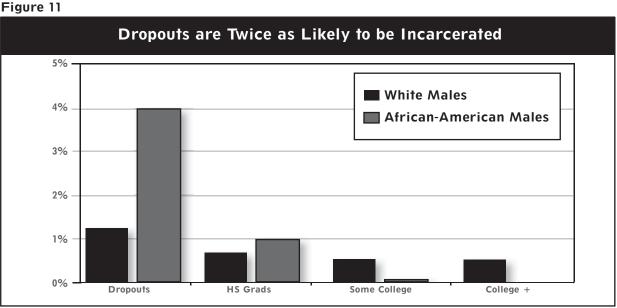
### Likelihood of Incarceration

Wisconsin spent approximately \$628 million incarcerating criminals each year during the past three years. The state's total incarceration costs average approximately \$30,000 per inmate each year.

Although the likelihood of any one high school dropout being incarcerated is small, the probability is twice as high as if the individual had earned a high school diploma, as can be seen in Figure 11. An African American male who fails to graduate from high school, for example, has a 4 percent chance of incarceration throughout his lifetime. This probability of incarceration is four times that of a white

Source: U.S. Census Current Population Survey, March Supplement (2006, 2007) and author's calculations

high school graduate, who has only a 1 percent chance of being incarcerated. As can be seen, the probabilities of incarceration decrease steadily as one's educational attainment increases. The costs of incarceration associated with dropouts are estimated by relying on the difference in probability of being incarcerated associated with higher levels of education attainment. Due to data limitations, we are considering only the incarceration rates of males, who constitute 94% of Wisconsin's inmate population.<sup>11</sup>



Note: Data were unavailable for Hispanics with postsecondary education. Incarceration rates provided by Lochner and Moretti (2001).

Since the CPS does not survey incarcerated residents, we relied on indirect estimates of criminal activity in Wisconsin and the previous work of academic researchers. These estimates assert the likely number of Wisconsin dropouts who would be incarcerated at some point during their lifetime. We used data on the types of crime, average sentence length, and average sentence served to construct a weighted average sentence that indicates the expected length of incarceration per incident.

As can be seen in the table below, 86 percent of white students graduate from high school, while only 44 percent of African American students graduate. Again, this provides further evidence of the achievement gap. Students classified as Hispanic or Other have slightly lower graduation rates, contributing to the composite rate of 82 percent.<sup>12</sup> Utilizing the anticipated rates of incarceration as presented in the work of Lochner and Moretti, and the information presented in the graph above, expected incarcerations were calculated considering the number of high school dropouts presented, as well as a hypothetical number, assuming that all students did, in fact, graduate.

Assuming the \$30,000 annual cost of incarceration per inmate, the state of Wisconsin can save over \$154 million dollars each year by increasing graduation rates, thereby lowering incarceration rates throughout the state.

#### Table 5

Cost of High School Dropouts or	State Incarceration Rates
<b>Total</b> African American White	82% 44% 86%
Number of African American dropouts % of African American dropouts	233,545 55
Number of White dropouts % of White dropouts	72,187 17
Expected Incarcerations from Dropouts African American White	9341 866
Expected Incarcerations without Dropouts African American White	4600 460
Projected cost of incarceration	306,210,000
Projected cost if no dropouts	151,800,000
Difference	154,410,000

Source: Lochner and Moretti (2001) and author's calculations

# Conclusions

As this study has examined various losses associated with Wisconsin's dropout rate, it is important to note that this report discusses only the most direct costs associated with low graduation rates. These costs only scratch the surface. The failure of many students to graduate has a negative impact on the state of Wisconsin at large, resulting in many costs to the state's residents. Thus, the objective of this report was to emphasize the need for reform initiatives to improve student retention and graduation.

Each student who fails to graduate from high school produces direct costs to taxpayers through lower tax revenues and greater social costs, particularly pertaining to healthcare and incarceration. As can be seen above, dropouts cost the state of Wisconsin \$121 million in tax revenue each year, as well as over \$120 million in annual Medicaid costs. Considering the likelihood of incarceration among those who do not complete high school, the state could potentially save up to an additional \$154 million in incarceration costs each year, should graduation rates increase.

Furthermore, the unemployment rate for high school dropouts in the state is a staggering 14.1 percent, while those who are employed earn, on average, \$10,000 less each year than those with a high school diploma. It is impossible to ignore these significant figures and its impact on the economy and workforce of Wisconsin itself. Though Wisconsin boasts one of the best statewide graduation rates in the country, improvements in the number of students graduating would not only help students, but also produce significant savings.

# Endnotes

<sup>1</sup> Data presented by the Wisconsin Department of Public Instruction. Available: <u>http://data.dpi.state.wi.us/data</u>

<sup>2</sup> Please note that the EPE estimate is for 2002, and the Urban Institute data is for 2000. This is due to issues of data availability.

<sup>3</sup> United States Census Bureau - American Community Survey, 2005-2007. Available: <u>http://factfinder.census.gov</u>

<sup>4</sup> Alliance for Excellent Education, 2008. Available: <u>http://www.all4ed.org/files/Wisconsin.pdf</u>

<sup>5</sup> United States Census Bureau, Current Population Survey, March Supplement and the author's calculations. It is important to note for the duration of this analysis that the CPS is known to underestimate dropouts numbers for various reasons, including its inability to survey those who are incarcerated, as well as its inclusion of those with a GED in its count of high school graduates.

<sup>6</sup> It is important to consider the difference between involvement in the labor force and unemployment. Those in the labor force are working or looking for work, while those who are unemployed are not currently working, and may or may not have left the labor force.

<sup>7</sup> United States Census Bureau – American Community Survey, 2005-2007. It is important to note that the relationship depicted between education and income has been demonstrated as simply as possible. Therefore, factors including age and experience have been excluded from the analysis.

<sup>8</sup> American Community Survey and Author's calculations using TAXSIM software available from the National Bureau of Economic Research. Please note the assumptions made as discussed above in the text.

<sup>9</sup> United State Census Current Population Survey, 2006-2008. The author would like to thank Brian Gottlob for his assistance with various calculations, including those related to healthcares costs.

<sup>10</sup> United States Census Current Population Survey 2006-2008; Wisconsin Department of Health Services

<sup>11</sup> Wisconsin Department of Corrections, 2008

<sup>12</sup> Wisconsin Department of Public Instruction, 2007

### THE FRIEDMAN FOUNDATION WELCOMES YOUR SUPPORT

As a nonprofit 501(c)(3) organization, we rely solely on the generous support of our donors to continue promoting the Friedman's vision for school choice throughout the country. Please send your tax-deductible gift today and help interject liberty and choice into our education system. Giving parents the freedom to choose the school that works best for their children is our goal, and with your help we can make it happen.

Dr. Milton Friedman, Founder Nobel Laureate and Founder of the Friedman Foundation

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