



# *The Myth of the Skills Gap in Wisconsin: Research Update*

by:

Marc V. Levine  
University of Wisconsin-Milwaukee  
Center for Economic Development  
March 2013

The release last month of our working paper, *The Skills Gap and Unemployment in Wisconsin: Separating Fact from Fiction* (February 2013)<sup>1</sup> has generated a number of interesting responses. The most common comment has been that, instead of relying on statistical evidence of labor market trends, the paper should have been based on interviews with Wisconsin employers. But as our paper points out, that is precisely the *problem* with existing accounts of a “skills gap” in Wisconsin: they are based primarily on anecdotes from employers about their difficulty finding “skilled workers,” without any analysis of whether such reported difficulty reflects unwillingness to pay market wages, inadequate business investment in training, or inefficiencies in employer hiring practices. The statistical evidence on wages, hours, educational attainment, and employment assembled in the paper, which no one has refuted, is not consistent with the claim that a generalized shortage of skilled labor exists in Wisconsin. The problem in the state, as we demonstrate in the paper, is a jobs gap, not a skills gap.

In response to the paper, commentators from the State Department of Workforce Development (DWD) and Wisconsin Manufacturers and Commerce lobby (WMC) have reiterated anecdotes about skills shortages in certain occupations, moving on from the fake shortage of welders, which was thoroughly demolished in the paper, to a supposed shortage of CNC machinists in Wisconsin. Once again, however, the data call into question the anecdotes. According to the most recent available data,<sup>2</sup> the unemployment rate for “computer controlled programmers and operators” in Wisconsin is 12.6 percent. There are roughly three times as many unemployed CNC programmers and operators in Wisconsin (630) as projected annual job openings by DWD (233). And this job gap, of course, understates the available labor force: it does not include new entrants, such as annual graduates of the state’s technical colleges, nor does it include the roughly 2,500 unemployed CNC programmers and operators from surrounding Midwest states (Illinois, Indiana, Minnesota, Iowa, and Michigan) who presumably could be attracted to Wisconsin

---

<sup>1</sup> Access at: [http://www4.uwm.edu/ced/publications/skillsgap\\_2013-2.pdf](http://www4.uwm.edu/ced/publications/skillsgap_2013-2.pdf)

<sup>2</sup> U.S. Bureau of the Census, American Community Survey, Table EE0 13- Detailed Census Occupation by Unemployment Status, Sex, and Race/Ethnicity (EEO Tabulation 2006-2010, 5-year ACS data).

were there truly a shortage of skilled CNC machinists here (or if Wisconsin employers were truly doing all they could to recruit, hire and train skilled workers).

The tables below show how wage trends over the past decade are inconsistent with tales of a CNC machinist shortage in Wisconsin. Once again, this is basic economics: if there is a short supply of a product or a commodity, a key indicator is rising prices. Wages are the price of labor, so if there is a CNC machinist shortage in Wisconsin, wages should be increasing, to lure new workers into the occupation, or to recruit workers from other states where they presumably are less in demand. That hasn't been happening in Wisconsin: real median hourly wages have *declined* here over the past decade for computer-controlled operators (-5.6%) and CNC programmers (-11.0%). These declines are *much greater* than the national declines since 2000 (-1.6% for CNC operators, and -4.6% for CNC programmers). Moreover, in 20 other states, CNC machinists actually saw their real wages *increase* over the past decade.<sup>3</sup> In states like North Dakota and Louisiana, where employment of CNC operators has more than *tripled* since 2000, real wages have climbed by over 30% (compared to the almost 6% real wage decline in Wisconsin, where employment of CNC operators has tumbled by 42% since 2000). Similarly, in states like Washington, where already robust employment of both CNC operators and programmers has jumped by almost 60% since 2000, real wages have climbed for both occupations over the past decade.

Again, the contrast to Wisconsin could not be starker. Despite the anecdotes of business lobbyists, state officials, or newspaper reporters, the wage data here simply do not reveal a tight labor market for CNC operators or programmers. If local employers are having difficulty hiring CNC operators and programmers, they should look at their own practices for the reasons; it isn't because there aren't available CNC operators and programmers, either in Wisconsin or in the geographically proximate states of the Midwest. For example, the unemployment rate for computer controlled programmers and operators in Michigan is 17%. If there were truly a shortage in Wisconsin, couldn't local employers attract those jobless Michigan

---

<sup>3</sup> Data calculated from Bureau of Labor Statistics, *Occupational Employment Statistics*, 2000 and 2011. Accessed at: <http://www.bls.gov/oes/current/oesrcst.htm>

workers, let alone hire some of the 12.6% of Wisconsin CNC operators and programmers who are unemployed, most of whom were skilled enough to be employed in the last year?

**Table 1:  
Contrasting Labor Markets For Computer-Controlled Operators:  
2000-2011**

State	% change real median wage
North Dakota	+37.9
Louisiana	+30.3
Arkansas	+20.0
Vermont	+18.1
Nevada	+15.9
Idaho	+15.7
Washington	+14.6
Indiana	+0.3
Iowa	+0.1
Ohio	-1.8
Illinois	-2.2
Wisconsin	-5.6
Michigan	-6.2
Minnesota	-12.7
USA (entire nation)	-1.6

Source: BLS, Occupational Employment Statistics, 2000-2011

**Table 2:  
Contrasting Labor Markets For CNC Programmers:  
2000-2011**

State	% change real median wage
Arizona	+67.6
Vermont	+31.7
Utah	+25.2
Washington	+23.3
Rhode Island	+22.5
North Carolina	+19.0
Oklahoma	+18.1
Ohio	-2.0
Indiana	-3.2
Iowa	-7.4
Minnesota	-7.7
Illinois	-9.8
Wisconsin	-11.0
Michigan	-19.9

Source: BLS, Occupational Employment Statistics, 2000-2011

One final point in this update. Data that became available, coincidentally, in the week after our original working paper was completed, provide further evidence that the premises and conclusions of the Wisconsin skills gap meme are fallacious. A data set on educational attainment by occupation in U.S. metropolitan areas between 1990-2010, compiled by Ross C. DeVol and associates at the Milken Institute, confirms the point in our paper that there is little merit to the claim popularized by Tim Sullivan among others that Milwaukee is at a “competitive disadvantage” in

workforce development and skills attainment.<sup>4</sup> Among the nation's 50 largest metro areas in 2010, Milwaukee ranked 11<sup>th</sup> in the proportion of workers with at least a high school diploma; 25<sup>th</sup> in the proportion of working-age population with at least some college; and 24<sup>th</sup> in the proportion of workers with at least a bachelor's degree. Although these rankings do not place Milwaukee at the top of "human capital" rankings, they hardly reveal a metropolis at the bottom of the rankings either, a view misleadingly propagated by skills gap promoters.

The Milken data on welders is particularly fascinating, given Sullivan's persistent assertion that Milwaukee suffers from a shortage of skilled, "factory-ready" welders. In 2010, Milwaukee ranked 4<sup>th</sup> among the nation's 50 largest metro areas in the percentage of welders holding at least a high school diploma; 5<sup>th</sup> in the percentage of welders with at least some college; and 16<sup>th</sup> in the percentage of welders with at least an associate's degree. In short, the data on educational attainment suggest that rather than facing a competitive "disadvantage," on skills, Milwaukee ranks *near the top* of metro areas in the skills of its welding workforce. These data, combined with the analysis of the wages, employment, and educational attainment of Wisconsin welders in our original working paper – especially the analysis of Sullivan's move to low-skill Texas because of the alleged Milwaukee "skills gap" – leave little doubt that the welding "skills gap" is, indeed, a fake skills gap.

Finally, the Milken data provide additional evidence of what we called the "inverse skills gap" in Milwaukee: the crisis of proliferating low-skill jobs and the underemployment of highly educated workers. As Table 3 below shows, using a slightly different data set and time period than our original paper, there has been a continuous and substantial growth in overqualification and underemployment in metro Milwaukee over the past twenty years. Increasing numbers of highly educated workers, unable to find employment commensurate with their skills, are holding low skill jobs. Moreover, as we analyzed in the paper, these are among the

---

<sup>4</sup> The Milken data is analyzed in Ross C. DeVol, I-Leng Shen, Armen Bedroussian, and Nan Zhang, "A Matter of Degrees: The Effect of Educational Attainment on Regional Economic Prosperity," Milken Institute (February 2013). The Milken data is accessed at: [www.matterofdegrees.net](http://www.matterofdegrees.net)

jobs likely to provide the largest number of openings in Wisconsin over the next decade. The crisis of underemployment is not likely to abate anytime soon.

**Table 3:**  
**Growing Underemployment in Metro Milwaukee: 1990-2010**  
**College Graduates in Low-Skill Occupations**  
 (percent of jobholders in low-skill occupations holding  
 B.A. degrees or graduate/professional degrees)

JOB	2000	2010
Bartenders	10.0	29.2
Retail Sales Clerks	15.6	30.7
Office Clerks	8.3	17.3
Waiters and Waitresses	10.8	15.3
Cashiers	8.6	10.2

Source: The Milken Institute

In his comments on our report, the president of the WMC acknowledged the reality of massive underemployment, but attributed it, without a shred of data, to colleges and universities producing too many history and political science majors. Although we don't have employment data by college majors at the local level, a recent report by the Georgetown University Center on Education and the Workforce does break down unemployment rates by undergraduate major for recent college graduates at the national level<sup>5</sup>. As Table 4 shows, while the labor market situation is, indeed, quite grim for history and political science majors, these unemployment rates suggest that quite a few of the bartenders, waiters, and retail clerks in Wisconsin probably hold degrees in economics, business management, architecture, and even computer science and mechanical engineering. Wisconsin's labor market

---

<sup>5</sup> Anthony P. Carnevale, Ban Cheah, and Jeff Strohl, "Hard Times: College Majors, Unemployment, and Earnings," Georgetown University Center on Education and the Workforce (February 2013).

problem is not that the skills of college graduates are not “aligned” with regional economic development; the problem is that economic policy and management strategy are failing to create a thriving economy of family-supporting jobs. The myth of a skills gap simply deflects our attention from the true economic policy challenges we face. And to the extent that we restructure institutions such as the UW system to respond to a fake skills gap –by doing such destructive things as creating a “6 month B.A. degree” as proposed in the Sullivan report, or by “aligning” courses of study with supposed “growth” sectors of the economy—we risk compromising the very integrity of the university and the economic future of the state.

**Table 4:**  
**Unemployment Rates for Recent College Graduates, By Major: 2010**

Major	Unemployment Rate
Architecture	13.9%
Business Management and Admin.	8.1%
Advertising and Public Relations	7.7%
Information Systems	11.7%
Computer Science	7.8%
Civil Engineering	8.1%
Mechanical Engineering	8.6%
English Language and Literature	9.2%
Philosophy and Religious Studies	10.8%
History	10.2%
Psychology	7.6%
Biology	7.7%
Economics	9.4%
Political Science	9.1%
Sociology	8.6%

Source: Georgetown University, Center on Education and the Workforce