Seeking Economic Sustainability:
The Economic and Demographic Outlook for Michigan
and Its Counties to 2035

FINAL REPORT

Prepared for

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Introduction

Over the past fifteen years, we have produced four sets of long-term economic and demographic forecasts (1994, 1998, 2003, and 2008) for the Michigan Department of Transportation (MDOT), the Metropolitan Planning Organizations (MPOs), and the State Regional Planning Organizations. In this report we summarize the procedures and broad results for the most recent outlook.

A consistent set of forecasts have been developed for each of Michigan's eighty-three counties and for the state as a whole (the latter equivalent to the sum of all of the counties). County results can be summed to form any region. Forecasts are provided for each year through 2010 and in five-year intervals from 2010 through 2035 for population, employment, personal income, and households. The forecasts were developed using a version of the Regional Economic Models, Inc., Policy Insight model, together with a methodology for developing household forecasts designed by us in cooperation with MDOT.

The forecasts are very detailed. The population forecasts are subdivided into eleven age cohorts for both males and females. The major components of population change are also isolated (natural change, net domestic migration, and net international migration). The employment forecasts are based on the Bureau of Economic Analysis series and are broken out into thirty-one industry divisions consistent with the North American Industrial Classification System (NAICS) for defining industry categories. (A list of the industry divisions is provided in the appendix.) Personal income is partitioned into five major subcategories, total shipments (sales) into nineteen industries, and a single series per county is provided for Gross Regional Product. The household forecasts cover the population in households (and group quarters), and the number of households. The latter also includes projections of the distribution of households by size of household, age of household head, category of income, number of vehicles, and with/without children status.

The forecasts can be requested—either the full set, or individual counties—from the Bureau of Transportation Planning at MDOT. Because of the density of these forecasts, in number of regions, number of years, and number of indicators per region, it is not possible to present details of the results in this brief report. Instead, it is our intention to summarize here the general process and trends that characterize the forecasts.

Procedures

The REMI Model

The forecasts, except for the household forecasts, were developed using an economic/demographic model constructed by Regional Economic Models, Inc. (REMI) of Amherst, Massachusetts [2], and adapted by the research team at the University of Michigan. The REMI model has been fully documented and peer-reviewed in the professional literature [3, 4] and is probably the most widely applied regional economic forecasting and policy analysis tool in the nation. We have been using evolving versions of the REMI model since 1983 to assess projects for several state government agencies in Michigan.

For this study, we were guided by the University of Michigan's near-term economic forecast for the state, which is used by the administration of the State of Michigan, the House Fiscal Agency, and the Senate Fiscal Agency [1]. We updated economic and demographic information not in the model when delivered but that had been released prior to finalizing our forecasts. We also made numerous adjustments to the model based on both our expertise and the comments and insights of a number of local MPOs and regional planning organizations. Since no model is able to include all local knowledge about a regional economy, we generated a preliminary set of forecasts and solicited input from these local organizations. Their comments guided many of the adjustments that produced the final set of forecasts summarized in this report.

The REMI model used in this study was an eighty-three county version, and the forecasts for each county were summed to the state forecast totals, with the model accounting for trade flows among the counties in the process. An economic model was chosen to produce the forecasts for a number of reasons:

- A model imposes a logical consistency and objectivity across counties.
- Its success patterns can be replicated, and forecast errors can be systematically analyzed and corrections introduced.
- The forecasts can be very comprehensive in coverage.
- The forecasts can be generated frequently.
- The model can capture the interactions between demographic and economic forces.
- Sophisticated models can capture trade flows among regions, and thus a county's responsiveness to activities outside of the county.

- A model does not assume that trends continue indefinitely; unlike extrapolation techniques, a model allows the economy to adjust over time.

Among economic models, the REMI model was selected because of several of its features and credentials:

- It is a state-of-the-art model that has been extensively peer-reviewed in the professional literature.
- It has been field-tested for over twenty-five years.
- The model is sufficiently comprehensive to incorporate both an economic and a demographic module that interact.
- The model accounts for trade flows among counties.
- It is a very detailed model that captures the dynamic interactions among economic sectors.
- It is used by other government agencies in Michigan.

The Household Model

The REMI model in isolation does not generate household forecasts. Thus, our research team at the University of Michigan, in cooperation with MDOT, developed an interface model to produce such forecasts. The interface model uses information from the 2000 PUMS database and a spreadsheet program to apportion households by age category (i.e., the age of the household head) at the county level. The changing age structure of the population is what drives all of the household forecasts; we have not made any other assumptions about changing household size preferences over time.

If, for example, we know from the Census that in county X there were 4,000 residents aged 45 to 54 in 2000, with 1,500 households headed by someone in that age group, then the household/population ratio for this age group is 0.375 (1,500/4,000). These 1,500 households are then allocated to the other household categories included in the forecast (income, household size, number of motor vehicles available, presence or absence of children) based on the distribution from the PUMS data. All of these ratios are held constant over the forecast period. The variable that moves the forecast forward is the population in each age category, which changes over time. The resulting apportionment contains seven age, five household size, three income, four vehicle availability, and two presence/absence of children categories.

General Observations on the State and County Forecasts for 2005–35

Before turning to the specifics of the forecast results, it is instructive to make a few general observations about the forecasting process. It should be first pointed out that long-term forecasts are intended to identify economic trends, not to predict business cycle movements. Second, forecasts are unable to capture major one-time events—unless there is prior knowledge of the event and external information is directly introduced into the forecast. Two examples of introducing such information into our current forecast are the recent exodus of Pfizer from Washtenaw County, and the arrival of Google. And speaking of Washtenaw, some counties have special circumstances that cause them to deviate from the general trends, such as a large college-age population.

In general, the long-term outlook for regions is governed by at least four considerations:

1. Prospects at the national level
2. Trends in productivity growth
3. The mix of industries within regions
4. Demographic trends

These considerations will surface throughout the discussion on forecast results.

Fundamental Drivers in Michigan's Long-Term Outlook

For this specific forecast, we identify three fundamental drivers underlying Michigan's long-term economic and demographic outlook.

1. The consequences of profound changes in the automotive industry
2. The level of investment in other activities that show promise for future growth and prosperity, and for which the region has supporting assets
3. The impact of the aging of the "baby-boomer" generation, and the migration patterns of the younger and well-educated populace

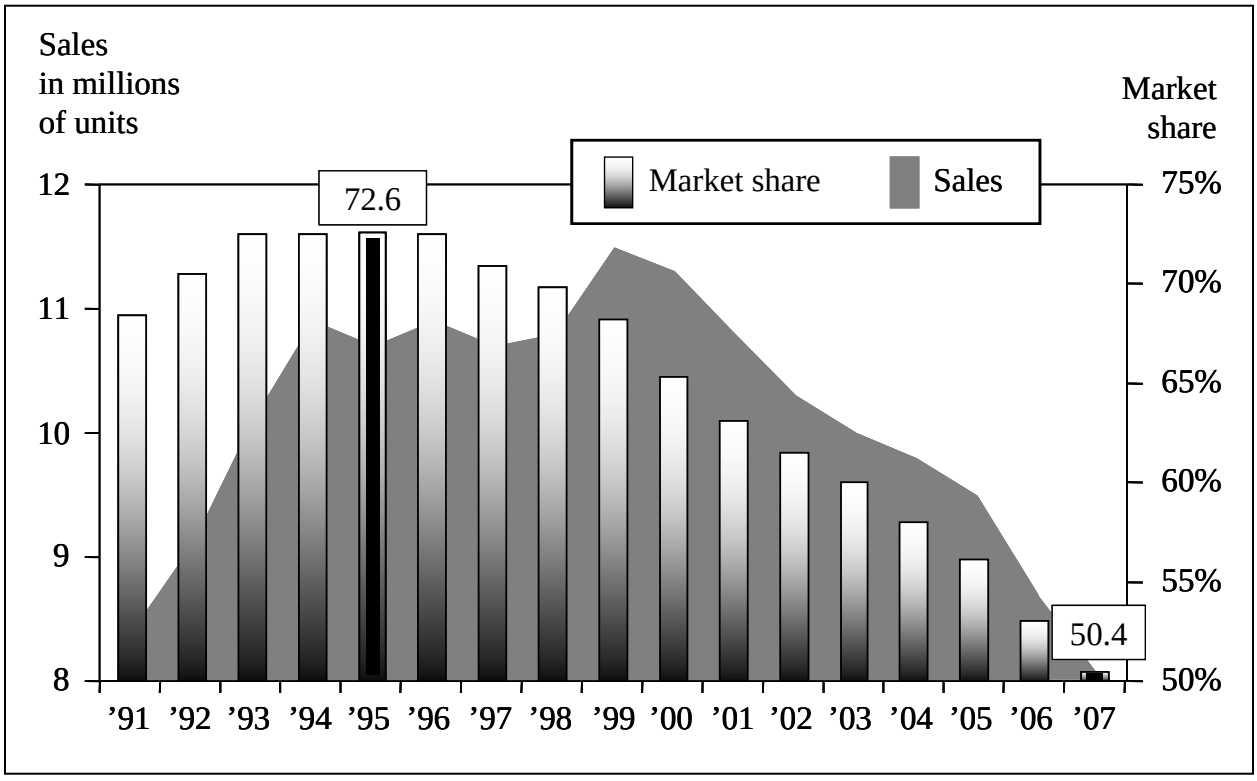
As these drivers constitute the fundamentals underlying the forecast, we make some additional observations on each in turn.

The Automotive Industry

A few overarching forces profoundly influence where we are now in the Michigan economy and where we are heading over the next few years and decades. The most significant force on the debit side of the ledger is the declining trend in the Detroit Three automakers' share of light vehicles sales in the United States, and the associated decline in Detroit Three sales. The

market share for the Detroit Three has declined more than 22 percentage points over the past twelve years, as shown in figure 1, from 72.6 percent in 1995 to 50.4 percent in 2007. And it will continue to shrink over the next few years. We are currently (as of September 2008) projecting a market share of 45.8 percent for 2008, dwindling further to 44.3 percent by 2010.

Figure 1. Detroit Three: Sales of Light Vehicles and Market Share of Total Sales United States, 1991–2007



Also shown in figure 1, sales of light vehicles by the Detroit Three continued to increase from 1995 to 1999, despite the drop-off in market share, because the total market was growing rapidly enough. That is, the Detroit Three were getting a smaller slice of an expanding pie. After 1999, the size of the total market no longer compensated for the Detroit Three's shrinking share, and their sales then plummeted from 11.5 million units in 1999 to 8.1 million in 2007, a 30 percent drop in vehicle sales in eight years. The Detroit Three sales levels in 2007 are 300,000 units below those recorded during the last recession, in 1991. Again, our short-term projection does not bring with it expectations for any improvement soon: we see a further drop in Detroit Three sales in 2008 to 6.5 million units.

Now, all of this wouldn't matter so much if we were talking about Montana; but we're talking about highly auto-centric Michigan. The state is significantly more concentrated in automotive industry employment than is the national economy. This can be established by a statistical measure known as the *location quotient*. The location quotient is the ratio of the state's employment share to the nation's share for an industry. As shown in table 1, Michigan is over seven times as concentrated in auto manufacturing employment as the nation. More to the point, it is 12.3 times as concentrated in Detroit Three employment—a gross disproportion. So, the fundamental problem in Michigan is an ultra-concentration in an activity that is floundering—anything else is a second-order problem.

Table 1. Employment Location Quotients by Industry, Michigan, 2006

Industry	Location Quotient
Automobile, light truck, and parts manufacturing	7.15
Detroit Three vehicle and parts manufacturing (end of 2005)	12.29
Manufacturing except autos and parts	1.05
Private nonmanufacturing	0.95

Educational Attainment and Economic Performance

The second overarching force affecting the Michigan economy—but this time on the credit side of the ledger—is the growing importance of an educated workforce. In our view, knowledge-based industries show the most promise to lead future economic growth. They do require the skilled and educated workforce that fuels their success, though. And as an educated workforce is highly correlated with growth in the knowledge-based industries, so it is with economic success in general, for both the individual and the community. This notion is supported by a large body of evidence, including the data in the next table.

In table 2, economic participation and success are compared with educational attainment, shown by selected labor force statistics for Michigan. The statistics in table 2 identify, for five different levels of education, the employment changes from the 1999–2000 period to the 2004–05 period, all for those aged 25–64.

Table 2. Labor Force Statistics for Michigan by Educational Attainment, Age 25–64 Years, 2004–05 Average

Educational Level	% Change Employed '99–'00 to '04–'05	Labor Force Participation Rate (%)	Unemployment Rate (%)	Weekly Earnings
Less than high school	–21.2	54.0	16.8	$ 479
High school graduate	–7.0	73.5	7.3	612
Some college	–0.9	80.4	5.1	745
College graduate	9.8	85.4	3.4	1,121
Graduate school	10.4	88.8	2.2	1,387

The labor force statistics show that education matters greatly to job market success. The number of people with less than a high-school diploma who are working declined by 21 percent over this recessionary period. Employment increased by about 10 percent for those with bachelor's degrees, as it did for those with advanced degrees, despite the difficult economic times. In 2004–05, a little more than half of high-school dropouts were participating in the labor force (employed or actively seeking employment), compared with 85–90 percent of college graduates. The unemployment rate of high-school dropouts was about five times greater than the rate for college graduates; and the college graduates earned over 2.3 times more on a weekly basis.

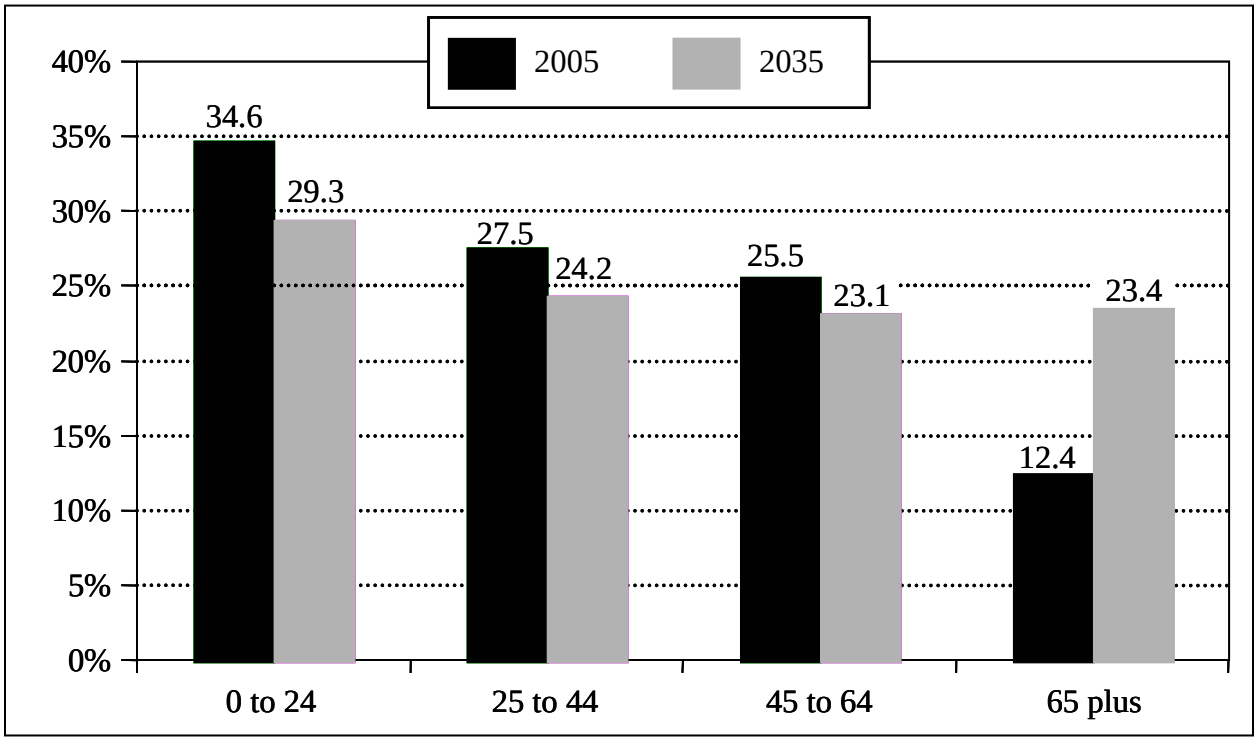
The evidence is compelling. Even in a troubled economic environment, educating and retaining highly skilled workers has a significant payoff in our transitioning economy. As the publisher of Forbes magazine commented, "The most valuable resource in the 21st Century is brains; watch where [the smart people] go, because robust economic activity will follow." Strengthening this resource is of paramount importance in Michigan.

The Aging of the Baby-Boomer Generation

The third fundamental driver in determining the longer-term prospects for Michigan is the demographic trends. These trends are a constraining factor on labor force size and growth, as well as an influence on the extent and distribution of consumer purchases. Shaping the profile of the labor force is the changing age structure and the migration patterns of the populace. Not only are we in a period of transition as we evolve from a more industrialized to a more information-

based economy, but we are heading for fundamental change in our demographic profile as well. The effect of the aging baby-boomer generation is already beginning to show, and we are only a few years away from the onset of its full effect—which will be dramatic, as suggested by our forecast of Michigan's population distribution by age group displayed in figure 2.

Figure 2. Population Distribution by Age Group, Michigan, 2005 and 2035



The figure shows the share of the state's population by age category in 2035 compared with 2005. All of the age categories under 65 years are expected to contribute a smaller share of the state's population in 2035 than in 2005. In contrast, the share of the population aged 65 or older nearly doubles, from 12.4 percent to 23.4 percent. In Michigan today, about one person in eight is 65 or older, but by 2035 that ratio will change to almost one in four. To put this in context, in Florida—known to locals as "God's waiting room"—about 17 percent of the population today is 65 or older.

In the years to come, the increasing number of older residents will have an all-encompassing effect both on the state's workforce supply and on the goods and services its residents demand. On the supply side, job growth will be severely constrained by the number of people available to work—that is, absent a large, and difficult to imagine, influx of younger

residents. On the demand side, the mix of goods and services that older residents purchase is very different from the consumer basket selected by families with children. An aging population will increase the demand for such activities as health care, leisure and recreational services, and financial activities.

All of these drivers have a significant influence on our long-term economic and demographic outlook for Michigan. We now turn to the specifics of that outlook.

Forecast for Michigan through 2035

Current conditions as well as anticipated future trends for both the state and the nation portend a subdued outlook for Michigan's labor market over the next thirty years. This impression is reflected in the results of our demographic and economic forecast through 2035 for Michigan and its counties. The forecast highlights how daunting the economic challenges will be. We will also draw from the forecast to suggest certain opportunities available to the state in a difficult economic environment.

We now consult the headline items for our forecast, with primary focus on the statewide results.

Population

We consider first our forecast of the state's population trajectory, which is central to the speed limits imposed on Michigan's employment in the long run. The path of total population in Michigan from 2000 to 2035 is shown in figure 3, with data from 2000 to 2006 provided by the U.S. Bureau of the Census [5] and the extension through 2035 generated by our forecast. Population increased by 0.23 percent per year on average between 2000 and 2006. After peaking in 2005, population is forecast to decline through 2009, gain some momentum by 2013, and then grow modestly after that. In numbers, this pattern translates into a decline of a tenth of a percent per year in the short term from 2006 to 2010, and an increase of 0.35 percent per year in the long term from 2010 to 2035. Population exceeds its 2005 peak level in 2014.

What is behind these movements in population? That is shown in figure 4, which breaks down population change into its primary components: net domestic migration, net international migration, and the natural change in population (births minus deaths). From 2000 to 2005, population increased by 144,000, a combination of a natural increase of 223,000 and 117,000

Figure 3. Michigan Population, 2000–2035

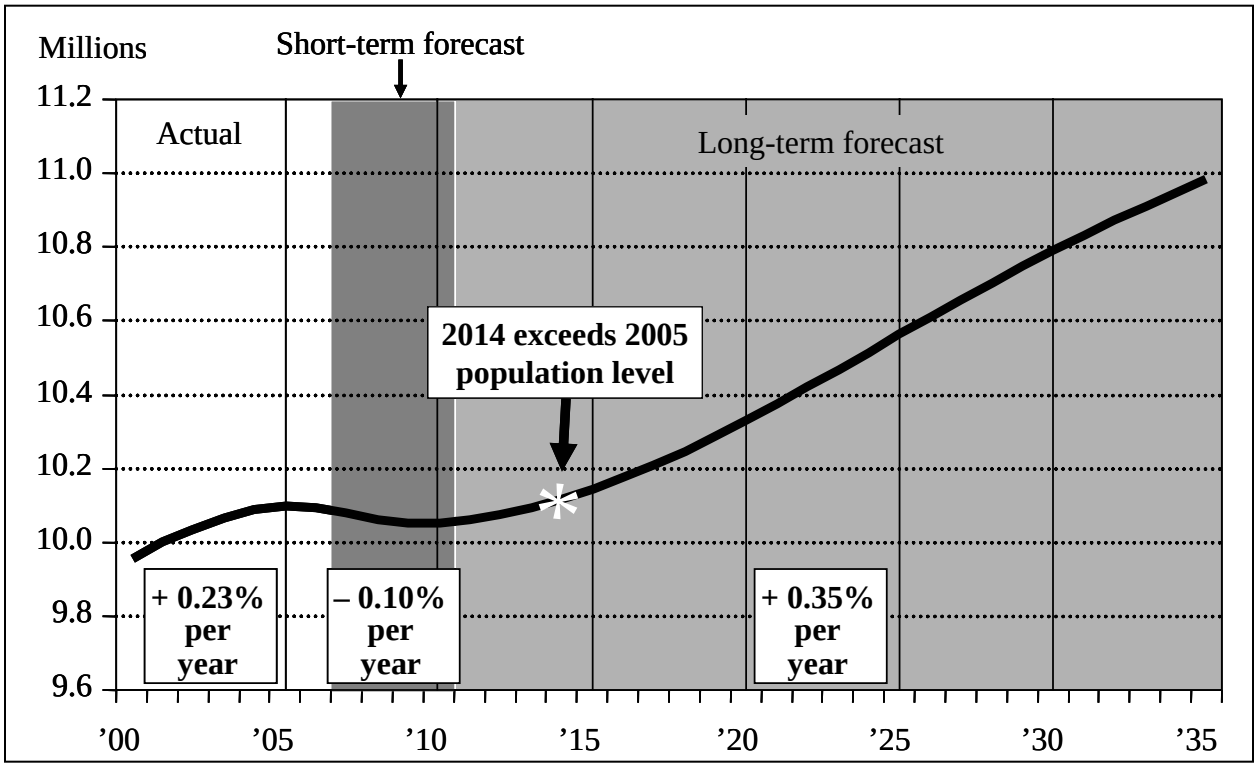
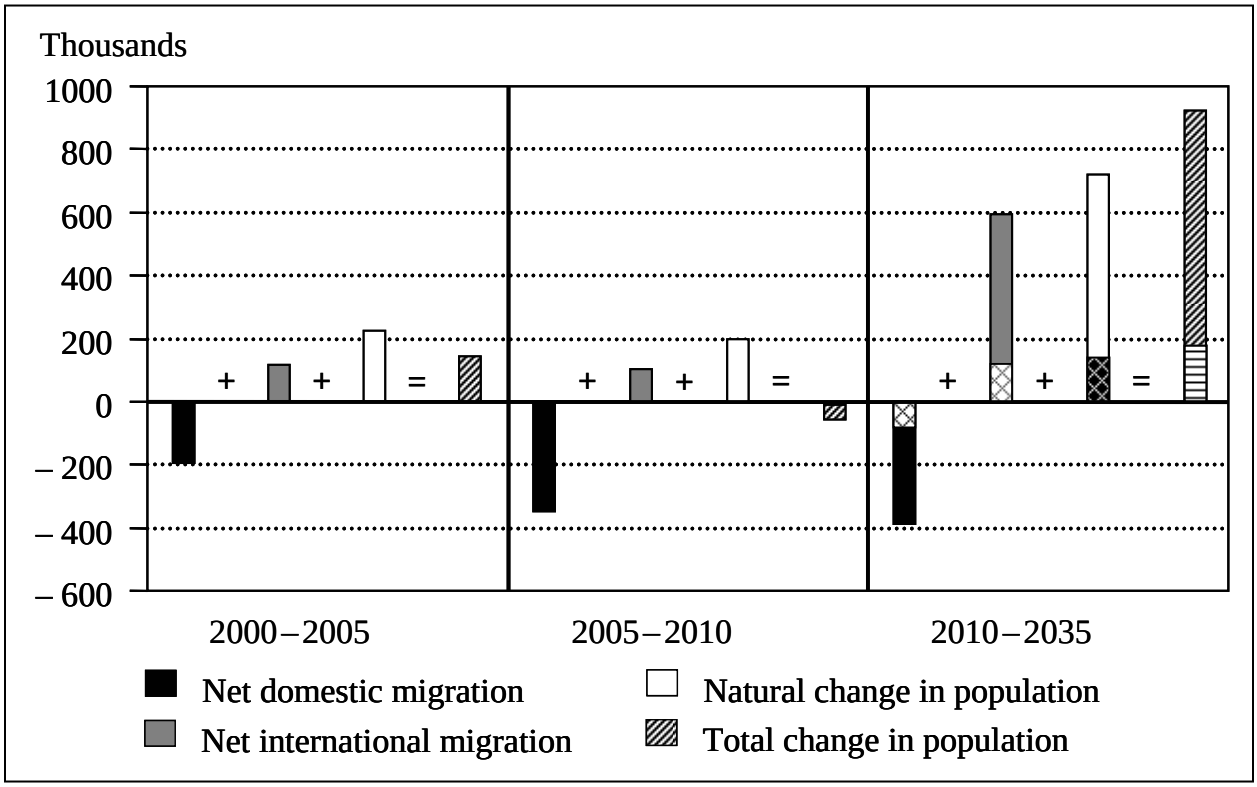


Figure 4. Components of Population Change in Michigan



additions from international migration, muted by a loss of 196,000 domestic migrants. From 2005 to 2010, we see population declining by 44,000. Natural increases and international migration both slow a little, but the big difference is the larger decline in domestic migration, falling by 347,000 in these difficult economic times.

For the twenty-five-year interval 2010–35, we project population growth to average 185,000 per five-year segment. (This calculation is made to more easily compare the results for this longer time interval with those for the previous five-year intervals.) We are projecting this growth despite a continued slowing of the natural increase as the population ages, and a pace of international migration roughly comparable to the previous periods. The difference is in the moderating decline in domestic migration forecast for the post-2010 period. Clearly, if this does not occur, movements in total population will be weaker over this period, which would lead to a weaker employment profile as well. This is a key sensitivity element in our forecast.

Employment

Our forecast of total employment through 2035 for Michigan is shown in figure 5. Data from 2000 to 2005 are from the U.S. Bureau of Economic Analysis (BEA) [6] and the extension through 2035 is our forecast. Thus, our forecast is based on the BEA concept of employment, which includes the self-employed, agricultural workers, and the military, rather than the more frequently cited but less comprehensive estimate of wage and salary jobs published by the U.S. Bureau of Labor Statistics (BLS) [7]. By the BLS measure, the employment downturn between 2000 and 2005 was much more severe than the 0.4 percent per year decline reported by the BEA and shown in figure 5.

Employment is forecast to continue to shrink, by 0.24 percent per year, from 2005 to 2010. By 2010, employment is forecast to turn around, growing more rapidly through 2015 and more slowly thereafter. This path translates into modest growth of 0.26 percent per year from 2010 to 2035. The state is expected to exceed its 2000 peak employment level by 2022.

Over the twenty-five-year period between 2010 and 2035, the projected per-year growth rate of 0.26 percent cumulates to an employment increase of 6.6 percent, less than one-quarter of the pace of employment growth sustained over the prior twenty-five-year period, between 1985 and 2010, as shown in table 3. This reflects weakness in prime-working-age population growth in the later period. It also highlights the critical importance of enhancing productivity, or output

per worker. This harks back to the section in this report on the importance of education, since one of the major tools available to enhance productivity is education and training.

Figure 5. Total Employment in Michigan, 2000–2035 (BEA definition—includes self-employed, farm, military)

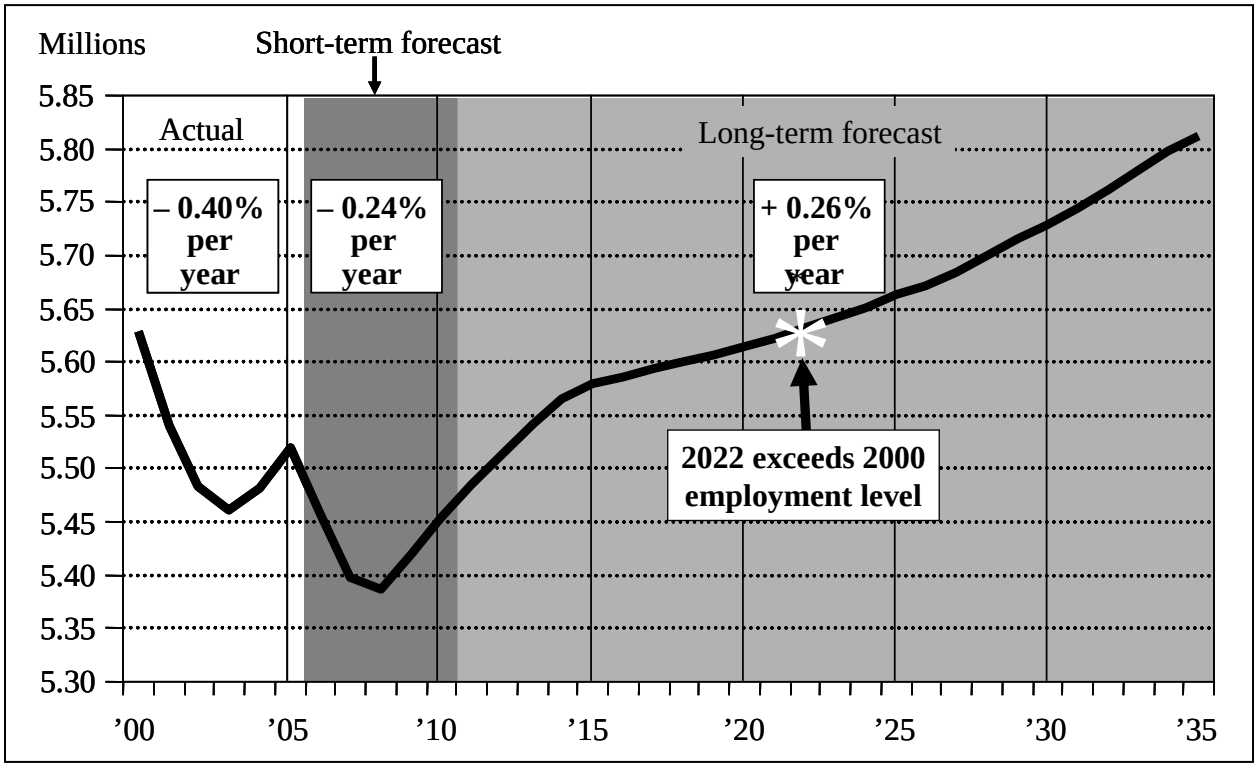


Table 3. Total Employment in Michigan, 25-Year Growth Rate

1985 –2010	2010 –2035
28.1%	6.6%

Industry Employment

Indeed, for employment in those industries requiring higher average levels of education, the outlook is more promising. To determine this, we identified the group of industries whose share of workers with a bachelor's degree or more exceeded the U.S. average for all industries, as shown in table 4. Within this group, industries range from the one requiring the most education, private education services, to health care and social assistance at the other end of the spectrum. As shown in the table, with a few exceptions, this higher-education group of industries pays wages in excess of the industry-wide average. Keep in mind, though, that in

every industry there are lower- and higher-compensated workers; these statistics only reflect average pay over the industry.

Table 4. High Education Industries

	% of U.S. Employment with Bachelor's or More 2000	Michigan Average Wage 2006
Average for all industries	27.2	$42,157
Average, all high-education industries		48,216
Private education services	61.2	30,111
Professional & technical services	58.0	68,828
Management of companies	49.1	91,798
Information	39.1	54,625
Financial activities	36.0	49,693
Government	33.4	43,403
Health care, social assistance	32.7	39,530

Among the high-education industries, Michigan actually added 99,000 jobs from 2001 to 2005, as shown in table 5. The state is forecast to gain 354,000 jobs in this industry group between 2005 and 2035. Industries with the largest long-term gains in this group are projected to be health care and social assistance, as well as professional and technical services. Government, on the other hand, is forecast to continue to decline, albeit at a slowing pace.

Table 5. Industry Employment Forecasts for Michigan, High-Education Industries

		Employment Change	
	2001	2001– 05	2005 – 35
High-education industries	2,222,355	99,093	353,829
Private education services	73,183	19,105	19,170
Professional and technical services	366,306	– 2,267	123,108
Management of companies	68,848	– 1,558	770
Information	87,123	– 6,409	– 6,101
Financial activities	375,624	48,933	26,649
Government	699,496	– 12,367	– 41,821
Health care, social assistance	551,775	53,656	232,054

We also isolated the group of industries whose share of workers with a bachelor's degree or more fell short of the U.S. industry average. As shown in table 6, the industry list ranges from

arts, entertainment, and recreation at the high end to accommodation and food services at the low end. This group of industries tends to pay wages below the statewide average, with two significant exceptions: manufacturing, dominated by auto-related activities; and construction. It should be pointed out that part-time workers are included in the total, which lowers the average for wages in industries such as accommodation.

Table 6. Low-Education Industries

	% of U.S. Employment with Bachelor's or More 2000	Michigan Average Wage 2006
Average for all industries	27.2%	$42,157
Average, all low-education industries		37,807
Arts, entertainment, and recreation	26.4%	26,135
Other services (repair, personal, civic)	19.5%	25,700
Manufacturing	19.2%	58,070
Trade, transportation, and utilities	16.4%	35,638
Administrative services	15.5%	31,241
Farm, natural resources, mining	13.7%	29,436
Construction	9.7%	46,561
Accommodation, food services	8.7%	12,664

The low-education industries collectively lost 120,000 jobs between 2001 and 2005, and are forecast to lose another 61,000 jobs through 2035. As shown in table 7, the greatest decline among these industries is expected to occur in manufacturing, particularly related to motor vehicle manufacturing. Three factors underlie the massive job losses: declining-to-stagnant market share among the Detroit Three automakers, gains in productivity, and a shift in consumer spending away from goods and toward services as we age. There are also declines in retail trade (contained in the trade, transportation, and utilities category in the table). These losses can be attributed to at least three developments: the growth in Internet shopping, the continued use of labor-saving technology (e.g., self-service checkouts), and the continued trend away from labor-intensive stores and toward discount stores and warehouse clubs.

Table 7. Industry Employment Forecasts for Michigan, Low-Education Industries

		Employment Change	
	2001	2001– 05	2005 – 35
Low-education industries	3,317,532	– 120,033	– 60,537
Arts, entertainment, and recreation	100,369	6,406	34,018
Other services (repair, personal, civic)	285,445	13,638	12,879
Manufacturing	843,743	– 142,839	– 228,794
Trade, transportation, and utilities	1,007,145	– 37,912	– 62,690
Administrative services	322,152	33,941	124,911
Farm, natural resources, mining	104,019	– 3,658	– 27,869
Construction	304,276	– 2,923	– 8,886
Accommodation, food services	350,383	13,314	95,894

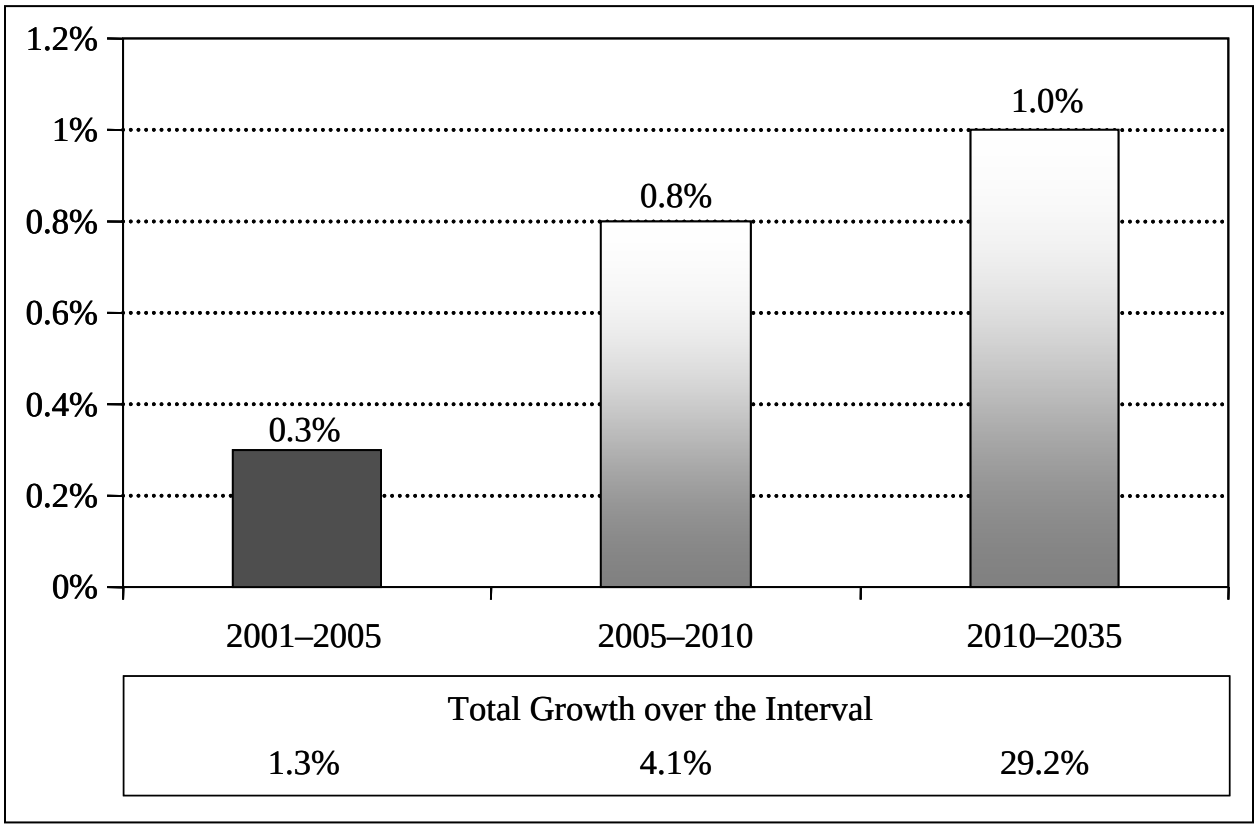
The gains among the low-education industries are clustered in two activities. The first could be labeled leisure and hospitality, combining the arts, entertainment, and recreation industry and the accommodation and food services industry. The second is the administrative support services industry, with much of its success coming on the coattails of the expanding high-education professional and technical services industry.

Income

The shift in the composition of jobs, and thus wages, contributes to the future growth profile of income in Michigan. Indeed, income is another important dimension of Michigan's economic outlook. Inflation-adjusted (real) personal income per capita is generally regarded by economists as the best single measure of economic welfare for a region. The standard of living for a region can rise even with sluggish employment growth if the income of residents is rising sufficiently. The average annual growth in real personal income per capita for Michigan is shown in figure 6, with the period 2001 to 2035 broken out into three intervals: 2001–05, 2005–10, and 2010–35.

Real income per capita grew at an average annual rate of 0.3 percent in the first half of the current decade, and is forecast to move up to a pace of 0.8 percent per year in the second half of the decade and one percent per year over the period 2010 to 2035. Thus, per capita income is expected to increase in future years. Its growth, however, is anticipated to be slow enough that Michigan's ranking among states likely will not move up. The better news: despite sluggish job growth, a rising standard of living should be ensured by healthy aggregate productivity growth.

Figure 6. Average Annual Growth in Michigan Per Capita Income (2005 $)



Households

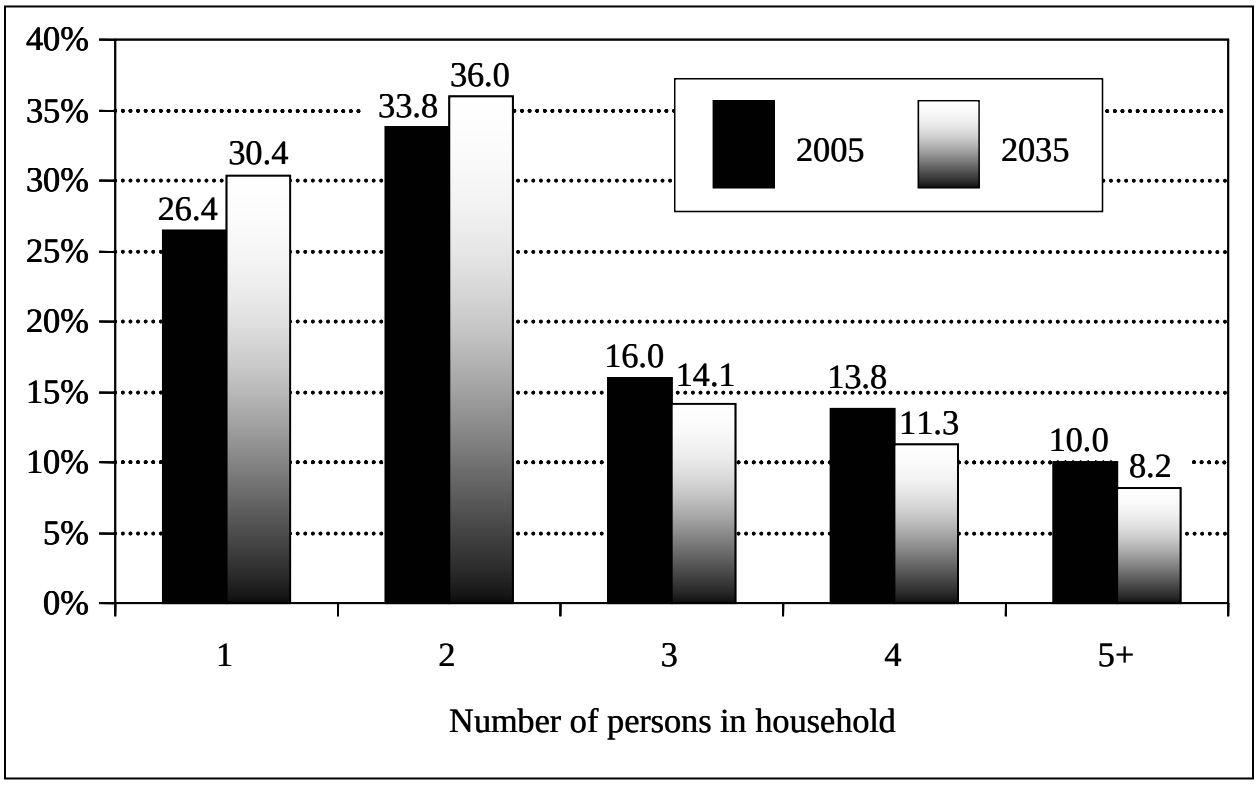
Another dimension of Michigan's demographic and economic profile is the future growth and composition of the number of households in the state. Although total population in Michigan is forecast to increase by 8.7 percent between 2005 and 2035, the population residing in group quarters expands by a much more robust 32.3 percent, as shown in table 8. This is largely due to an aging population entering assisted-living facilities, including nursing homes. The rest of the population—those living in households—grows 8.2 percent between 2005 and 2035. In contrast to this population growth in households, the *number* of households increases by a more vigorous 20 percent. This implies that the average household size declines over the period, and as shown in table 8, it does, motivated by a proclivity for smaller-sized households among older residents.

Table 8. Number of Households in Michigan, 2005–2035

	2005	2010	2035	% Change 2005–2035
Total population	10,100,833	10,057,256	10,982,682	8.7%
Group quarters	224,190	227,781	296,548	32.3%
Population in households	9,876,643	9,829,475	10,686,134	8.2%
Households	3,863,662	3,981,427	4,635,109	20.0%
Average household size	2.56	2.47	2.31	N.A.

Indeed, the *share* of one- and two-person households is expected to increase over the next thirty years. This is shown in figure 7, which also shows our anticipation that the *share* of each category of larger-size households (three, four, and five-plus residents) declines without exception. If preferences (unrelated to age) to live in smaller households continue to change in the same direction as they have over the past fifty years, growth in the number of households in Michigan will be even greater than we are forecasting.

Figure 7. Distribution of Michigan Households by Size, 2005 and 2035



Forecast for Michigan Counties through 2035

County Population and Employment

The demographic and economic outlook for regions of Michigan can best be summarized by the following two maps of the state broken out into its eighty-three counties. The first map, figure 8, shows the change in population forecast from 2005 to 2035 for each of Michigan's counties. Population change is subdivided into three categories: growth greater than the statewide average, growth less than the statewide average, and population decline over the thirty-year period. The second map, figure 9, has the same layout for the projected change in total employment over the period.

In general, regions with a large share of employment in the declining industries, such as manufacturing and government, will see little if any job gain over the next thirty years, and many will see employment declines because of the age structure of the existing population. Employment will increase in professional and business services (which includes temporary and leased workers), private education, health and social services, and leisure and hospitality services. Regions with a large share of employment in the growing industries have the potential for relatively healthy employment gains over the next thirty years, but job growth will depend on growth in the working-age population.

More specifically, the fastest-growing counties in Michigan are clustered in four geographic areas. First is the tourist-oriented and retiree-friendly northwestern Lower Peninsula, particularly the Traverse City area. Second is the urban and suburban Grand Rapids area, which is more concentrated in industries projected to grow, including tourism. Third is the suburban Lansing area, which is also more concentrated in the growing industries. And fourth is the area most concentrated in high-education industries, comprising the counties of Oakland, Livingston, and Washtenaw.

Although the slowest-growing counties in Michigan are scattered throughout the state, there are three general areas of greater concentration. First is the rural areas of the Upper Peninsula, second is the area along the shores of Lake Huron, and third is the strip of counties along the state's southern border. All three areas tend to have an older population and an unfavorable industry mix.

Figure 8. Change in Population in Michigan by County, 2005–35

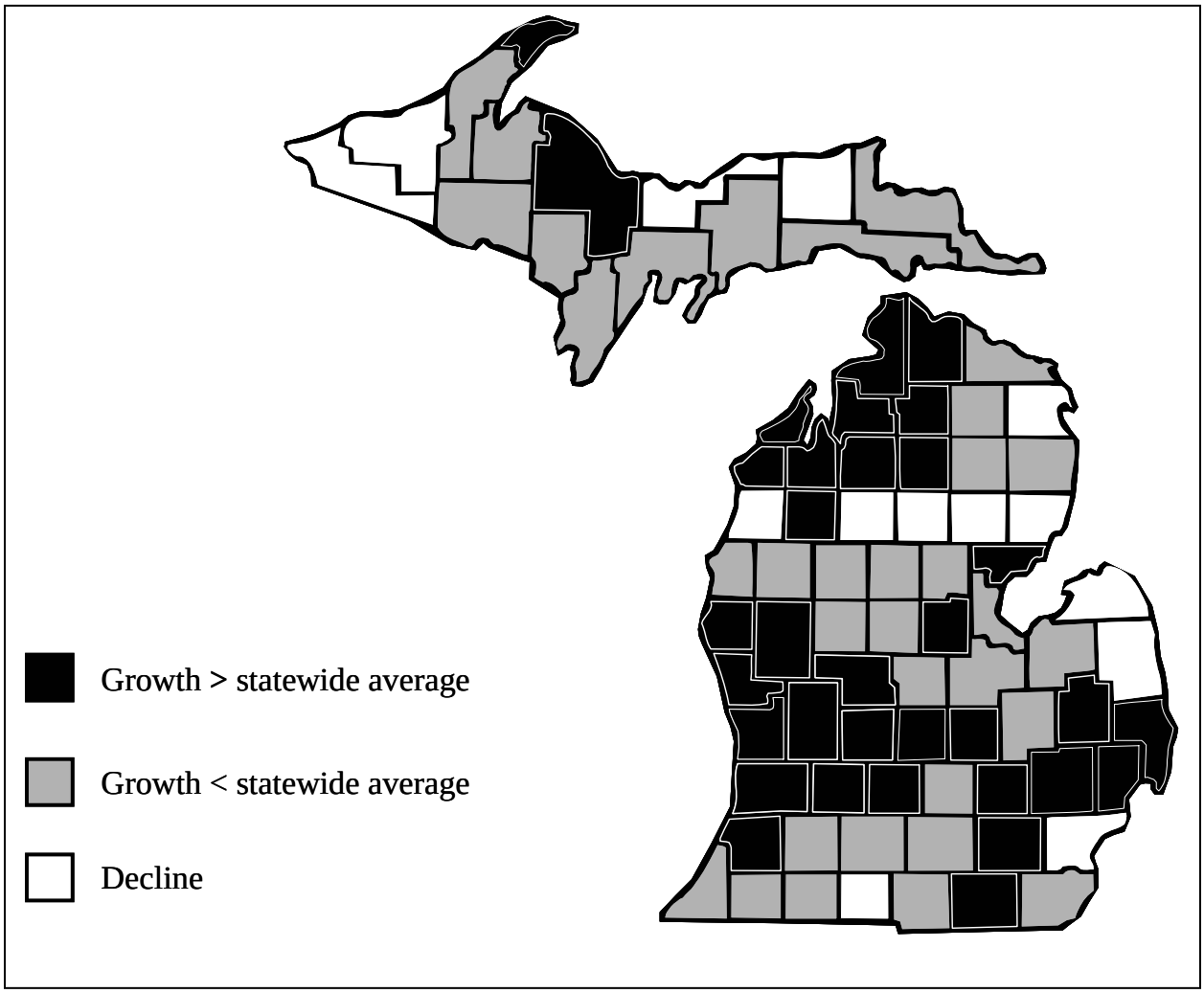
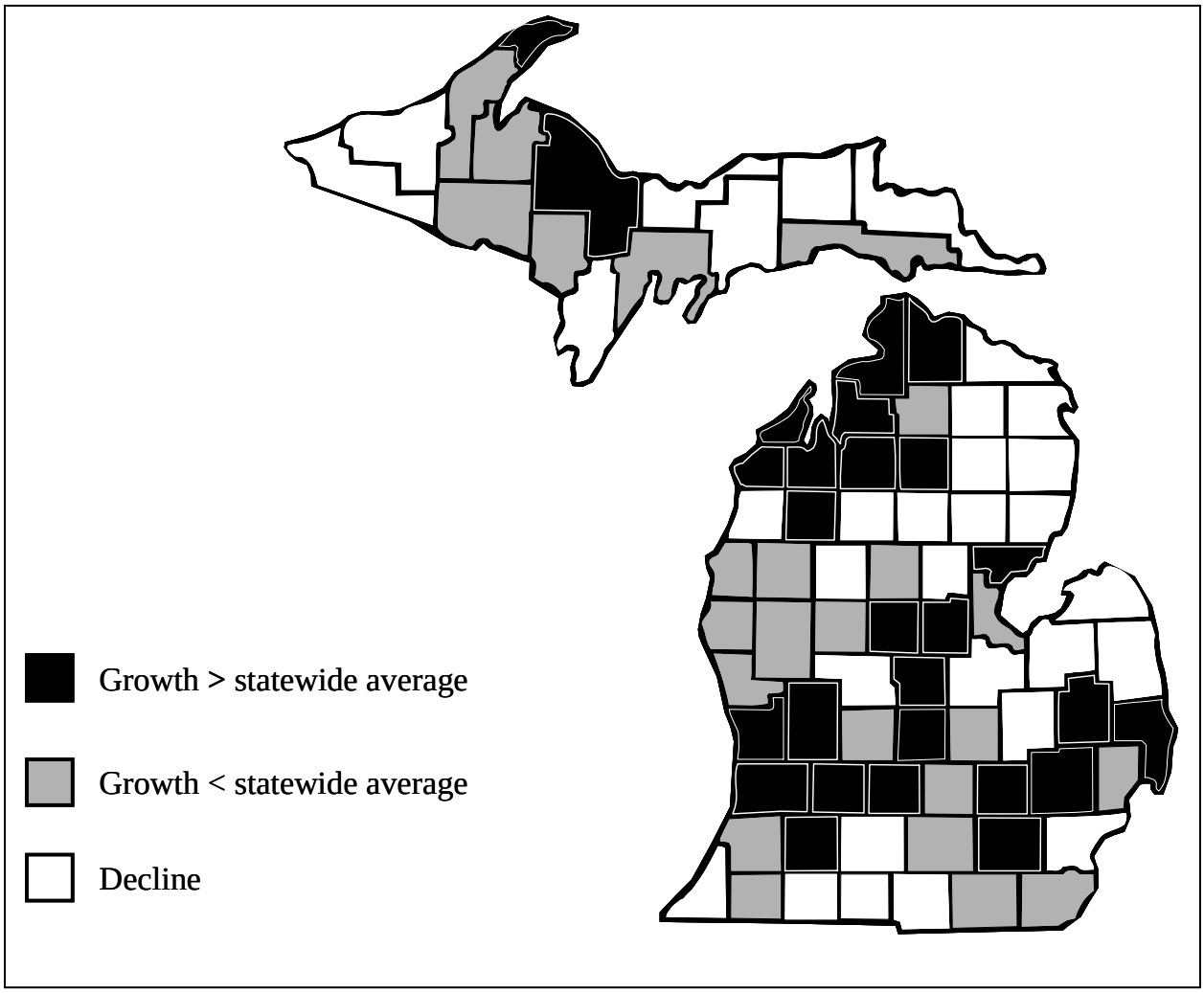


Figure 9. Change in Employment in Michigan by County, 2005–35



Conclusion

Application of the Forecasts

MDOT, the MPOs, and the regional planning agencies will use the forecasts for Michigan and its eighty-three counties to develop estimates and forecasts of travel. Specifically, the forecasts will be used to develop the Statewide Transportation Plan, Regional Plans, and Urbanized Area Plans, as well as to provide input into MDOT's State Transportation Improvement Program (STIP) and the Urbanized Areas' Transportation Improvement Programs (TIPs). The projections are the basis of the Statewide Model's trip generation file updating (county control totals), the Statewide Goods Movement/Truck Model Program, and development of the Border Crossing model. The current forecasts now supersede those released in June 2003 to support these planning, development, and data-updating activities.

Opportunities for Economic Development in Michigan

We draw the following items from our forecasts, suggesting opportunities available to Michigan in this difficult economic environment.

- The knowledge-based economy, and the educated workers who fuel it, are the fulcrum of future prosperity in Michigan.
- Bill Gates observed that for knowledge-based enterprises, educational attainment trumps everything when they're deciding where to invest.
- Michigan and its communities need to invest in programs to provide the education and training essential for the economy of the future.
- Among activities with fewer educational requirements, the hospitality industry shows promise for the future, providing services to visitors as well as to a growing number of older people.
- Support personnel for industries with the most favorable growth prospects—health care and professional/technical services—require skills but often not professional degrees.
- Other actions may show promise for the economic well-being of the state, but none is more compelling than investing in workforce development.

Assets Matter

When considering policies that encourage greater diversification into certain sectors, it is important to assess whether Michigan has the underlying assets to promote and sustain these sectors, no matter how promising or "hot" they may be. In our view, Michigan's key assets and sectors of promise that are linked to them include the following:

- A premier system of higher education and the knowledge-based sector
- The Great Lakes and the tourist-oriented sector
- A nationally prominent health system and the health care sector

Suggested Policy Responses

Our forecasts highlight both the longer-term problem of shortages of qualified labor to meet the needs of a significantly older population and the cost of not attracting knowledge-based and elder-friendly businesses. What can be done is to invest in those activities that show promise for future growth. This suggests several areas of focus for our public and private leaders in Michigan:

- Maintain a strong health care system
- Improve recreational and cultural amenities
- Attract emerging industries, consistent with the assets of the region
- Increase technological collaboration within the state
- Emphasize education and training

Such an approach would be in step with the evolving new economy, recognizing that regardless of the fate of the domestic auto industry, we are not going back to the good old days. Instead, success requires a community—business, education, and government—that understands what the thriving economies of the future will look like, and that has the will to get there.

Appendix: Employment Divisions by Industry

1. Total employment
2. Farm (agricultural products)
3. Private non-farm
4. Natural resources, mining
5. Forestry, fishing, related activities
6. Mining
7. Utilities
8. Construction
9. Manufacturing
10. Trade, transportation, and utilities
11. Wholesale trade
12. Retail trade
13. Transportation and warehousing
14. Information
15. Financial activities
16. Finance and insurance
17. Real estate and rental and leasing
18. Total services
19. Professional and technical services
20. Management of companies and enterprises
21. Administrative and waste services
22. Private educational services
23. Health care and social assistance
24. Arts, entertainment, and recreation
25. Accommodation and food services
26. Other services, except public administration
27. Total government
28. State government
29. Local government
30. Federal government, civilian
31. Federal government, military

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