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Talent 2025: Assessment of the West Michigan Talent Development System

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Assessment of the West Michigan
Talent Development System**

August 11, 2010

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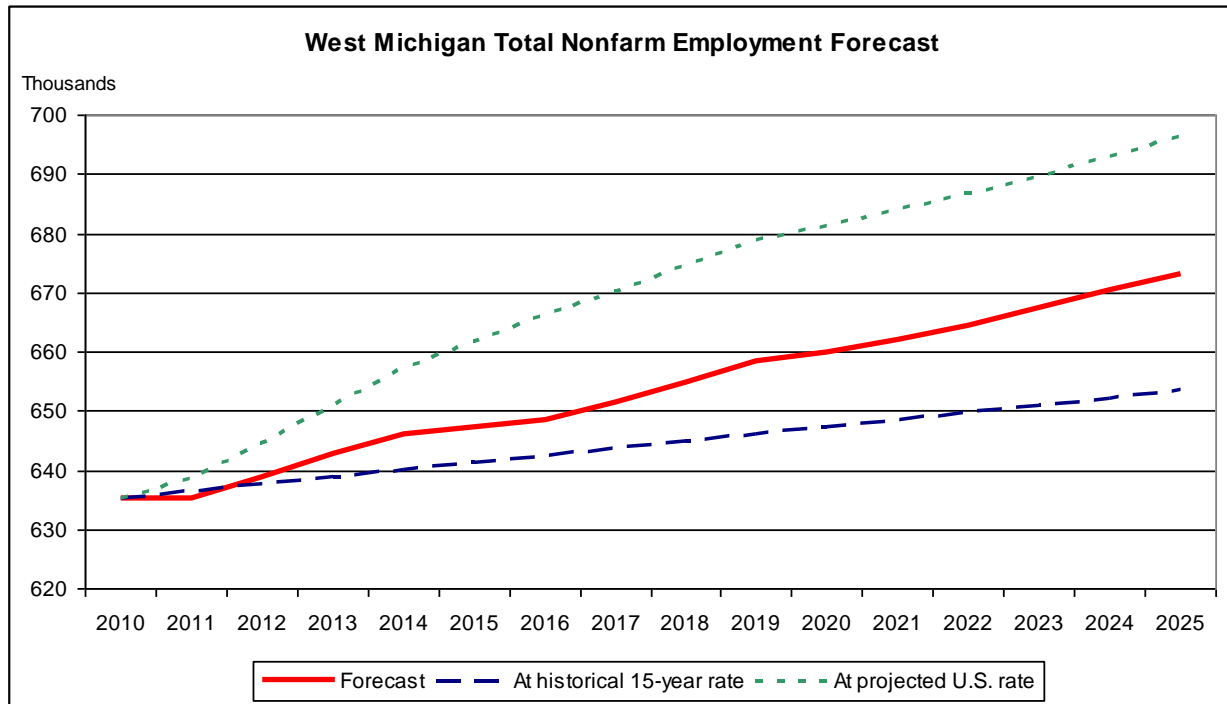
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Executive Summary

The West Michigan region faces two possible futures. If it continues on its current path, we forecast that the region will grow at a 0.4 percent annual rate during the next 15 years, generating 38,000 more jobs in 2025 than existed in 2010. While this forecast is an improvement over historical trends, it is well below the expected 0.9 percent average annual rate of employment growth currently forecast for the nation. If the region simply grew at the national rate—in other words, if it were “average”—it would gain 61,000 jobs by 2025.

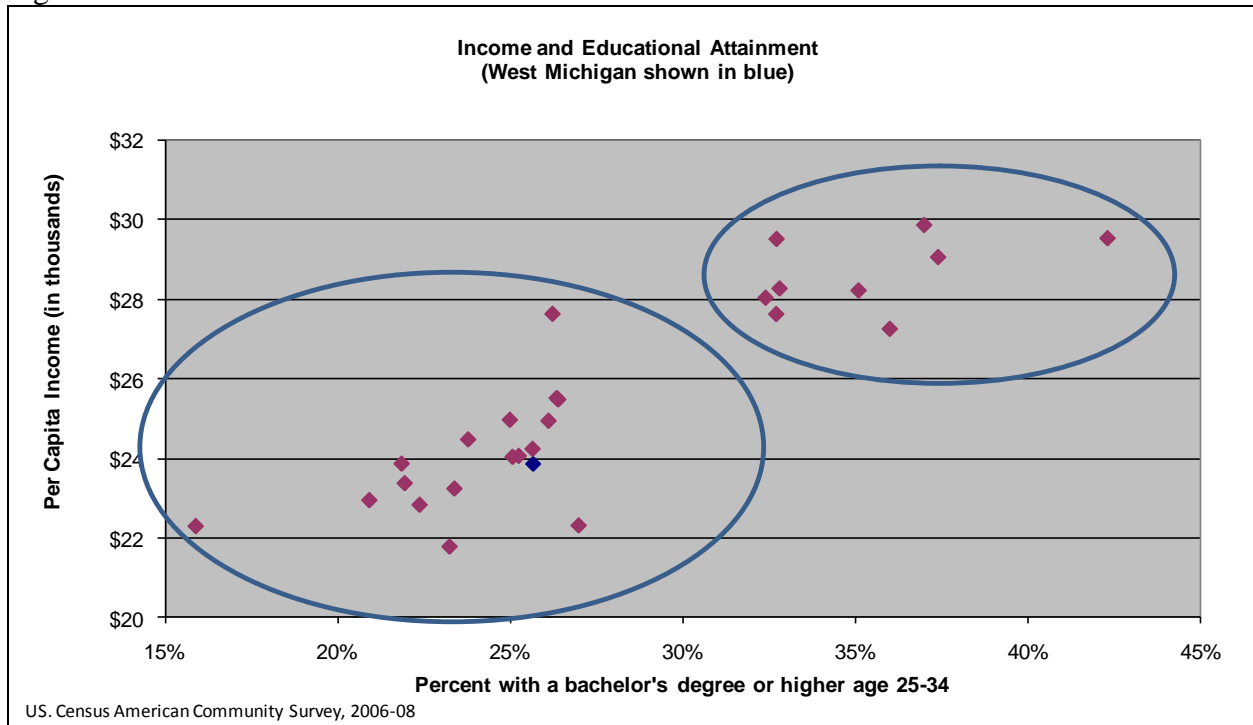
Figure 1



The growth trajectory we have forecast for the region is based on the growth potential of its current base industries, as well as expected increases in research and development activities in the life sciences sector and a substantial increase in its health care sector. To achieve a greater rate of employment growth during the next 15 years, we suggest that it work to improve the quality of its workforce.

The relationship between educational attainment and per capita income has been clearly demonstrated many times. Figure 2 shows the income and educational levels of metropolitan regions that have characteristics similar to West Michigan. The regions are clearly coalescing into two groups: high talent—high income regions and medium talent—medium income regions; unfortunately, the West Michigan region (the blue diamond in Figure 2) is in the latter group.

Figure 2



The challenges facing West Michigan are to improve both its talent development system and its ability to attract needed talent to the region. These are not easy tasks and will require a strong and active partnership between the region's private and public sectors.

The purpose of this report is to

- document the need to improve the region's talent development system,
- identify potentially successful practices in other regions,
- identify existing assets in the regional talent system, and, most importantly,
- develop an indicator system that can be used to monitor the success of the region.

The components of the system are listed in Figures 3 and 4 and clearly show the following:

- The key missing indicator for the monitoring system is the absence of any consistent, comparable data on pre-K quality and availability.
- Student performance in the region falls dramatically between the third and sixth grade and does not recover.
- Too many high school students are not graduating.
- The retention rate of the region's community college students lags behind the top 10 percent of the community colleges in the nation—meaning that too many students are dropping out and not obtaining the skills required for success in their careers.
- While a large percentage of the region's nontraditional students (those over 25 years old) do not need remedial education courses as they enter college, the same cannot be said for traditional students. Too many students seem to be leaving high school without being college-ready.

Figure 3

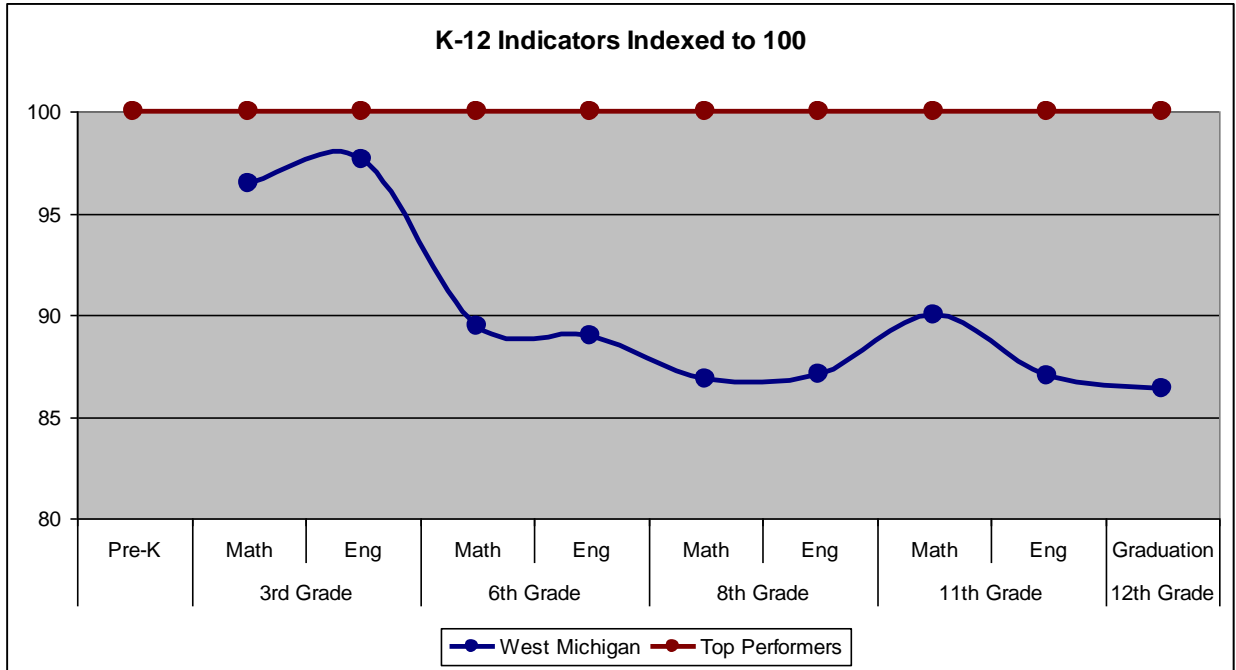
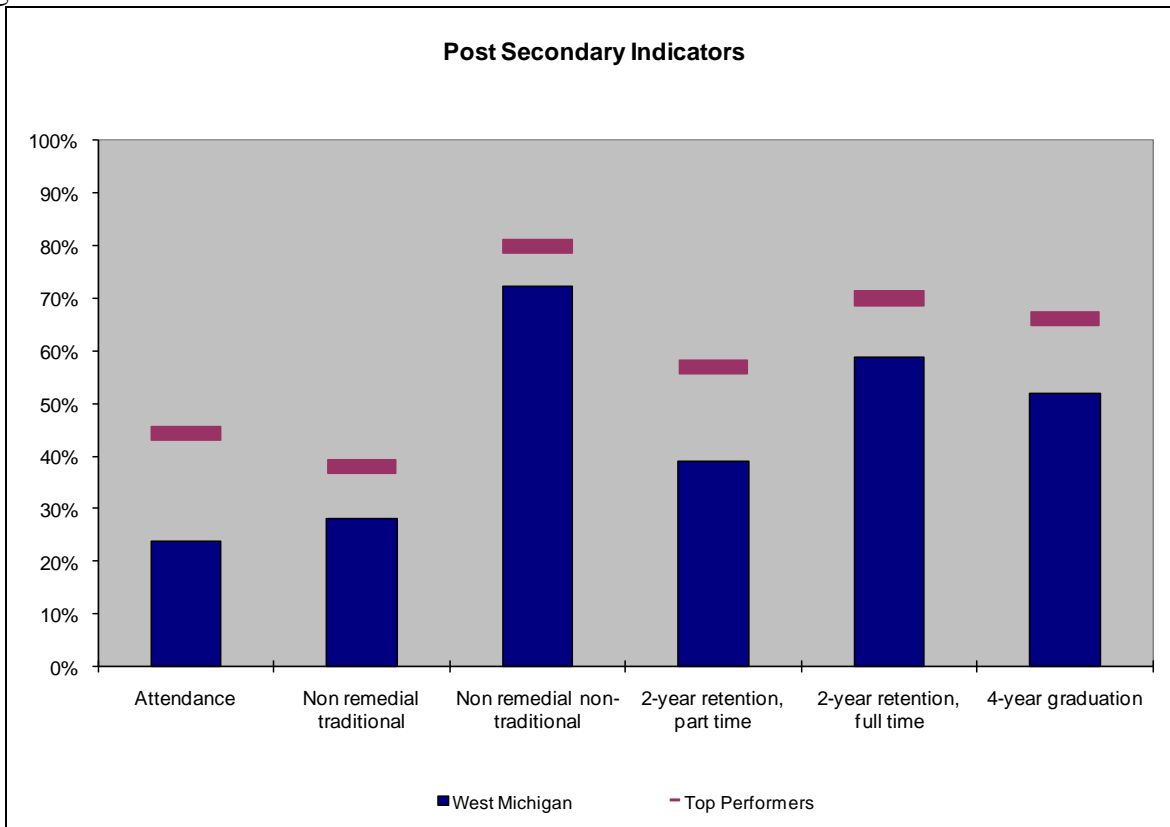


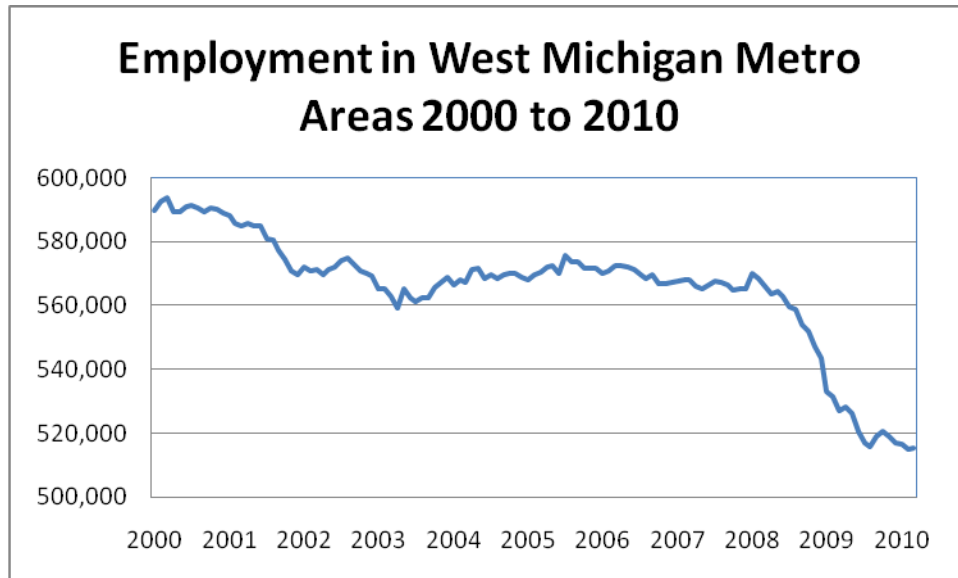
Figure 4



Introduction

The West Michigan economy is currently recovering from one of the deepest recessions it has suffered in the past 30 years. In 2009 alone, more than 49,000 residents of West Michigan lost their jobs.¹ Of course, the downturn was global in magnitude: 2009 was the first year on record that the entire global economy declined.²

Figure 5



W.E. Upjohn Institute, seasonally adjusted data from the Bureau of Labor Statistics, Current Employment Statistics (BLS-CES).

More troubling for West Michigan is that this deep recession hides a significant economic structural change that could have a more lasting and negative impact on the region's economy. During the last national expansion, from 2002 to 2007, the three metropolitan areas of West Michigan (Grand Rapids, Muskegon, and Holland) didn't see their employment grow; instead they lost 3,300 workers (Figure 5). There are many reasons given for the region's loss of employment, including the relentless demand for productivity improvements and the severe price competition from Asia and Mexico. However, there is also the real fear that the quality of the region's talent base is below par. Now is a prudent time for the West Michigan business community to take stock of the region's talent base and development system to identify whether both are ready for the future.

This report offers a multipart analysis of the future demand and supply of workforce talent in West Michigan, including the identification of key performance indicators of the local talent system. The analysis begins by detailing the current and future environment of West Michigan. The first section provides an overview of the region's baseline, with a focus on the characteristics of West Michigan's current workforce. In the second section, these baseline characteristics help generate a view of how the region is likely to look in 15 years if nothing in

¹ "West Michigan," in this report, is defined as Allegan, Barry, Ionia, Kent, Montcalm, Muskegon, Newaygo, Oceana, and Ottawa Counties.

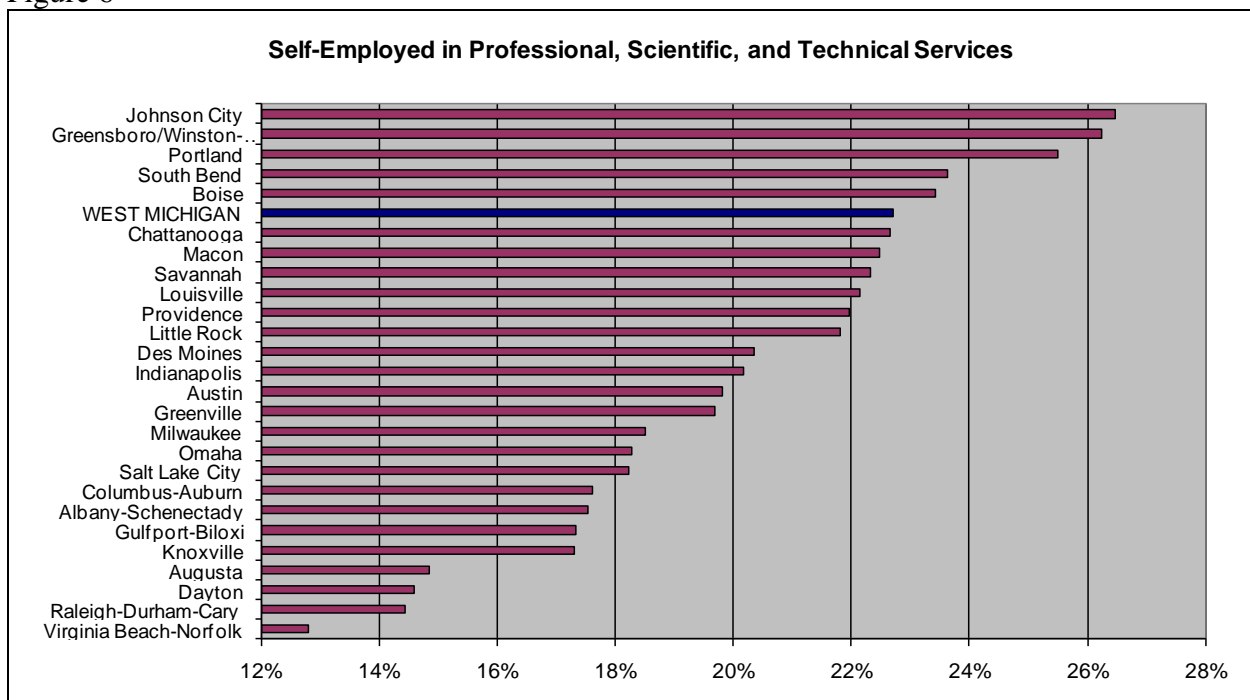
² International Monetary Fund. April 2009: *World Economic Outlook: Rebalancing Growth*. Available at <http://www.imf.org/external/pubs/ft/weo/2010/01/index.htm> (accessed May 17, 2010).

the current workforce and economic system changes. Another way to think of these first two sections is as a call to action for the region.

The rest of the report examines West Michigan’s workforce development system and how it compares to other parts of the state, nation, and even the globe. In the third section, existing assets for the development of talent in the region are identified, followed by descriptions of the more promising talent development initiatives in other parts of the country. Next, a set of indicators to monitor the region’s advancement toward a more promising alternative future are identified and analyzed using current data and a benchmark comparison with similar communities. Finally, a few conclusions arising from this analysis are discussed in the last section of the report.

Before we continue, however, it is important to remember that West Michigan has a long legacy of innovation and entrepreneurship—two salient factors for the success of any region. Both are reliant on the talent of the region, and more importantly on a regional environment that encourages risk taking, accepts new concepts and ideas, and embraces the learning process stemming from failures and second attempts. There are few measures that properly capture a region’s performance in innovation and entrepreneurship; however, we offer two. The first is the percentage of the region’s self-employed professionals in the professional, scientific, and technical services sector, which is shown in Figure 6. Among the 25 similar regions, West Michigan ranks sixth.³

Figure 6



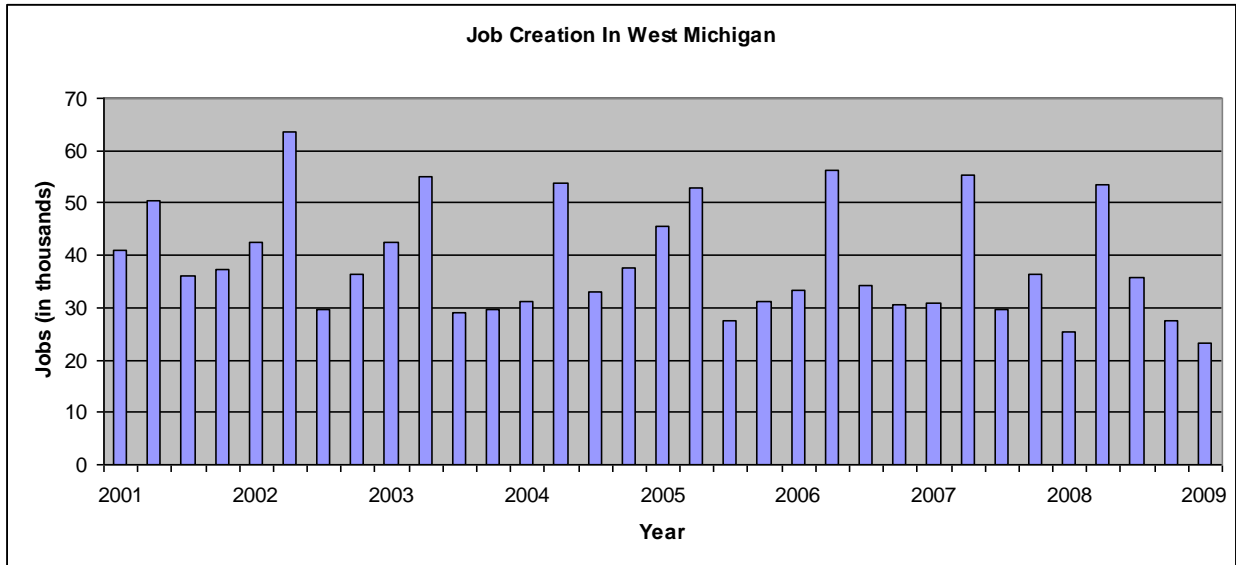
U.S. Census, American Community Survey (ACS) 2006-08

The second indicator that monitors innovation is job creation. Without innovation, employment growth would be at a standstill, at best, as the region’s firms would be just holding their own.

³ For more information on the comparison regions used in this report, see the “Regional Comparison” section starting on page 67.

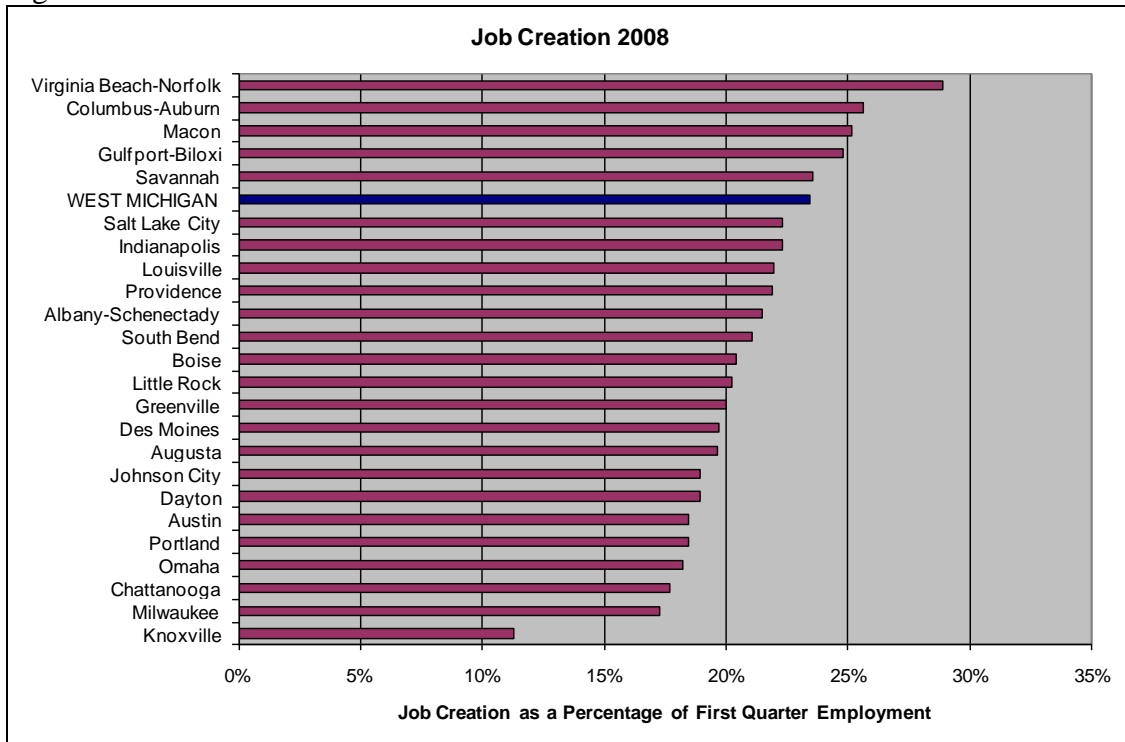
Innovation opens new markets with new products and services, or through the application of new technologies or designs to existing products and services. As these transformed products and services reach the market, job creation occurs. As shown in Figure 7, West Michigan has had a strong track record for job creation in the past eight years.⁴ Figure 8 also shows that, compared to other areas, West Michigan had a reasonable year in 2008.

Figure 7



U.S. Census Bureau, Quarterly Workforce Indicators (QWI)

Figure 8



U.S. Census Bureau, QWI

⁴ Job creation occurs when a firm creates a new job that is filled by a person who has never worked for the firm before; therefore, it excludes recalls and replacement hires.

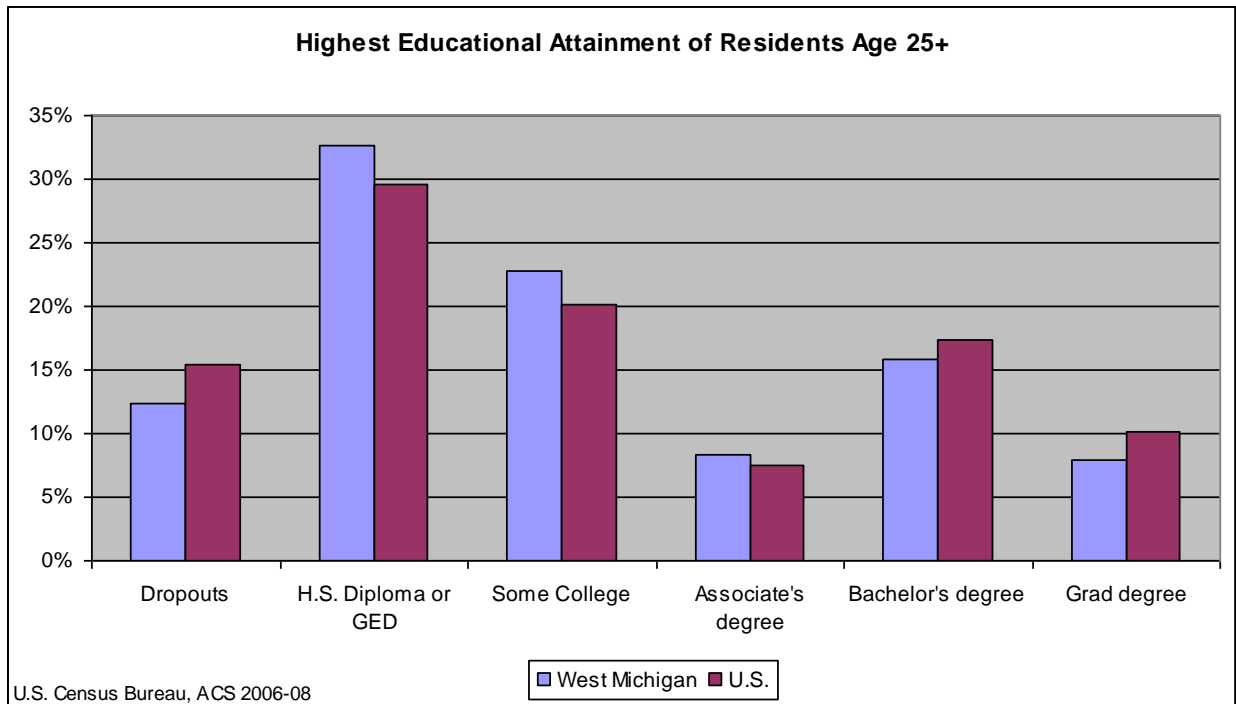
Baseline Talent Situation in West Michigan

Before digging more deeply into the region's workforce development system, it is important to develop an understanding of the characteristics of individuals currently working or available to work in West Michigan. This section provides data on three major themes of concern for the local workforce: educational attainment, age profile (and whether the aging of the workforce will be an issue), and current occupational mix.

Educational Profile

In general, West Michigan residents are not as well educated as the overall U.S. population. On the plus side, a smaller portion of West Michigan adults (age 25 or older) are high school dropouts compared to the national average (Figure 9). Unfortunately, a smaller share of West Michigan's population than the nation's has gone on to achieve the highest levels of education: a bachelor's or graduate degree. Even when associate degrees are considered, a smaller percentage of West Michigan adults have completed a formal postsecondary degree (not including certificates) than adults in the nation as a whole: 31.8 percent versus 34.9 percent, respectively. This suggests that the workforce available to employers in West Michigan is less educated than could be expected, on average, in other parts of the nation.

Figure 9



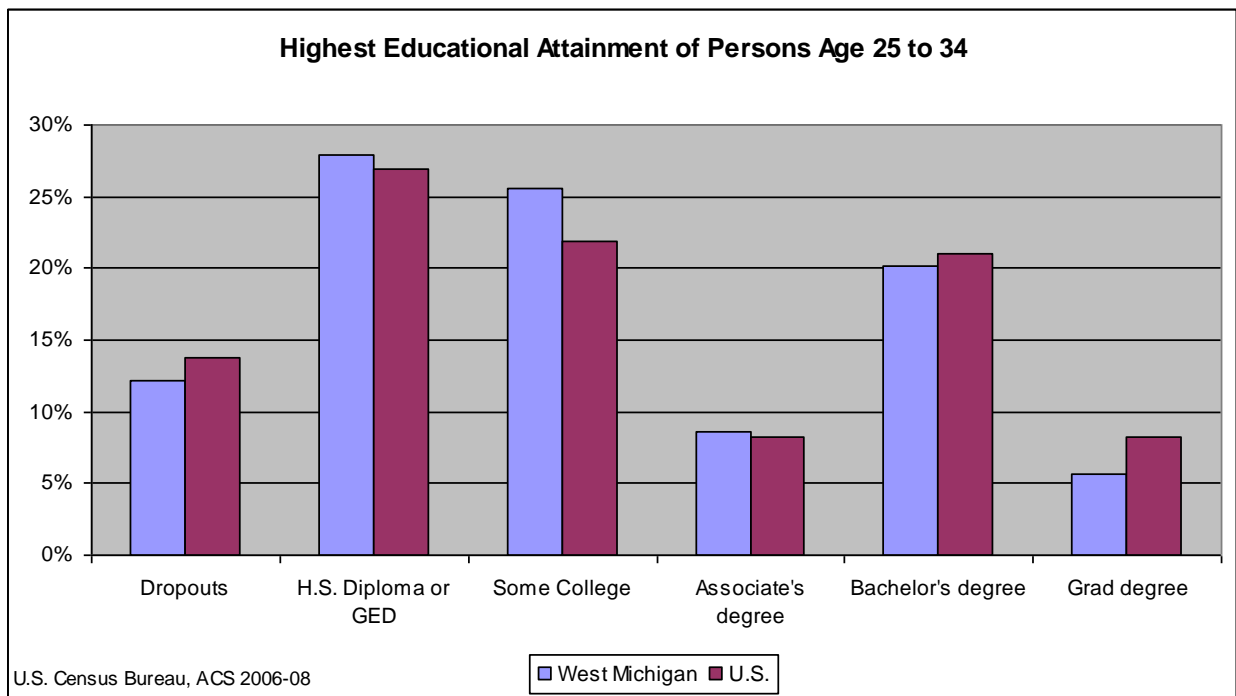
The educational attainment of all adults age 25 and older offers a measure of the overall skill level of the entire workforce. The educational attainment of younger workers is not considered, since persons age 18 to 24 are not yet past the age where traditional educational completion typically occurs. However, the workforce development community is increasingly concerned

with the educational attainment of young adults, defined here as persons age 25 to 34, because skill levels in this age category

- offer a useful gauge of a region’s attractiveness to the “young professional” population who are increasingly locating in regions with high amenities, and
- serve as a measure of the region’s future global competitiveness, since the individuals from this generation will turn into the region’s leaders of business, industry, education, and government by 2025.

Unfortunately, as shown in Figure 10, West Michigan trails the U.S. in the educational attainment levels of its age 25-to-34 population. On the plus side, a lower percentage of West Michigan’s young adults are high school dropouts, compared to the national average. In addition, a slightly higher percentage of the region’s young adults hold an associate’s degree. However, this same age group is below the national average in both the share of individuals with a bachelor’s degree and the share with a graduate degree.

Figure 10



Equally troubling, the percentage of this age group who have some college—which means they have attended (or are attending) college but have not completed a degree—is significantly higher in West Michigan than the national average (Figure 11). Some of these individuals, of course, completed certificate programs and are pursuing their careers; however, this should be true across the nation as well.⁵ The fact that more than 25 percent of the region’s young adults entered college but did not earn a degree suggests the existence of significant barriers to post-secondary graduation.

⁵ Certificate programs entailing one-year or less of training fall under the “some college” category. It is possible West Michigan employers have a uniquely high demand for workers with specialized training certificates compared to the rest of the nation; however, there is no evidence available that confirms this.

Figure 11

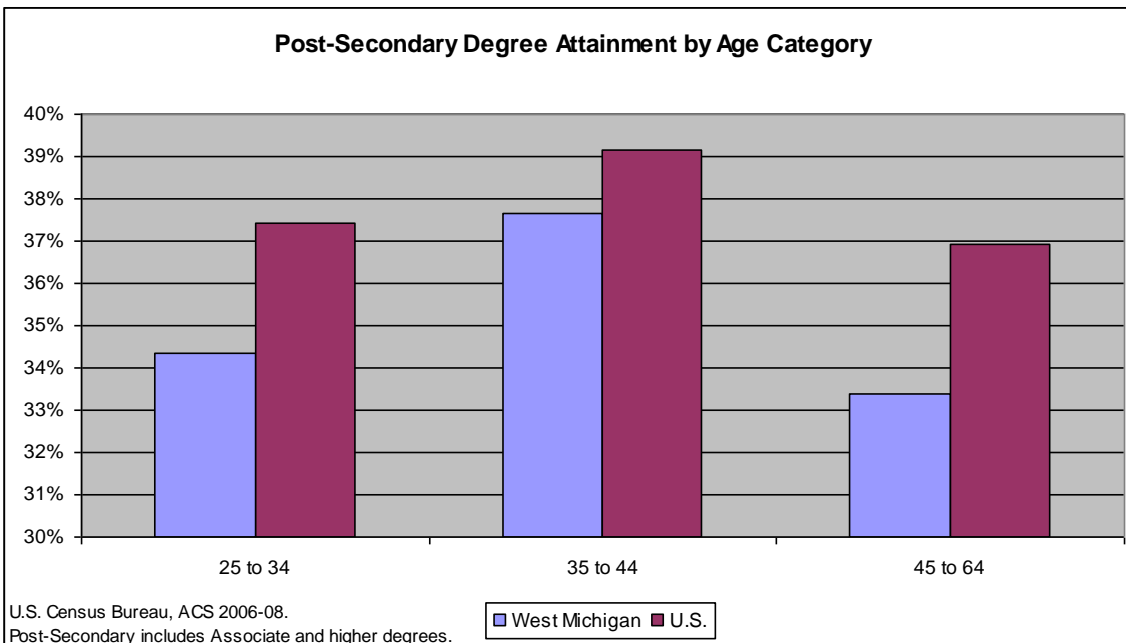
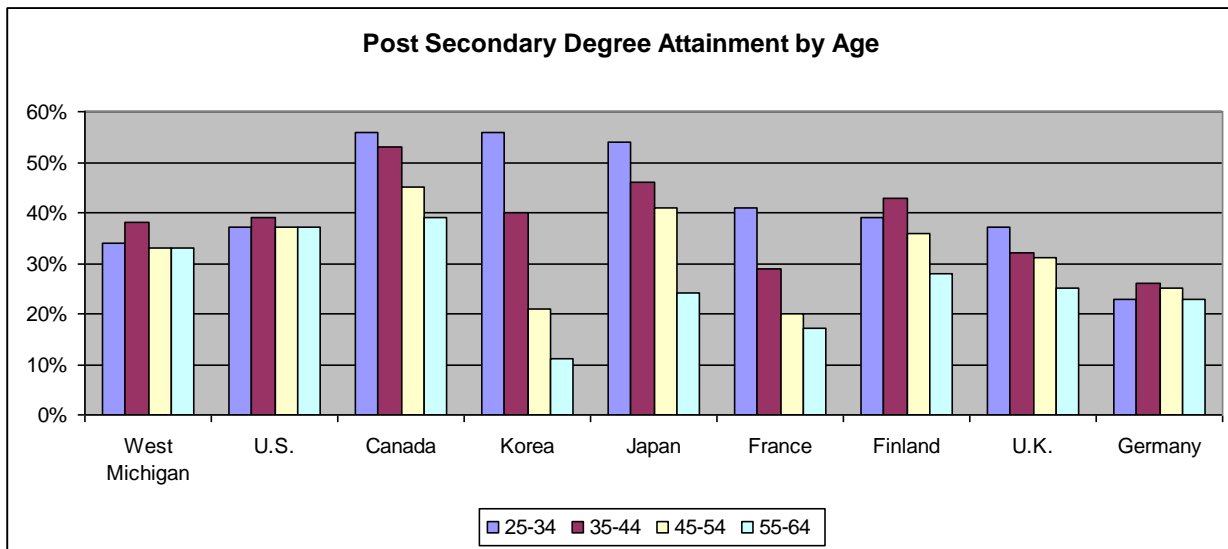


Figure 12



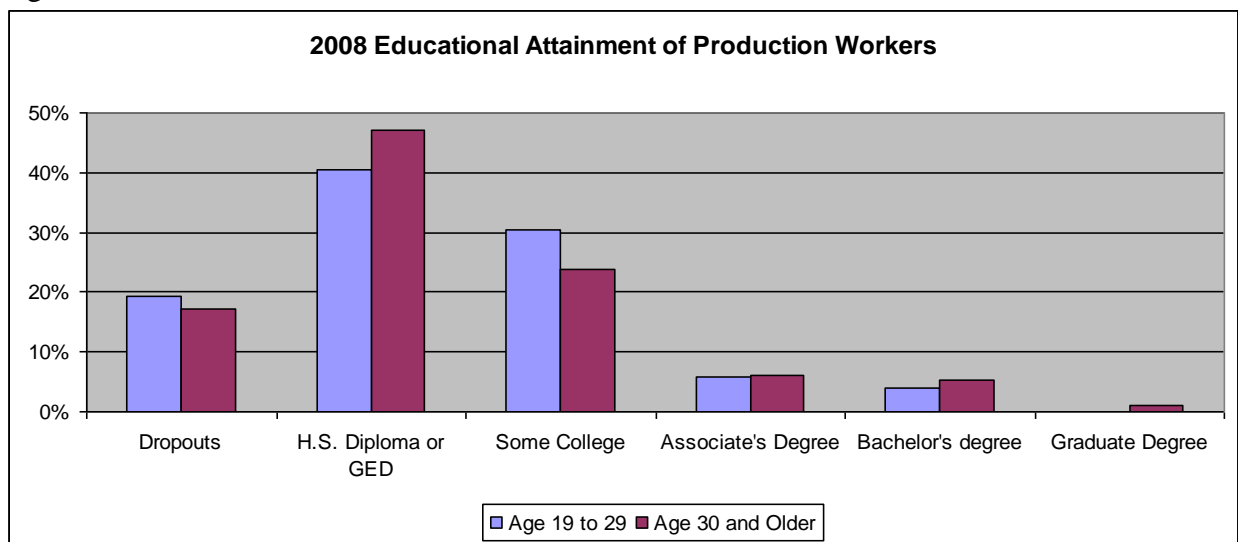
U.S. Census Bureau, ACS 2006-08; OECD *Education at a Glance*, 2009.

In the past, a general assumption has been that each generation will be more educated than the previous generation; however, recent trends suggest that this assumption may no longer be correct. As Figure 12 illustrates, in both West Michigan and the nation, the rate of any post-secondary degree completion is lower for 25- to 34-year-olds than it is for 35- to 44-year-olds. Of course, by any measure, the United States and West Michigan are still highly competitive global players on this front when compared to most other parts of the globe. Still, it should be noted that several nations have surpassed the United States and are poised to gain a competitive advantage in the future: Canada (56 percent), Korea (56 percent), and Japan (54 percent) all have

levels of post-secondary attainment among their age 25-to-34 populations that exceed the U.S. level of 42 percent (Figure 12).⁶

A possible threat to the region’s economic base production activities is the quality of its younger workers. Today the production environment is more demanding than ever before, as most manufacturers require a minimum of a high school degree and often some postsecondary education, such as a certification of training. However, a higher percentage of the region’s production workers who are under the age of 30 are high school dropouts than of production workers who are age of 30 or older. Fewer of the younger workers have a high school diploma, while more have taken some college. Although some of these young workers may still be completing certificates or two-year technical degrees for more advanced manufacturing-related positions, it is concerning to see that high school dropouts are actually increasing among the younger generation of workers in this field. It suggests that employers may be selecting among a shrinking pool of qualified applicants compared to previous generations.

Figure 13



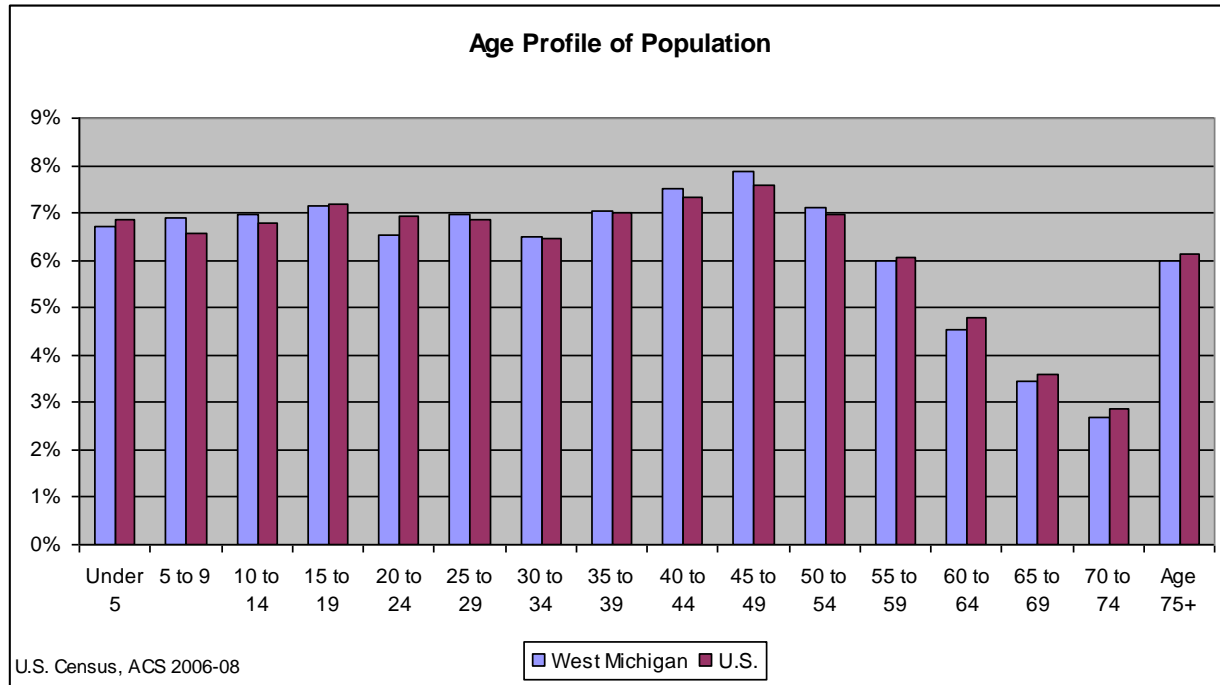
W.E. Upjohn Institute, analysis of Ruggels et al. University of Minnesota IPUMS database (IPUMS)

Age Composition

A second major factor of concern for workforce development is the age of the region’s population. If the pool of workers is rapidly aging or the region is devoid of a source of young, up-and-coming workers, area employers could struggle to fill positions as workers retire. As shown in Figure 14, West Michigan is home to a slightly higher concentration of middle-aged residents in their 30s, 40s, and early 50s than the nation as a whole. Conversely, persons in their early 20s (age 20 to 24), as well as older adults (age 55 and older) represent a smaller share of West Michigan’s population than they do nationwide. Overall, most prime-working-age groups in West Michigan are not notably larger or smaller in relative size than in the United States as a whole; however, the smaller concentration of persons age 20 to 24 and persons age 65 and older do confirm that the region is not a strong destination for either college attendance or retirement.

⁶ OECD. *Education at a Glance*. Paris: OECD 2009.

Figure 14



Detailed Age and Educational Profile

While data on the education and age characteristics of the overall region can provide some information on whether workforce shortages will arise in the future, the more important question to consider is how specific occupations are impacted by these trends and whether problems can be anticipated for the business activities that are necessary for the future success of the West Michigan economy. In reality, some occupations are more likely than others to be impacted by an aging workforce or a shortage of workers who have the necessary level of education and training. Additionally, some occupations are more critical to the industries that are key to the area’s growth, such as export-base industries, high-growth industries, and innovative or creative fields.

An examination of the age of West Michigan workers indicates that only 15.7 percent were age 55 or older in 2008—an age group that can be expected to be retiring by 2025. In comparison, nationwide 18.3 percent of workers were age 55 or older in 2008.⁷ This suggests that the region has a younger workforce than the United States and that it may face fewer problems with mass retirements by 2025.

The major occupational fields most affected by an aging workforce are those near the top of Figure 15: legal occupations; cleaning and maintenance; and arts, design, and media jobs. At the other end of the spectrum are fields such as fishing, farming, and agriculture; food prep and service; and health care support—all of which rely on older individuals for less than 10 percent of their workforce. On a positive note, several occupations that could be key to West Michigan’s

⁷ U.S. Census Bureau, *American Community Survey*, 2008. Percent of employed civilians.

dominant industries—for example, engineers, scientists, and production workers—do not appear to be heavily reliant on workers over age 55.

Figure 15

West Michigan Major Occupations with Oldest Workers

Occupation	Under Age 55	Age 55+	Percent of Occupation Age 55+
Legal occupations	2,704	1,068	28.3
Cleaning and maintenance	20,306	6,271	23.6
Arts, design, media	6,423	1,665	20.6
Business & finance operations	17,992	4,463	19.9
Health care practitioners	26,410	6,378	19.5
Office administration	76,370	17,996	19.1
Community/social services	9,606	2,181	18.5
Transportation	35,858	7,965	18.2
Management	48,078	9,663	16.7
Computer/mathematical	8,623	1,622	15.8
Education	30,719	5,756	15.8
Installation, repair, maintenance	17,899	3,192	15.1
Sales	61,215	10,455	14.6
Protective service	7,188	1,200	14.3
Engineering and architecture	12,429	1,987	13.8
Personal care	16,325	2,471	13.1
Production workers	69,040	10,201	12.9
Sciences	4,203	560	11.8
Construction	26,385	3,193	10.8
Healthcare support	14,539	1,525	9.5
Food preparation and service	32,747	2,212	6.3
Farming, fishing, and forestry	5,520	371	6.3
Total	550,579	102,395	15.7

Upjohn Institute analysis of Ruggels et al. (2008) IPUMS data.

In occupations that are key to the success of the region’s base economy, such as engineering and production occupations, there is evidence that firms in West Michigan have been fairly successful in bringing on younger workers. As shown in Figure 16, the largest age category for engineers in West Michigan is 25 to 29 years of age, which illustrates the relative success of area firms in hiring new college graduates. Overall, employment in engineering occupations trails off significantly at age 50 and above, which suggests that local companies may not be as dependent as previously thought on these more experienced engineers. Additionally, it shows that there is a pipeline of young engineers currently gaining experience in West Michigan.

Figure 16

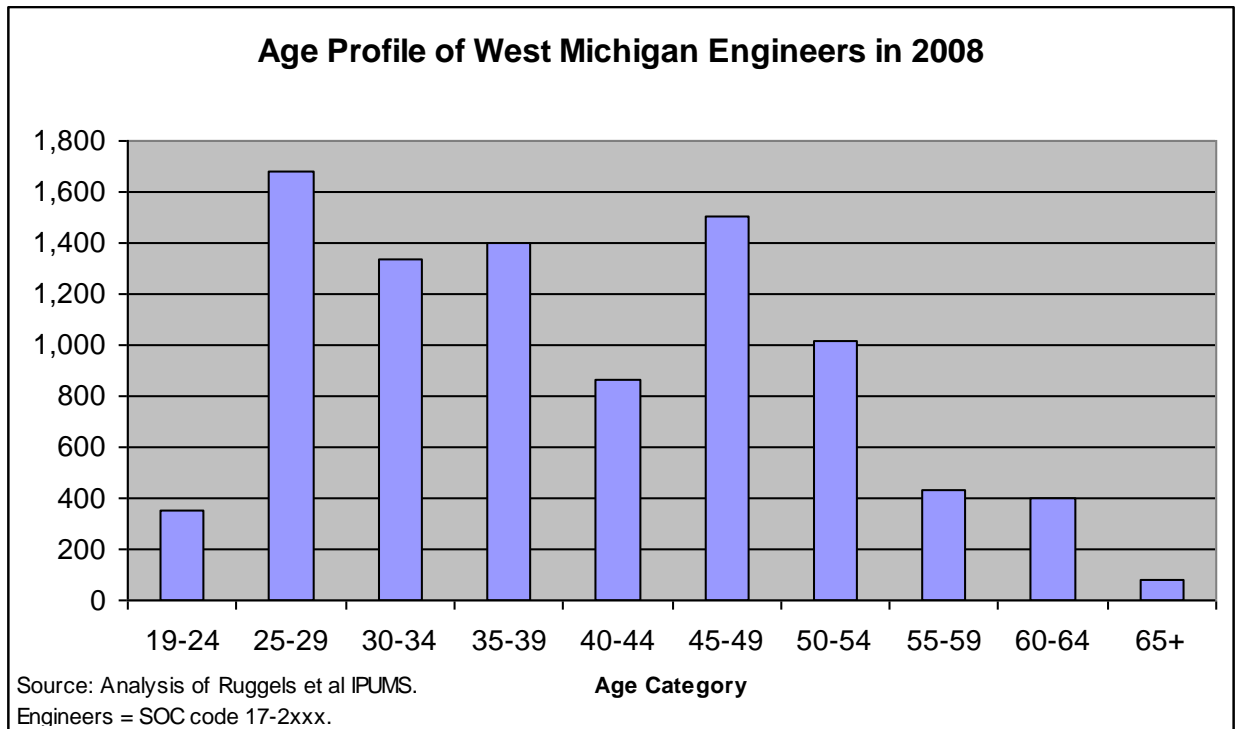
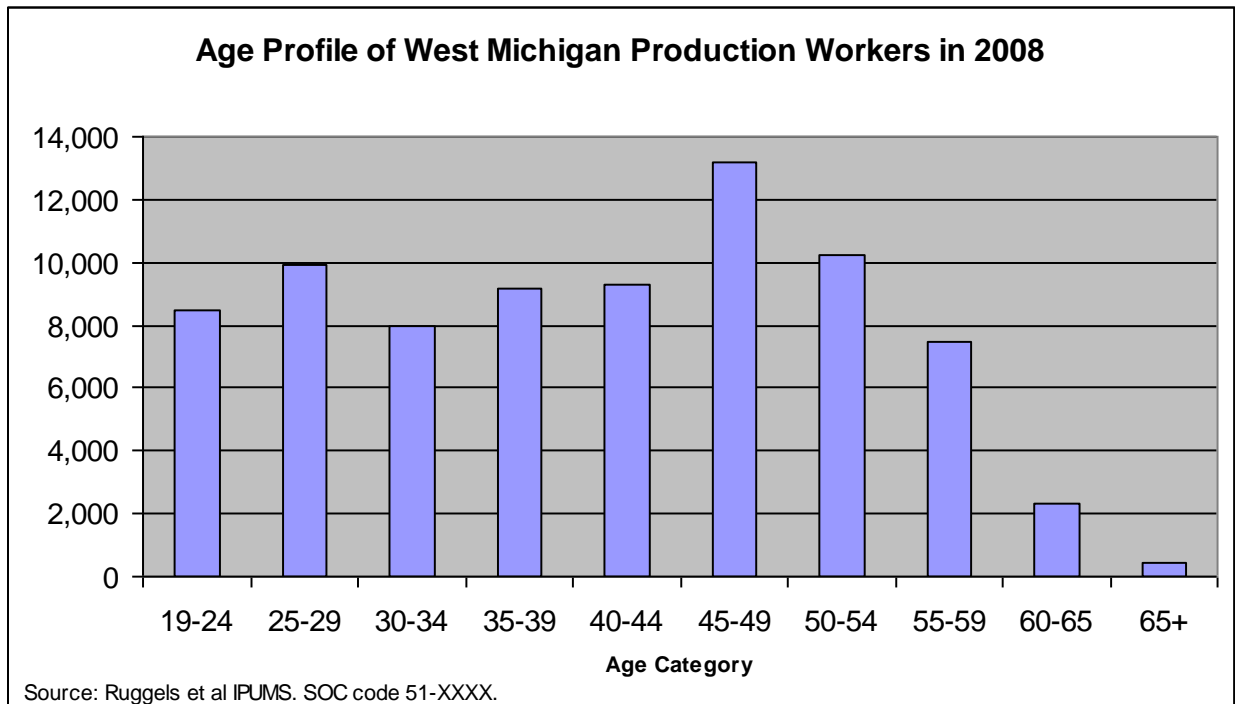


Figure 17



The broad category of production occupations, which includes workers ranging from basic assemblers to skilled manufacturing trades such as machinists and CNC machine setup, relies on a large number of workers age 45 to 49 (Figure 17). This could be concerning for firms that rely

on experienced or skilled workers, especially since the steep drop-off in employment above age 54 suggests that production workers may move to less physically demanding occupations or retire at a younger age than workers in other occupations. However, on the plus side, the age-25-to-29 category represents the third largest group of production workers and suggests that West Michigan firms have had some success in recruiting employees from the millennial generation—although the question remains as to whether these workers are obtaining the technical skills necessary for future high-tech manufacturing work.

In general, the data suggest that the area may not be facing an “age cliff,” where the rapid retirement of baby boomers and a shortage of younger workers could stress the workforce system. A complete set of charts for every major occupational category (Appendix A) illustrates that few fields are composed of workforces where the largest share of workers is age 50 or older—the group most likely to be retiring by the year 2025. With a few exceptions, most occupations are dominated by workers in their 40s or even 30s, which are ages when the participation rates are highest. This suggests that there are likely to be an ample number of younger workers in most occupational fields currently gaining the experience necessary to advance into senior level positions within their chosen career fields over the next 15 years. Instead, however, the real challenge may be whether this workforce will possess the skills and education necessary to boost the region’s competitiveness by 2025.

Occupational Composition

Not surprisingly, the occupational composition of West Michigan’s current workforce reflects the region’s history as a manufacturing center for goods such as furniture, automobile parts, and food products. However, over time the occupational mix has slowly shifted as production work has moved out of the community and the importance of services has grown. Figure 18 shows the level and relative share of employment in each of seven general occupational groupings for both today (2010) and 20 years ago (1990).

Figure 18

West Michigan Occupational Employment Breakdown

General occupational category	1990		2010	
	Workers	Percentage	Workers	Percentage
Production and distribution	131,000	23.6	116,501	18.3
Knowledge-based workers	94,784	17.1	120,631	19.0
Service workers	85,866	15.5	126,395	19.9
Retail and sales	64,364	11.6	65,560	10.3
Administrative	94,116	17.0	107,049	16.9
Construction and trades	54,189	9.8	54,347	8.6
Other	29,823	5.4	44,819	7.1
Total	554,142		635,302	

Upjohn Institute estimate using REMI model. Excludes Oceana and Montcalm counties.

As the nature of the local economy has changed over the years, more workers have moved into knowledge-based occupations and service jobs, while the demand for traditional blue-collar jobs such as manufacturing production work, construction trades, and warehouse distribution positions has declined. Additionally, even within these broad occupational categories, significant shifts have occurred that reflect the changing nature of the industries in West

Michigan and their demand for workers. A listing of detailed occupational employment for the region, which is available in Appendix B, illustrates many of these underlying changes, such as the rise of health care jobs and the stagnation of retail activity—both of which reside within the larger category of service occupations. The same is true even within broad fields that have faced decline: for example, within production and distribution occupations there has been a significant increase in demand for food processors and motor vehicle operators amidst a rapid decline in many other similar professions.

Figure 19

2010 Occupational Grouping Comparison (%)

General occupational category	West Michigan	United States
Production and distribution	18.3	12.9
Knowledge-based workers	19.0	21.4
Service workers	19.9	21.1
Retail and sales	10.3	10.1
Administrative	16.9	18.2
Construction and trades	8.6	9.3
Other	7.1	7.0

Upjohn Institute estimate using REMI model.

Note: West Michigan excludes Oceana and Montcalm counties.

Despite the rapid transition that has occurred over the past two decades, the worker composition in West Michigan still varies significantly from the rest of the country. For example, knowledge-based occupations represent the largest share of all U.S. workers, making up 21.4 percent of employment nationwide. However, these occupations account for only 19 percent in West Michigan, where knowledge-based work is only the second largest occupational field (Figure 19). Overall, the West Michigan region trails the rest of the nation in developing a knowledge-based and service-based workforce, while retaining a larger portion of workers involved in traditional blue-collar activities.

Of course, the mix of workers currently in West Michigan does not necessarily help or hinder the region’s future growth. For one thing, even established workers can and do make the transition to new occupations—usually through vocational training and postsecondary educational programs, which are the focus of Talent 2025. Also, the possession of a unique concentration of workers in an occupational area, such as West Michigan’s high percentage of employment in production and distribution jobs, can sometimes serve as a competitive advantage for attracting new industries that need specific types of workers. For example, consumer products companies could be attracted by the presence of designers who are currently tied to the office furniture industry, or a wind turbine manufacturer may find the region attractive because of the presence of experienced assembly and metal fabrication workers.

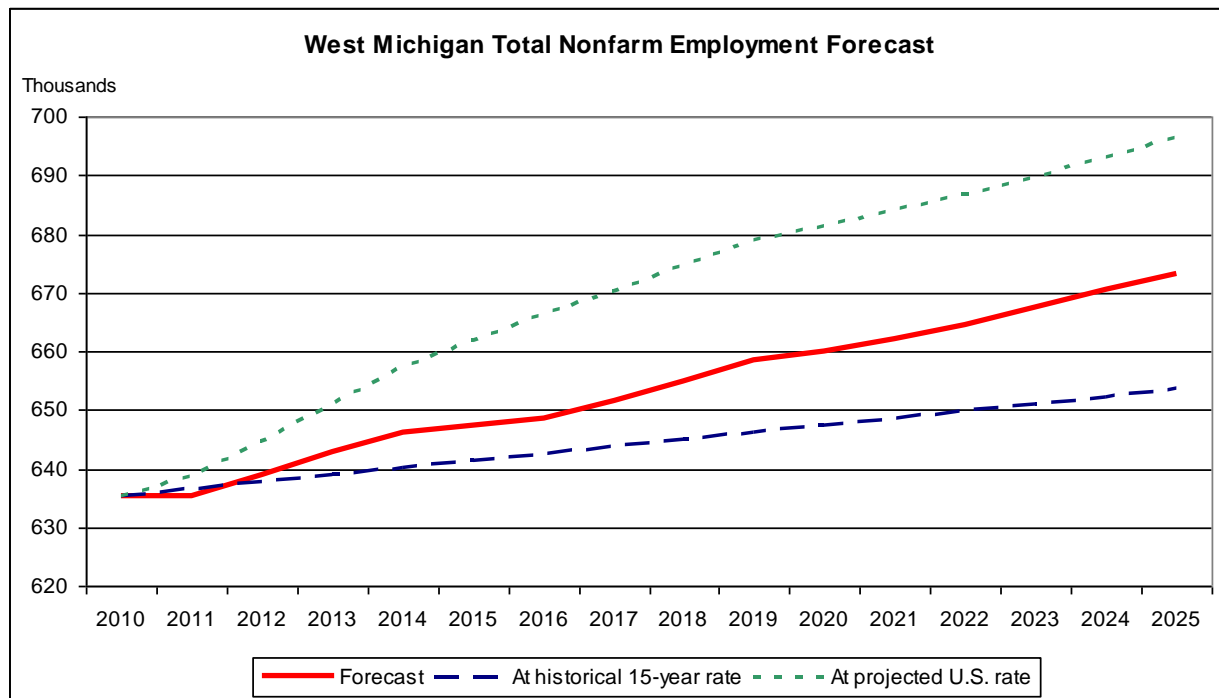
Projections

In order to build a strategy for developing the talent needed in the future, it is essential to first have an idea of what that future might look like. As such, this section details the results of a 15-year forecast custom-developed for the West Michigan region using

- an economic model of the region developed for the Upjohn Institute by Regional Economic Models Inc. (REMI).
- input on conditions and the future direction of the region collected during a meeting of local business leaders, economic developers, and researchers.⁸
- a general assumption that the national and state economies will enter recovery over the next year.

The resulting 2010-to-2025 forecast for West Michigan is most heavily influenced by the current mix of industries in the region and the expected long-term growth rates of these industries nationwide; this industry-based forecast represents the baseline of expectations forecast by the model. However, based on information provided by the local experts polled at the December forecasting meeting, along with our own knowledge of the region, the forecast was also adjusted to reflect some of the changes being pushed in West Michigan that should have an impact on the local economy. Specifically, the forecast was tweaked to reflect the planned growth of the region's medical and biomedical research industries, which are being bolstered by a substantial influx of private funding. For an explanation of the REMI model baseline forecast assumptions and the inputs used to modify the forecast, see Appendix D.

Figure 20



⁸ Meeting held December 7, 2009, at the GVSU Alumni House. For a complete list of attendees, see Appendix D.

Figures 20 and 21 summarize the total employment forecast for the West Michigan region over the next 15 years. If West Michigan employment grows at the rate expected by the forecast, there will be approximately 38,000 more jobs in the region by 2025, a 6 percent increase or a 0.4 percent average annual rate of growth. Compared to the growth rate experienced by the region over the past 15 years, the forecast is optimistic; between 1994 and 2009 the region added jobs at only a 0.2 percent annual average pace. Still, the growth forecast in the region for the period from 2010 to 2025 is quite modest compared to national projections, which call for a 0.6 percent annual average rate of growth. If West Michigan were able to match the U.S. growth rate, the region would add nearly 61,000 jobs over the next 15 years.

Figure 21

2010-to-2015 period forecast	Cumulative percentage change	Average annual rate of change	Net employment change
West Michigan forecast	6.0	0.4	38,000
At historical 15-year rate	2.9	0.2	18,200
At projected U.S. rate	9.6	0.6	61,000

Detailed Occupational Forecast

More important to the development of the future talent system is an understanding of the occupational needs that are expected to underlie the projected change in employment. Although current trends suggest that growth will be only modest in West Michigan, both national trends and local industrial and occupational shifts are likely to lead to very strong demand for select occupations, while employment demand in other occupational areas will stagnate or decline.

Figure 22

General occupational category	2010		2025		Change, 2010 to 2025
	Workers	Pct. share	Workers	Pct. share	
Production and distribution	116,501	21.0	106,297	16.7	-10,204
Knowledge-based workers	120,631	21.8	137,744	21.7	17,113
Service workers	126,395	22.8	147,064	23.1	20,669
Retail and sales	65,560	11.8	65,093	10.2	-467
Administrative	107,049	19.3	109,917	17.3	2,868
Construction and trades	54,347	9.8	55,949	8.8	1,602
Other	44,819	8.1	51,216	8.1	6,397
TOTAL	635,302		673,280		37,978

Upjohn Institute estimate using REMI model. Excludes Oceana and Montcalm counties.

Figure 22 summarizes the growth expected for major occupational groupings in West Michigan over the next 15 years. The fastest growth is projected to occur in the service category, which will need more than 20,000 additional workers and will grow to become the dominant type of job in the region, representing over 23 percent of all nonfarm employment. The number of knowledge workers is also expected to increase—in this case, by over 17,000. However, on its current path the West Michigan region will be unable to increase the overall share of these high-skill jobs in the local economy. On the other end of the spectrum, the forecast anticipates a

continued decrease in demand for workers to fill positions in production and distribution occupations over the same period. On its current course, West Michigan will have approximately 10,000 fewer production and distribution workers by 2025, as these types of jobs are expected to represent only 16.7 percent of all future jobs. For a detailed listing of projected occupational employment change between 2010 and 2025, see Appendix C.

Occupational Change and Future Talent Needs

Projected future talent demand depends on four major economic factors: 1) overall expected growth, 2) changes to the industrial mix of the economy, 3) shifts in the occupational mix required by industries, and 4) the educational and training requirements of individual occupations. Additionally, job demand will also be affected by retirements, which will increase the number of workers demanded even in fields that are otherwise declining. Over the next 15 years, these factors will combine to alter the nature of the workforce through differing demand based on education and training level of the workers needed by employers.

A starting point for understanding how the type of worker demanded might change in the future is the Bureau of Labor Statistics' (BLS) national-level forecast. Although the BLS occupational forecast extends only through 2018—not all the way to 2025—it does provide insight into both the opportunities and the challenges that face the future workforce. In particular, the BLS forecast provides an estimate of not just overall net employment, but also expected openings—a factor that influences workforce demand as the existing workforce retires or moves on into other occupations.

Figure 23

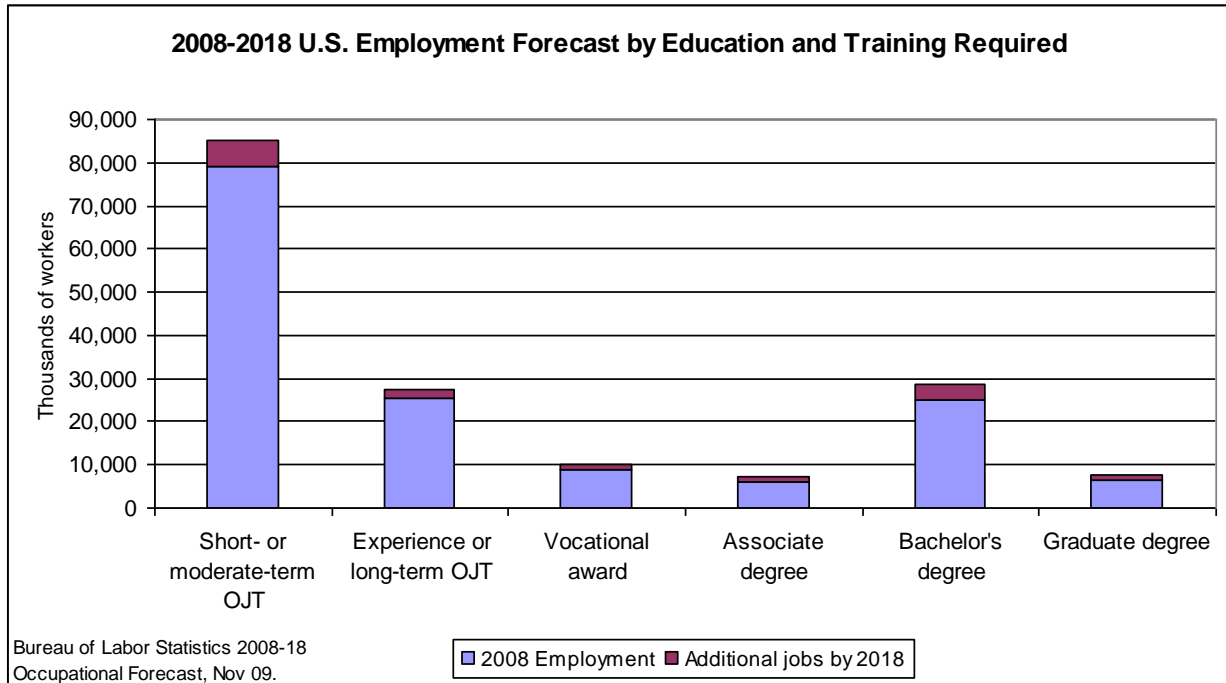
BLS 2008 - 2018 Forecast of Employment by Educational and Training Requirements

Required Education or Training of Worker	Total (000s)		Distribution		Net Change		Job Openings	
	2008	2018	2008	2018	Change	Pct Change	Openings	Share of Openings
First professional degree	2,001	2,354	1.3	1.4	353	17.6	746	1.5
Doctoral degree	2,085	2,430	1.4	1.5	345	16.6	743	1.5
Master's degree	2,531	2,995	1.7	1.8	464	18.3	1,008	2
Bachelor's or higher degree, plus work experience	6,518	7,068	4.3	4.3	550	8.4	2,106	4.1
Bachelor's degree	18,584	21,669	12.3	13	3,085	16.6	7,072	13.9
Associate degree	6,129	7,297	4.1	4.4	1,168	19.1	2,372	4.7
Postsecondary vocational award	8,787	9,951	5.8	6	1,164	13.2	2,927	5.7
Work experience in a related occupation	14,517	15,697	9.6	9.4	1,180	8.1	4,196	8.2
Long-term on-the-job training	10,815	11,620	7.2	7	806	7.5	3,081	6.1
Moderate-term on-the-job training	24,568	26,531	16.3	16	1,963	8	7,058	13.9
Short-term on-the-job training	54,396	58,593	36	35.3	4,197	7.7	19,619	38.5

Lacey, T.A. & Wright, B. (November 2009). Occupational employment projections to 2018. *Monthly Labor Review*. P. 82.

Much of the talk about the need for a more educated workforce centers on the rapid net employment growth expected in fields that require postsecondary degrees. According to the BLS, occupations requiring an associate's degree are expected to grow at a faster pace nationwide than any other category: 19.1 percent between 2008 and 2018, for an increase in demand of nearly 1.2 million workers (Figure 23). Similarly, rapid expansion is expected in all other job categories where an official postsecondary degree is required, ranging from bachelor's degrees up through doctoral and professional degrees. Conversely, net employment growth in occupations requiring only on-the-job training—which typically consist of positions accessible to workers with only a high school diploma or, in some cases, dropouts—are expected to expand at a more modest pace ranging from 7.5 to 8.1 percent.

Figure 24



However, net employment growth rates do not paint a complete picture of future employment need. For one thing, the high percentage growth rates for occupations requiring postsecondary degree attainment are a function of the comparatively small starting base of these fields. Instead, workforce demands are better represented by the number of openings and overall level of employment expected within each category in the future. By this measure, the number of openings for relatively unskilled work—occupations requiring no more than moderate-term on-the-job training—are expected to constitute over half of all job openings in the near term (Figure 24).

Graphing total occupational employment and growth by educational requirement category for the 2008-2018 period clearly illustrates the dilemma: although higher-skill jobs are quickly growing in importance, demand for low-skill workers will continue to be dominant (Figure 24). Unless there is a significant change in both the requirements of the work and the expectations of employers, this forecast indicates that over half of all U.S. employment in 2018 will still require no more than short- or moderate-term training—a level that can be filled by high school graduates and even high school dropouts with training that lasts no more than a few months.⁹

The Middle-Skills, Middle-Wage Debate

With the nation’s manufacturers adding 136,000 jobs during the first six months of 2010, news reports suggest that many are having difficulties in finding the skilled workers they need. As reported recently in the New York Times:

⁹ The Bureau of Labor Statistics defines “short-term training” as requiring no more than basic demonstration and less than one month of job experience to master. Occupations requiring “moderate-term training” are defined as those that can be mastered through informal training and/or job experience in less than 12 months’ time.

a number of manufacturers say that even if demand surges, they will never bring back many of the lower-skilled jobs, and that training is not yet delivering the skilled employees they need. Here in this suburb of Cleveland, supervisors at Ben Venue Laboratories, a contract drug maker for pharmaceutical companies, have reviewed 3,600 job applications this year and found only 47 people to hire at \$13 to \$15 an hour, or about \$31,000 a year.¹⁰

Still, labor economists are in the middle of an ongoing debate regarding the fate of middle-skills and middle-wage jobs in both manufacturing and services in the long term. Autor found that from 1998 to 2009, employment and wage growth has adopted a U-shaped pattern, one with growth in the extremes—low-wage, low-skilled jobs and high-wage, high-skilled jobs—and contracting opportunities in the middle. In his examination of employment data from 2007 to 2009, Autor found that there was no net change in the number of high-skilled professional, managerial, and technical occupations nor in the number of low-skilled service occupations, but an 8 percent drop in the in middle-skilled white-collar sales, office, and administrative jobs and a 16 percent drop in middle-skilled production jobs.¹¹ Autor, Katz and Kearney found the same results.¹²

The reasons most often cited for the decline in middle skills jobs are these three:

1. Automation has “deskilled” many of these jobs, making them available for lower-skilled workers.
2. Multinational firms have moved some of their middle-skilled jobs to offshore locations in China, Mexico, and other nations with lower wage rates.
3. Declining labor unions.¹³

On the other hand, Holzer argues that while middle-skilled jobs may have declined, the approaching retirement of the baby boomers will generate a strong replacement need for their workers. He concludes that the demand for both mid-level and high-level skills is likely to outpace the supply during the next decade.¹⁴

Some researchers, however, argue that part of the problem is that the Bureau of Labor Statistics (BLS) uses a methodology that underestimates the demand by employers for workers with a postsecondary education. For example, Carnevale, Smith, and Strohl claim that a past BLS forecast for the period 1998 to 2008 underestimated employers’ actual demand for middle and high skills, while their own methodology was closer to the mark for that time period. In 2018, they estimate only 38 percent of all jobs will require no more than a high school degree; in comparison, BLS predicts that 67.7 percent will require some level of work experience and on-the-job training but not postsecondary education. Carnevale et.al. predict that 29 percent of

¹⁰ Rich Motoko, “Factory Jobs Return, but Employers Find Skills Shortage,” *New York Times*, July 2, 2010.

¹¹ David H. Autor *The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings*. The Center for American Progress and the Hamilton Project, (2010).

¹² David H. Autor, Lawrence Katz, and Melissa Kearney Trend in U.S. Wage Inequality: Revising the Revisionists. *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.

¹³ Michael J. Handel “Skills Mismatch in the Labor Market” *Annual Review of Sociology* 20 (2003): 135-165.

¹⁴ Harry Holzer. *Is the Middle of the U.S. Job Market Really Disappearing? A Comment on the “Polarization” Hypothesis*, Washington, DC: Center for American Progress (2010). Harry Holzer and Robert Lerman. “The Future of Middle Skill Jobs,” Washington DC: Brookings Institution (2009).

workers in 2018 will have at least some college or an associate’s degree, compared to BLS’s 10.6 percent. Finally, Carnevale et.al. predict that 33 percent of the jobs will require a bachelor’s degree or higher, while the BLS predicts only 21.3 percent.¹⁵

Still their results show that average earning gains attributed to an associate’s degree are much lower than those for a bachelor’s degree. On average, a person with a two-year associate’s degree earns 27.6 percent more than a person who just completes high school. However, a person with a bachelor’s degree earns on average 50 percent more than a person with only an associate’s degree.¹⁶ In short, the future of middle-skilled jobs is uncertain and depends upon occupational demand estimates.

Figure 25

U.S. Wages by Training Level for 2008

Education or Training Level	Median Annual Wages (\$)
Professional degree	122,550
Doctoral degree	61,200
Master's degree	55,170
Bachelor's plus experience	89,720
Bachelor's degree	57,770
Associate degree	54,320
Vocational award or certificate	32,380
Long-term OJT	39,630
Moderate-term OJT	30,640
Short-term OJT	21,320

BLS Monthly Labor Review , Nov. 2009.

OJT = On-the-job training

Long-term OJT = More than 12 months training/exerience required

Moderate-term OJT = From 1 to 12 months training/experience.

Short-term OJT = Less than 1 month of training required.

Nevertheless, the one fact that almost all labor economists agree on is that education increases earnings overall, as illustrated by median annual wage data from the Bureau of Labor Statistics (Figure 25). For example, bachelor’s degree holders can expect a much greater return on their education than persons stopping at an associate’s degree, particularly once they gain experience and move into more advanced positions. Workers who complete nondegree vocational training programs or who are able to successfully gain skills through extensive on-the-job training can also increase their wages, though the effect is smaller.

West Michigan Talent Needs

Although the REMI model that was used to generate the 2010-to-2025 forecast for West Michigan does not break down occupational growth by education/training requirement, it is possible to produce an estimate using data from O-Net, a federal government project that

¹⁵ Anthony Carnevale, Nicole Smith, and Jeff Strohl. *Projections of Jobs and Education Requirements through 2018*. Washington, DC: Georgetown University. Center on Education and the Workforce report (2010).

¹⁶ Carnevale et.al. p. 5.

supplies detailed data on occupational classifications.¹⁷ Estimates of educational attainment were created by multiplying the detailed West Michigan occupational forecasts for 2025 (Appendix C) with national-level estimates of educational requirements for these occupational categories created by O-Net. Second, the number of additional turnover openings was estimated by assuming a continuation of the ratio of replacement openings to total employment based on data from the BLS 2006-2016 occupational employment forecast for the Grand Rapids region. Although these estimates provide some insight into the magnitude of demand for talent that will exist in the region for workers with postsecondary credentials, it should be noted that this methodology faces several major limitations.

1. O-Net educational requirement estimates for occupations reflect the *current* demand within occupational categories for workers of various educational attainment levels—not the level of educational attainment or training that will be required by employers in the future.
2. The data from O-Net reflects *national* average levels of educational attainment within broad occupational categories. As such, the data cannot reflect the unique demands of employers in West Michigan.
 - a. The number of openings is based on forecast data for a shorter period that ends far short of 2025. It is possible that the pace and relative ratio of replacements to employment will change in the future because of demographics or other social trends.
3. The estimates created here cannot accurately illustrate where the region should ideally be heading. These values are based on existing national and local average values—not the levels of education and training required by employers in the nation’s top-performing regions, which may better represent the ideal levels West Michigan should be striving to obtain.

As such, the West Michigan projections of employment growth and openings by educational and training requirements should be considered, at best, conservative estimates of the changes in worker demand that are likely to occur over the next 15 years. It should also be noted that employment levels may not exactly match previous charts and tables because of rounding in the estimation process.

¹⁷ More information on O-Net and access to data referenced in this report is available at <http://on-line.onetcenter.org/> (accessed March 17, 2010).

Figure 26

West Michigan Projected Worker Demand by Educational Attainment

Minimum Educational Level Required	2025 Employment	Net for the 2010 to 2025 Period			
		Growth	Percent Change	Replacement Openings	Net Openings: Growth Plus Replacement
Graduate Degree	64,350	9,060	16.4%	17,620	26,680
Bachelor's Degree	94,640	8,890	10.4%	28,120	37,010
Associate's Degree	54,510	3,990	7.9%	16,160	20,150
Some College	117,140	5,320	4.8%	37,330	42,650
HS Diploma	251,120	6,120	2.5%	92,060	98,180
Dropouts	87,410	1,700	2.0%	35,230	36,930

W.E. Upjohn Institute

As shown in Figure 26, if current trends hold true, the future workforce in West Michigan will change in a pattern similar to that expected for the United States. The number of jobs requiring a postsecondary degree is expected to expand at a rapid pace in percentage terms; however, the majority of openings will still be in lower-skilled occupations with few formal educational requirements. A surprising number of job openings expected over the next 15 years will not even require a high school diploma; although some of these positions will be filled by teenage students seeking entry-level job experience, the reality is that many will also be filled by adult high school dropouts with little in the way of skills or training.

At the other end of the spectrum, the growth of occupations requiring workers with a master's degree or higher is expected to grow at a faster rate than any other category, 16.4 percent, and provide over 26,000 job openings over the 15-year period. Occupations requiring this sort of advanced training include a diversity of jobs including scientists, business executives, physicians, professors, and engineers, and wages that typically range between \$55,170 and \$122,550 per year.¹⁸ While the growth of these sorts of high-skilled and high-wage jobs is certainly good for West Michigan, it could also present a challenge to the talent development system.

The region's existing colleges and universities do not currently produce enough graduates to fill all 26,000 openings that are expected, nor are they likely to be able to provide a diverse enough range of academic programs to satisfy all local employers. According to the National Center for Education Statistics, during the 2007-2008 academic year the region's largest producer of graduate degrees, Grand Valley State University, awarded 918 master's degrees and no PhDs¹⁹ or professional (MD, JD) degrees; the largest number of graduate degrees awarded were master's degrees in business (MBAs) or public administration (MPAs).²⁰ The region's other private schools provide even more limited graduate-degree offerings: Aquinas awarded 126 master's degrees, and Calvin awarded 12 during the same period, while Hope College in Holland has no graduate degree programs. Assuming that these institutions maintain their current rates of graduate program enrollments and completions, West Michigan's largest sources of graduate

¹⁸ National median 2008 salaries by educational level from the BLS *Monthly Labor Review* (November 2009).

¹⁹ GVSU does offer two clinical doctorate programs in nursing and physical therapy; however, these are specialized small clinical programs and not traditional doctoral programs.

²⁰ IPEDS database, available at <http://nces.ed.gov/ipeds/datacenter/Default.aspx> Accessed March 17, 2010.

school degrees will produce fewer than 16,000 new master's degree graduates over the next 15 years.

Other branch operations exist in West Michigan, but serve relatively small or specialized student populations (i.e., Western Michigan University, Ferris State University, Cooley Law School, and the University of Phoenix). Unfortunately, data on the number of individuals awarded graduate degrees from these institutions are not available; however, the number of annual completions is presumed to be relatively small. In short, to sustain the expected growth (or even push for a higher-achieving workforce environment) the region may need to consider the importance of factors such as quality of life in recruiting a talented workforce from other parts of Michigan and the United States.

Regional Asset Scan

The regional asset scan included in this section was prepared for the purpose of identifying regional innovative practices that can be put to scale for the Talent 2025 system. The West Michigan region was specifically examined to provide a listing of who is providing services that fulfill these key asset roles within the regional talent development system. Particular attention focused on five areas: 1) early childhood development; 2) primary and secondary schooling, with particular emphasis on career awareness, career development, and out-of-school time supports to assist the regional educational efforts for this age grouping; 3) higher education as inclusive of all forms of postsecondary education including two-year college programs, traditional four-year and graduate college studies, technical training inclusive of internship, and work study or service learning opportunities; 4) adult workforce development including adult and family literacy, workplace functional skills training, incumbent worker skill certification, and transitional skills training; and 5) talent attraction from outside the region and retention efforts within the region.

The process to collect this information was cumbersome because of an absence of consistent data sources and the lack of responsiveness of local contacts. The search included the identification and examination of preexisting up-to-date scans, contact with community 2-1-1 system databases, Internet searches, contact with United Way and community and local family foundation representatives. The intent was not to list all talent development or education-related services in the community, but rather, to identify programs, initiatives, and services that are innovative and have a proven track record.

The listing includes activities across the region, although some geographic areas are better represented than others because of response rates. In terms of the developmental periods, the kindergarten through secondary assets and adult workforce are represented at a greater rate than other developmental periods of the overall system. A lack of assets surfaced in the areas of early childhood education, adult postgraduate education, and talent attraction. A recommendation for further research would include scheduled focused interviews with community representatives and business leaders to further hone this listing.

TALENT 2025 Regional Asset Scan

Innovation		Alleghen	Barry	Ionia	Kent	Montcalm	Muskegon	Newaygo	Oceana	Ottawa
Program/Initiative	Partners/Description									
<u>Early childhood</u>										
First Steps Commission	<p>The First Steps Commission is the governing body of First Steps and is comprised of 19 community leaders representing business, education, health care, child advocacy, and philanthropy. Commission members have diverse interests and backgrounds but share a common focus: all children deserve the opportunity to reach their full potential through a high-quality and aligned system. First Steps was originally created in 2005, initially titled the Early Childhood Children’s Commission, and was created to be an independent and influential entity that, in collaboration with other community stakeholders, sets and advances the agenda and priorities for early childhood work in Kent County. The Commission is intended to be independent and neutral with a priority of enhancing communication and coordination.</p>				√					
Ready for School	<p>The Ready for School program, operating in the Holland-Zeeland area since 2007, has a goal of preparing 75 percent of 5-year-olds for kindergarten by 2013. To that end, the program has added four more schools, created a "readiness" definition, and invited 230 preschool teachers to professional development seminars. In 2009, 1,300 incoming kindergartners were examined for school readiness using a state test on pre-literacy skills. The partnership involves health care providers, business representatives, educators, the faith community, and nonprofit organizations to establish common goals. The program received seed money from the Community Foundation of the Holland-Zeeland Area but is primarily funded by contributions.</p>									√

<p>El Puente, Spanish Immersion in the Christian Schools Program</p>	<p>This program began in Zeeland Christian schools and now includes West Ottawa and Holland Public School District. 3 and 4 year old preschool classes as well as kindergarten through fourth grade level classes are designed to immerse students in Spanish as their second language. Children learn core curricula such as language arts, math, sciences, etc. in Spanish taught by native speakers. The program will add additional years of the immersion program as the students progress through grade levels.</p>				√					√
<u>K-12 education</u>										
<p>Extended Learning Opportunities Network - quality after school programming/Advancing Youth Development workshops</p>	<p>Operated by the City of Grand Rapids Office of Children, Youth and Family, this network includes a coalition of community stakeholders working to ensure every child in the Grand Rapids community has access to quality after school programs that are well coordinated and make efficient use of funding. ELO has been recognized as a model collaborative by the Michigan After School Partnership for initiating system-wide change in after school programs, developing standards of quality and building partnerships for sustainability.</p>				√					
<p>Van Andel Education Institute Science Academy - elementary and middle school</p>	<p>Van Andel Education Institute's Science Academy is a nonprofit academic institution that offers educational programs for elementary and middle school students and teachers, as well as local community members. The Science Academy's mission is to advance and promote science education and increase the number of students who choose to pursue careers in science or science-related fields. Programs are built on the expertise of Van Andel Research Institute's world-renowned scientists and Van Andel Education Institute's expertise in curriculum and instruction. The intent is to expand programming to include high school students and teachers, and to ultimately have a national impact on science education.</p>				√					

Michigan Virtual High School	<p>The State of Michigan founded <i>Michigan Virtual University</i> in the late 1990s to support the state's economic development efforts by providing convenient and cost-effective education and training to Michigan's current and future workforce. The organization's mission and vision was refined in 2004 and now serves the K-12 education community through the Michigan Virtual High School and Michigan LearnPort. Course format is offered as teacher-led, student-directed and as an enrichment course. As one of the largest virtual schools in the U.S., Michigan Virtual School offers more than 150 on-line courses, including e-courses like Chinese and CareerForward®, an on-line career exploration course. Teacher professional development is provided through Michigan LearnPort. MVU provides on-line career development tools for high school and middle school students, parents and K-12 educators, including a no-cost on-line course called CareerForward that helps all Michigan schools meet the state's on-line learning graduation requirement. MVU's web-based application, called myDreamExplorer®, gives students an opportunity to explore different career pathways, take personal interest surveys and build a personalized education development plan.</p>	√	√	√	√	√	√	√	√	√
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<p>GVSU/W.K. Kellogg Foundation Michigan Teaching Fellowship partnership for math/science teacher education in GRPS</p>	<p>Designed to increase the quantity and strengthen the quality of Michigan math, science, and technology teachers, the WKKF-WW Michigan Teaching Fellowship is a proxy for the National Merit Scholarship for teachers. The Fellowship, which will first be available for students entering graduate programs in the summer of 2011, offers recent graduates and career changers in science, technology, engineering, and math (STEM) a stipend of \$30,000 to complete a specially designed, cutting-edge master’s degree program, in exchange for a commitment to teach for three years in high-need secondary urban or rural schools. The program provides Fellows with this stipend to support their preparation for teaching, including in-depth clinical experience. Once their preparation is complete, Fellows will be part of a cohort teaching in high-need schools in the same districts at the same time. The schools, along with university partners, will provide mentoring and support throughout the three-year fellowship period. The fellowship is administered by the Woodrow Wilson National Fellowship Foundation and is funded with a \$16.7 million grant from the W.K. Kellogg Foundation.</p>				√					
<p>Kent County Work Base Learning Initiative</p>	<p>This initiative offers students the opportunity to explore the world of careers and make the connection to the classroom. This website is a resource for educators, parents, employers and especially, students for future career opportunities.</p>				√					

<p>Kent School Services Network</p>	<p>This three year old Kent County initiative to bring community services into schools has shown signs of reducing absenteeism and boosting student achievement. Highlighted by the National Coalition for Community Schools, the initiative was established on the basis that high absenteeism of 18 or more days in an academic year leads to academic failure, even if the student is in kindergarten. A community schools coordinator works as a liaison to bring resources to families to ensure students stay and remain engaged in school. Philanthropy covered the \$1.3 million needed to operate the program the first three years. Districts are now being asked to pay half of the school coordinator, and with budget constraints schools are not able to cover the costs. Network 180 has now provided a \$6 million grant to expand strategy in 12 new schools in the next two years.</p>				√					
<p>New Tech Network High School</p>	<p>Enrollment will begin in Fall 2010 at Holland New Tech School, one of three secondary options within Holland Public Schools. Students will take part in core curriculum technology-driven, project-based learning on location, but take electives and participate in extra-curricular activities at Holland High. Holland New Tech will offer a proven educational model in conjunction with the National New Tech Network. Holland High will serve as the hub. The national nonprofit New Tech Network currently supports about 50 high schools in 10 states. It has a 10-year track record of positively impacting student achievement and motivation through relevant "project-based" instruction.</p>									√
<p>West Ottawa International Baccalaureate Program</p>	<p>West Ottawa Public Schools offer a K-12 international curriculum through the International Baccalaureate Program. As one of only a few districts in the country to offer this curriculum at all grade levels, the school system plans to begin elementary and middle school staff training in the 2009-10 school year and be fully implemented by Fall 2013.</p>									√

Ottawa Area Intermediate School District Career Tech	<p>The Careerline Tech Center (CTC) has traditionally appealed to area juniors and seniors who were interested in gaining high quality, hands-on training that would prepare them for immediate employment following high school graduation. Today, CTC is an educational “hub” for all juniors and seniors, whether they are interested in gaining employability skills in a specific trade or occupation, gaining academic credit toward high school graduation requirements in addition to elective credit, or— in the Center’s most recent transformation— gaining post-secondary credit toward a two-year or four-year degree at a Michigan college or university. Through a partnership with Lake Michigan College, students attending CTC may earn direct college credit while still in high school. Direct college credit is transcribed credit that is transferable to most colleges or universities in Michigan. Students in some CTC programs have an opportunity to earn as many as 30 direct college credits during their junior and senior years, which takes them halfway to their associate’s degree completion at a fraction of the tuition cost of other community colleges and universities.</p>									√
Muskegon Career Center	<p>The Muskegon Career Center has been highlighted by the Michigan Department of Education as an example of “green” activities happening in secondary career and technical education. The Career Center has wind turbines and solar panels and uses them to instruct students in their construction trades program.</p>					√				
Heart of West Michigan United Way	<p>Heart of West Michigan United Way’s Schools of Hope partners with the Grand Rapids Public Schools to recruit and train reading tutors to work with elementary students in grades 1 – 3 in 15 schools. Tutors spend 30 minutes each week with the same child during the school year. Schools of Hope schools provide all the materials for tutors so advance preparation is not needed. Schools of Hope coordinators are present during all tutoring sessions to provide assistance and support. Most programs are housed in a separate classroom designated specifically for Schools of Hope. The goal of Schools of Hope is to close the 3rd grade reading achievement gap between the highest performing districts in Kent County and Grand Rapids Public Schools. The program has a waiting list of children who need reading tutors. The goal in the 2009 – 2010 school year was to increase the number of tutors from 1,200 to 1,500.</p>				√					

Meijer Good Schools Program	<p>With a major grant from the Meijer Foundation, the Meijer Good Schools for Grand Rapids program was launched in 2007. Meijer Good Schools honorees receive monetary incentives for meeting a set of rigorous criteria that evaluates student achievement, attendance, leadership and educational vitality, data-driven decision-making, rigorous curriculum and instruction, and the school culture. The Meijer Good Schools for Grand Rapids program is based on a model developed by the Skillman Foundation in Detroit and other national educational benchmarks. Schools may qualify in one of three grant categories, making them eligible for grants up to \$75,000, \$50,000, or \$25,000. Funded programs or projects address one or more of the indicators of student success.</p>				√					
Holland Hospital Foundation School Nurse Partnership	<p>Holland and two West Ottawa schools participate in the partnership. The presence of a school nurse has been directly linked to academic achievement: healthy students are better learners. School nurses provide a wide scope of services beyond just treating illnesses and injuries: they also screen for hearing and vision impairments, administer medications, partner with school staff to provide health-related education, work with parents and are the first line of advocacy in cases of abuse and neglect. Last year, this program logged over 22,000 visits by children in grades K-4.</p>								√	
Educator in the Workplace	<p>Kent Intermediate School District and Grand Rapids Area Chamber of Commerce partner for this "business immersion" program which provides teachers with the opportunity to spend time at local companies and learn what skills are needed to be successful. This effort is part of the Chamber's Consensus Principles on Education Program, which was developed in 2007 to link educators with businesses to assist with workforce development. Teachers earn continuation credit, get an orientation to the business world, spend two days performing tasks in a local business, and then present what they have gained from their experience to their fellow teachers.</p>				√					

FIRST Robotics	The mission is to inspire young people to be science and technology leaders by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.			√	√		√			√
Grand Rapids Area Pre-College Engineering Program (GRAPCEP)	Grand Rapids Area Pre-College Engineering Program (GRAPCEP) at Davenport University serves over 3,000 students in schools in GRPS. GRAPCEP provides curriculum, classes, workshops, summer camps, and competitions in GRPS middle schools and four traditional high schools. These GRAPCEP services are open to all GRPS students. The targeted middle schools have high populations (70 percent or higher) of economically disadvantaged students and more students from ethnic minority groups (80 percent or greater). GRAPCEP also trains teachers throughout the state of Michigan to use inquiry and project-based teaching strategies, therefore influencing many more students in classrooms where these strategies are implemented. In 2006-2007, 55 Michigan teachers participated in GRAPCEP training sessions, including some sessions for graduate credit. (SOURCE: acteon-line.org)				√					
Muskegon Opportunity Broad Based Student Preparation Program	This student preparation program includes a school-based intensive support program and a last dollar Muskegon Opportunity Safety Net Scholarship for any high school senior earning a diploma from a public, parochial, or charter school in the MAISD and persons 21 years of age or younger who earn a GED Certificate. The program is introduced to students midway through seventh grade to ensure students are prepared academically and financially for success in postsecondary education. Efforts are targeted at both the student and their parent/guardian to increase the possibility of success in accessing postsecondary education and to enable the students to succeed at the postsecondary level. Student mentoring, support, advocacy, career exploration, college exploration, and training for educators and community members are all key components in the navigation process for students. The program includes a college access network with public awareness efforts to create a culture of learning and career awareness as well as to contribute to the economic vitality of the county.						√			

Muskegon Promise Zone	<p>The Muskegon Area Intermediate School District is designated as the lead entity and was awarded one of ten Promise Zone designations from the state legislature's recently passed "Michigan Promise Zone Act." The purpose of a Promise Zone is to support local efforts to promise a college education to K-12 students who reside within the zone. A governing board is currently conducting research, planning, and evaluating the potential to raise the private dollars which must fund the Promise Zone for the first two years. After the second year of distributing privately funded scholarships, a certified Promise Zone can then capture one-half of the growth in the state education tax, to be used for a two-year associate's degree or up to a four-year degree for resident students.</p>					√				
Calvin College Office of Pre-College Programs	<p>The Calvin College Office of Pre-College Programs partners with Meijer in a program that targets churches and ethnic minority groups. Students of all grade levels are invited to begin thinking about participation in their communities and in the world, both now and ultimately as adults. The office achieves this goal by:</p> <ul style="list-style-type: none"> * providing academic guidance and enrichment programs, * offering preparation in college entry activities and test taking, and * affording exposure to subject areas and careers. <p>Through these means, the office's intent is that student and families will:</p> <ul style="list-style-type: none"> * understand the wide array of educational options after high school, * experience what a college campus has to offer, * arrive at high school graduation equipped with requisite skills, * be able to select a college that matches their desires. <p>A listing of programs includes Excel ACT Tutoring, Pathways to Possibilities, Entrada, STEP, Aspirando Alto, MLK Young Leaders Weekend, Summer Camps, and the Summer Academy.</p>			√		√				

West Michigan Alliance of Immersion Educators	This education collaboration was established in 2007 to join professors and teachers from seven school districts and three colleges. The teaching professionals teach a range in ages from pre K through college. The Alliance shares strategies and practical points of teaching students of all ages in an immersion system with educators from Hope College, Calvin College, and Grand Valley State University, along with school teachers from Holland, West Ottawa, Zeeland, Grandville, Rockford, Forest Hills and Kalamazoo.				√					√
College access programs	The Community Foundation of the Holland/Zeeland Area, the Fremont Area Community Foundation, the Grand Rapids Community Foundation, and the Muskegon Opportunity each have received grant awards through the Michigan College Access Network to assist these communities in establishing local college access networks. These networks will coordinate programs, services, and resources that lower the barriers preventing students, particularly low-income and first-generation students, from pursuing postsecondary educational opportunities. While Muskegon received a \$50,000 start-up grant to begin implementing its local network and to integrate two statewide initiatives - The Michigan College Access Portal (MiCAP) and KnowHow2GOMichigan - into its community networks, the other communities were awarded \$8,000 planning grants. These organizations will spend the next 6-12 months convening teams of education and community leaders to determine each community's college access needs. They will then design a plan to deliver college access services such as mentoring, career exploration, tutoring, college placement test preparation, college admission advising, and Free Application for Federal Student Aid completion assistance.				√	√	√			√
Michigan Carpenters Apprenticeship Program	A School-to-Registered Apprenticeship program in which high school students work part-time in registered apprenticeships for local employers and continue as full-time apprentices once they complete high school. The program operates jointly with the United Brotherhood of Carpenters, the Model Apprenticeship Instructional Program, Newaygo County Career Tech Center, Kent Career Tech Center, and Allegan County ISD.	√			√		√			

<p>Ferris State and Grand Valley State Universities</p>	<p>The Ferris State University GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs)/College Day Program targets Baldwin Community Schools, Grand Rapids Public Schools, Morley-Stanwood Public Schools, Muskegon Public Schools and Muskegon Heights Public Schools offering students the academic skills, information, and encouragement they need to not only graduate from high school, but apply and attend an institution of higher education. Students begin the program in their 7th grade year and are followed through high school graduation. Through this program's goals, it is intended that students will not only succeed in and outside the classroom, but will also gain the skills necessary to graduate from an institution of higher education. GEAR UP is funded nationally by the U.S. Department of Education, by the State of Michigan's Department of Labor and Economic Growth, and locally by its project partners. GEAR UP facilitates student tutoring and mentoring, offers workshops for college preparation and financial aid, and assists schools and teachers to better prepare students for college studies.</p>									
<p>Innocademy</p>	<p>The Innocademy is a K-8 magnet school located within the Zeeland Public Schools. Established in 2007, the school is a public school targeted at students currently attending in the Zeeland area, students who are currently home-schooled, and students from the area who are living in a foreign country. School is offered year-round with daily Spanish language instruction. The design emphasizes critical thinking, problem solving, and small classrooms with multiage grouping and student-directed-learning. In the 2009-10 school year (the school's third year), 140 students were enrolled; the Innocademy opened in 2007 with 35 students.</p>									<p>√</p>

Black River Public School	<p>Black River Public School is a not-for-profit school chartered by Grand Valley State University. It is located in the historic Holland Furnace building near downtown Holland and serves students in grades K-12. The school is designed as a college preparatory, liberal arts middle school and high school that utilizes smaller class size to promote student participation, responsiveness, and experiential learning. The elementary school is a Montessori-based design that fosters student achievement and responsibility in smaller sized classes and individualized learning plans to enhance advancement. Black River Public school has no geographical boundaries; any student, regardless of school district, can attend.</p>									
Adelante! America	<p>Holland was chosen by AT&T and the League of United Latin American Citizens as one of 8 sites around the United States to conduct the Adelante! America program. Locally the program is hosted by Latin Americans United for Progress. This leadership program for students in grades 8-10 is designed to use relationships to help students develop the motivation and vision to finish high school and to pursue further education and training beyond high school graduation. The group meets weekly to learn about leadership and careers. The group organizes the annual Hispanic Youth Leadership Conference, now in its second year, on the campus of Hope College. Workshops address the unique challenges faced by Hispanic students and addresses career awareness, career exploration, college exploration and access as well as leadership topics.</p>	√								√
Muskegon Waypoint Academy	<p>Muskegon Waypoint Academy is a tuition-free charter school serving grades 6-12. Waypoint Academy focuses on developing career-related skills along with academics by partnering with local businesses, industries, service providers, and colleges to provide internship opportunities and experience in the field. Students can earn both a high school diploma and a career readiness certificate, and the Academy guarantees placement in postsecondary education/training or in entry level employment in their chosen career pathway.</p>					√				

Grand Rapids University Preparatory Academy	<p>Designed as the first of Grand Rapids Public Schools Superintendent Bernard Taylor's "Centers of Innovation," the Grand Rapids University Preparatory Academy is a tuition-free public school that provides a rigorous college preparatory curriculum for urban students through a unique school design. Features of the program include small class sizes, individualized learning plans, project-centered learning, active parental involvement, and a focus on real-world experiences through partnerships with local businesses, government entities, colleges, and other community organizations. The Academy currently serves grades 6 through 8, and plans to expand the program by one grade per year until it becomes a full middle/high school by 2013.</p>				√					
Lights On AfterSchool! - Muskegon United Way	<p>Recognizing that the highest juvenile crime rates occur between the hours of 3 to 6 p.m., Lights On Afterschool! Muskegon County provides high-quality, community-enriched programs in fun, safe havens for students in the after school hours. Six sites opened in the 2008-09 school year, with programs that included tutoring, mentoring, physical recreation, organized sports, computers and technology, expulsion diversion programs, social activities and clubs, youth leadership development, and volunteerism. The project is funded through grants provided by Alcoa Foundation, White Lake Community Fund of the Community Foundation for Muskegon County, Verizon Foundation, the Muskegon Chronicle, and individual contributors, and is operated by the United Way.</p>					√				

REAL Science - Muskegon ISD	<p>REAL Science is a community partnership of local businesses, individuals, and 12 public school districts that promote a real-world, rigorous science experience for all students. The program supplies modern scientific instruments to encourage hands-on investigation and provides training and support for high school science teachers, including a summer academy for teachers of chemistry and biology. Every public and charter high school in Muskegon County along with several schools in neighboring Ottawa and Newaygo counties have chosen to participate in REAL Science. Recently, the program was one of nine in the state to receive the "Winners Circle" award from the Michigan Association of School Administrators, and it has received financial support from every sector of the community including a \$150,000 grant from the Alcoa Foundation and a \$99,910 grant from the West Michigan STEM (Science, Technology, Engineering and Mathematics) Education Innovation Fund Initiative.</p>						√	√		√
Higher education										
Van Andel Institute										
Graduate School in Biomedical Research	<p>Van Andel Institute Graduate School is a unique PhD program that prepares students for careers in biomedical disease research. The program includes an innovative, problem-based curriculum that simulates how scientists approach new research questions, laboratory; rotations; seminars and workshops; and optional teaching and hospital experiences.</p>				√					
Professional development for educators	<p>Students in Labs/Internships targets students at the high school, college, university, and graduate level to offer experience and exploration opportunities in science careers by working in Van Andel Research Institute labs. Several programs provide these offerings including the Grand Rapids Area Pre-College Engineering Program, internships (Frederik and Lena Meijer summer program, medical internships, guest students), Bridges to the Baccalaureate, and the VAI-MSU Graduate Program.</p>				√					
	<p>Postdoctoral Fellowships - Van Andel Research Institute (VARI) offers postdoctoral fellowships to scientists beginning their research careers after graduate school, allowing them to not only advance their knowledge and research experience, but also support the Institute's research endeavors under the mentorship of a VARI scientific investigator.</p>				√					
Workforce	-									

Internship Initiative	The Internship Initiative is a partnership between the West Michigan Strategic Alliance, the Mid-Michigan Innovation Team, and the Detroit Regional Chamber.	√	√	√	√	√	√	√	√	√
Professional Certificate in Sustainable Business	Van Andel Education Institute and Aquinas College Sustainability Initiative				√					
Regional Center of Expertise on Education for Sustainable Development	One of eight locations in Central and North America with the RCE designation from the United Nations University - Institute of Advanced Studies. The City of Grand Rapids, Grand Rapids Public Schools, Grand Rapids Community College, Grand Valley State University, the West Michigan Sustainable Business Forum, the West Michigan Strategic Alliance, and Aquinas College, plus 100 additional agencies and organizations, signed on as partners. The City of Grand Rapids fills the lead role in sustainable development as it showcases its economic growth, social equity, education and environmental stewardship.				√					
SOURCE	The SOURCE is a not-for-profit employee support organization designed to help employees keep their jobs, receive training to enhance their employment, and move into better positions within or across companies. It does this by utilizing the best resources of the government, area nonprofits, and private employers. Partners include American Seating Company, Butterball Farms, Inc., Cascade Fresh Cleaning Company, DECC Company, Employment Group, Grand Rapids Foam Technologies, Grand Rapids Spring & Stamping, Imperial CRS, Michigan Department of Human Services, Michigan Family Resources, Oliver-Tolas Healthcare Packaging, Pridgeon & Clay, Richwood Industries, Ridgeview Industries, Spectrum Industries, Vi-Chem Corporation, and Wolverine Coil Spring.				√					

Health Field Collaborative	<p>A group of seven health-related employers from both long-term and acute care sectors that formed in 2001. Goodwill Industries of Greater Grand Rapids serves as the fiscal entity, and the participating employers serve as the oversight board and pay a membership fee. Two initiatives operate within the collaborative: ACT (Assess, Counsel, and Train) and OPEN (Occupational Performance Enhancement Network); the latter acts as its retention program. Grand Rapids Community College provides the learning coordinator for ACT, and OPEN uses a coaching team comprised of one Goodwill caseworker, one Kent County Department of Human Services case worker, as well as a part-time AmeriCorps Volunteer. The initiative assists participating businesses in finding and keeping employees and also offers career pathways for the employees of participating members.</p>				√					
Apprenticeship Opportunities	<p>Of the 2,803 sponsors in the state of Michigan in 2009, 520 or 18 percent of the participating sponsors are from the Talent 2025 region representing more than 70 different occupations.</p>	√	√	√	√	√	√	√		√
Grand Valley State TRiO Programs	<p>Upward Bound provides support to participants in preparation for college entrance and higher education pursuits at GVSU. It is targeted to students from low-income families and to first generation college going students with the goal of increasing the rate of secondary education completion. Student Support Services' goal is to increase college retention and graduation rates of its participants and to assist students in making the transition from one level of higher education to the next. Academic, grant aid, and counseling support are provided. Educational Opportunity Centers offer counseling, financial aid information and information on college admissions to qualified adults with the goal of increasing the number of adult participants who enroll in postsecondary education. Educational Talent Search identifies and assists disadvantaged youth with college access through academic, career and financial counseling; its emphasis is on high school dropout prevention and dropout recovery. The Ronald E. McNair Post Baccalaureate Achievement Program prepares participants for doctoral studies through involvement in research and other scholarly activities. The program targets disadvantaged students who have a demonstrated record of strong academics. Transition assistance is available from undergraduate to postgraduate completion for students from underrepresented segments of the community.</p>	√	√	√	√	√	√	√	√	√
Reentry Roundtable	<p>There are 50 to 60 providers of services for returning incarcerated citizens make up the Roundtable. The program seeks to coordinate efforts by police, courts and social service agencies to address the needs of inmates before they are released from jail, and afterward.</p>	√	√	√	√	√	√	√	√	√

Michigan Works!	The region is represented by six Michigan Works! Agencies and 17 area service centers that provide a variety of services to employers and job seekers, including education and training for specific job skills, on-the-job training and subsidized employment, job search assistance, childcare provider assistance, non-custodial parent programs; retention and transportation assistance.	√	√	√	√	√	√	√	√	√
Postsecondary Educational Opportunities	These opportunities include the following institutions: Grand Valley State University, Ferris State University, Montcalm Community College, Muskegon Community College, Grand Rapids Community College, Thomas Cooley Law School, Western Michigan University - Grand Rapids Campus, Calvin College, Hope College, Calvin Theological Seminary, Michigan State University Center for Medical Studies, Davenport University, Kendall School of Design, Aquinas College, Blue Heron Academy of Healing Arts and Sciences, Cornerstone University, Baker College, Kuyper College, Everest Institute, ITT Technical Institute, University of Phoenix.	√	√	√	√	√	√	√	√	√
Literacy to Work Initiative	The West Michigan Strategic Alliance, in partnership with the West Michigan Literacy Center and Grand Rapids Community College, the Area Community Service Employment and Training Council, the Michigan Department of Labor, Energy and Economic Growth, and the Wal-Mart Foundation, will provide accelerated training for displaced and incumbent workers with which to earn their GED or National Career Readiness Certificate. The West Michigan Strategic Alliance (WMSA) has been awarded a \$550,000 grant from the Wal-Mart Foundation to expand a pilot program for adult literacy. The pilot, Making College Accessible, provides individualized instruction to improve the basic skills of displaced workers enabling them to earn a GED or National Career Readiness Certificate and obtain occupational training. The pilot is operating in Kent County. The Wal-Mart Foundation grant will help expand it to Ottawa and Muskegon counties, and the plan is to eventually expand to Allegan, Barry, Ionia, and Newaygo counties.				√		√			√

Pathways to Prosperity	Goodwill Industries of Greater Grand Rapids, the Literacy Center of West Michigan, the Women’s Resource Center, Michigan Works! Of Kent/Allegan Counties, Cascade Engineering, Manpower, Rockford Berge, and Cassie Stern Health Care Workers Education and Training Center partner with the Green Pathways Job Opportunity Program to integrate existing and new education/job training, placement, retention and support service programs to assist the target populations with attaining and retaining employment in high-growth green industry occupations. An expanded service network will be formed to implement pre-employment and basic skills training, career coaching, and green job training programs to effectively build the skills of the target populations.				√					
<u>Talent retention</u>										
Hello West Michigan by Quaeris	Quaeris is a nonprofit consortium of employers that works to attract and provide support for new talent settling in the West Michigan area. Housed at HelloWestMichigan.com, Quaeris provides a website promoting the region for the benefit of recruiting talent and employees, enables resume sharing between members, provides professional networking opportunities, and connects new recruits with education and training programs. The goal is "to better position West Michigan to compete for talent with other regions around the country." Quaeris members include some of West Michigan’s largest employers such as Haworth, Herman Miller, Perrigo, Amway, and Spectrum Health.				√		√			√
WMSA and National Career Readiness Certificate Initiative	Wolverine Coil Springs, located in Grand Rapids, tests all current employees with three WorkKeys® assessments and has instituted the National Career Readiness Certificate as a preinterview tool for new employees. By testing current employees, the company has gained an understanding of the current talent pool; identified opportunities for additional, targeted training; located "diamond in the rough" employees who were underemployed and moved them into fast track training for advancement; and identified critical thinkers on the current team—those most likely to be open to innovation. By requiring a National Career Readiness Certificate for applicants, the company gained confidence that new full-time employees have the foundational skills that show they are ready to train and ready to contribute to company success.				√					

Maximizing Assets: Talent Development Strategies in Other Regions

Austin, Texas

“Austin 20,010 by 2010” is an initiative that started in 2006. Organized by the Greater Austin Chamber of Commerce, the goal is to increase the number of people from Austin who enroll and graduate from higher educational institutions. While Austin has a high postsecondary attainment rate, the success is attributed to the city’s being the home of the University of Texas and to the fact that local technology companies attract people from the outside, rather than to Austin’s providing opportunities for local residents. The eventual goal is to have 100,000 students—6 percent of the local population—in higher education by 2015. Currently, the growth of students is below the rate hoped for; however, the initiative continues to help students become ready for college. Additionally, the Greater Austin Chamber of Commerce is partnering with other organizations to help students complete their IRS forms and to increase the rate of students filling out FAFSA (Free Application for Federal Student Aid) forms in order to broaden financial access.

Cincinnati, Ohio

The Greater Cincinnati Workforce Network (GCWN) is a collaborative effort with local Workforce Investment Boards, chambers of commerce, economic development organizations, higher educational institutions, and others. The GCWN was formed in summer of 2008 from several different talent development groups. The network’s focus is talent development in certain sectors, such as health care, advanced manufacturing, and construction. Its executive summary states three specific goals to be accomplished in the three years that began in mid-2008:

- 1) Prepare at least 1,500 low-skilled adults for better jobs and long-term careers in priority industries.
- 2) Improve at least 30 employers’ abilities to recruit, train, retain, and advance employees to midlevel skilled jobs to fill critical occupational shortages in priority industries.
- 3) Create and sustain a durable coordinating mechanism to improve and align the policies, strategies, and resources of the Tristate area’s (Indiana, Ohio, and Kentucky) workforce development system.

Additionally, they are currently planning for future talent development inclusive of increasing educational attainment. Cincinnati is a founding participant in the National Talent Dividend Network, launched by the group CEOs for Cities. The network promotes vibrant cities that support elementary and secondary education, reduced commuting time, and educational attainment to increase regional income.

Another regional program in Cincinnati is STRIVE. Founded in 2006, STRIVE is a partnership made up of various groups including education, elected officials, and corporations, all focused on enhancing education in Cincinnati and northern Kentucky. STRIVE takes a comprehensive approach to education, from early childhood to postsecondary. The program’s core beliefs are that education must take into account life outside as well as inside school, must be accountable and have data-driven decisions, must prevent students from falling through cracks, and must allow fair and even opportunities for all students.

STRIVE has developed a “Student’s Roadmap to Success,” which identifies indicators of success from birth to college graduation and workforce entry. Examples include the following: students attending full-day kindergarten, reading at grade levels, considering college by seventh grade, mastering Algebra I by eighth grade, identifying career plans by tenth grade, securing financial aid for higher education, and enrolling in college.

Ohio

The Ohio Board of Regents is an advisory group to the chancellor of Ohio’s public colleges and universities. The board is not a governing body, but rather it recommends and coordinates post-secondary policy for the state. Its work focuses on improving students’ access to and success in postsecondary education, as well as the efficient and effective operation of the public university system in Ohio. Because the Ohio university system is statewide, the Board of Regents is able to gather data and address concerns for every public school and student in Ohio.

In March 2010, the Ohio Board of Regents delivered the “Third Report on the Condition of Higher Education in Ohio.” The report discusses certain policies, draws conclusions, and makes recommendations on eight main points:

- 1) Are programs streamlined to shorten paths to degrees?
- 2) How effectively is Ohio addressing college affordability?
- 3) Are Ohioans ready for college and work?
- 4) Are educational programs managed effectively?
- 5) Are administrative services managed effectively?
- 6) Are current levels of educational attainment and degree attainment adequate for a twenty-first century economy?
- 7) What is the financial strength of higher education?
- 8) Are higher education’s current contributions to workforce development, research and technology transfer adequate to support a thriving twenty-first century economy?

In response to these questions, the report discusses lowering the need for remedial education, increasing graduation rates, increasing STEM enrollment, and other policies already being discussed in West Michigan.

Another group working on higher education is the Ohio College Access Network (OCAN), which was founded by the KnowledgeWorks Foundation, the Ohio Board of Regents, and the Department of Education. OCAN serves more than 180,000 students and has 34 programs in various counties and schools to assist college students in Ohio.

Indianapolis, Indiana

Indianapolis is a founding member of CEOs for Cities’ National Talent Dividend Network. This new regional initiative is led by Indiana University – Purdue University Indianapolis, the Central Indiana Community Foundation, the University of Indianapolis’s Center of Excellence in Leadership of Learning, and other Indianapolis community partners. The initiative aims to improve the educational attainment rate in the region by 1 percent. The group believes that this increase in college graduates from a rate of 30.1 to 31.1 percent would generate a \$1.3 billion

“talent dividend.” For the Indianapolis area, this computes to 11,036 additional graduates. These Indianapolis partners have named their regional initiative the Talent Alliance, and the joint efforts include representatives of local government, business, nonprofit organizations, and local higher educational institutions and school systems. Other key partners include the Lumina Foundation for Education and the national CEOs for Cities organization.

These partners are committed to the principle that educational outcomes, economic development, and community well-being are interconnected. As a result, the partnership shares a commitment to help every learner in the community succeed from cradle to career. The Alliance’s strategies for achieving the Talent Dividend include focusing on adults who have already completed some college education, leveraging existing federal and regional programs that enhance college degree attainment, and developing a revitalized Indiana education plan based on goals, measurable objectives, and best practices.

Louisville, Kentucky

The Greater Louisville Project is an independent, nonpartisan civic initiative organized by the Community Foundation of Louisville and supported by a consortium of philanthropic foundations that includes the James Graham Brown Foundation, Brown-Forman, the C. E. and S. Foundation, the Annie E. Casey Foundation, the Community Foundation of Louisville, Gheens Foundation, the Humana Foundation, the JPMorgan Chase Foundation, and the Stephen Reily and Emily Bingham Fund. Its mission is to act as a catalyst for action, providing research, data, and analytic tools in support of the agenda for long-term progress outlined in the 2002 Brookings Institution report *Beyond Merger: A Competitive Vision for the Regional City of Louisville*. The Greater Louisville Project publishes the biennial *Competitive City Report*, tracking progress against key community indicators.

In 2003, the Greater Louisville Project began to focus on six areas identified through the Brookings Institution report. These six areas, identified as deep drivers of change, include 1) primary education, 2) postsecondary education, 3) economic development, 4) creating quality neighborhoods, 5) investing in working families, and 6) balancing metropolitan growth. Since then, the GLP has honed in on three deep drivers of change: 1) education, 2) jobs, and 3) balanced regional growth. Although the GLP recognizes that the deep drivers of change represent large goals, they believe the goals are attainable and can inform the civic agenda by highlighting both the possibilities and the challenges facing Louisville.

The Education Deep Driver calls for improving educational attainment at all levels, including high school graduation rates and completion of certificate programs and of associate’s and bachelor’s degrees. Implicit in achieving this goal is a reduction in high school dropouts, an improvement in college preparation, and improved access to and quality of early childhood education. Metrics the group tracks include the following two goals:

- 1) Double the anticipated increase in young adults age 25-34 with a bachelor degree, from 5,000 to 10,000, by raising education at all levels.
- 2) Prepare and send more people to postsecondary schools.

The Jobs Deep Driver calls for accelerating the rate of growth in professional/technical job categories that offer wages that raise the median family income. Implicit in achieving this goal

is providing skills and knowledge training for residents employed in lower-wage sectors and attracting, retaining, and growing employers that offer professional/technical jobs. Metrics the group tracks include this one:

- Add 15,000 more high-skilled/high-wage jobs in the professional and technical categories, with the goal of raising the median family income.

The Growth Deep Driver calls for maintaining the concentration of jobs and population in the urban core while maintaining balanced growth in the region. Implicit in achieving this goal is heightened regional cooperation and continuing our focus on the revitalization and rebuilding of distressed neighborhoods. Metrics include the following goal:

- Reverse current trends in order to retain 70 percent of the population and 60 percent of the jobs based in Jefferson County to protect its strength as the hub of the region.

To promote innovation toward transformational change, the Greater Louisville Project formed the Action Network, which knits together initiatives focused on advancing the goals identified through the “Deep Drivers of Change.” While many services and programs are essential to community advancement, the Action Network represents initiatives that go beyond routine service delivery to identify strategic initiatives that will change Louisville’s standing among its peer cities in critical measures of competitiveness and quality of life.

Partners identified in the Action Network are committed to innovation and to accelerating change on key community indicators tracked in the biennial *Competitive City Report*, published by The Greater Louisville Project.²¹

Criteria for Inclusion in the Action Network:

Partners must exhibit the following characteristics:

1. A strategic, local initiative, not an organization or advocacy campaign.
2. Innovative or focused on change designed to advance a key indicator of civic progress.
3. Features measurable goals.
4. Collaborative or based on partnerships.
5. Cuts across sectors or affects more than one dimension of the “Competitive City Agenda.”

²¹ A listing of network partners can be found at <http://www.greaterlouisvilleproject.org/GLP/ActionNetwork/tabid/104/Default.aspx>. For more information on the program see <http://www.greaterlouisville.com/mvp/ComDev.pdf>. (Accessed July 7, 2010)

The Greater Milwaukee Committee and the Milwaukee 7

The Greater Milwaukee Committee (GMC) is a private-sector civic organization whose mission is to contribute to the cultural and economic base of the Milwaukee metropolitan area. The organization was formed in the late 1940s and is composed of leaders in business, labor, education, philanthropy, and nonprofit community development. The GMC is a major sponsor of the Milwaukee 7 and has four primary committees; these work on issues of 1) regional economic development, 2) future workforce, 3) education, and 4) quality of life. Within these committees are task forces that have helped, among other things, link and leverage K-12 education with employer needs through the Regional Workforce Alliance, the Talent Dividend Task Force, and other projects. The GMC was instrumental in securing and guiding the work of the regional WIRED effort. Most recently, Milwaukee-area business leaders announced their goals for the Talent Dividend Initiative—to increase the number of college graduates by more than 13,000 people by 2012 and infuse \$1.5 billion annually into the area economy.

The Milwaukee 7 serves a seven-county region surrounding Milwaukee and focuses on both business and talent development. Established in September, 2007, this effort was formed to create a regional, cooperative economic development platform for the seven counties of southeastern Wisconsin: Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Waukesha, and Washington. Its mission is to attract, retain, and grow diverse businesses and talent. The area intends to measure its progress through five established indicators: 1) per capita income, 2) employment growth, 3) educational attainment of the adult population, 4) export value of Wisconsin's manufactured goods, and 5) net regional migration. Part of the momentum of this initiative can be seen in variety and level of financial support secured in the last five years. More than 60 contributors have raised more than \$6.4 million to support a five-year economic development campaign.

More recently, the Milwaukee 7 created a vision for the region and identified a plan to reach this vision. The partners identified their regional assets as defined by elements that are fundamental or pose unique opportunity for the region's long-term prosperity. The region's assets include the following eight: 1) proximity to Lake Michigan, 2) its Chicago/Madison connection, 3) infrastructure and the planning and policy development that supports an innovative economic climate, 4) arts and entertainment, 5) positioning within the Great Lakes Trade Zone, 6) innovation capacity that engenders entrepreneurial activity, 7) cultural diversity, and 8) the presence of experienced and educated talent. An analysis of the local economy concluded that the region produces a gross metropolitan product of \$78 billion from 50,000 businesses that employ one million people. Approximately one-third of those one million jobs are involved in the export of goods and services beyond the region; therefore, much of the economic development work has focused on the seven regional "export drivers."

These seven sectors are not unlike those found in other similar metropolitan areas (manufacturing, financial services, headquartered company management, information technology, acute health-care distribution, and educational services); however, the region has found it useful to categorize the sectors and identify the number of jobs and average wage within each sector. Since manufacturing holds the lead within the sectors for the percentage of export driver jobs (57 percent), and since it was determined that the region ranks second in the nation among the top 50 metro areas for manufacturing jobs, the Milwaukee 7 effort is focusing

strategic economic and talent-development resources on securing this position as the sector transitions to the next generation of manufacturing.

Milwaukee 7 appears to have a transformative purpose for its regional agenda. Community partners have recognized that they need to stop becoming trapped by challenges and remaining quiet about the area's assets. Resources are being directed not only to the building up of assets but also to focusing on achieving a competitive cost of doing business through creating alignment around regional solutions for issues such as transportation, water, and talent.

Wichita, Kansas

In 2007, south central Kansas formally organized its regional efforts to enhance transformation and innovation through integration of education, workforce, and economic development systems. The group's goal is to accelerate economic growth and transformation by fostering innovation and talent development critical to the aircraft industry and other technology-driven employers in the region. Focus is placed on increasing the competency of the workforce and expanding education and training in science, technology, engineering, and math. One target is the emerging composite and advanced materials industry, as the use of composites has dramatically accelerated in the aviation industry.

To maintain a competitive advantage and further develop composite expertise in south central Kansas, the group recognizes that it is critical for the region to expand workforce training at all levels, from K-12 students to entry-level workers and experienced engineers. In developing a premier workforce of skilled composite and advanced materials technicians who can serve a variety of industries, south central Kansas holds the belief that it can diversify the regional economy while strengthening its manufacturing base and providing for future growth and stability.

The region covers 10 counties in south central Kansas encompassing the regional labor market: Butler, Cowley, Harper, Harvey, Kingman, Marion, McPherson, Reno, Sedgwick, and Sumner. The initiative is collaboratively administered by the Workforce Alliance of South Central Kansas, the Western Kansas Workforce Board, and the Kansas Department of Commerce. Wichita State University's Center for Economic Development and Business Research has also served a key role in regional asset mapping, conducting briefings on new approaches to innovation, illustrating the latest approaches to reengaging displaced workers, and facilitating the region's efforts to integrate K-12, workforce development, and community-college and university education. Key areas addressed and partners include the following:

- Education and training
 - Kansas Career Pipeline/K-12
 - Wichita Area Technical College (WATC)
 - Wichita State University (WSU), College of Engineering (COE)

- New technology, products, and business
 - WSU's National Institute for Aviation Research (NIAR)
 - WSU's Center for Entrepreneurship
 - WSU's Small Business Development Center

- Via Christi Health Systems, Orthopedic Research Center
- Regional economic growth
 - Business and industry
 - Greater Wichita Economic Development Coalition (GWEDC)
 - Economic development agencies in the region

Gap Analysis and Indicators

In this section, potential gaps, or problem areas where improvement in the workforce system may be required, in the region’s current workforce development system are identified and discussed. To identify and monitor performance along the current continuum of education and training, multiple indicators of performance are used to measure education and training outcomes at key points. These indicators ultimately form the basis for identifying problems and successes in the current system, as well as tracking the future outcomes and any initiatives to improve the workforce development system.

The first set of educational indicators, shown in Figures 27, 28, and 29, define the scale of the educational system in West Michigan. The region’s K-12 system has about 260,000 students, according to the 2008-2009 Michigan Department of Education headcount, and about 90 percent are in the public school system (Figure 27). Two-year colleges enroll slightly fewer than 25,000 students (Figure 28). Most students enrolled at a two-year postsecondary institution are enrolled at one of the three major community colleges in the region: Grand Rapids Community College, Muskegon Community College, and Montcalm Community College. Only 7.0 percent of these students attend private for-profit schools such as ITT Tech. Additionally, most two-year college students attend classes part-time; only about 45 percent are enrolled on a full-time basis.

Figure 27

K-12 Headcount			
Level	Total	Private (%)	Public (%)
Kindergarten	22,449	7.5	92.5
Grade 1	19,171	9.3	90.7
Grade 2	19,296	8.8	91.2
Grade 3	19,229	9.3	90.7
Grade 4	19,314	9.3	90.7
Grade 5	18,905	9.3	90.7
Grade 6	19,388	9.2	90.8
Grade 7	19,331	8.8	91.2
Grade 8	19,342	8.7	91.3
Grade 9	21,551	9.8	90.2
Grade 10	21,950	10.6	89.4
Grade 11	20,283	11.3	88.7
Grade 12	20,974	11.0	89.0
Total	262,973	10.1	89.9

Michigan Center for Educational
Performance and Information (CEPI), 2008-2009

Figure 29 shows the attendance level for the region’s four-year colleges. Grand Valley State University (GVSU) is the largest college in the region and the only public four-year institution. However, the combined number of students attending private colleges is greater than the total

enrollment at GVSU. It should be noted that Ferris State University and Western Michigan University are just outside of the region, and some students from the West Michigan region attend these schools, either by commuting to the main campus locations or by attending small satellite campuses located near Grand Rapids. Unfortunately, enrollment statistics are not available for the number of West Michigan residents who enroll in classes at these institutions.

Figure 28

Two-year College Students in West Michigan

	Students	Private for-profit	Public
Total	24,377	6.8%	93.2%
Full time	11,393	13.7%	86.3%
Part time	12,984	0.8%	99.2%
Instruction FTE	732	68	664
Students per FTE	33.3	24.5	34.2

Integrated Post Secondary Education System (IPEDS), 2007

Figure 29

Four-year College Students in West Michigan

	Students	Private for-profit	Private not-for-profit	Public
Total	54,253	2.5%	53.5%	44.0%
Full time	37,730	3.1%	47.0%	50.0%
Part time	16,523	1.1%	68.4%	30.5%
Instruction FTE	2,400	93	1145	1162
Students per FTE	22.6	14.5	25.3	20.6

IPEDS, 2007

Pre-Kindergarten and Early Childhood

Unfortunately, there are no universally accepted Pre-K screenings or tests in Michigan, leaving no way to accurately measure the performance of West Michigan compared to other areas, the whole state, or the country. However, the educational exposure of young children, along with their performance and demonstration of basic capabilities prior to entering the traditional K-12 system, is recognized as an important indicator of future success; therefore, this section discusses what limited measures are currently available, as well as some examples of successful approaches to pre-K and early childhood development.

School districts and Intermediate School Districts (ISDs) cover the span of using a variety of tests or none at all to determine school-readiness. Some counties in the region, including Allegan and Kent, have developed their own county-wide systems of assessing students prior to those students' entering kindergarten. In other parts of the region, some districts use the DIBELS

assessment, which is a nationally recognized assessment system.²² Not every school conducts an assessment, however; some of the region's school districts simply place students in kindergarten and hope for the best. Of course, Head Start is available in every county in the region, but is limited to certain low-income groups only. Other programs such as the Great Start Readiness Program are offered by the state; however, capacity is limited and not all districts participate in the program, since they must contribute some funding. For specific target populations, programs such as Early On and Ready, Set, Succeed! exist to help children with identified developmental delays or specific disabilities.

Following a needs assessment in 2007, the Holland/Zeeland Community Foundation started the Ready for School program to promote early childhood education. Ready for School uses the DIBELS assessment in conjunction with data analysis from Hope College. The Ready for School officials found in September 2009 that 57 percent of incoming kindergartners were not ready, meaning only 43 percent were ready, which is far below their 2013 goal of having 75 percent of children be ready for school. When asked if their system could be applied regionally, they stated that the system worked well on a building level, but they were unsure if the recommendations based on their data would work regionally.

Another example of an approach to pre-K assessment can be found in Kent County, which in 2007 undertook an effort to collect data on children entering school using the Kindergarten Observation Form, which tests cognitive, physical, and emotional development. Competency levels were defined; however, the precise definition of "ready for school" in Kent County was not defined. Because of this, few conclusions can be drawn about either the readiness of children in the county or the viability of this approach for other areas.

More generally, there are several studies showing positive benefit-to-cost ratios for early childhood education. One study tracked participants at the Perry Preschool to age 40 and found that over this long period, there was a 17.1 benefit-to-cost ratio.²³ Another paper discussed the benefits of targeting programs to low-income families versus universal early childhood education. The conclusion found that while universal programs do have benefits for all income levels, the lowest income groups benefit the most. Resource scarcity or community attitude might mandate limiting program scope by income.²⁴

Several sources indicate that social and emotional health is just as important as cognitive skills. Ready for School and the Great Start Collaborative both address these issues in their programs. One study suggests that developing social and emotional skills as well as self-regulation helps children avoid later delinquency. Other recommendations include adequate training and compensation for educators, small class sizes, and consistent monitoring.²⁵

²² The Dynamic Indicators of Basic Early Literacy (DIBELS) is a measurement system for literacy skills for elementary-age children developed by the University of Oregon. The first test is conducted in kindergarten.

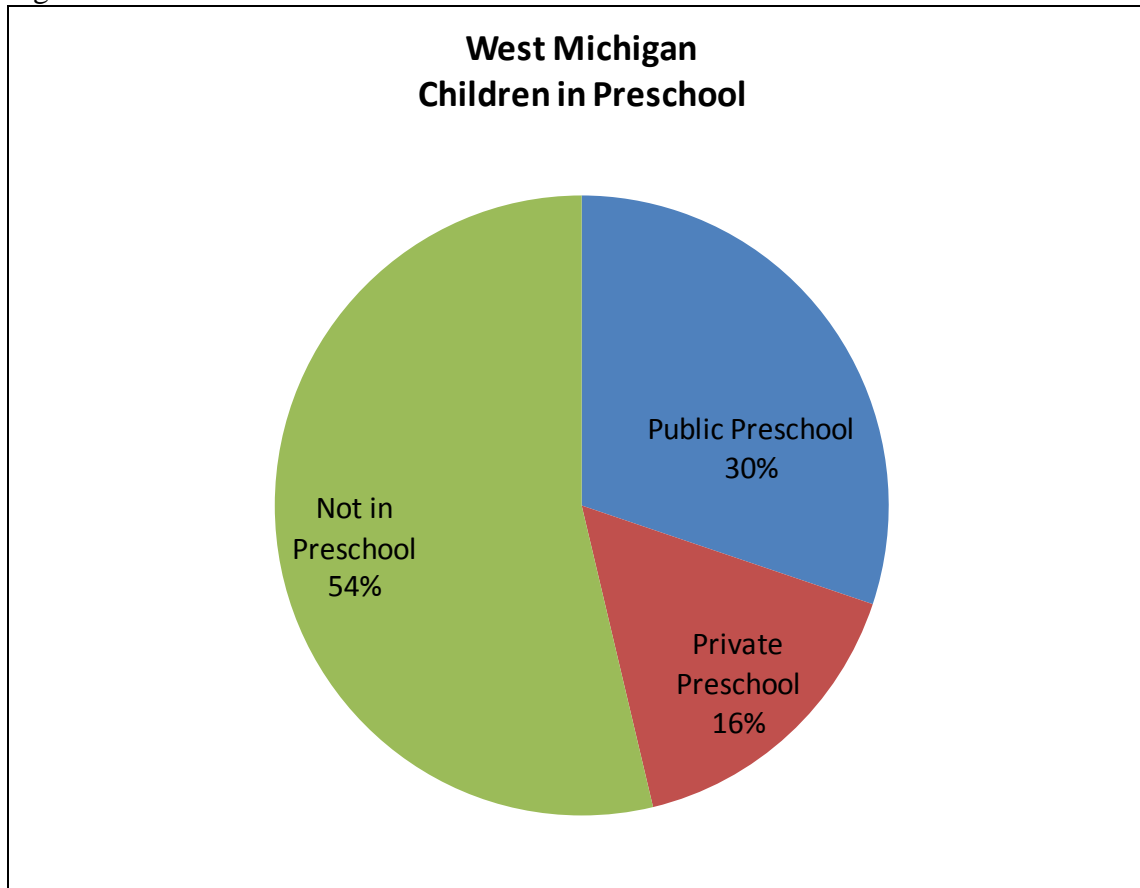
²³ Julia B. Isaacs *Cost-Effective Investments in Children*. (Washington, DC: The Brookings Institution 2007).

²⁴ Timothy J. Bartik *Distributional Effects of Early Childhood Programs and Business Incentives and Their Implications for Policy*. W.E. Upjohn Institute for Employment Research Working Paper 09-151 (Kalamazoo, MI: W.E. Upjohn Institute, 2009)

²⁵ W. Steven Barnett. *Preschool Education and Its Lasting Effects: Research and Policy Implications*. (Boulder, CO: Education and the Public Interest Center and Education Policy Research Unit, 2008).

Another measure of pre-K and early childhood success is exposure to early educational experiences. Figure 30 shows how many children are reported to attend preschool. According to the U.S. Census Bureau’s American Community Survey, less than half of all children age three and four are in preschool. However, the data are self-reported by the parents or guardians and there is no standard definition of how “preschool” differs from “day care.” This makes it difficult to assess the quality of the pre-K experience that children may be receiving, since parents reporting that their children attend preschool may simply have their students in daycare facility with little or no formal educational component. Conversely, many daycare centers may be providing students with a quality preschool education; however, there are no widely recognized standards. Although accreditation for pre-K programs exists through organizations such as the National Association for the Education of Young Children does exist, the cost of accreditation is high and several counties in West Michigan have no accredited preschools. Additionally, simply being in a quality preschool may not ensure that a child is ready for school.

Figure 30



U.S. Census ACS, 2006-08.

Pre-K through 12th Grade Indicators

Indicators for the prekindergarten through twelfth grade system use several types of test results as well as the high school graduation rate to track performance for the region. For third-, sixth-, and eighth-grade students, the Michigan Education Assessment Program (MEAP) scores for math and for English language arts (ELA) were utilized. The MEAP tests are graded on four levels; the top two levels are classified as “meeting standards.” The West Michigan region was

compared to the top five Michigan county performers in these three target grade levels in the math and ELA subject areas for the 2008 test (Figure 31). It should be noted that the top-performing counties are selected for each indicator and vary across the spectrum—i.e., the top five counties for performance on third-grade math will vary from the top five counties for performance on eighth-grade English.

The data show that in third grade, West Michigan students overall perform similarly to those in top-performing areas, particularly in English (Figure 31). However, relative performance declines by sixth grade, after which time the region’s students, as a whole, perform at a level between 85 and 90 percent of the top-performing counties.

The school index showed a noticeable drop-off in MEAP score performance from third to sixth grade, relative to top-performing counties. The building data was further analyzed in order to discover any schools not experiencing the performance drop. However, most buildings suffer at least some drop-off between third and sixth grade. Across the state, 417 schools do not have a drop-off in English, and only 87 do not have a drop-off in math. Only 30 of the more than 1,200 K-6 schools had more students meeting standards in sixth grade in both math and English. While making conclusions would not be advisable without more data, it is worth noting that these schools are smaller than average. The schools averaged only about 52 students in third grade, compared to 88 students in third-grade buildings across the state. It also must be noted that the average performance of these schools was lower than that for West Michigan. Math and English scores for third-graders meeting standards was 93 and 86 percent, respectively, in West Michigan. However, the 30 schools’ average scores were 71 and 61 percent.

In a recent study completed by the Annie E. Casey Foundation as part of their KIDSCOUNT 2010 Special Series, third-grade reading proficiency is noted as critical to future school performance. The report indicates that, nationally, 85 percent of low income fourth-graders in predominantly low-income schools are failing to reach “proficient” levels in reading on federal tests. The report emphasizes that it is critical that children master grade-level reading by third grade, because that is when instruction moves from a focus on learning to read to one of reading to learn. The report emphasizes that focusing on early reading is a valuable dropout prevention tool as well.²⁶ This report cites the work of the Common Core Standards Initiative, led by governors and state school officials, to raise expectations for what U.S. children need to be able to know and perform. The goal is to assist children, parents, communities, and the schools to close the achievement gaps by raising expectations, ensuring equal opportunities to learn and improving teaching and learning overall. The report cites four recommendations to this end:

- 1) Develop a coherent system of early care and education that aligns, integrates and coordinates what happens from birth through third grade so students are ready to take on the learning tasks associated with fourth grade and beyond.
- 2) Encourage and enable parents, families, and caregivers to play their indispensable roles as coproducers of good outcomes for their children.
- 3) Prioritize, support, and invest in results-driven initiatives to transform low-performing schools into high-quality teaching and learning environments in which all children are present, engaged, and educated to high standards.

²⁶ Leila Fiester and Ralph Smith. *Early Warning! Why Reading By the End of Third Grade Matters: KIDSCOUNT Special Report*. (Baltimore, MD: Annie E. Casey Foundation, 2010)

- 4) Find, develop, and deploy practical and scalable solutions to two of the most significant contributors to the underachievement of children from low-income families—chronic absence from school and summer learning loss.

Other research indicates that dropout prevention is also initiated through early childhood education initiatives. In a summative evaluation of the Ready to Learn Initiative, researchers examined whether preschoolers who were exposed to a media-rich literacy curriculum had better early reading skills than preschoolers who were exposed to a media-rich science curriculum.²⁷ The research found that students in the media-rich literacy classrooms outperformed students in the media-rich science classrooms by a statistically significant margin on all but the PALS Beginning Sound Awareness subtest. Across the four statistically significant impacts, the authors reported an average effect size of one-third of a standard deviation, equivalent to moving a student from the fiftieth percentile to the sixty-third percentile.

For eleventh-grade students, the Michigan Merit Examination (MME) and the ACT test were examined as indicators for high school students. The MME is administered to all students and includes a consolidated group of tests that contain the ACT, WorkKeys, and Michigan-developed assessments. The ACT scores by district reported by the MME are not the scores reported to colleges, but rather are weighted by performance on other portions of the MME. Also, ACT scores across Michigan show little difference across counties. The MME is, therefore, the preferred indicator.

The MME scores for eleventh-graders in West Michigan show a slight improvement relative to the top performers in Math, although English performance remains at a relative level similar to earlier grades. It is also important to note that the MME is scored more strictly than the MEAP. The MME scores are in the mid-60 percent range for top performers and high-50 percent range in West Michigan (Figure 32). If one accepts the MME's standard of "satisfactory performance," it paints a more discouraging picture of student performance statewide, since only roughly two-thirds of students in even the top-performing areas are meeting standards.

As stated before, the ACT scores shown are weighted by MME performance, and are considered somewhat unreliable as an indicator on their own. The regional average score is 18.7 for math and 21.1 for English, with an average composite score of 19.8 (Figure 32). On this basis, the region falls only slightly below the top performing average. These data are not shown in Figure 30, as they overlap and follow a similar trend with the MME, which is the preferred indicator for performance at this grade level.

The last K-12 indicator is the cohort graduation rate. Beginning in 2003 for the graduating class of 2007, Michigan began tracking the students individually from ninth to twelfth grade. The previous method for determining graduation simply used graduating seniors from that year only. The cohort tracks students for transfers in or out as well as dropouts, and it thus determines a more accurate graduation profile for a school. West Michigan's graduation rate ranks the lowest among all the indicators when compared to the top counties in the state. Only about 77.6 percent of West Michigan's students graduate from high school, compared to nearly 90 percent of students in the top-performing areas in the state.

²⁷ William R. Penuel, Lauren Bates, Shelley Pasnik, Eve Townsend, Lawrence P. Gallagher, Carlin Llorente, and Naomi Hupert. *Summative Evaluation of the Ready to Learn Initiative*. (Morton, NY: Educational Development Center and Menlo Park, CA: SRI International, 2010).

Figure 31

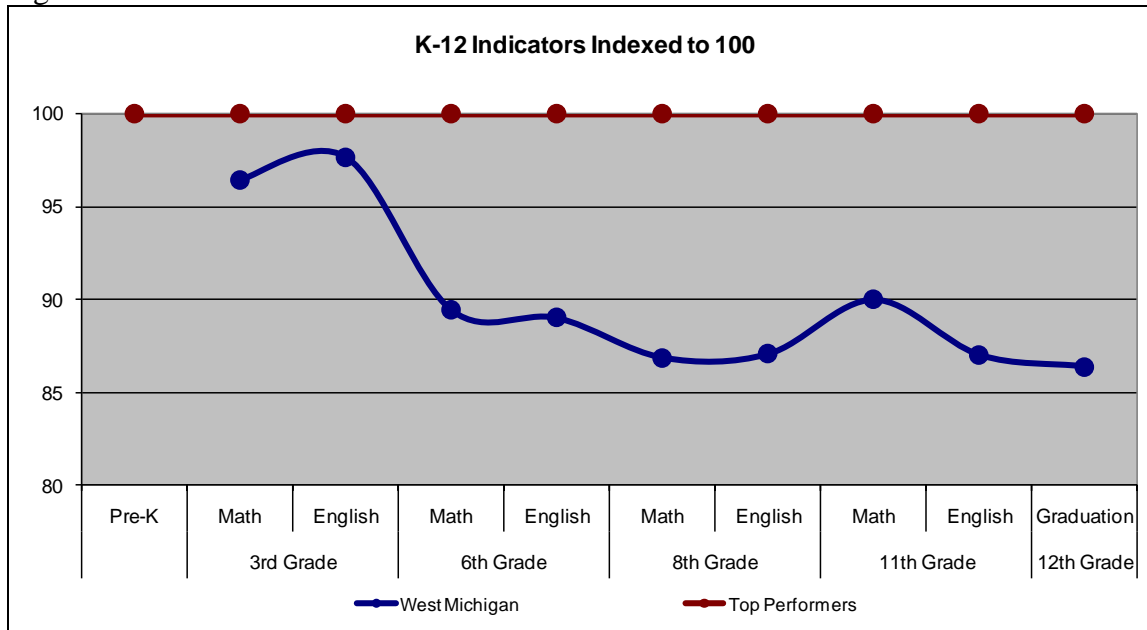


Figure 32

Grade	Indicator	Sub-Indicator	West Michigan Percent	Percent of Top 5
Pre-K	Ready for School		N/A	N/A
3 rd Grade	Percent Met Standards	Math	93.2	96.5
		English	85.9	97.7
6 th Grade	Percent Met Standards	Math	82.6	89.4
		English	82.1	89
8 th Grade	Percent Met Standards	Math	79.8	86.9
		English	80.3	87.1
11 th Grade	Percent Met Standards	Math	59	90
		English	57.9	87
11 th Grade	Score	Math	21.1*	94.8
		English	18.7*	92.5
12 th Grade	Graduation Rate		77.6	86.4

Michigan CEPI, 2008-2009

* ACT Scores are reported differently than MEAP or MME. Rather than percent meeting standards, school average scores are provided.

A number of models have surfaced to address early childhood education, third-grade reading proficiency, and dropout prevention, some of which are interrelated. Currently the focus is on year-round school and/or high-quality after-school programming, early childhood education, and K-3 literacy efforts.

One example of a successful approach to early childhood issues can be found in the Literacy Collaborative, a comprehensive school reform project designed to improve the reading, writing, and language skills of elementary children. The cornerstone of this project is dynamic, long-term professional development. School-based literacy coordinators are trained in research-based methods, are provided with ongoing professional development as they continually implement research-based approaches in their own classrooms; and are supported as they provide on-site training for the teachers in their schools. The goal of this comprehensive effort is to significantly raise the level of literacy achievement for all students.²⁸

As early as 1993, the National Education Commission on Time and Learning (NECTL) urged school districts to develop school calendars that acknowledged differences in student learning and major changes taking place in American society. The report reflected a growing concern about school calendar issues, especially for students at risk of academic failure. A research synthesis conducted by Cooper et al. (1996) integrated 39 studies that assessed the effects of summer vacation on standardized achievement test scores.²⁹ The 39 studies included 13 that could be included in a meta-analysis, or a statistical integration, of the results. The meta-analysis indicated that summer learning loss equaled at least one month of instruction as measured by grade-level equivalents on standardized test scores—i.e., on average, children's tests scores were at least one month lower when they returned to school in the fall than their scores had been when they left in the spring. In summary of this study and other more recent studies, the following four points are known:

- 1) Students forget mathematics material over the summer, and low-income children lose reading skills as well.
- 2) Extending the school year by a few days is a questionable intervention, but substantially increasing the length of the school year coupled with corresponding curricula reform could have a positive impact on student learning.
- 3) Summer programs are an effective intervention for purposes of academic remediation, enrichment, or acceleration, and a knowledge base has accumulated that can help make the most of summer school.
- 4) Modified school calendars may have a small positive impact on student achievement and a more noticeable impact on the achievement of disadvantaged children.

A more recent look at an evaluated program to address summer academic slides and, ultimately, the reduction of achievement gaps points to the program Building Educated Leaders for Life (BELL), initially started in Cambridge, Massachusetts, and now expanded to five other cities. This study included randomized assignment and evaluated the effectiveness of the BELL

²⁸ Literacy Collaborative. *The Positive Effects of Literacy Collaborative on Teaching and Student Learning: A Federally Funded Value-Added Study* (Literacy Collaborative, 2009). Study available at <http://www.ecs.org/html/Document.asp?chouseid=8563> (Accessed March 17, 2010)

²⁹ Harris Cooper. *Summer Learning Loss: The Problem and Some Solutions*. (Champaign IL: ERIC Clearinghouse on Elementary and Early Childhood Education, May 2003).

program—a summer program designed to improve academic skills, parental involvement, academic self-perceptions, and social behaviors among low-income children and families. The study, which focused on programs operating in Boston and New York City, found that, during the summer, children in the BELL treatment group gained about a month’s worth of reading skills more than their counterparts in the comparison group. The study also found evidence of positive impacts on the degree to which parents encouraged their children to read.³⁰

The strategies that the literature currently emphasizes to prevent high-schoolers from dropping out include supporting early-warning data systems to identify students at risk of leaving school, raising the maximum compulsory schooling age from 16 to 18, providing catch-up programs for credit-delinquent students, and increasing high school relevance via dual enrollment programs and career and technical education coursework. Increasingly, emphasis is also placed on K-3 literacy efforts to ensure that students are reading at grade level by fourth grade and that they maintain grade-level proficiency in order to be prepared for high school.

In addition, no matter how sound a state's or region’s education system or how vigorous its dropout prevention efforts, some students will invariably fall through the cracks. Dropout recovery systems and programs provide students who have dropped out of school with another chance for high school success. To provide second-chance opportunities for educational success, leaders can create incentives for schools to reengage students. Leaders can also provide multiple pathways to high school graduation and can permit schools to award credit based on performance and competency. Whether schools choose to offer dropout prevention or dropout recovery programs, a recent study from the University of Chicago supports the notion that it is far better for students to earn a high school diploma than a General Educational Development (GED) diploma.³¹ The study reports that the GED credential holds little value in helping students succeed in the job market or earn a postsecondary degree. The report, *The GED*, also notes that GED recipients are more equivalent to high school dropouts than they are to high school graduates in terms of their career outcomes, earnings, and general performance in society.

According to the report, GED recipients, taken as a whole, are as smart as high school graduates are when measured by a scholastic achievement test. However, as a group, GED recipients persistently fail to perform at the level of high school graduates. The report attributes the lack of success for many GED recipients to personality shortfalls such as lack of persistence, low self-esteem, low self-efficacy, and a high propensity for risky behavior. “The same traits that lead them to drop out of school also lead them to leave from jobs early, to divorce more frequently, and to fail in the military,” the report states.

The report finds that GED recipients go to college at a higher rate than high school dropouts, but notes that few recipients finish more than one semester after enrolling. It cites a study by the GED Testing Service, which followed 1,000 randomly selected individuals who passed the GED test in 2002, and found that only 31 percent ever enrolled in a postsecondary institution of any kind, and that 77 percent of those who enrolled did so for only a single semester.

³⁰ Duncan Chaplin and Jeffrey Capizzano. *Impacts of a Summer Learning Program: A Random Assignment Study of Building Educated Leaders for Life (BELL)*. (Washington, DC: Urban Institute, 2006).

³¹ James J. Heckman, John Eric Humphries, and Nicholas S. Mader, *The GED*, NBER Working Paper w16064 (Cambridge, MA: National Bureau of Economic Research, 2010). Available at <http://ssrn.com/abstract=1620781> (Accessed June 15, 2010).

Some dropout prevention programs that consistently appear in the literature include the full-scale, multifaceted Harlem Children’s Zone effort; California’s Linked Learning Approach (which offers four core components including challenging academics, demanding technical component, a work-based learning component and supplemental counseling and academic services); the National Governors Association initiative to curb high school dropout rates and achieve graduation for all; and the Accelerated Middle School Intervention.³²

Postsecondary Indicators

This section examines several different aspects of the postsecondary education system in West Michigan. Figure 33 shows the indicators compared to best performers for attendance, students requiring remedial training, retention, and graduation rates. Additional detail is provided in Figure 34.

The college attendance indicator is equal to the number of first-time, incoming freshmen at a public university in Michigan divided by the total headcount of the senior class where the student attended. The attendance data were supplied by Grand Valley State University. Unfortunately, the college attendance indicator does not capture students going to postsecondary institutions other than public four-year colleges, such as community colleges, private four-year colleges, or schools located outside of Michigan. However, the consistency of this indicator and the ability to compare across the state make the data useful as a proxy for likeliness to attend college. In West Michigan, only 24 percent of students were headed to a public university in Michigan, compared to an average of 44 percent of graduating high school seniors in the top-performing counties (Figures 33 and 34). It is worthwhile to note that Ottawa County is in that top five, however, which suggests that at least one area of the region is currently doing well in terms of sending students to college.

The need for remedial coursework is an indicator of college readiness. Data are available only for community colleges, which offer these classes in order to ensure that students are prepared for the normal coursework. In order to make this indicator comparable to the other indicators, Figure 33 shows the number of students *not* taking remedial courses. On this measure, West Michigan ranks relatively high compared to the top performers in terms of the remedial education required by both traditional and nontraditional (age 25 and older) students. The top performance level is represented by the average of the top three community colleges in Michigan.

Retention rate is utilized as a measure of the ability of community colleges to keep students progressing toward a certificate or degree. Although the graduation rate is a valid alternate measure, most institutions report the graduation rate only for full-time students, which results in a vast underestimation of the success of two-year degree programs, since the majority of students attend part-time. The graduation rate for two-year colleges is shown in Figure 34 for discussion

³² Information on these programs can be found at the following web sites:
http://www.hcz.org/images/stories/From%20Cradle%20through%20College_11.6.09.final.pdf
<http://www.all4ed.org/files/LinkedLearning.pdf>,
<http://www.nga.org/Files/pdf/0910ACHIEVINGGRADUATION.PDF>,
<http://ies.ed.gov/ncee/wwc/reports/dropout/ams/>

purposes, but is not included as one of the key indicators in Figure 33. The retention rate represents the percent of students in the 2008 fall cohort who are still attending from the previous fall, excluding students who have graduated. As shown in Figure 33 and Figure 34, the Grand Rapids, Muskegon, and Montcalm community colleges have lower retention rates for either full- or part-time students than the comparison, which consists of the top 10 percent of all community colleges nationwide. It should be noted that technical colleges were excluded from the comparison.

Graduation rate is the primary indicator used to assess the output of four-year colleges. Because of data limitations, the indicator includes only full-time students and public institutions. The only public four-year institution in West Michigan, GVSU, has a graduation rate of 52 percent, compared to an average graduation rate of 66 percent at the top 10 percent of public colleges and universities nationwide. It should be noted that retention rates for four-year universities were also examined and on this measure GVSU performs much closer to the top performers for the retention of full-time students, but much worse for part-time students (Figure 34). Although graduation rate is the preferred indicator of overall four-year school performance, the differentiation in retention rates may suggest areas of both strength and weakness for the region’s public four-year educational programs.

Figure 33

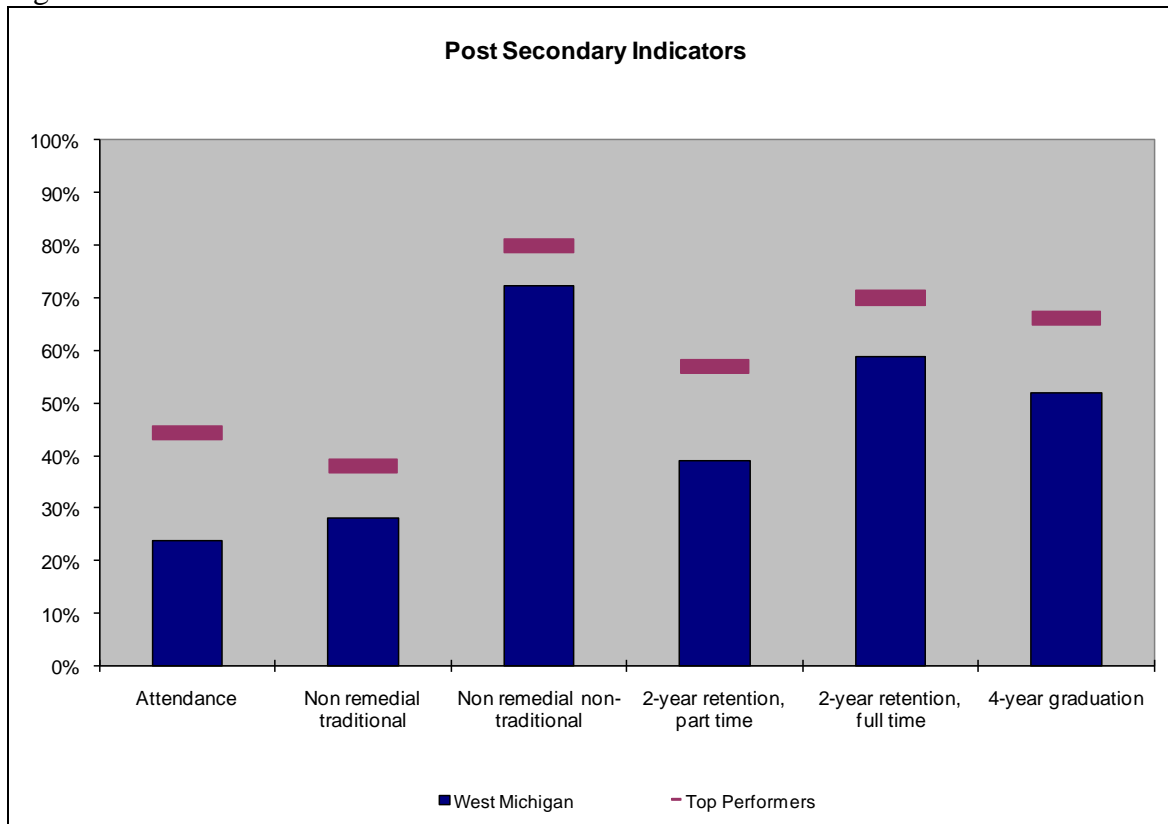


Figure 34

Postsecondary Indicators

Indicator	West Michigan (%)	Top Performers (%)
Attending a public school in Michigan	24	44
Not taking remedial classes, traditional students	28	48
Not taking remedial classes, nontraditional students	72	80
Two-year retention rate, part-time students	39	57
Two-year retention rate, full-time students	59	70
Two-year graduation rate	17	52
Four-year retention rate, part-time students	29	79
Four-year retention rate, full-time students	84	87
Four-year graduation rate	52	66

Sources: Grand Valley State University, 2009; Michigan Center for Educational Performance and Information, 2008-2009; State of Michigan Performance Audit of Developmental Education at Michigan Public Community Colleges May 2009; Integrated Post Secondary Education System, 2007

Best Practices for Addressing the Gaps

The future challenges facing the region and the nation as a whole have been clearly set forth by Bowen, Chingos and McPherson (2009):

- 1) The level of educational attainment today is both too low and stagnating.
- 2) The national education system generates large and growing disparities in graduation outcomes related to race/ethnicity and socioeconomic status.
- 3) To increase the level of education attainment, significant improvement is required to improve the graduation for economically disadvantaged populations.
- 4) Time-to-degree matters for success; remedial education can be a barrier because of its extra costs and the delay it creates for graduation.³³

College Retention

Research suggests that the ability to complete the academic demands of college is *not* the major barrier stopping students from completing college. The major barriers include the following three factors:

- 1) Financial stress of the cost of college and the ability of students to support themselves and, in some cases, their families as they go to school.
- 2) Lack of flexibility in the course offerings at college.
- 3) Personal development: the lack of self-esteem, self-confidence, and emotional intelligence.

³³ William G. Bowen, Matthew M. Chingos, Matthew, and Michael S. McPherson, *Crossing the Finish Line: Completing College at America's Public Universities* (Princeton, NJ: Princeton University Press, 2009).

According to Johnson and Rochkind, most students drop out of college because they find the stress of supporting themselves and attending and paying for schooling simply too difficult.³⁴ Moreover, more than a third of the college dropouts whom they interviewed claimed that they could not return even if tuition was free because they simply could not afford not working.³⁵ In short, people who do not complete college are often putting themselves through school; this holds true for traditional students as well as older workers returning to college.

When Johnson and Rochkind asked persons who did not complete college what would be two policy changes that would make college graduation more feasible, they said colleges should offer more financial assistance, including extending to part-time students the health care services offered to full-time students. Colleges should also offer more courses in the evenings and on weekends.³⁶ Finally, affordable child care services on campus could make a big difference, they said, especially for women.

Making Remedial Education Work

Although data limitations are large, it is estimated that more than 60 percent of the students enrolled at two-year colleges, and 20 to 30 percent at four-year colleges, take remedial courses.³⁷ These students face an uncertain future; the U.S. Department of Education estimates that only 17 percent of high school graduates who require at least one remedial reading course and 27 percent who require a remedial math course earn a bachelor's degree.³⁸

Past studies have pointed to the importance of standard monitoring and testing activities for helping students successfully pass remedial courses. According to McMillan, Parke, and Lanning (1997), a number of studies statistically correlate students' success and the following program characteristics:

- required entry-level testing,
- mandatory placement in basic skills courses,
- continuous evaluation,
- interface between remedial and college-level courses, and
- using technology to offer remediation through alternative instructional media.³⁹

³⁴ Jean Johnson and Jon Rochkind, *With Their Whole Lives Ahead of Them: Myths and Realities about Why So Many Students Fail to Finish College* (San Francisco, CA: Public Agenda, 2010). Available at <http://www.publicagenda.org/files/pdf/theirwholelifesaheadofthem.pdf> (accessed March 17, 2010).

³⁵ Ibid.

³⁶ Ibid.

³⁷ Michael Kirst, "Who Needs It? Identifying the Proportion of Students Who Require Postsecondary Remedial Education Is Virtually Impossible" *National CrossTalk* (Winter 2007). Available at www.highereducation.org/crosstalk/ct0107/voices0107-kirst.shtml (accessed March 17, 2010).

³⁸ National Center for Education Statistics, *Remedial Education at Higher Education Institutions in Fall 1995*, (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1996).

³⁹ Virginia K. McMillan, Scott J. Parke, and Carol A. Lanning, "Remedial/Developmental Education Approaches for the Current Community College Environment" *New Directions for Community Colleges* 1997(100) (Winter 1997): 21-32

More current research suggests that even with these measures in place the following barriers can hinder student success:

- *Cost.* Since students taking remedial courses do not earn college credits, they face extra financial burden because of the additional time it will takes to complete a degree or certificate.
- *Many of the remedial programs do not tackle the personal self-esteem problems that many students, coming from troubled high schools, may have.* This is equally important for returning nontraditional students, who may be intimidated by being back in the classroom.

The two general solutions to these challenges are clear:

First, better high school preparation for college-bound students is needed, combined with more flexible remedial education offerings at the community college. Richey et.al. (2002) found that collaborative partnerships between community colleges and their feeder high schools are an effective means of reducing the need for postsecondary remedial education.⁴⁰ Second, shortening the duration of the necessary remedial courses, when possible, has also been found to be effective in keeping students in college. Collins advocates the elimination of "rigid census dates and seat-time requirements," found in most states that require 16-week or semester-long remedial courses. He argued that this slows the "accelerated delivery" that can be provided by short refresher courses which last only a few weeks and cover only the specifics areas where students are deficient. He further claims that this strategy has been shown to be effective because the refresher approach allows students start in right away on college-level work.⁴¹

Accelerating students' progress through their necessary remedial classes is a focus of the Bill and Melinda Gates Foundation and the Lumina Foundation for Education's *Developmental Education Initiative*. The following six participating states plan to implement the initiative: Connecticut, Florida, North Carolina, Ohio, Texas, and Virginia. The goal of the initiative is to increase the number of students who complete college preparatory work and move on to complete college-level work. The participating community colleges plan to implement the initiative's developmental education strategies by accelerating student progress through their necessary remedial classes, and by providing academic and support services. Of course, this will require revising the development education curricula in these community colleges and providing professional development for the college's staff and faculty during the three-year initiative.

In addition in Florida, the Department of Education has initiated an "early intervention" program in the state's high schools. The state plans to provide "an opportunity for college placement testing and remediation while in high school."

⁴⁰ Deborah K. Richey, Jeanette Mathern, Carol S. O'Shea, and Shelby J. Pierce, "Community College/High School Feedback and Collaboration: Preventive Measures," *New Directions for Community Colleges* 1997(100) (Winter 1997): 63-72.

⁴¹ Michael Lawrence Collins, *Setting Up Success in Developmental Education: How State Policy Can Help Community Colleges Improve Student Outcomes* (Boston: Jobs for the Future, 2009).

Second there is a need to improve students' self-esteem and ability to make it through remedial training and college. Some educators refer to a “sustainability gap,” which is the difference between a student’s ability to perform and his or her actual performance, maintained over the semester. Unfortunately, it is all too common for students who are earning passing grades at the beginning of a course to give up and fail the course at term’s end.

One study found that nonacademic factors such as self-confidence, drive, social support, and social involvement all had a positive relationship to retention. “Students who master course content but fail to develop adequate academic self-confidence, academic goals, institutional commitment, achievement motivation, and social support and involvement may still be at risk of dropping out.”⁴²

A promising program that is designed to address these nonacademic factors facing remedial students is the Academy for College Excellence (ACE), formerly the Digital Bridge Academy. It is a well-regarded remedial program for underprepared college students and has several unique features:

- The program begins with a two-week foundation course that focuses on self-discipline, leadership, communication skills, and self-esteem.
- The same group of students stays together for the whole semester to form a learning community. Many ACE students report that their cohort ends up feeling like a family.
- The program stresses interactive learning and just-in-time learning, where students put into practice what they have just learned.

ACE’s learning environment allows students to reclaim their educational experience and create a new vision of what learning can be. The ACE methodology and curriculum facilitates a deeper connection between educators and students while awakening students' desire to learn.”⁴³ Currently six community colleges in California and one each in Illinois and Pennsylvania are using the program.

Finally, a new national initiative is just getting started: *Getting Past Go*, a program supported by a grant from the Lumina Foundation for Education and formed from a partnership of the Education Commission of the States (ECS), Knowledge in the Public Interest (KPI), and Policy Research on Preparation, Access, and Remedial Education (PRePARE) at the University of Massachusetts, Boston. The initiative’s objective is to create a network of state postsecondary system and institutional leaders committed to improving developmental studies policy and practice to increase college attainment rates in their states.⁴⁴

⁴²Veronica A. Lotkowski, Steven B. Robbins, Richard J. Noeth, *The Role of Academic and Non-Academic Factors in Improving College Retention* (Iowa City, IA: ACT Inc., 2004), 6.

⁴³ See <http://academyforcollegeexcellence.org/> (Accessed June 14, 2010).

⁴⁴ Mary Fulton, *State Reporting on Developmental Education Analysis of Findings: Getting Past Go Project* (Denver, CO: Education Commission of the States, 2010). Also see Bruce Vandal, *Getting Past Go: Rebuilding the Remedial Education Bridge to College Success* (Denver, CO: Education Commission of the States, 2010), available at <http://www.gettingpastgo.org/docs/GPGpaper.pdf> (accessed June 25, 2010).

Regional Comparison

In order to compare educational attainment and income, comparison areas originally developed by the W.E. Upjohn Institute for the West Michigan Strategic Alliance were used to illustrate the general relationship between education and income. The West Michigan region is composed of the Grand Rapids-Muskegon-Holland Combined Statistical Area, as defined by the U.S. Census— includes Allegan, Barry, Ionia, Kent, Muskegon, Newaygo, and Ottawa counties— plus, the addition of Montcalm and Oceana counties. The comparison areas were selected utilizing the following basic criteria:

- Regions should contain at least five counties (the sole exception is the South Bend region; it has only four counties but is similar in size, industrial mix, and geography).
- Regions should have more than one core area.
- Regions should have a population greater than 375,000 but less than 2.2 million.
- Regions should not be located in a unique tourism or retirement area, such as Florida or California.

A scatter plot of educational attainment and per capita income for West Michigan and the comparison regions is shown in Figure 35. Two distinct groups can be seen, separated by a natural break: the group in the upper right has per capita incomes above \$27,000, and the percent of this groups' residents age 25 to 34 (young professionals) with at least a bachelor's degree is above 31 percent. In the group in the lower left, West Michigan is located roughly in the middle of the pack, with a per capita income of \$23,853 and 25.7 percent of the 25- to 34-year-old population holding a bachelor's degree. To move into the higher income and education group of communities, the region would need approximately 10,000 more bachelor's degrees among 25- to 34 year-olds and an increase in overall regional per capita income of \$3,400.

Figure 35

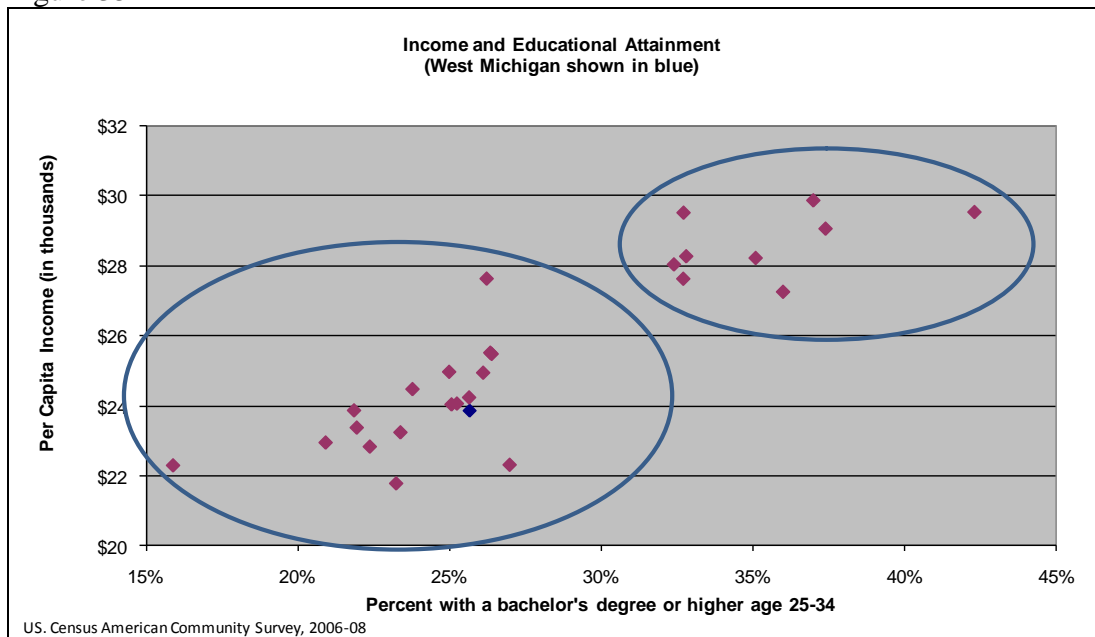


Figure 36 provides a detailed list of per capita income and educational attainment for West Michigan and each of the comparison areas. Ranked in terms of per capita income, West Michigan is twentieth out of the 27 regions. On educational attainment among 25- to 34-year-olds, the region fares slightly better; West Michigan is sixteenth out of the 27 regions, with 25.7 percent of the age group holding at least a bachelor's degree.

Figure 36

Education and Income

Metro or Combined Statistical Area	Percent With Bachelor's Degree, 25-34	Per Capita Income
Austin-Round Rock	37.0	29,873
Raleigh-Durham-Cary	42.3	29,540
Portland-Vancouver-Beaverton	32.7	29,522
Des Moines-Newton-Pella	37.4	29,066
Providence-New Bedford-Fall River	32.8	28,278
Albany-Schenectady-Amsterdam	35.1	28,229
Milwaukee-Racine-Waukesha	32.4	28,045
Virginia Beach-Norfolk-Newport News	26.2	27,640
Indianapolis-Anderson-Columbus	32.7	27,636
Omaha-Council Bluffs-Fremont	36.0	27,264
Louisville/Jefferson County-Elizabethtown-Scottsburg	26.4	25,526
Boise City-Nampa	26.4	25,491
Dayton-Springfield-Greenville	25.0	24,980
Salt Lake City-Ogden-Clearfield	26.1	24,955
Greensboro-Winston-Salem-High Point	23.8	24,487
Little Rock-North Little Rock-Pine Bluff	25.7	24,249
Knoxville-Sevierville-La Follette	25.3	24,074
Savannah-Hinesville-Fort Stewart	25.1	24,050
Chattanooga-Cleveland-Athens	21.9	23,879
WEST MICHIGAN	25.7	23,853
South Bend-Elkhart-Mishawaka	21.9	23,388
Greenville-Spartanburg-Anderson	23.4	23,253
Augusta-Richmond County	20.9	22,962
Macon-Warner Robins-Fort Valley	22.4	22,846
Columbus-Auburn-Opelika	27.0	22,327
Gulfport-Biloxi-Pascagoula	15.9	22,310
Johnson City-Kingsport-Bristol (Tri-Cities)	23.2	21,796

Source: American Community Survey, 2006-2008

In order to look more closely at the relationship between educational attainment and income, we examined data from the 1990 Census, as well as the 2006-2008 Census Bureau ACS data.

Several variables had to be changed slightly. First, in 1990, age breakdown of education was not available, so both years use the total population over 25 instead of persons age 25 to 34. Second, it should be noted that the Census Bureau's definitions of Metropolitan Statistical Areas have changed since the 1990 Census. The current definitions were developed after the 2000 Census. For comparison purposes we are using the data that corresponds to each year's area definition.

Figure 37

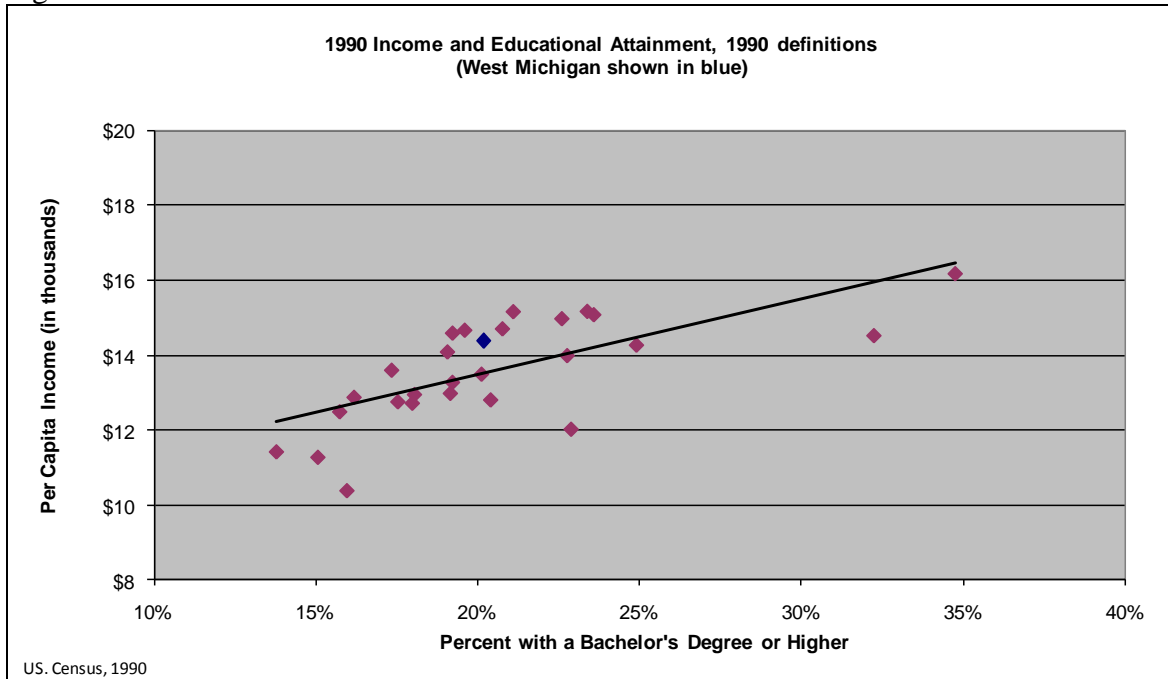


Figure 38

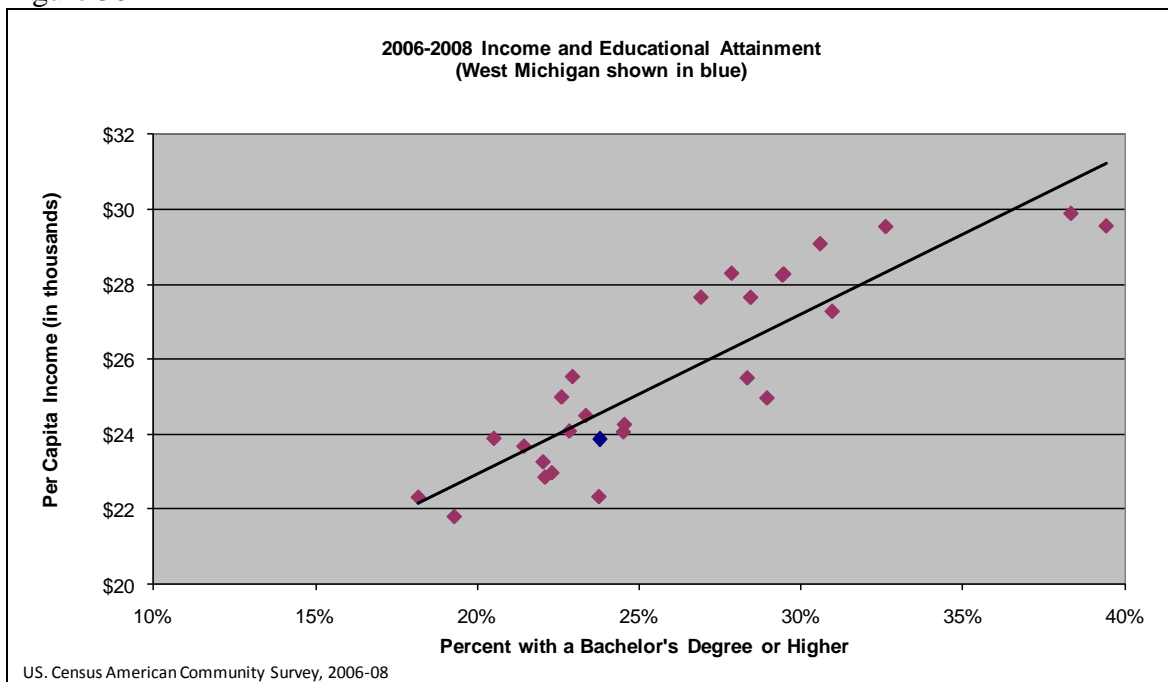
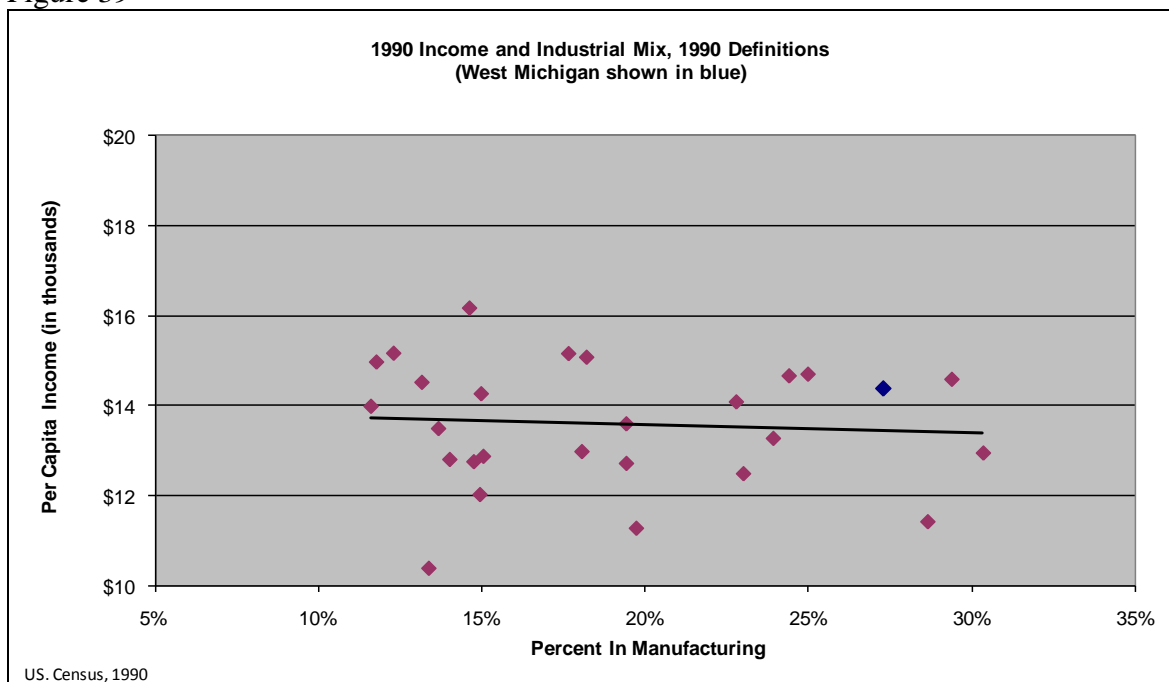


Figure 37 shows educational attainment and income for 1990, and Figure 38 shows the same for the 2006-2008 period. Both figures have a trend line that suggests increasing returns for higher

levels of education. Notice, however, that the trend line is steeper for the 2006-2008 data than for 1990. The correlation between educational attainment and income is 0.88 for the 2006-2008 data, compared to only 0.69 in 1990, which suggests that the importance of an educated populace for a region's prosperity has increased over the past 16-18 years.

Unfortunately, it appears that West Michigan has not fared well since 1990 in terms of its income relative to the education of the region's residents. In 1990, the region was above the trend line—which would indicate that the region's income was higher than predicted given the educational attainment of its residents. However, in the more recent data the region has fallen below the trend line (Figure 38). In 1990, only Austin, Texas, and Raleigh-Durham, North Carolina, were well ahead of the pack of comparison regions in terms of residents with bachelor's degrees. Since then, those two regions remain the two highest points on the graph; however, Portland, Des Moines, Providence, Albany, Milwaukee, Virginia Beach, and Omaha have all moved up to form a new grouping of cities with higher levels of educational attainment and income (Figure 38). West Michigan remains in the lower grouping and is located below the trend line, which indicates that its educational attainment has lagged behind the comparison communities, as has its ability to grow regional income with the educated workers that are in the region. Of course, this reflects the fact that a higher attainment rate does not automatically equal higher income on its own; for example, Salt Lake City is fairly well-educated but has an income level below similarly educated regions such as Virginia Beach and Boise, and income below the less-educated community of Dayton, Ohio (Figure 36).

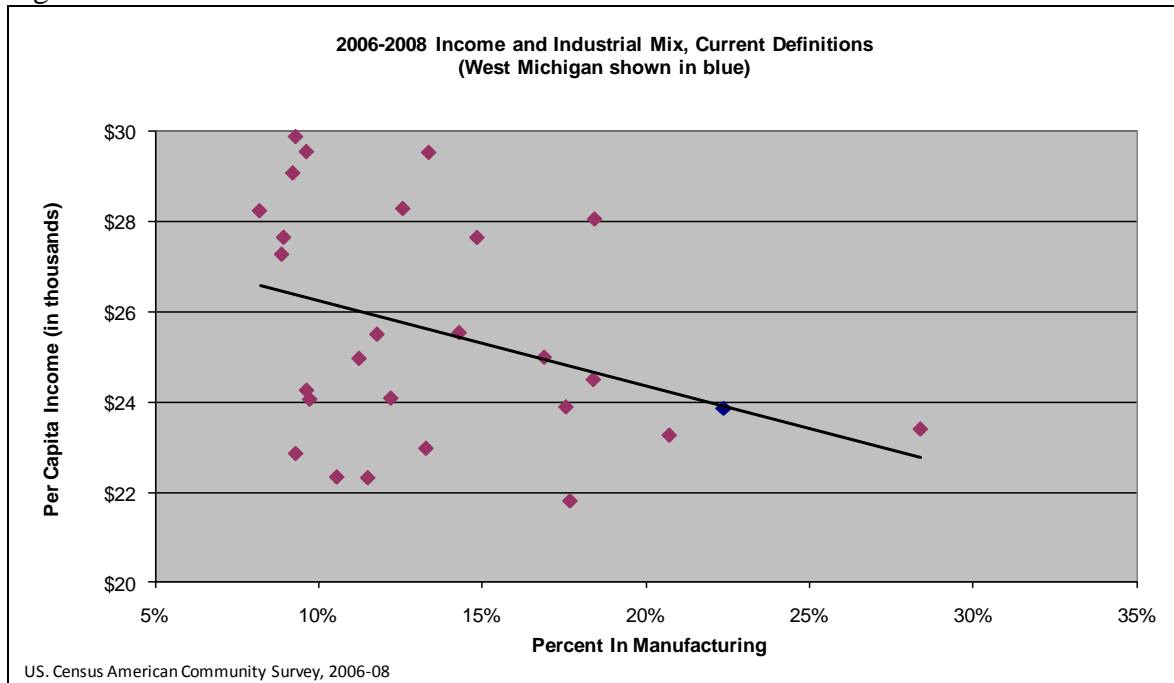
Figure 39



One reason for the change in the relationship between educational attainment and income over the past several decades may be the changing role of manufacturing in the economy. In 1990, the per capita income of regions with a high concentration of manufacturing was not significantly different from communities with larger service sectors (Figure 39). However, since then the trend has shifted and, as the 2006-2008 data illustrate, higher levels of manufacturing are now often associated with lower per capita incomes (Figure 40). For West Michigan, this

shift in the relationship between income and manufacturing has not been advantageous, since the region is so heavily dependent on the sector: in 1990 the region had the fourth highest concentration of manufacturing activity among the comparison regions, and by the 2006-2008 period it had increased to having the second highest percent in manufacturing. During the intervening years, it is clear that West Michigan failed to increase its educational attainment and remained reliant on a manufacturing sector that no longer provides the level of per capita income it did in the past.

Figure 40



Conclusions

When West Michigan is examined in the context of economic and workforce data, the region does not appear to be particularly troubled. The region ranks high in job creation, and the profile of the region's workforce is relatively young in key occupations such as engineering. Additionally, the region is forecast to grow at a modest pace over the next 15 years, which puts it ahead of many other Michigan communities. Based on this alone, some may argue that there is no problem and no cause for concern.

Major Findings

A deeper analysis suggests otherwise, however; at the very least, the region can perform better than it currently does. On the simplest measure of success—per capita income—the region is in a middling pack of performers. More importantly, it is no coincidence that regions with more educated populaces earn more, illustrating that it is not merely population size or industry concentration or geographic location that determines a given region's fate.

If West Michigan decides to pursue an alternate path into the future, this report identifies some key indicators to monitor change.

- At the K-12 level: MEAP and Michigan Merit Examination scores, and high school graduation rates.
- At the postsecondary level: high school graduates attending college for the first time, remedial education required by traditional and nontraditional students, community college retention, and four-year college graduation rates.

Currently, West Michigan does not rate amongst the top performers on key indicators of the early childhood, K-12, and postsecondary portions of the current workforce development system. This suggests that, although the current workforce development system is adequate, more could be done to ensure that the region offers a world-class workforce by 2025. Indeed, this analysis has identified several major gaps in the current workforce development system, including the following:

- There is no consistent tracking of preschool educational attainment or performance.
- The relative performance of elementary students in West Michigan declines between the third and sixth grades.
- Too many students require remedial education because they lack the basic skills necessary to successfully complete college-level courses. The time and expense of remedial coursework can discourage students and limit their access to postsecondary training.
- Too many college students do not complete their coursework for their degree.

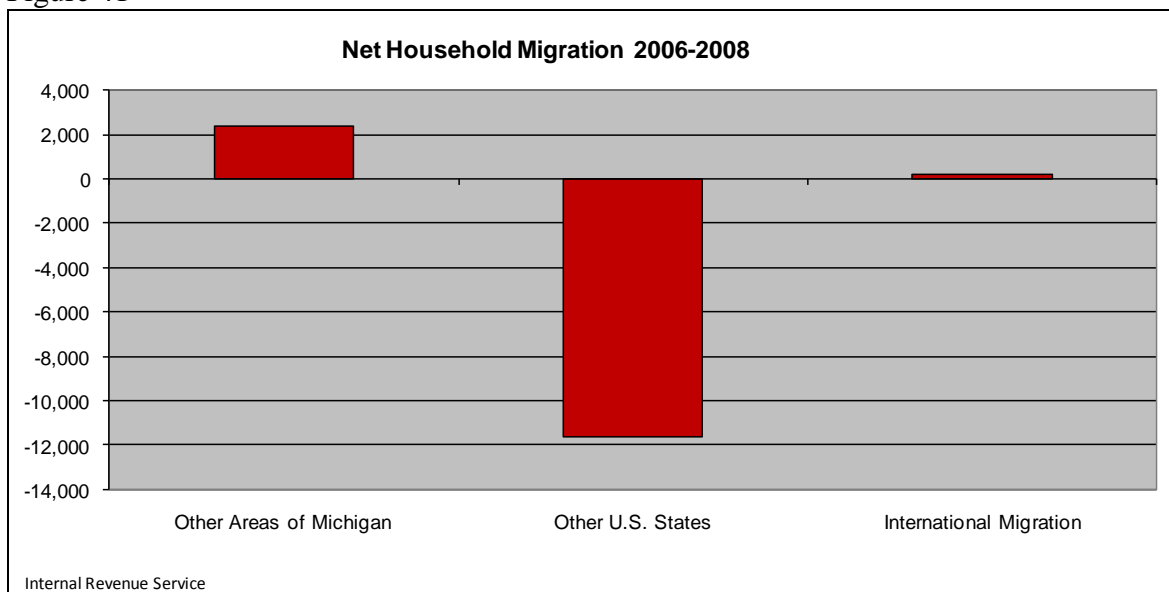
Additionally, it should be noted that West Michigan currently lacks the capacity to produce a large share of the workers needed to fill the more than 26,000 new openings expected by 2025 in occupations that require at least a graduate degree (Figure 25). It would be unrealistic to call a lack of graduate degree programs a direct result of the gaps in the lower levels of the system. Still, the importance of high-skilled and high-paying jobs requiring a graduate-level education should not be underestimated either. However, the widely varied requirements and small scale

of the highest-skilled occupations makes it impossible for the region to become educationally self-sufficient, and requires alternate tactics outside of traditional workforce development efforts to ensure that the region succeeds. This leads us to one final thought to consider.

Migration and Workforce Development

In addition to educating and training the workforce, West Michigan should also be concerned about its ability to attract new workers to the region. So far, this report has focused on analyzing the region's workforce development system and gaps that may need to be addressed in order to avert a future skills shortage; however, any effort to improve West Michigan's workforce would be remiss if it did not also consider the ability of the region to attract and retain workers. Skilled workers also tend to be the most mobile workers; their income levels and demand from employers make households headed by educated workers more likely to move in any given year. If the region simply forges a better educational and workforce development system without also considering what it takes to keep skilled workers living in the region, the results may be disappointing. Additionally, the complex and varied nature of the economy will always force firms to at least occasionally look outside the region for certain types of workers.

Figure 41



Unfortunately, in recent years West Michigan has experienced a net loss of households, as more people have left the region than have been moving into it. According to migration data from the Internal Revenue Service (IRS), from 2006 through 2008 over 53,000 households left the area, while only 44,000 moved in, resulting in a net loss of more than 9,200 households and \$261 million in aggregate income. As shown in Figure 41, West Michigan has been successful in attracting residents from other parts of the state: between 2006 and 2008, the region experienced a net gain of over 2,000 households, as more households moved into West Michigan from other parts of Michigan than moved from West Michigan to other parts of the state. However, the migration trend for other parts of the nation is significantly different. During the same time period, over 31,000 West Michigan households moved to another state, while slightly less than 20,000 moved in from outside the state, which resulted in a net loss of nearly 12,000 households.

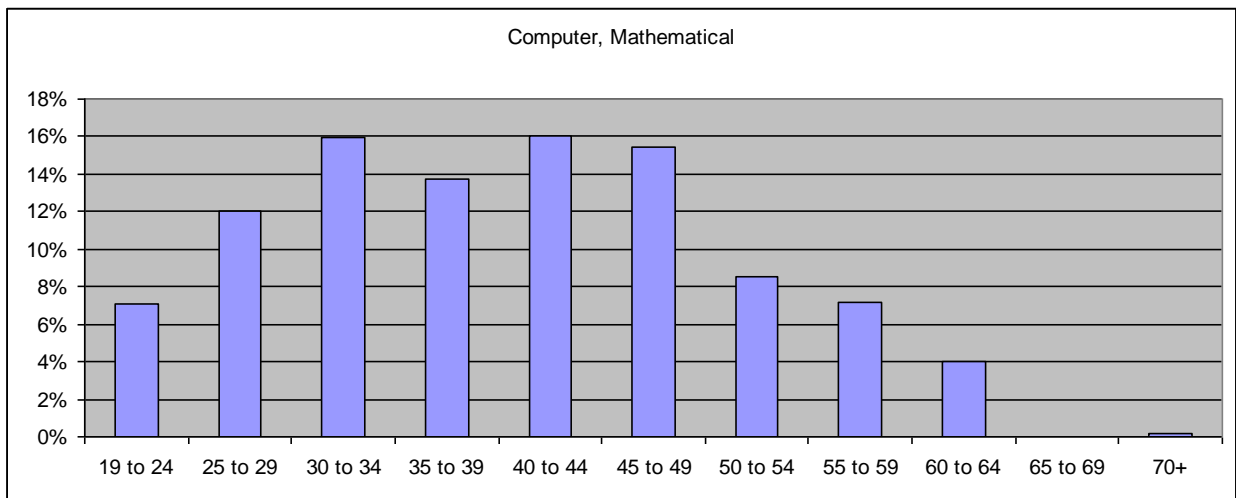
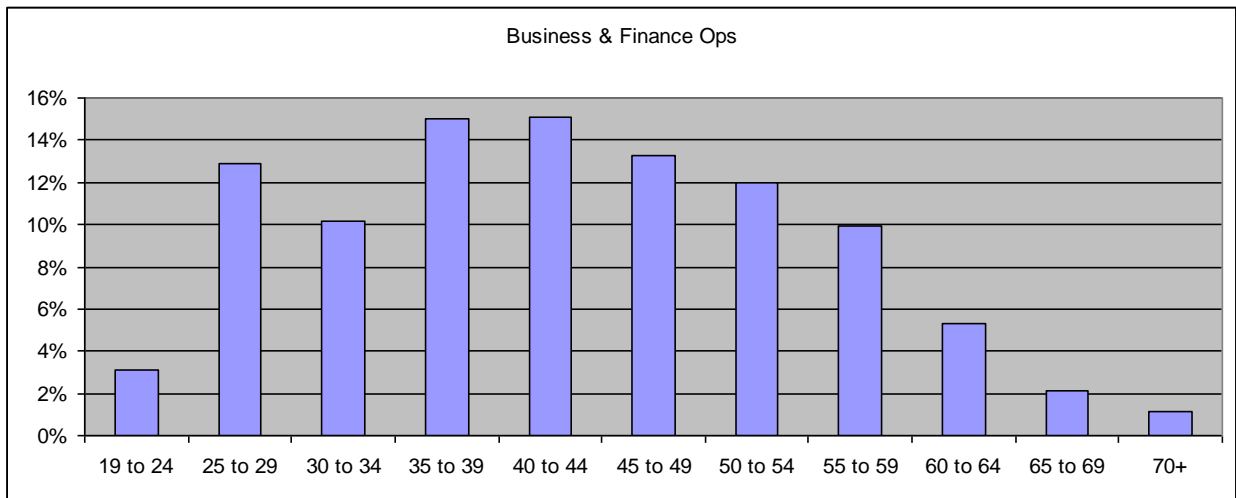
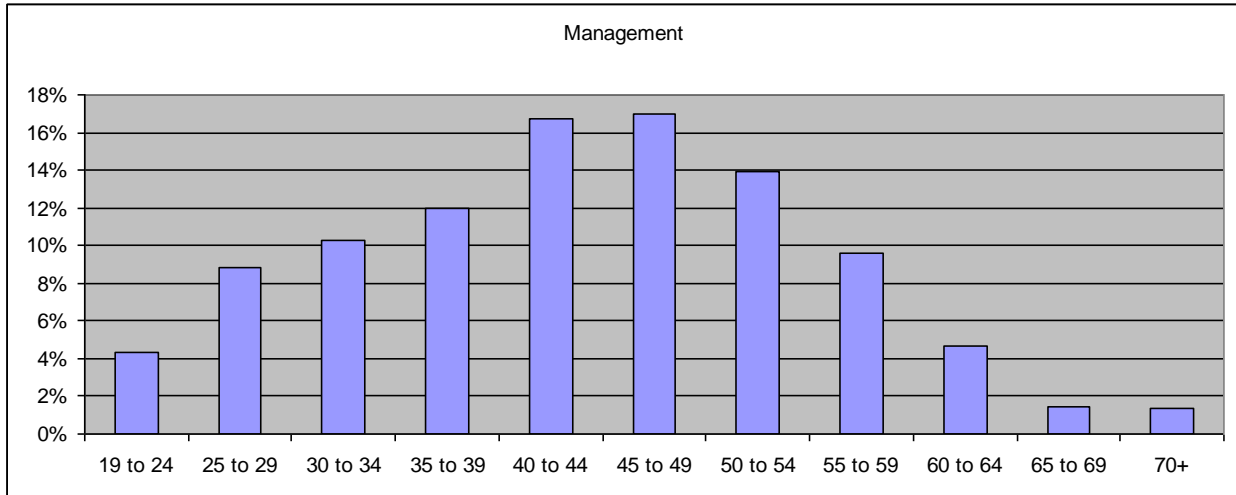
International migration does not play a significant role in the growth or decline of West Michigan's population. On net, the region gained a few hundred households between 2006 and 2008 as a result of movers from foreign countries (Figure 40).

West Michigan's population has grown slightly overall during recent years; however, the growth was primarily the result of births exceeding deaths—not the attraction of new residents.⁴⁵ Of course, the issue is not simply that not enough residents are moving in but the fact that so many are leaving. There are already efforts to promote the region's quality of life to perspective new residents, such as the "Hello West Michigan" web site and the "live and work" section of The Right Place's web site. But despite the region's attracting some newcomers, clearly many residents feel that economic opportunities or quality-of-life differences warrant the significant cost associated with an out-of-state move. Although workforce development has been the focus of this report, it would be a mistake if the issue of attracting and retaining skilled workers and its impact on the future workforce was not also considered.

⁴⁵ U.S. Census Bureau, population estimates, components of population change. Electronic database available at www.census.gov (accessed March 11, 2010).

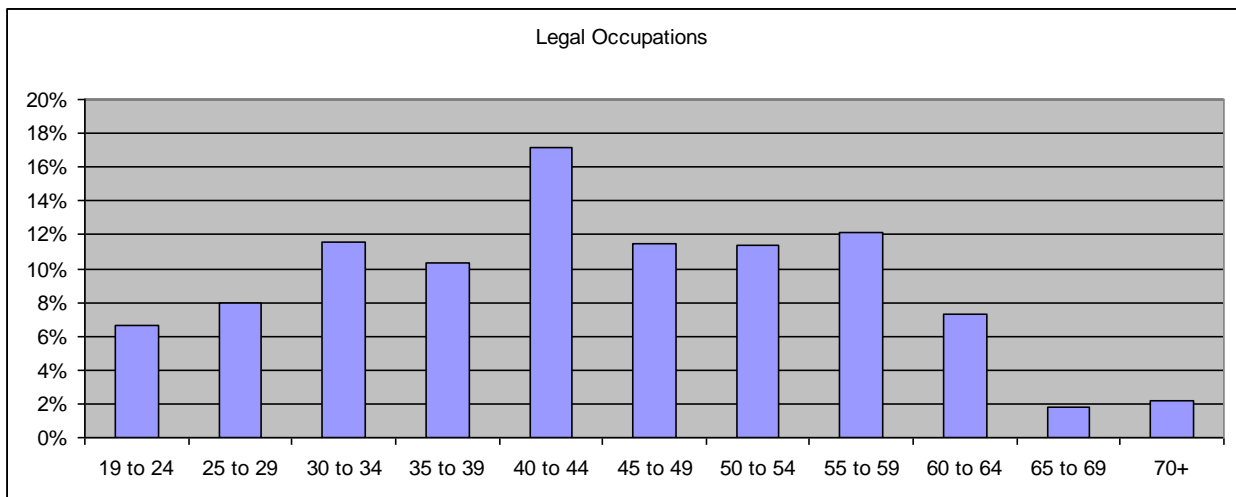
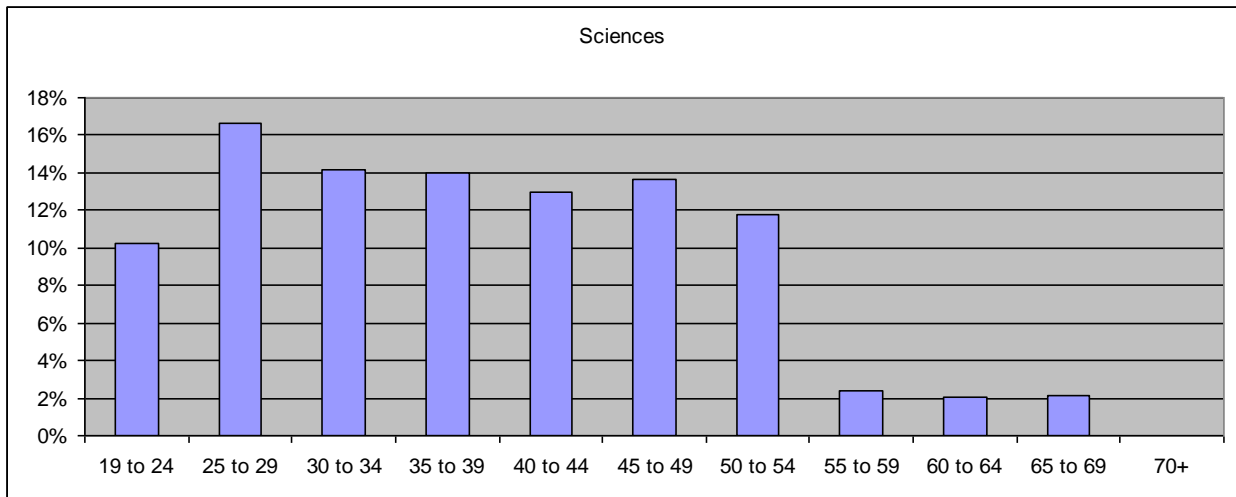
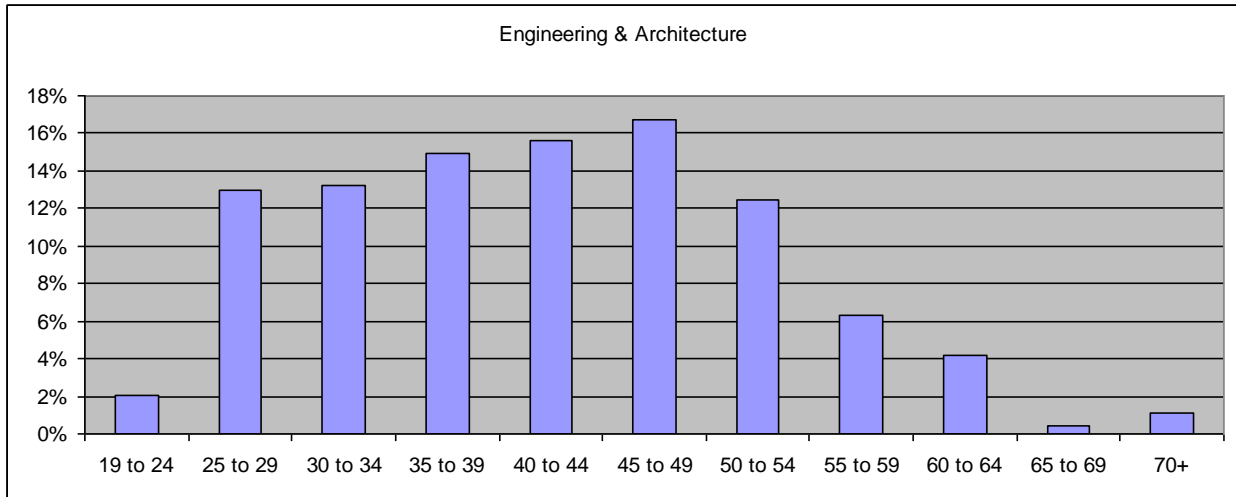
APPENDIX A

This Appendix provides the age breakdown for key occupations in the West Michigan region for the 2006-2008 period



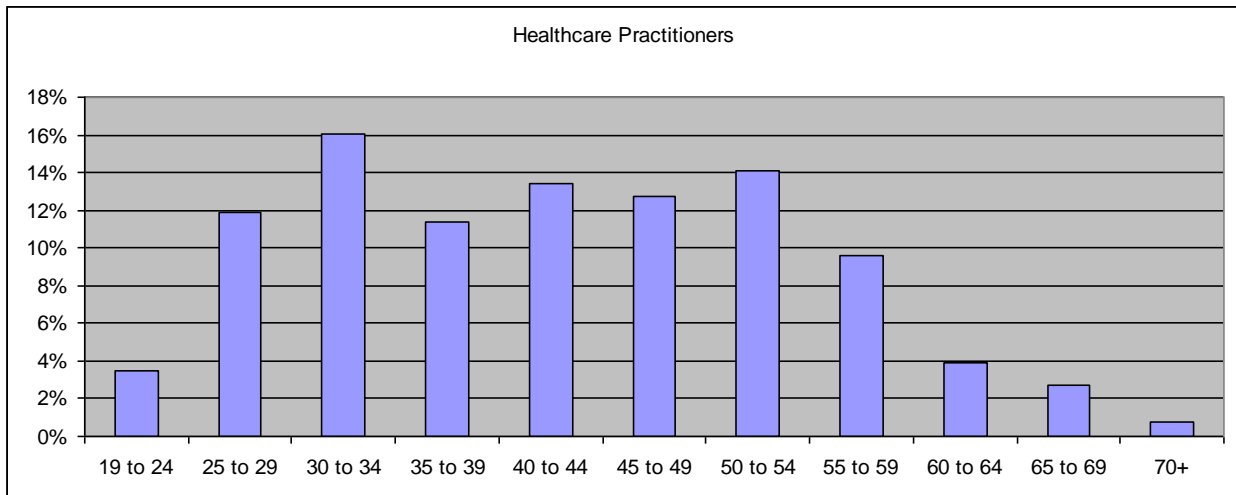
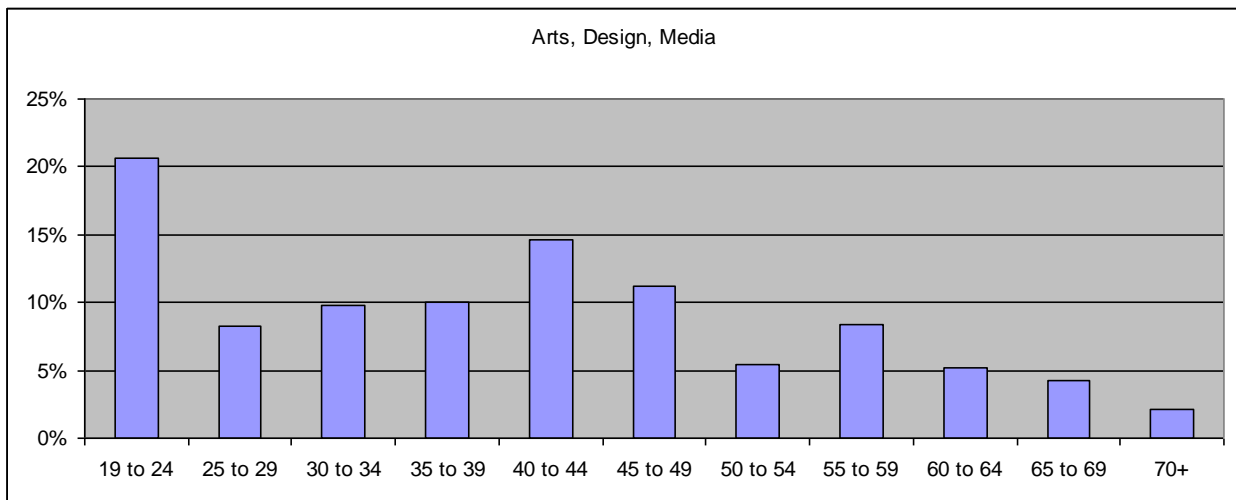
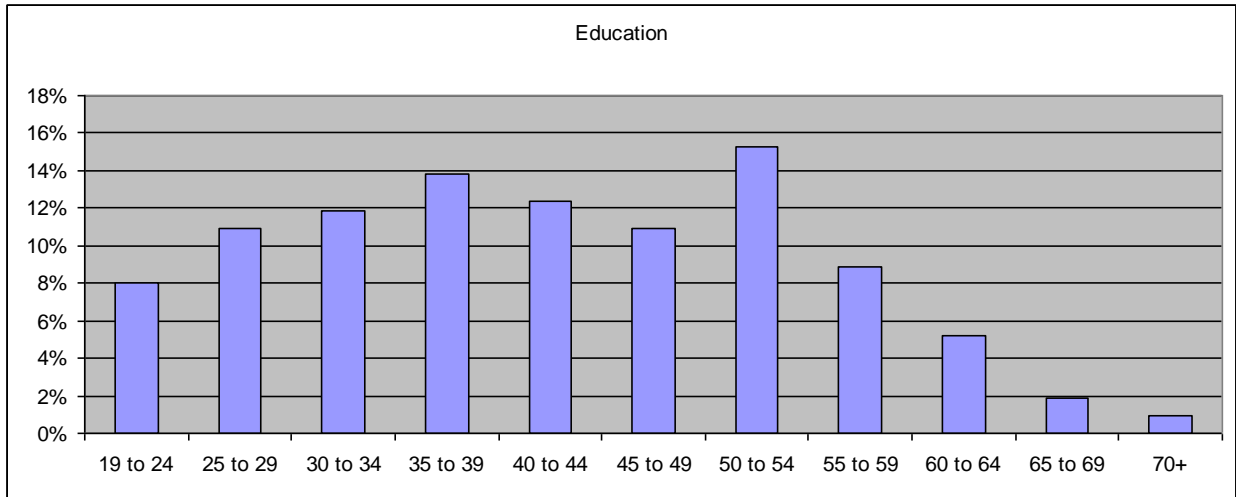
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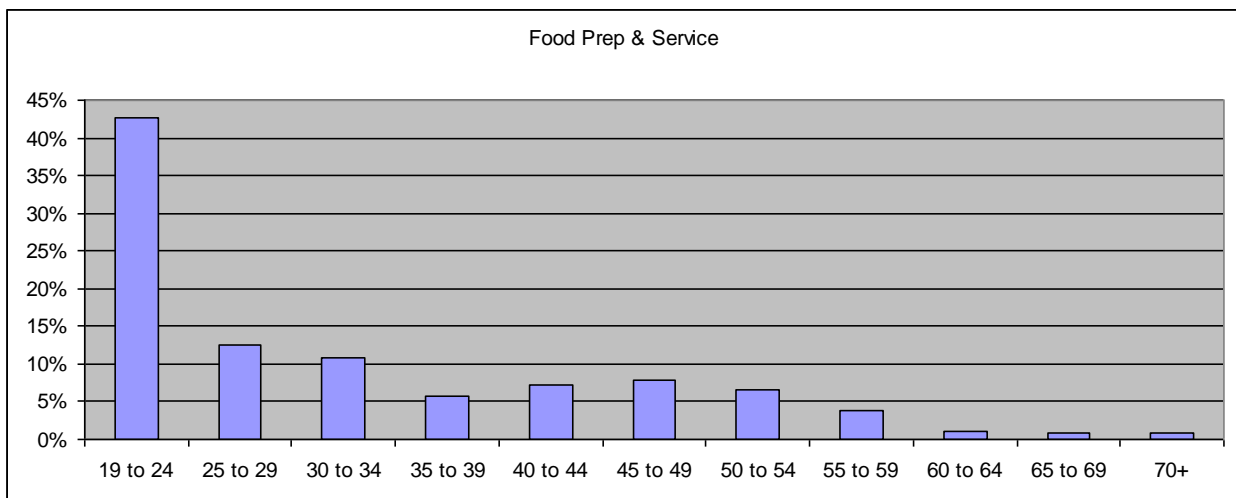
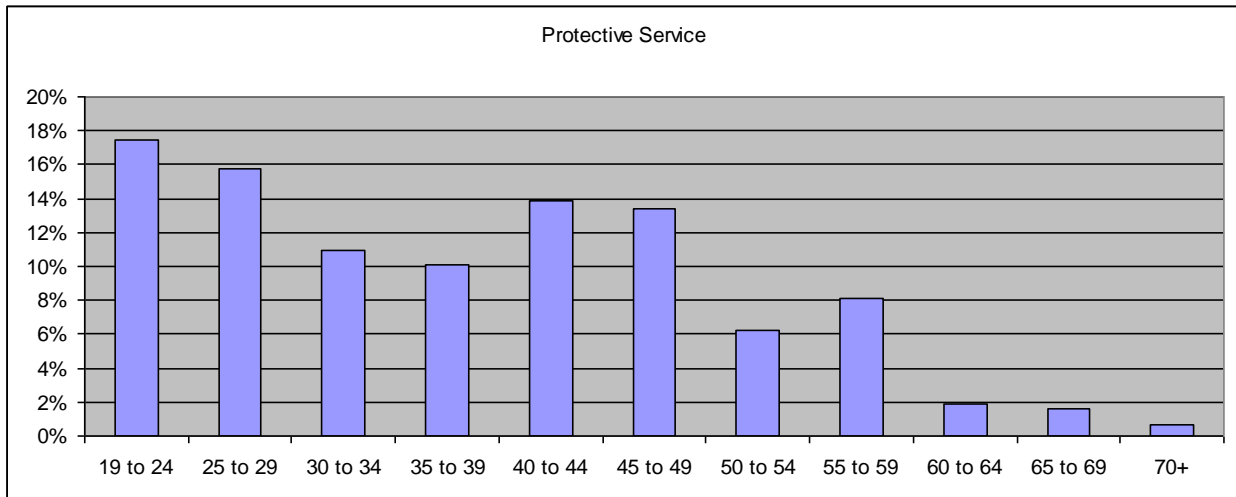
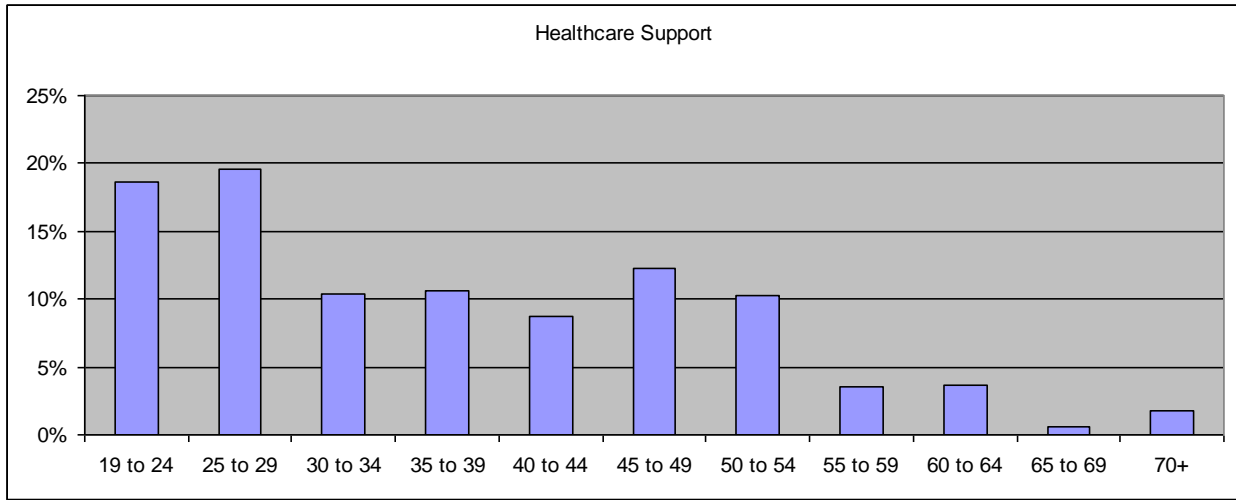
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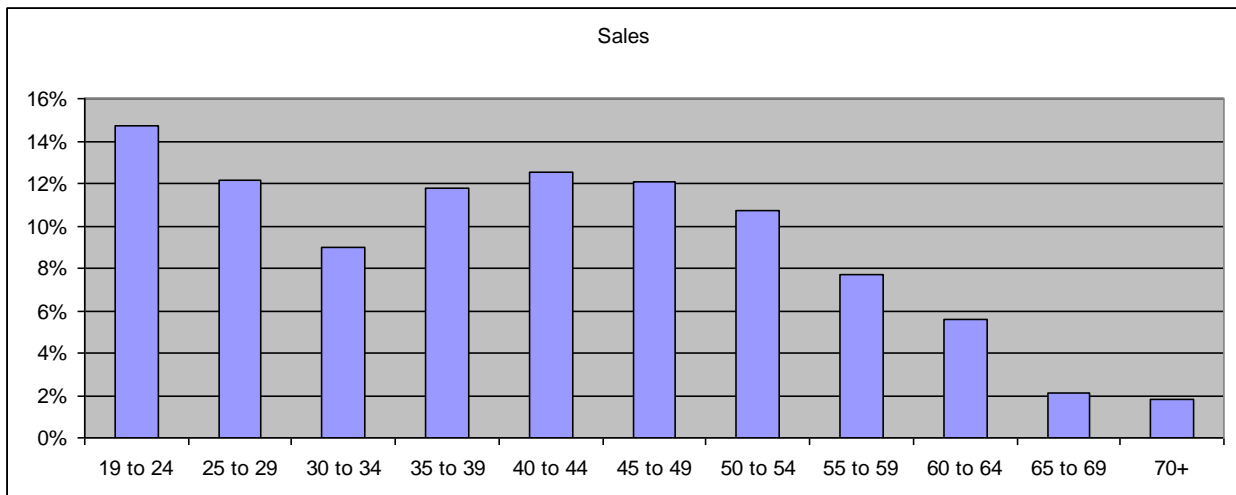
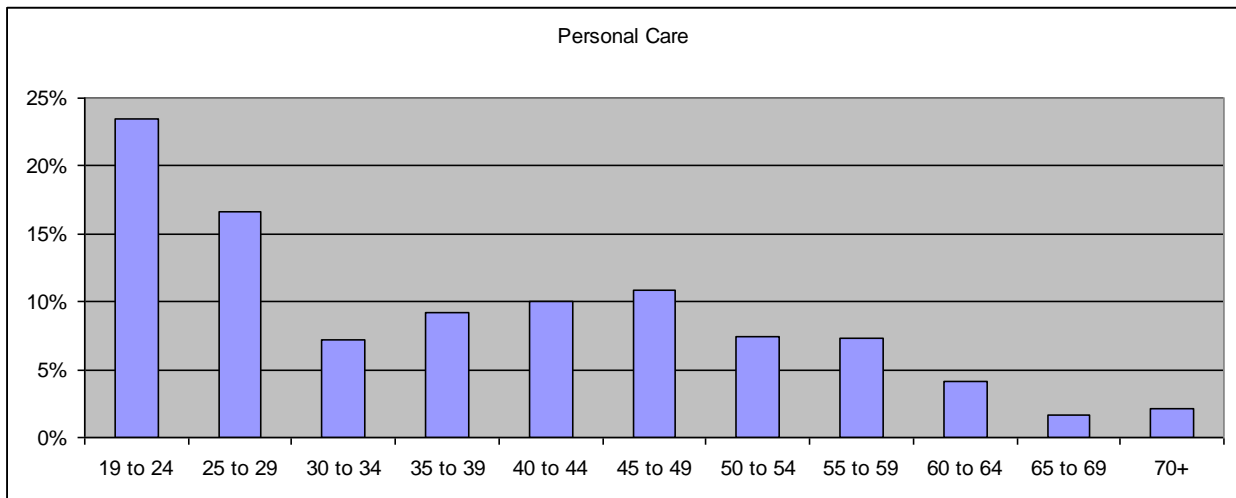
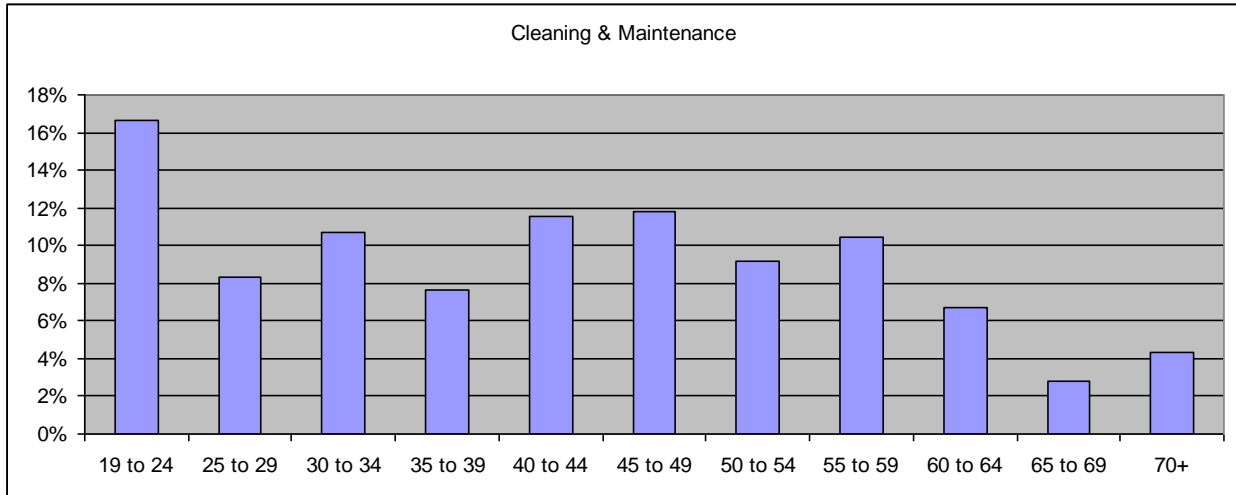
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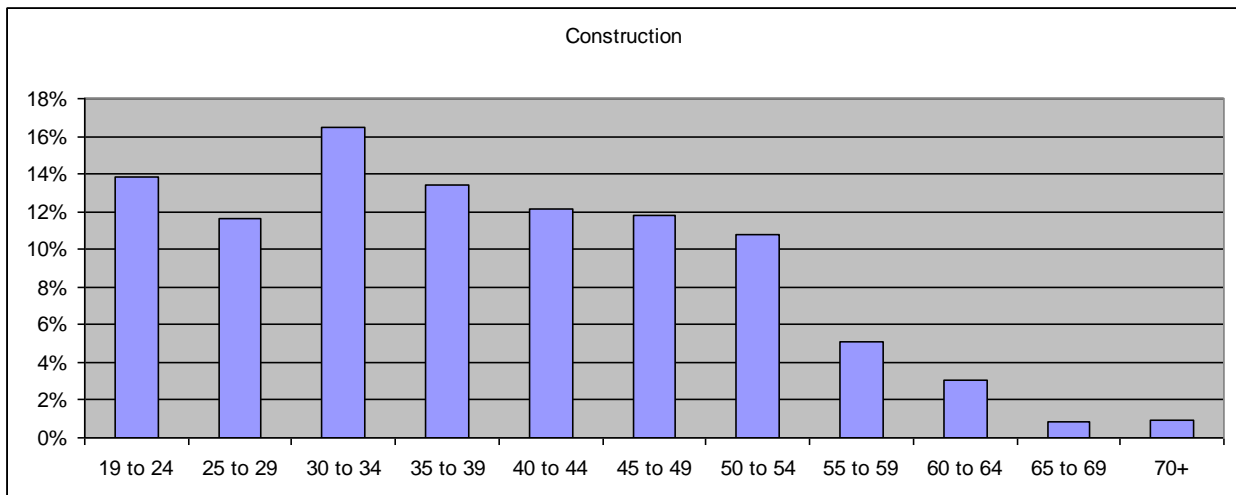
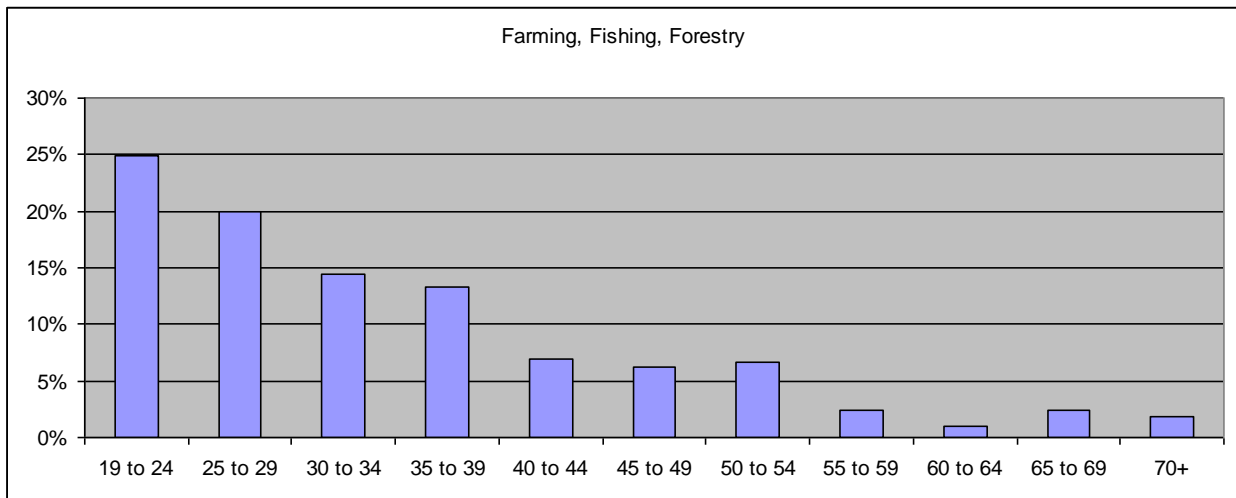
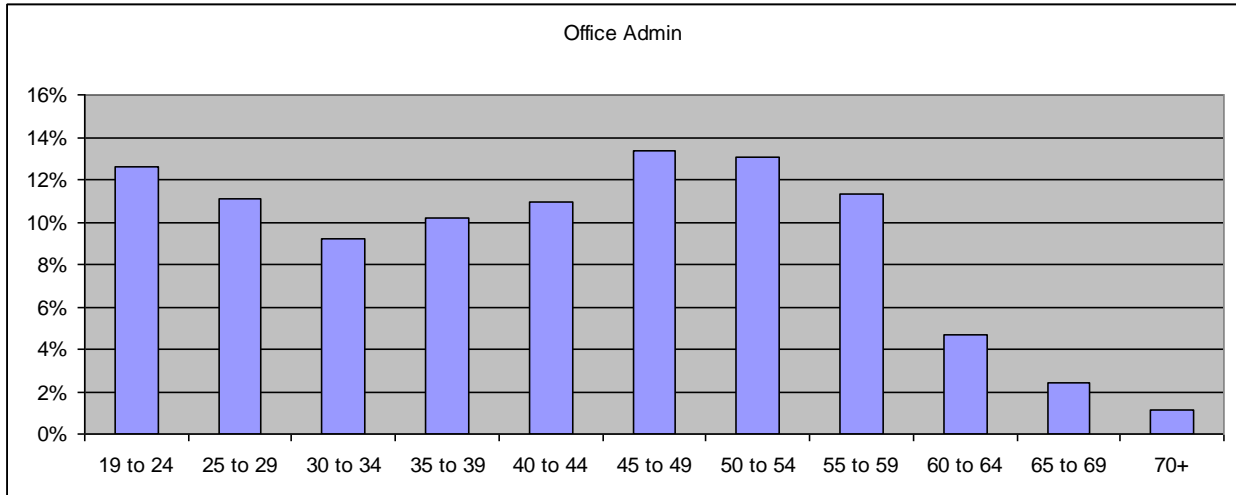
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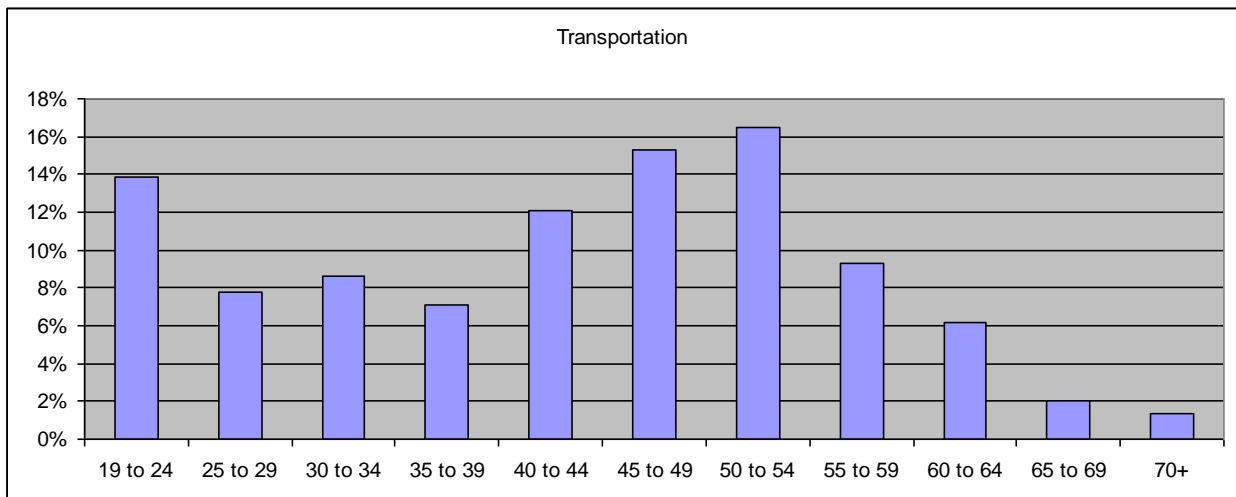
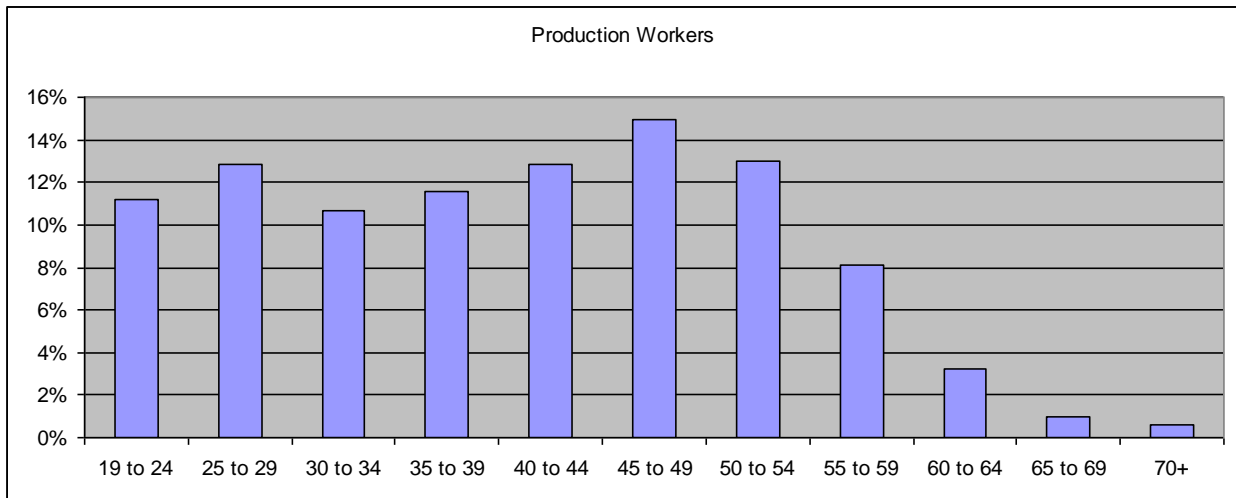
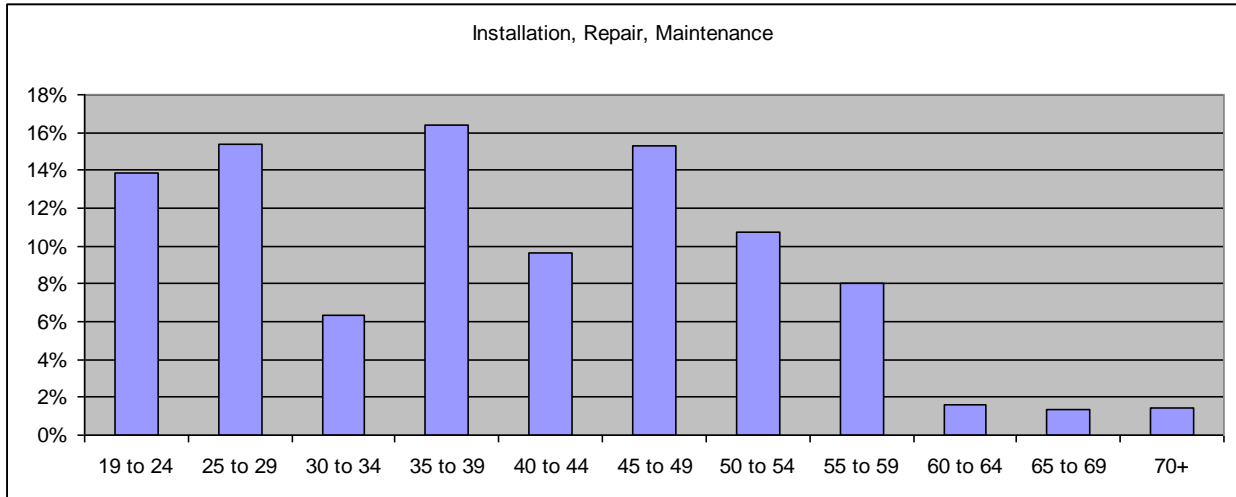
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APPENDIX B

Appendix List: Detailed West Michigan Occupational Employment

Detailed occupational category	1990	2010	Pct. Change
Top executives	10,299	9,673	-6.1
Advertising, marketing, promotions, PR, and sales managers	2,412	2,585	7.2
Operations specialties managers	6,238	6,630	6.3
Other management occupations	8,307	11,257	35.5
Business operations specialists	12,717	15,983	25.7
Financial specialists	8,444	11,403	35
Computer specialists	8,776	12,602	43.6
Mathematical science occupations	374	447	19.5
Architects, surveyors, and cartographers	613	826	34.7
Engineers	7,005	6,659	-4.9
Drafters, engineering, and mapping technicians	3,906	3,728	-4.6
Life scientists	761	990	30.1
Physical scientists	1,022	1,138	11.4
Social scientists and related occupations	1,450	1,857	28.1
Life, physical, and social science technicians	1,204	1,390	15.4
Counselors, Social workers	3,549	5,383	51.7
Miscellaneous community and social service specialists	2,350	3,386	44.1
Religious workers	1,453	2,240	54.2
Lawyers, judges, and related workers	2,183	2,690	23.2
Legal support workers	1,342	1,757	30.9
Postsecondary teachers	852	2,328	173.2
Primary, secondary, and special education teachers	3,710	7,442	100.6
Other teachers and instructors	1,049	1,827	74.2
Librarians, curators, and archivists	839	1,055	25.7
Other education, training, and library occupations	1,715	3,102	80.9
Art and design occupations	2,214	2,253	1.8
Entertainers and performers, sports and related occupations	1,703	1,997	17.3
Media and communication occupations	1,973	2,173	10.1
Media and communication equipment occupations	668	690	3.3
Health diagnosing and treating practitioners	10,994	18,915	72
Health technologists and technicians	7,696	12,100	57.2
Other healthcare practitioners and technical occupations	424	539	27.1
Nursing, psychiatric, and home health aides	6,351	11,481	80.8
Occupational and physical therapist assistants and aides	370	679	83.5
Other healthcare support occupations	3,531	5,763	63.2
First-line supervisors/managers, protective service workers	1,085	1,236	13.9
Fire fighting and prevention workers	1,616	1,875	16
Law enforcement workers	6,236	7,552	21.1
Other protective service workers	4,224	7,762	83.8
Supervisors, food preparation and serving workers	2,842	3,504	23.3
Cooks and food preparation workers	9,314	11,805	26.7
Food and beverage serving workers	18,912	24,632	30.2
Other food preparation and serving related workers	4,310	5,319	23.4
Supervisors, building & grounds cleaning and maintenance workers	826	1,577	90.9

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Building cleaning and pest control workers	10,804	17,550	62.4
Grounds maintenance workers	3,171	6,443	103.2
Supervisors, personal care and service workers	594	856	44.1
Animal care and service workers	547	932	70.4
Entertainment attendants and related workers	1,885	2,640	40.1
Funeral service workers	184	266	44.6
Personal appearance workers	2,006	2,730	36.1
Transportation, tourism, and lodging attendants	340	571	67.9
Other personal care and service workers	6,718	11,222	67
Supervisors, sales workers	6,580	6,131	-6.8
Retail sales workers	40,049	37,588	-6.1
Sales representatives, services	4,114	6,643	61.5
Sales representatives, wholesale and manufacturing	9,391	9,163	-2.4
Other sales and related workers	4,230	6,035	42.7
Supervisors, office and administrative support workers	5,679	6,183	8.9
Communications equipment operators	959	904	-5.7
Financial clerks	14,044	17,243	22.8
Information and record clerks	20,271	25,848	27.5
Material recording, scheduling, dispatching, distributing	20,073	16,800	-16.3
Secretaries and administrative assistants	15,408	18,630	20.9
Other office and administrative support workers	17,682	21,441	21.3
Supervisors, farming, fishing, and forestry workers	258	328	27.1
Agricultural workers	5,959	7,665	28.6
Fishing and hunting workers	7	57	714.3
Forest, conservation, and logging workers	141	355	151.8
Supervisors, construction and extraction workers	2,374	2,128	-10.4
Construction trades and related workers	21,719	19,519	-10.1
Helpers, construction trades	1,785	1,534	-14.1
Other construction and related workers	1,903	2,139	12.4
Extraction workers	300	312	4
Supervisors of installation, maintenance, and repair workers	2,298	2,366	3
Electrical and electronic equipment mechanics, installers, repairers	2,816	2,534	-10
Vehicle and mobile equipment mechanics, installers, and repairers	6,642	8,187	23.3
Other installation, maintenance, and repair occupations	14,352	15,628	8.9
Supervisors, production workers	5,682	4,531	-20.3
Assemblers and fabricators	20,201	14,448	-28.5
Food processing occupations	3,217	3,924	22
Metal workers and plastic workers	22,232	16,947	-23.8
Printing occupations	2,087	1,731	-17.1
Textile, apparel, and furnishings occupations	5,047	4,237	-16
Woodworkers	5,559	4,117	-25.9
Plant and system operators	1,883	1,474	-21.7
Other production occupations	20,976	18,302	-12.7
Supervisors, transportation and material moving workers	1,697	1,957	15.3
Air transportation occupations	147	234	59.2
Motor vehicle operators	15,114	18,206	20.5
Rail transportation occupations	299	247	-17.4

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Water transportation occupations	95	157	65.3
Other transportation workers	1,185	1,562	31.8
Material moving occupations	25,579	24,427	-4.5

Upjohn Institute REMI model.

APPENDIX C

Appendix List: Detailed West Michigan Occupational Employment Forecast

Detailed occupational category	2010	2025	Pct. Change
Top executives	9,673	9,166	-5.2
Advertising, marketing, promotions, PR, and sales managers	2,585	2,648	2.4
Operations specialties managers	6,630	6,699	1.0
Other management occupations	11,257	12,436	10.5
Business operations specialists	15,983	17,999	12.6
Financial specialists	11,403	12,330	8.1
Computer specialists	12,602	15,404	22.2
Mathematical science occupations	447	494	10.5
Architects, surveyors, and cartographers	826	1,060	28.3
Engineers	6,659	7,062	6.1
Drafters, engineering, and mapping technicians	3,728	3,886	4.2
Life scientists	990	1,078	8.9
Physical scientists	1,138	1,291	13.4
Social scientists and related occupations	1,857	2,158	16.2
Life, physical, and social science technicians	1,390	1,502	8.1
Counselors, Social workers	5,383	6,924	28.6
Miscellaneous community and social service specialists	3,386	4,421	30.6
Religious workers	2,240	2,980	33.0
Lawyers, judges, and related workers	2,690	3,051	13.4
Legal support workers	1,757	2,053	16.8
Postsecondary teachers	2,328	3,352	44.0
Primary, secondary, and special education teachers	7,442	9,817	31.9
Other teachers and instructors	1,827	2,340	28.1
Librarians, curators, and archivists	1,055	1,145	8.5
Other education, training, and library occupations	3,102	4,033	30.0
Art and design occupations	2,253	2,415	7.2
Entertainers and performers, sports and related occupations	1,997	2,304	15.4
Media and communication occupations	2,173	2,454	12.9
Media and communication equipment occupations	690	744	7.8
Health diagnosing and treating practitioners	18,915	23,534	24.4
Health technologists and technicians	12,100	14,516	20.0
Other healthcare practitioners and technical occupations	539	615	14.1
Nursing, psychiatric, and home health aides	11,481	15,505	35.0
Occupational and physical therapist assistants and aides	679	887	30.6
Other healthcare support occupations	5,763	7,254	25.
First-line supervisors/managers, protective service workers	1,236	1,275	3.2
Fire fighting and prevention workers	1,875	1,937	3.3
Law enforcement workers	7,552	7,952	5.3
Other protective service workers	7,762	8,867	14.2
Supervisors, food preparation and serving workers	3,504	3,682	5.1
Cooks and food preparation workers	11,805	12,660	7.2
Food and beverage serving workers	24,632	26,577	7.9
Other food preparation and serving related workers	5,319	5,629	5.8
Supervisors, building & grounds cleaning and maintenance workers	1,577	1,854	17.6
Building cleaning and pest control workers	17,550	19,992	13.9

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Grounds maintenance workers	6,443	7,715	19.7
Supervisors, personal care and service workers	856	1,104	29.0
Animal care and service workers	932	1,050	12.7
Entertainment attendants and related workers	2,640	3,398	28.7
Funeral service workers	266	316	18.8
Personal appearance workers	2,730	3,171	16.2
Transportation, tourism, and lodging attendants	571	687	20.3
Other personal care and service workers	11,222	15,552	38.6
Supervisors, sales workers	6,131	5,932	-3.2
Retail sales workers	37,588	37,477	-0.3
Sales representatives, services	6,643	7,078	6.
Sales representatives, wholesale and manufacturing	9,163	8,234	-10.1
Other sales and related workers	6,035	6,372	5.6
Supervisors, office and administrative support workers	6,183	6,215	0.5
Communications equipment operators	904	752	-16.8
Financial clerks	17,243	18,424	6.8
Information and record clerks	25,848	27,401	6.0
Material recording, scheduling, dispatching, distributing	16,800	14,984	-10.8
Secretaries and administrative assistants	18,630	19,902	6.8
Other office and administrative support workers	21,441	22,239	3.7
Supervisors, farming, fishing, and forestry workers	328	267	-18.6
Agricultural workers	7,665	6,445	-15.9
Fishing and hunting workers	57	40	-29.8
Forest, conservation, and logging workers	355	297	-16.3
Supervisors, construction and extraction workers	2,128	2,172	2.1
Construction trades and related workers	19,519	19,859	1.7
Helpers, construction trades	1,534	1,562	1.8
Other construction and related workers	2,139	2,242	4.8
Extraction workers	312	285	-8.7
Supervisors of installation, maintenance, and repair workers	2,366	2,391	1.1
Electrical and electronic equipment mechanics, installers, repairers	2,534	2,399	-5.3
Vehicle and mobile equipment mechanics, installers, and repairers	8,187	8,783	7.3
Other installation, maintenance, and repair occupations	15,628	16,256	4.0
Supervisors, production workers	4,531	3,823	-15.6
Assemblers and fabricators	14,448	12,475	-13.7
Food processing occupations	3,924	4,322	10.1
Metal workers and plastic workers	16,947	13,223	-22.0
Printing occupations	1,731	1,336	-22.8
Textile, apparel, and furnishings occupations	4,237	3,594	-15.2
Woodworkers	4,117	3,891	-5.5
Plant and system operators	1,474	1,373	-6.9
Other production occupations	18,302	15,568	-14.9
Supervisors, transportation and material moving workers	1,957	2,096	7.1
Air transportation occupations	234	241	3.0
Motor vehicle operators	18,206	19,890	9.2
Rail transportation occupations	247	236	-4.5
Water transportation occupations	157	192	22.3
Other transportation workers	1,562	1,792	14.7

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Material moving occupations	24,427	22,245	-8.9
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Upjohn Institute REMI model.

APPENDIX D

Meeting attendees

Thank you to the following individuals and organizations for participating in the forecasting session on December 7, 2009.

Michael Dunlap, furniture
Jenny Shangraw, Right Place
Ed Garner, Muskegon Area First
Craig Nobbelin, health
Mark Champion, GRCC
Eric Merkle, autos
Teresa Sturris and Tom O'Brien, MCC
Eric, Metrics Reporting
Fred Keller
Jim Fisher

Several other individuals were also present but did not sign in.

REMI model inputs

The following assumptions represent the key underlying factors in the 2010 – 2025 forecast developed for West Michigan in this report.

Average U.S. GDP growth average of 2.6 percent for the period

Average Michigan Gross State Product growth of 2.3 percent for the period.

Annual average state employment growth of 0.3 percent for the period.

Continued net job losses in the automotive sector statewide.

Additional growth beyond the baseline projection in West Michigan for health-related fields (+1,000 in hospitals, medical R&D, other related) and electronics (+500 for solar and other green manufacturing).

APPENDIX E

Appendix List: Components of Top Five Index for K-12 Indicator Series

County	Grade	Test	Subject	Score* (%)
Alcona	3	MEAP	Math	97.2
Livingston	3	MEAP	Math	96.7
Houghton	3	MEAP	Math	96.6
Presque Isle	3	MEAP	Math	96.4
Iron	3	MEAP	Math	96.0
West Michigan	3	MEAP	Math	93.2
Mason	3	MEAP	English	90.4
Livingston	3	MEAP	English	89.3
Missaukee	3	MEAP	English	87.2
Gratiot	3	MEAP	English	86.5
Gladwin	3	MEAP	English	86.4
West Michigan	3	MEAP	English	85.9
Livingston	6	MEAP	Math	96.3
Benzie	6	MEAP	Math	92.2
Crawford	6	MEAP	Math	91.6
Bay	6	MEAP	Math	91.0
Barry	6	MEAP	Math	90.7
West Michigan	6	MEAP	Math	82.6
Livingston	6	MEAP	English	96.2
Barry	6	MEAP	English	92.8
Bay	6	MEAP	English	90.7
Grand Traverse	6	MEAP	English	90.7
Ottawa	6	MEAP	English	90.7
West Michigan	6	MEAP	English	82.1
Livingston	8	MEAP	Math	93.9
Alpena	8	MEAP	Math	92.5
Barry	8	MEAP	Math	91.4
Clinton	8	MEAP	Math	90.9
Ottawa	8	MEAP	Math	90.5
West Michigan	8	MEAP	Math	79.8
Livingston	8	MEAP	English	95.2
Alpena	8	MEAP	English	93.5
Grand Traverse	8	MEAP	English	91.2
Bay	8	MEAP	English	90.7
Clinton	8	MEAP	English	90.5

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West Michigan	8	MEAP	English	80.3
Ottawa	11	MME	Math	69.0
Houghton	11	MME	Math	65.7
Midland	11	MME	Math	65.3
Washtenaw	11	MME	Math	64.5
Dickinson	11	MME	Math	63.2
West Michigan	11	MME	Math	59.0
Washtenaw	11	MME	English	67.4
Leelanau	11	MME	English	67.1
Grand Traverse	11	MME	English	66.8
Dickinson	11	MME	English	65.8
Midland	11	MME	English	65.5
West Michigan	11	MME	English	57.9
Washtenaw	11	ACT	Math	21.5
Midland	11	ACT	Math	21.4
Ottawa	11	ACT	Math	21.4
Houghton	11	ACT	Math	21.1
Oakland	11	ACT	Math	20.7
West Michigan	11	ACT	Math	20.1
Washtenaw	11	ACT	English	20.7
Leelanau	11	ACT	English	20.4
Oakland	11	ACT	English	20.1
Grand Traverse	11	ACT	English	20.0
Midland	11	ACT	English	19.9
West Michigan	11	ACT	English	18.7
Huron	12		Graduation	91.8
Clinton	12		Graduation	90.6
Schoolcraft	12		Graduation	89.3
Alger	12		Graduation	88.8
Lapeer	12		Graduation	88.4
West Michigan	12		Graduation	77.6

*Percent meeting standards for MEAP and MME. Raw score for ACT and graduation rate.

Source: Michigan Center for Educational Performance and Information, 2008-09

APPENDIX E

Appendix List: Selected Components of Index for Post-Secondary Indicator Series*

County		Attending a public university in Michigan (%)
Marquette		74.3
Oakland		42.1
Ottawa		37.8
Kalamazoo		37.6
Clinton		37.5
West Michigan		23.7
Community college		
Community college	Student type	Students not requiring remedial courses
Delta	Nontraditional	85
Macomb	Nontraditional	78
Bay de Noc	Nontraditional	76
West Michigan	Nontraditional	80
Traditional		
Montcalm	Traditional	67
Wayne County	Traditional	39
Kellogg	Traditional	38
West Michigan	Traditional	28

*Remaining postsecondary indicators are based on an average of a list of national schools, too large to list here.

Sources: Grand Valley State University, 2009; Michigan Center for Educational Performance and Information, 2008-2009; State of Michigan Performance Audit of Developmental Education at Michigan Public Community Colleges, May 2009.