



Business Leaders' Insights: Michigan's Workforce Strengths & Challenges

March 20, 2013

About Business Leaders for Michigan

Business Leaders for Michigan, the state's business roundtable, is dedicated to making Michigan a Top Ten state for job, economic, and personal income growth. The work of Business Leaders for Michigan is guided by the Michigan Turnaround Plan, a holistic, fact-based strategy to achieve the organization's Top Ten goals. The organization is composed exclusively of the chairpersons, chief executive officers, or most senior executives of Michigan's largest companies and universities. Our members drive over 25% of the state's economy, provide over 325,000 direct and 820,000 indirect jobs in Michigan, generate over \$1 trillion in annual revenue and serve nearly half of all Michigan public university students. Find out more at www.businessleadersformichigan.com.

Executive Summary

Business Leaders for Michigan's goal of helping Michigan become a Top Ten state will be impacted by the strength of our workforce. This paper summarizes research we conducted to identify economic trends that will influence Michigan's workforce needs, and suggests ways we can support state residents to meet those needs now and in the future. Three primary findings were drawn from the research:

1. In the **short** run, Michigan generally appears to be producing talent with the right education, but not enough workers have the experience and skills job providers need.
2. In the **long** run, Michigan faces challenges producing enough talent with the right education. Michigan's slow population growth and low educational attainment cannot keep pace with the projected increase in the demand for educated talent.
3. If current trends continue, Michigan could find itself with too many people in need of lower-wage jobs and not enough workers for many high-wage ones. Further, not all high-paying, high-demand positions may experience an under supply of talent. This will require greater collaboration to anticipate future employer needs through our education systems and responsive training programs.

National Workforce Trends & Profile

Globalization has accelerated America's path towards becoming a knowledge-based economy across all industry sectors, including traditional ones such as agriculture and manufacturing. This trend is causing employment and income growth to be increasingly driven by one's education level. In order to support a prosperous economy, workers must be educated, skilled, and experienced.

The nation's economy has shifted rapidly toward one based on knowledge and service industries and this trend is expected to continue.

- Today, 87 percent of the U.S. economy is driven by non-agricultural or manufacturing sectors, such as professional, business and educational services, according to the [Bureau of Economic Analysis](#).¹
- Knowledge and service sector jobs have been the fastest growing occupations over the past ten years, while construction and manufacturing jobs have declined. These trends are expected to continue through 2020, according to the [Bureau of Labor Statistics](#),ⁱⁱ with the exception of a projected increase in construction jobs tied to the economic recovery.

The result is that over 60 percent of jobs in the United States will need to be filled by those with some form of post-secondary education by the year 2025, according to the [Lumina Foundation](#).ⁱⁱⁱ

- This will require the nation to produce 62 million high quality degrees and credentials over the next twelve years. Yet, at current rates, the nation is projected to produce only 39 million two- and four-year college degrees by 2025, leaving a talent gap of 23 million. A failure to produce this number of educated workers risks the nation's ability to grow jobs and incomes.

"For individual Americans, the consequences of not completing postsecondary education are increasingly dire. For many years, the main reason many people went to college was to gain access to better-paying jobs that allowed them to earn more throughout their lives. But earnings potential is no longer the only driver. In this economy, the issue is whether you even have a job."^{iv}

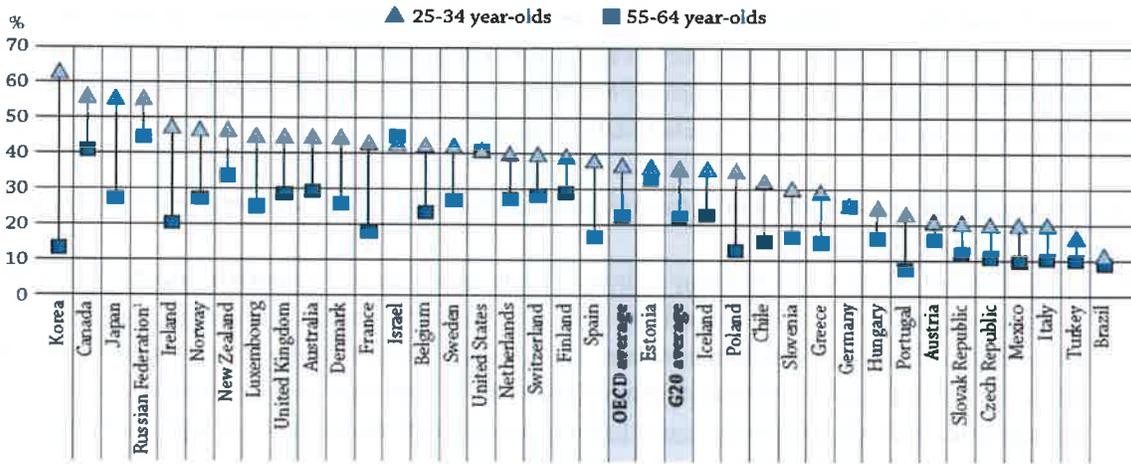
—Lumina Foundation 2013–2016 Strategic Plan

America ranks twelfth in the developed world in generating college graduates among 25–34 year olds according to the [Organization for Economic and Community Development \(OECD\)](#).^{1 v}

- In almost all countries, the proportion of 25–34 year olds who attained tertiary levels of education is greater than that of those about to leave the labor market (55–64 year olds).
- If current tertiary degree attainment rates among 25–34 year olds are maintained, the proportion of adults in France, Ireland, Japan, and Korea who have a tertiary education will grow more than that of other OECD countries, while that proportion in Austria, Brazil, and Germany will fall further behind other OECD countries listed in the accompanying chart.

¹ The OECD is an international organization consisting of 34 member countries from all over the globe. The OECD includes the world's most well-developed economies and nations, as well as some that are just emerging.

Percentage of Population that has Attained Tertiary Education, By Age Group (2009)



1. Year of reference 2002.

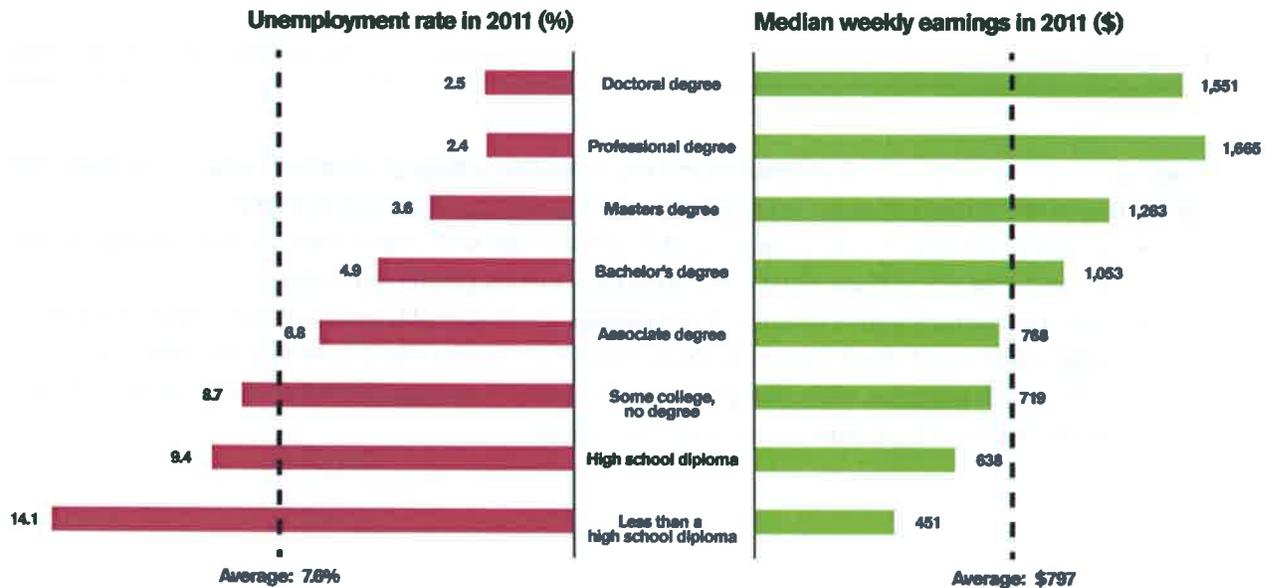
Countries are ranked in descending order of the percentage of 25-34 year-olds who have attained tertiary education.

Source: OECD, Table A1.3a. See Annex 3 for notes (www.oecd.org/edu/eag2011).

The education level of the workforce strongly correlates to wages and employment levels.

- Jobs requiring some level of education beyond high school pay far higher wages and experience greater employment even during recessions, according to the [Bureau of Labor Statistics](#).^{vi}

Unemployment Rates and Earnings by Education Level



Source: Bureau of Labor Statistics (2012)

- During the recent recession, the demand for college graduates grew. Those with four-year degrees gained jobs during and after the recession, while employment for those with two-year degrees held constant, and those with a high school degree or less lost over 5 million jobs, according to a [Georgetown University study](#).^{vii}

"It's a tough job market for college graduates but far worse for those without a college education."

-"The College Advantage," Study by the Georgetown Public Policy Institute^{viii}

Michigan Workforce Trends & Profile

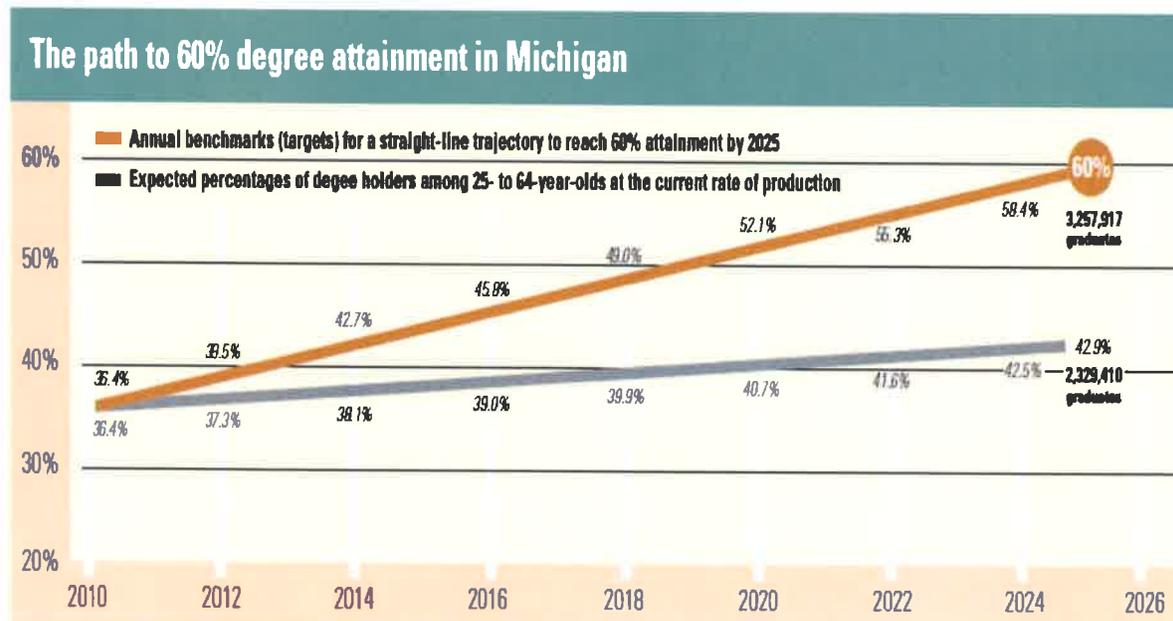
Michigan's economy is following national trends as it diversifies towards a knowledge-based economy. This change will require a more educated workforce to drive income and employment growth at a personal level, and economic growth for the state as a whole.

Michigan's economy reflects the national trend of an economy shifting rapidly to one based on knowledge and service industries.

- While manufacturing plays a larger role in Michigan than in the nation as a whole (about 16 percent of Michigan's GDP versus 12 percent for the nation's GDP, according to the [Bureau of Economic Analysis](#)),^x the economy has been diversifying for decades to reflect the growth of knowledge and service industries.

The result is that changes in the economy will require Michigan to produce 900,000 more college graduates by 2025 than is currently projected, according to a [Lumina Foundation report](#).^x

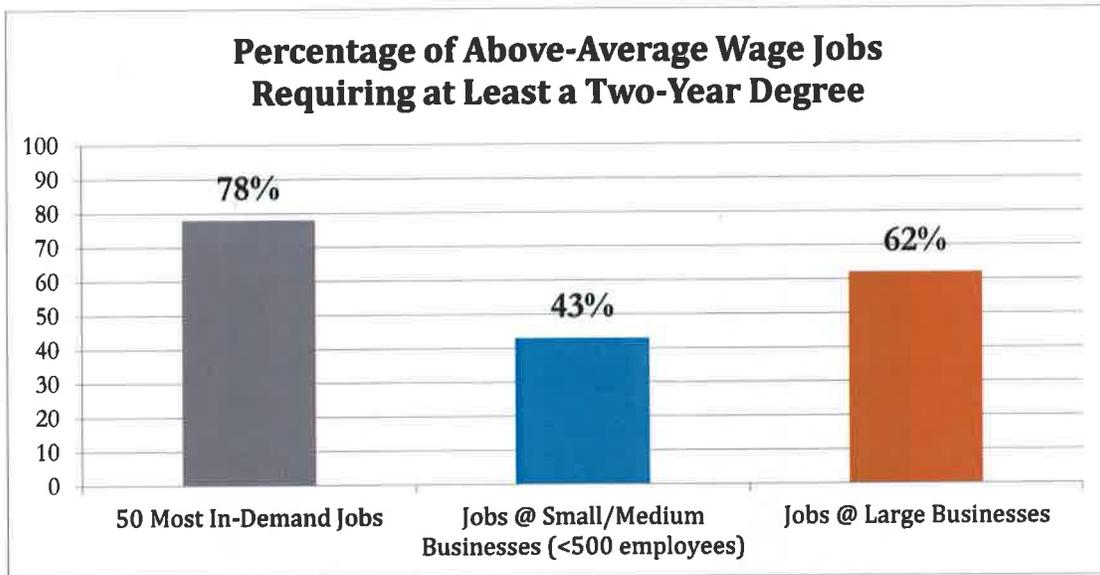
- [Help Wanted](#),^{xi} a report by the Georgetown University Center on Education and the Workforce, explains why increasing higher education attainment is so important. According to the Center's analysis of occupation data and workforce trends, 62 percent of Michigan's jobs will require postsecondary education by 2018. Between now and 2018, Michigan will need to fill 1.3 million vacancies resulting from job creation, worker retirements, and other factors. Of these job vacancies, 836,000 will require postsecondary credentials.
- This projection is recognized in the strategy Business Leaders for Michigan outlined, which identifies the six highest-potential opportunities to grow a [New Michigan economy](#)—all of which require more talent with some education beyond high school.
- Michigan could meet nearly all of its projected talent needs by increasing post-secondary degree attainment to 60 percent by 2025, according to the [Lumina Foundation](#).^{xii}



Source: U.S. Census Bureau, 2000 Census and 2010 American Community Survey

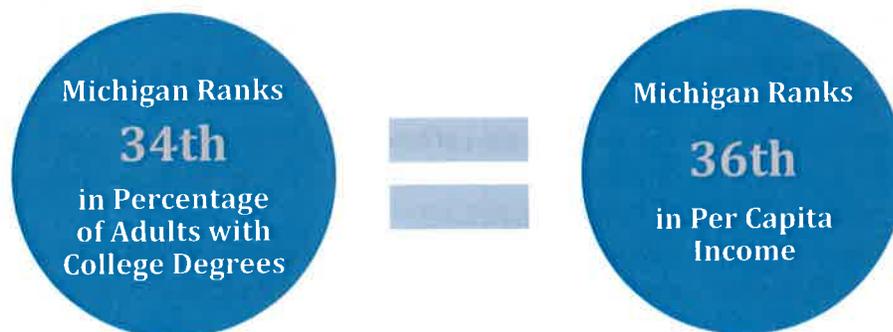
Most of Michigan's high demand, above average wage jobs today require at least a two-year degree.

- Nearly 80 percent of Michigan's 50 most in-demand jobs that pay above average wages require at least a two-year degree and two-thirds require at least a four-year degree, according to the [Michigan Bureau of Labor Market Information \(MBLMI\)](#).^{xiii}
- Fifty-seven percent of above-average wage jobs filled by large businesses require a four-year degree, and 62 percent require at least a two-year degree, according to a survey of BLM members.
- Small and medium businesses report that 43 percent of their jobs require at least a two-year degree, according to Glengariff.



Michigan's relatively low education attainment levels correlate to below-average personal income.

- According to the [BLM 2012 Benchmarking Report](#)^{xiv}, Michigan ranks 34th in residents over age 25 with a four-year degree and 36th for per capita personal income

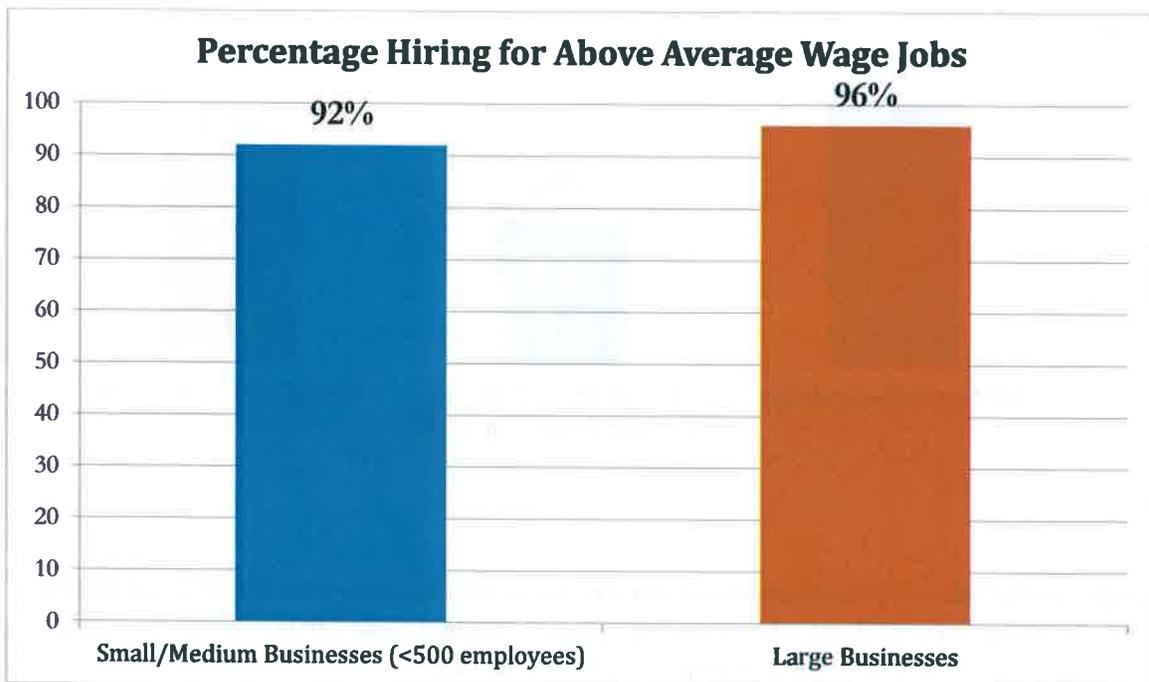


Michigan's Workforce Strengths

Michigan's economy is growing again after a decade of job losses, resulting in even stronger demand for educated talent. Fortunately, Michigan's colleges and universities appear to be meeting market demand for above average wage jobs while population migration has stabilized.

Michigan's economy is growing—small/medium (less than 500 employees) and large businesses in Michigan are currently hiring for jobs that pay above average wages.

- Ninety-two percent of Michigan's small/medium businesses have hired an employee who earned more than the state median wage in the past year, while 96 percent of large businesses have done the same, according to a statewide poll conducted by the Glengariff Group and a survey of BLM members.

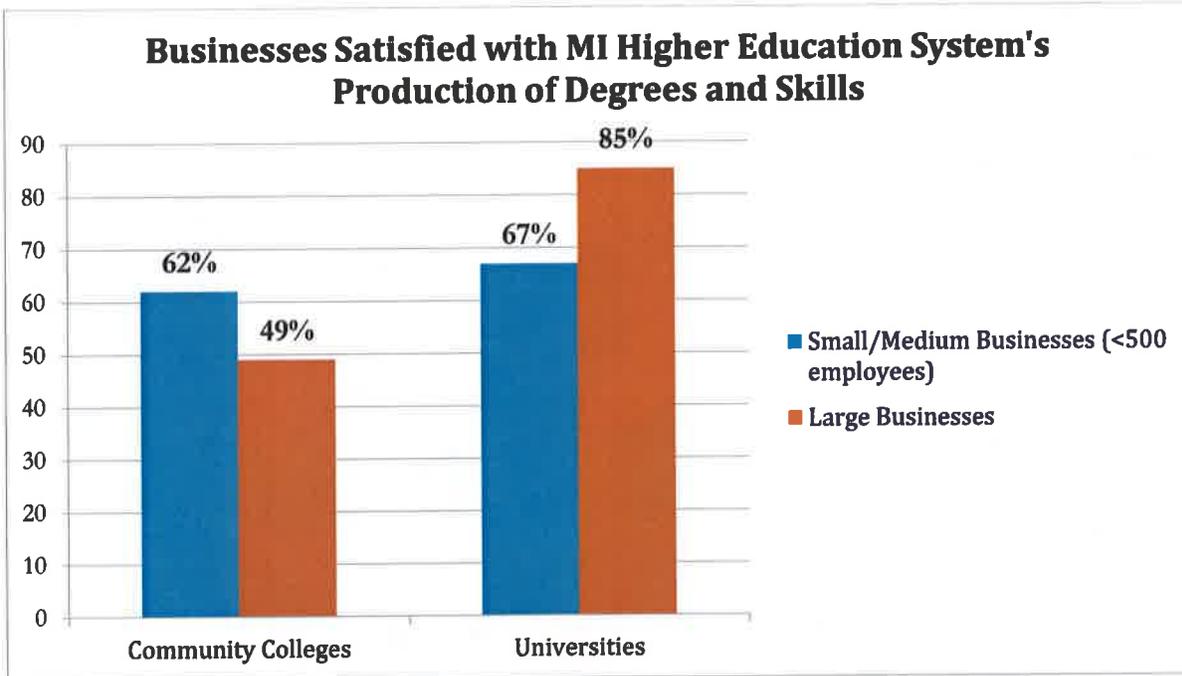


Michigan is a strong producer of educated talent and persons with technical degrees.

- Michigan's four-year universities rank fourth in the number of degrees awarded in critical skill areas and sixth in science, technology, engineering, and math fields, according to the Anderson Economic Group.
- Michigan ranks 11th for the overall number of four-year or higher degrees conferred from public universities based on population—and that number has been increasing, according to the [Integrated Postsecondary Education Data System \(IPEDS\)](#).^{xv}
- Michigan ranks 21st in the number of technical two-year degrees and certificates awarded—a number that has grown by 35% since 2003, according to most recent [BLM Benchmarking Report](#).^{xvi}

Michigan businesses generally believe the state's colleges and universities are producing graduates with the combination of degrees and skills employers need, according to a statewide Glengariff poll and a survey of BLM members.

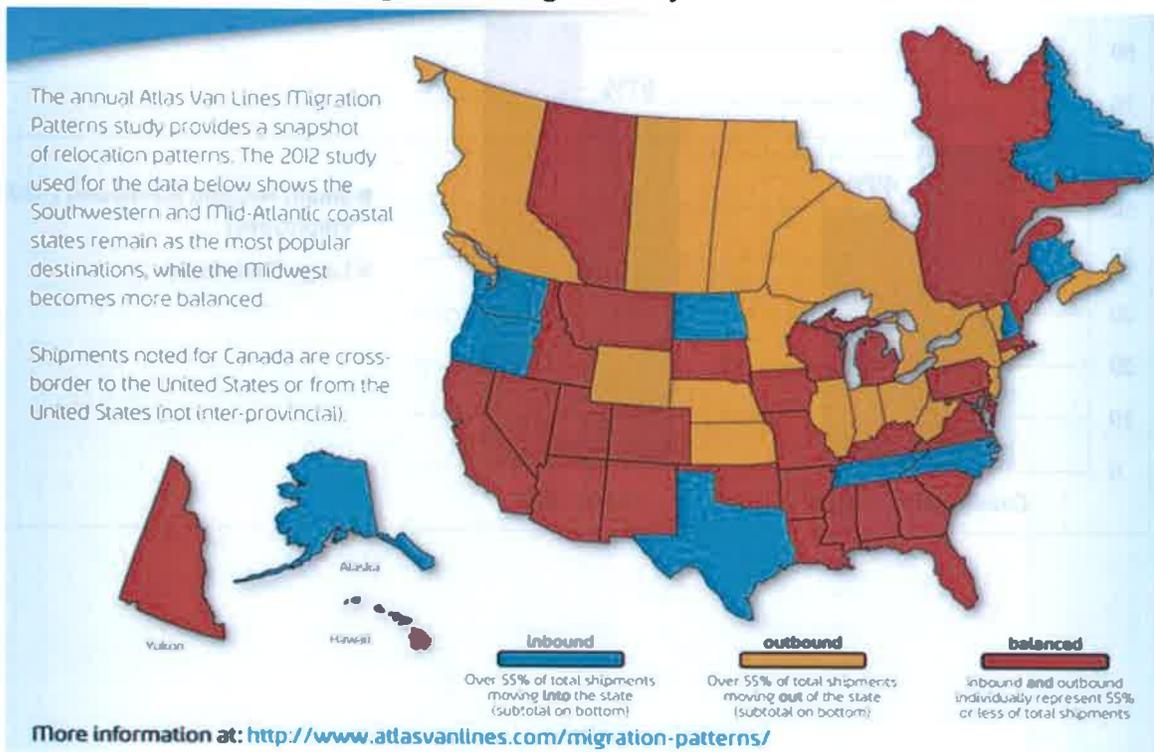
- Sixty-seven percent of small/medium and 85 percent of large businesses believe the state's universities are producing graduates who have the degrees and skills employers need.
- Over 62 percent of small/medium businesses believe that the state's community colleges are producing graduates with the right degrees and skills, but only 49 percent of large businesses agree.



Michigan's migration patterns are stabilizing and offer an opportunity to fill talent needs as the economy grows.

- Michigan's overall net migration has stabilized after a decade of net out-migration according to a study by [Atlas Van Lines](#).^{xvii}
- Michigan's out-migration remains relatively low, including among recent college graduates, based on [U.S. Census data](#)^{xviii} and [analysis by the state demographer](#).^{xix} For example, the average state loses 6.1 percent of its 18–19 year olds annually, compared to a mere 4.2 percent loss for Michigan. For 20–24 year olds, the average state loses five percent, versus only a 4.4 percent loss for Michigan. However, the U.S. Census reports that Michigan attracts 50 percent fewer 18–24 year olds than the average state.

Population Migration by State



Michigan's Workforce Challenges

The shift to a knowledge-based economy and Michigan's resurgent economic growth has created short- and long-term challenges of matching workforce supply with demand. Short-term skill shortages will eventually be replaced by long-term education shortages unless actions are taken to reverse this trend.

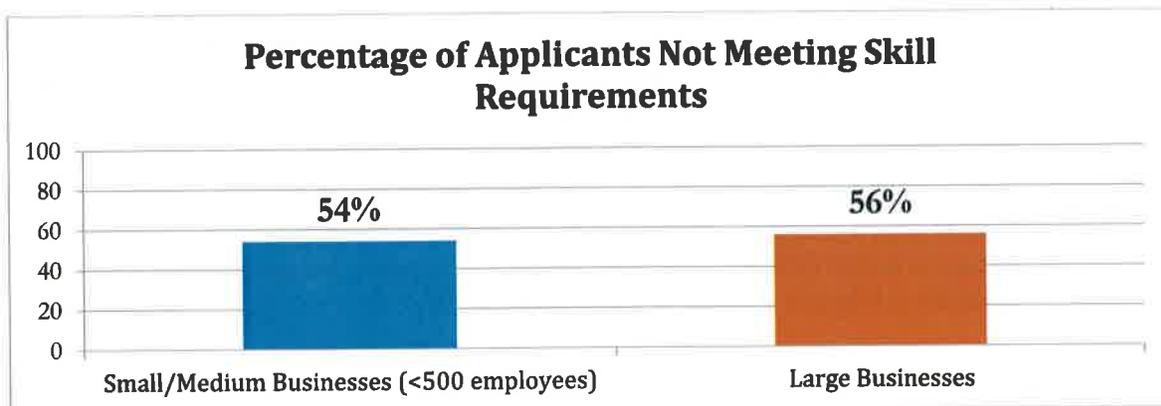
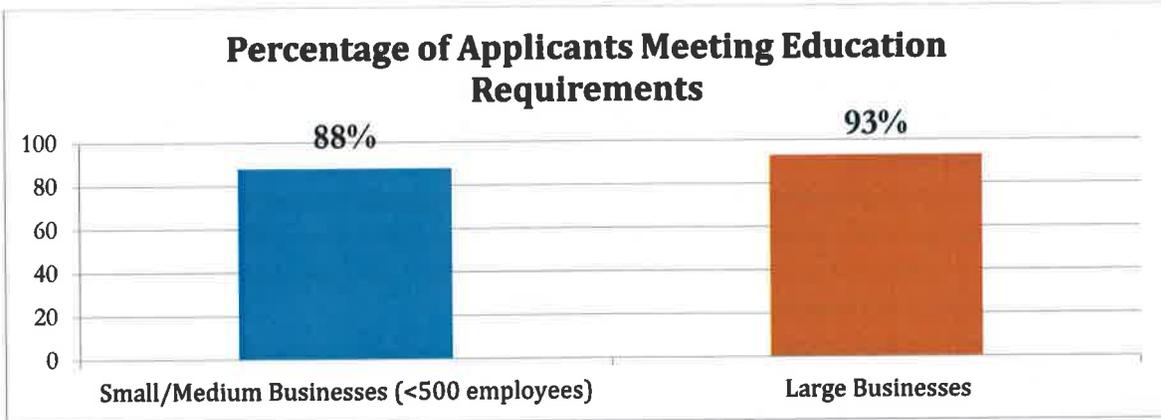
According to a Glengariff poll and a survey of BLM members:

Michigan businesses are experiencing some difficulty filling above average wage jobs.

- Twenty-eight percent of small/medium and 73 percent of large businesses experienced difficulty filling above average wage jobs.
- A majority of these jobs were in technically oriented fields, such as engineering or information technology, but a large number were also in management, sales, marketing, and other fields.

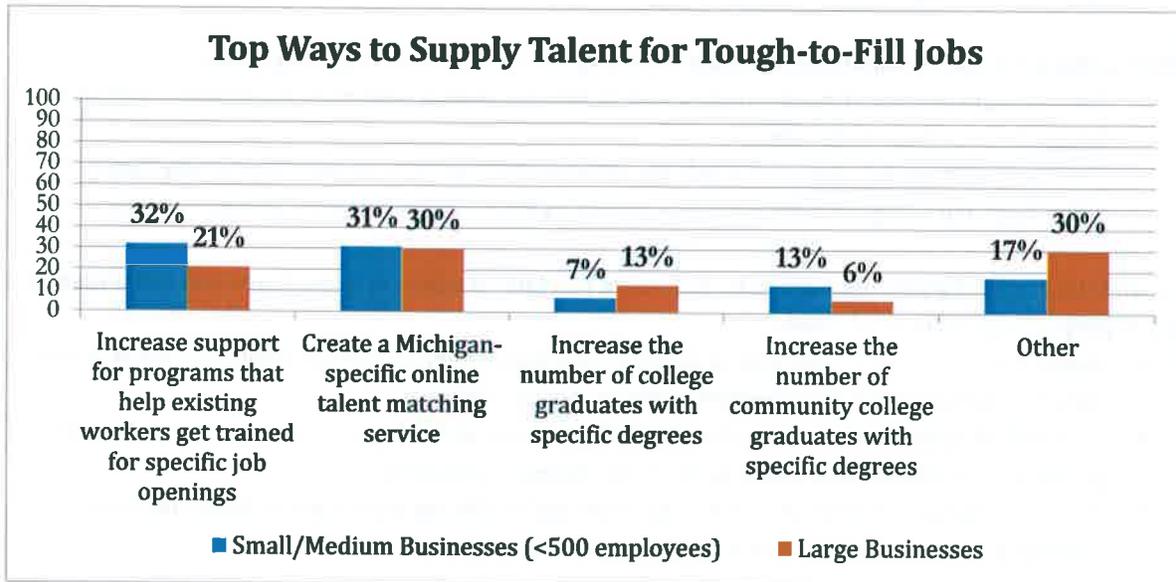
The difficulty in filling jobs appears to be due more to a lack of relevant experience and skills than to a lack of proper education credentials.

- Ninety-three percent of large and 88 percent of small/medium businesses report that job applicants meet the minimum education requirements for available jobs.
- Over half of all businesses report that a lack of applicants with adequate experience or skills is the primary reason for not being able to fill above average paying jobs.
- Over 90 percent of all businesses cite a job applicant's skills and experience as being the most important requirement for a job with their company.



Michigan businesses identified solutions to filling high-wage, high-demand jobs in the short-term.

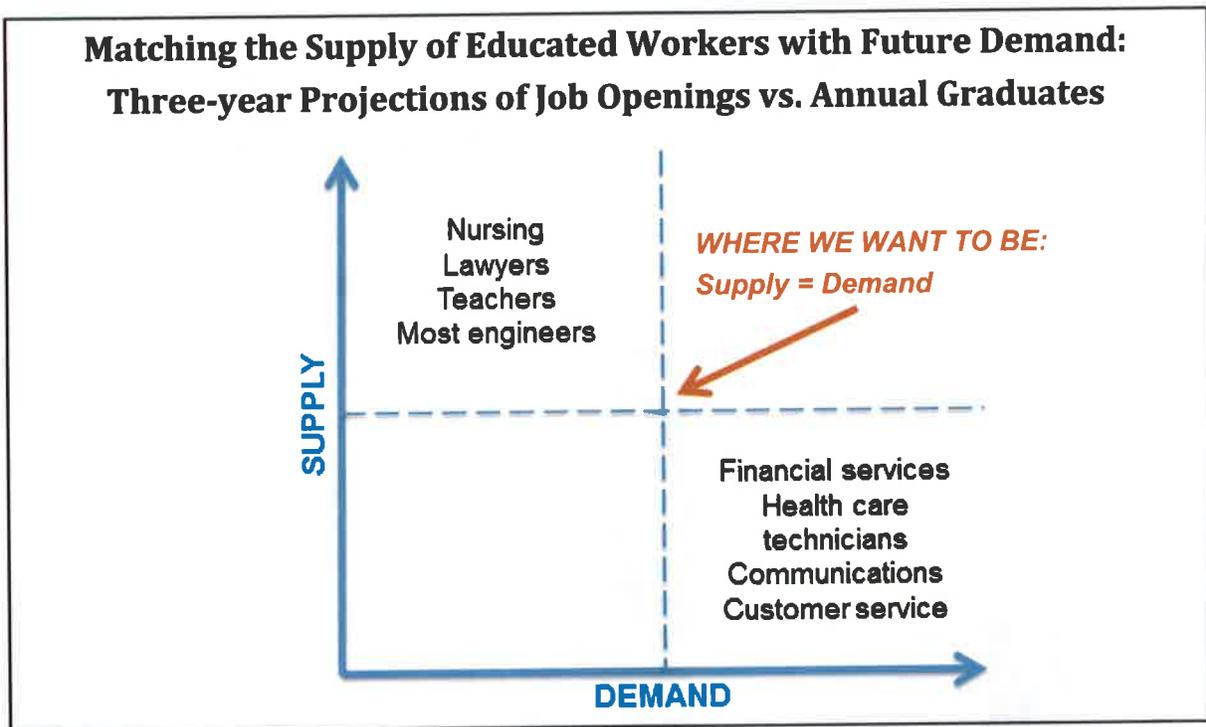
- Businesses cited using training programs to give existing workers the relevant skills needed for specific job openings and an online talent matching service to better match talent supply with demand as the top two ways to supply talent for tough-to-fill jobs.



Not all high-demand, high-wage jobs are projected to have an equal supply of talent based on three-year employment projections. Our research in this area was supplemented with data from the Michigan Bureau of Labor Market Information and Kelly Services/Economic Modeling Specialists Inc. (KS/EMSI) data, which showed:

- Occupations with a high number of openings (high-demand occupations) experience an over-supply of talent when the state is producing more graduates than openings in those fields.
- If the economy grows and increases demand for their services, occupations can change from having too much supply to not enough.
- Eight of the top ten high-demand, high-wage jobs listed by the [MBLMI](#)^{KS} are projected to be in over-supply of talent over the next three years, according to data provided by KS/EMSI.
- Specific examples listed below identify projected job openings versus graduates in associated fields in 2011:
 - Registered nurses: The number-one high-demand, high-wage occupation with between 3,285 and 3,767 annual job openings versus a supply of 6,809 annual graduates. The result is an over-supply of between 3,042 and 3,524 people.
 - Elementary school teachers (excluding special education): One of the top ten high-demand, high-wage occupations with between 1,013 and 1,227 annual job openings versus a supply of 1,749 annual graduates. The result is an over-supply of between 522 and 736 people.
 - Personal financial advisors: An occupation with 2,654 annual openings versus 1,494 annual graduates resulting in an under-supply of 1,160 people.

Matching the Supply of Educated Workers with Future Demand: Three-year Projections of Job Openings vs. Annual Graduates

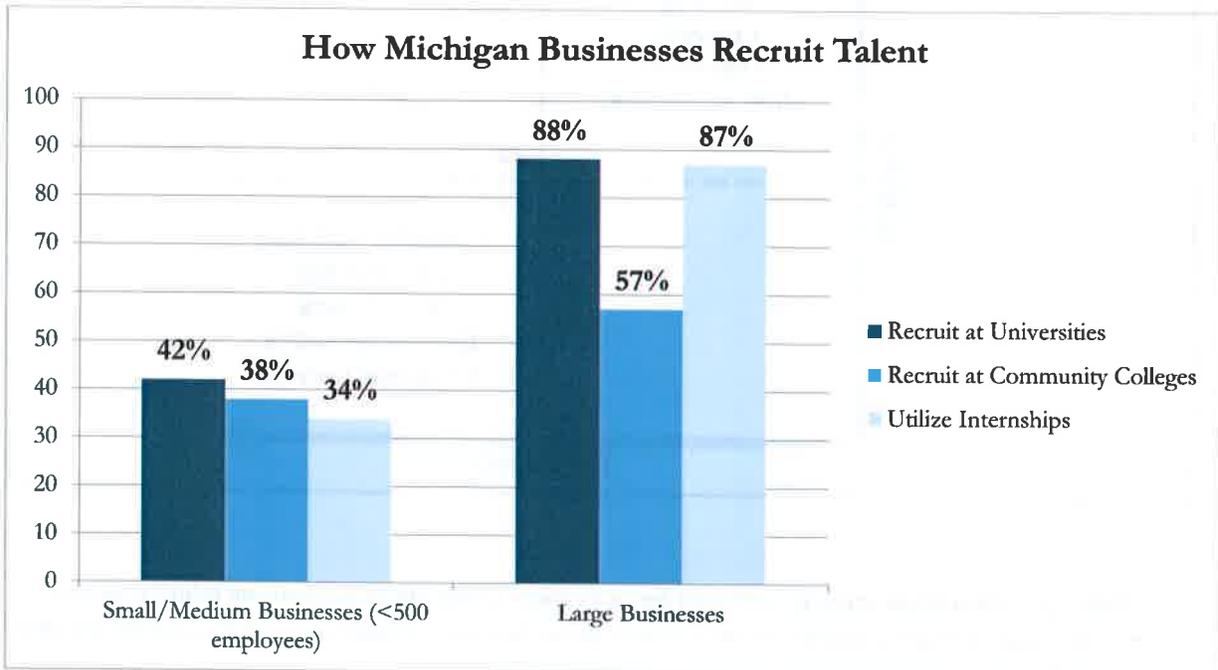


Michigan's slow population growth and aging demographics mean a shrinking talent pipeline.

- Michigan will have a smaller talent pool with approximately 100,000 fewer 18–24 year olds by 2025 as the state's population ages, according to the [U.S. Census](#).^{xxi}
- Michigan universities rank 35th for the proportion of out-of-state and international freshmen students versus sixteenth for enrolling in-state students, according to [IPEDS data](#).^{xxii}
- We are unlikely to produce enough in-state talent to meet projected talent needs by increasing in-state enrollments alone.

Small/medium Michigan businesses do not recruit at the state's colleges and universities or utilize internships to the extent of larger businesses.

- Eighty-eight percent of large and 42 percent of small/medium businesses recruit at Michigan universities.
- Fifty-seven percent of large and 38 percent of small/medium businesses recruit at Michigan's community colleges.
- Eighty-seven percent of large and 34 percent of small/medium businesses utilize internships in Michigan as a way of recruiting talent with the relevant skills needed for their job openings.



Findings

Business Leaders for Michigan reached three primary findings as a result of the research compiled and analyzed for this report. These findings are based on America's and Michigan's migration to a knowledge-based economy (including jobs in the agricultural and manufacturing sectors that pay above-average wages), in which employment and earnings are increasingly tied to education levels and economic growth is driven by the educational quality of the workforce.

1. In the **short** run, Michigan generally appears to be producing talent with the right education, but not enough workers have the experience and skills job providers need.
2. In the **long** run, Michigan faces challenges producing enough talent with the right education. Michigan's slow population growth and low educational attainment cannot keep pace with the projected increase in the demand for educated talent.
3. If current trends continue, Michigan could find itself with too many people in need of lower-wage jobs and not enough workers for many high-wage ones. Further, not all high-paying, high-demand positions may experience an under supply of talent. This will require greater collaboration to anticipate future employer needs through our education systems and responsive training programs.

Research Methodology

Business Leaders for Michigan (BLM) utilized four primary sources of data to identify how well the workforce meets the current job market's requirements and the impact of future trends for this paper.

- A statewide poll of 600 small/medium sized Michigan businesses conducted by the Glengariff Group, Inc. The poll included businesses with more than ten employees who had hired someone earning a minimum of \$36,000 annually in the past 12 months or who had difficulty filling a position that pays a minimum of \$36,000 annually. Retail and hospitality businesses were screened out of the sample. The live operator telephone survey was conducted January 3–15, 2013.
- A poll of BLM companies using questions used in the poll of small/medium businesses above.
- Government data sources, particularly those of the U.S. Census, Bureau of Labor Statistics and Bureau of Economic Analysis, and Michigan Bureau of Labor Market Information.
- Analysis of data compiled by non-government sources, such as Kelly Services/Economic Modeling Specialists Inc. (KS/EMI) and Anderson Economic Group (AEG).

Resources

[Business Leaders for Michigan: 2012 Economic Competitiveness Benchmarking Report](#)

[Business Leaders for Michigan Higher Education Performance Tracker](#)

[Georgetown University Center on Education and the Workforce](#)

[Lumina Foundation: A Stronger Nation through Higher Education](#)

[Michigan Census Data: Michigan Center for Shared Solutions and Technology Partnerships](#)

[Michigan Labor Market Information](#)

[U.S. Bureau of Economic Analysis](#)

[U.S. Bureau of Labor Statistics](#)

EndNotes

- ⁱ U.S. Bureau of Economic Analysis (BEA). Retrieved February 25, 2013, from <http://bea.gov/iTable/iTable.cfm?ReqID=5&step=1#reqid=5&step=1&isuri=1&402=15&403=1>
- ⁱⁱ U.S. Bureau of Labor Statistics (BLS). Table 2. Employment by major industry sector, 2000, 2010, and projected 2020. Retrieved February 25, 2013, from <http://bls.gov/news.release/ecopro.t02.htm>
- ⁱⁱⁱ Lumina Foundation Strategic Plan. (2013). Indianapolis, IN: Lumina Foundation.
- ^{iv} Ibid.
- ^v *Education at a Glance* (p. 25–212). (2011). The output of educational institutions and the impact of learning. Paris, France: OECD.
- ^{vi} “Education pays: more education leads to higher earnings, lower unemployment.” (2010, Summer). *Occupational Outlook Quarterly*, 54, 32. Retrieved February 25, 2013, from <http://www.bls.gov/ooq/2010/summer/oochart.pdf>
- ^{vii} Carnevale, A., Jayasundera, T., & Cheah, B. (2012). *The College Advantage: Weathering the Economic Storm*. Washington, DC: Georgetown Public Policy Institute.
- ^{viii} Ibid.
- ^{ix} Regional Data. (n.d.). U.S. Bureau of Economic Analysis (BEA). Retrieved February 25, 2013, from <http://bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=1#reqid=70&step=10&isuri=1&7007=2011&7093=Levels&7090=70&7035=-1&7036=-1&7001=1200&7002=1&7003=200&7004=NAICS&7005=-1&7006=26000>
- ^x *A strong nation through higher education*. (2012). Indianapolis, IN: Lumina Foundation.
- ^{xi} Carnevale, A., Smith, N., & Strohl, J. (2010). *Help wanted: projections of jobs and education requirements through 2018*. Washington, DC: Georgetown University Center on Education and the Workforce.
- ^{xii} *A strong nation through higher education*. (2012). Indianapolis, IN: Lumina Foundation.
- ^{xiii} *Michigan's Hot 50*. (2011). Lansing, MI: Michigan Bureau of Labor Market Information and Strategic Initiatives.
- ^{xiv} Business Leaders for Michigan (2012). 2012 Economic Competitiveness Benchmarking Report. Detroit, MI: Business Leaders for Michigan.
- ^{xv} A-Z, S. I. (n.d.). College & Career Tables Library. *National Center for Education Statistics (NCES) Home Page, a part of the U.S. Department of Education*. Retrieved February 26, 2013, from http://nces.ed.gov/datalab/tableslibrary/searchresults.aspx?type=search&keywords=&datasource=IPEDS&releaseyear=0&ipeds=0&showlike=no&type_get=get
- ^{xvi} Business Leaders for Michigan (2012). 2012 Economic Competitiveness Benchmarking Report. Detroit, MI: Business Leaders for Michigan.
- ^{xvii} Moving Migration Patterns | Atlas Van Lines. *Moving Companies - Movers - Moving Services | Atlas Van Lines*. Retrieved February 26, 2013, from <http://www.atlasvanlines.com/migration-patterns/>
- ^{xviii} LISTSERV 15.5 - POPULATION-CENSUS Archives. *LISTSERV 15.5 - State Of Michigan Listserv Archives at LISTSERV2.MICHIGAN.GOV*. Retrieved February 26, 2013, from <http://listserv2.michigan.gov/wa.exe?A2=ind1209C&L=POPULATION-CENSUS&D=1&P=957>

^{xix} CGI - Migration. *SOM - State of Michigan*. Retrieved February 26, 2013, from <http://www.michigan.gov/cgi/0,4548,7-158-54534-140915--,00.html>

^{xx} *Michigan's Hot 50*. (2011). Lansing, MI: Michigan Bureau of Labor Market Information and Strategic Initiatives

^{xxi} CGI - State Population Projections to 2030. (n.d.). *SOM - State of Michigan*. Retrieved February 26, 2013, from <http://www.michigan.gov/cgi/0,1607,7-158-54534-116118--,00.html>

^{xxii} A-Z, S. I. (n.d.). The Integrated Postsecondary Education Data System - Home Page . *National Center for Education Statistics (NCES) Home Page, a part of the U.S. Department of Education*. Retrieved February 26, 2013, from <http://nces.ed.gov/ipeds/>

