

# The Past and Future Growth of Southeast Michigan

## Population, Households, Jobs and Land Use

### 1965 to 2025

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#### Abstract

SEMCOG's 2025 Regional Forecast Totals of population, households and jobs are presented with historical comparisons from 1965 to 1995. The report includes descriptions of changes in age structure, household size and composition and job industrial class. It also presents land urbanization that has and will result from household and job growth.

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## Executive Summary

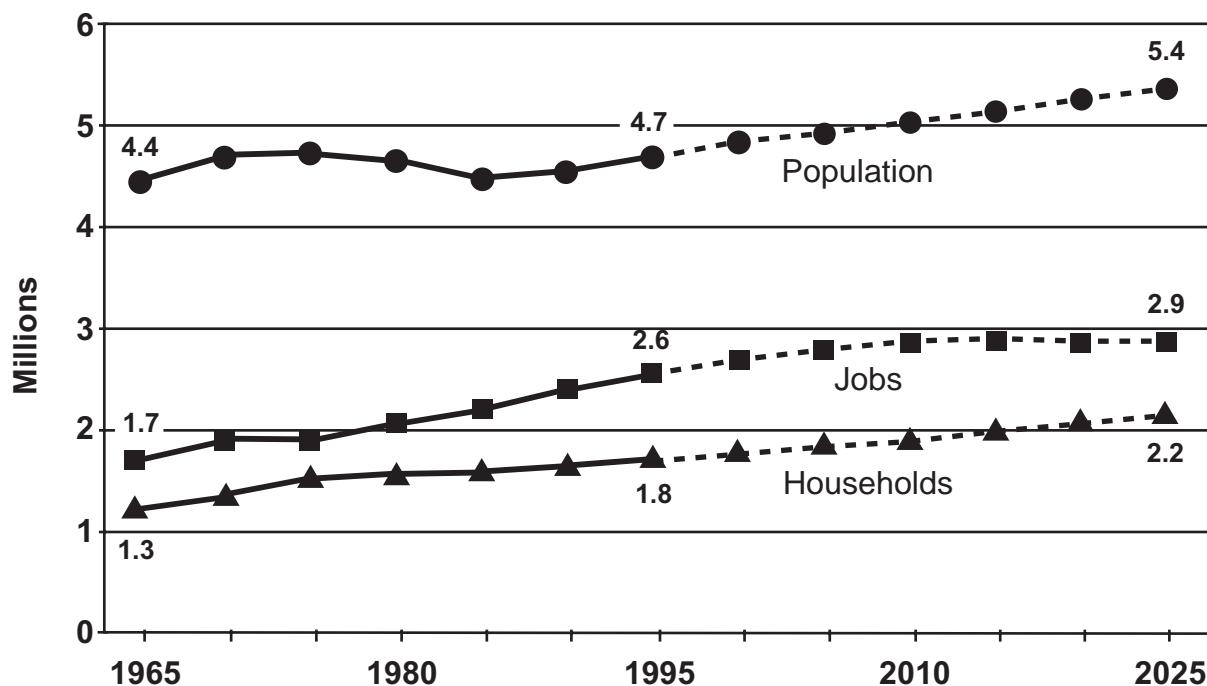
### Introduction

SEMCOG has produced a set of Regional Forecast Totals (RFTs) that provide numbers of population, households and jobs for the Southeast Michigan region at five-year intervals to the year 2025. At its October 29, 1998 meeting, the General Assembly adopted the RFTs as the first step in producing a forecast for small areas and the region's 233 local communities. These numbers will then be used to update future travel needs in SEMCOG's Regional Transportation Plan. This report presents the RFTs in a historic context by showing the region's growth and change since 1965.

### Results

Southeast Michigan is now growing moderately in population and households and more strongly in jobs. Figure 1 shows total population, households and jobs from 1965 through the forecast years to 2025.

Figure 1  
Summary of Population, Households and Jobs, 1965-2025



Sources: See Figures 2, 5 and 6; and SEMCOG DataCenter.

Population growth was stagnant in the '70s and '80s as the region's economy adjusted to oil shocks and manufacturing cutbacks. Since the late '80s, growth has been steady and will continue so through the forecast period. From 1995 to 2025, the region will add 721,000 people, growing to 5.4 million. Households will increase by 427,000 by 2025, growing at a faster rate than population as a result of continued decreases in average household size.

The biggest changes over the forecast period relate to the aging of the population, especially the baby boom generation — people born from 1946 through 1964. By 2025, that group will be between 60 and 79 years old. The aging of the baby boomers, plus increases in longevity, will result in an increased elderly population and smaller households. This also accounts for the lack of job growth forecast for the period after 2010.

Although the region is currently adding jobs at a rapid pace and the forecast predicts a full employment economy, job growth will halt after 2010. Because the number of prime working age adults (ages 18 to 54) will drop by 166,000 between 2010 and 2025, there will need to be major increases in labor force participation of older workers just to maintain a workforce at 2010 levels — about 2.9 million.

Rapid urbanization of land in the region is a result of continued growth in households and employment since 1965. The urbanization area was already spread out by 1965 and, when households grew by 40 percent between 1965 and 1995, the result was additional major increases in urbanized land. Based on SEMCOG's previous forecast, 33 percent more land will be urbanized between 1990 and 2020.

## Methods

The Regional Forecast Totals include numbers on population age groups; households by size, income group and whether children present; and jobs by type of industry. The process began with forecasts for counties produced by economists at the University of Michigan using the REMI model (Regional Economic Models, Inc.). SEMCOG then evaluated these against alternative national forecasts for Southeast Michigan. The final RFTs reflect staff and SEMCOG committee input and are presented in full in Appendix B of the report. The historical comparisons that start with 1965 were derived from the census and other sources and were modified to match RFT definitions.

## Introduction

SEMCOG has produced an updated forecast of Southeast Michigan's population, households and jobs that extends the projections to year 2025. These numbers are called Regional Forecast Totals (RFTs) and were adopted by SEMCOG's General Assembly on October 29, 1998. Adoption of the Forecast Totals is the first step in producing a detailed small area 2025 Regional Development Forecast (RDF) at five-year intervals that will be used to update the analysis of future travel in SEMCOG's Regional Transportation Plan. The 2025 RDF meets these SEMCOG planning objectives:

- provides a base for SEMCOG's long range regional plans,
- links future changes to past trends and the most current data on residential development and economic activity,
- provides SEMCOG's member local governments with an essential component of their comprehensive planning and
- satisfies planning requirements of the federal Transportation Equity Act for the 21st Century (TEA-21).

This report presents the 2025 Regional Forecast Totals by placing the numbers in the historic context of growth and change in Southeast Michigan since 1965. That is the year the Detroit Regional Transportation and Land Use Study (TALUS) began, which was a precursor to the establishment of SEMCOG in 1968.

The report graphics show the striking changes in growth rates, age structure and mix of jobs by industry from the past as a prologue to understanding continued change in the future.

### Definition of Regional Forecast Totals

Appendix A contains detailed definitions of Forecast Totals variables. All numbers are totals for the seven-county SEMCOG region. Included in the totals are:

- population and population by age groups: 0-4, 5-15, 16-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75 and older,
- households, household size and households by four income groups combined with the presence or absence of children and
- jobs and jobs by nine industrial classes.

Graphics in this report show data at five-year intervals starting with 1965. Numbers from past years have been made to conform with 2025 RDF definitions. Numbers from 1970, 1980 and 1990 are derived from decennial censuses. The other years are based on estimates from TALUS, SEMCOG, the U.S. Census Bureau and the Bureau of Economic Analysis.

## Methods

SEMCOG's Regional Forecast Totals are developed through evaluation and analysis of several national forecasts for Southeast Michigan. The most important input comes from work done by economists at the University of Michigan's Institute of Labor and Industrial Relations. They used the REMI model (Regional Economic Models, Inc.) (Treyz, Rickman, 1992, pp. 221-253) to produce forecasts for each of Michigan's counties. SEMCOG staff worked with a committee of demographers, economists and county planners — the Regional Development Forecast Subcommittee of the DataCenter Advisory Council — to review REMI results.

In addition to REMI, input on the RFTs came from comparisons with government projections and private data company forecasts. Using a final run from the REMI model, SEMCOG added the county numbers to get regional totals. SEMCOG made several adjustments based on subcommittee consideration of key issues such as labor force participation of an aging workforce, immigration rates and birth rates. More detailed projections are listed in following sections, but the most basic assumptions underlying the 2025 RFTs are:

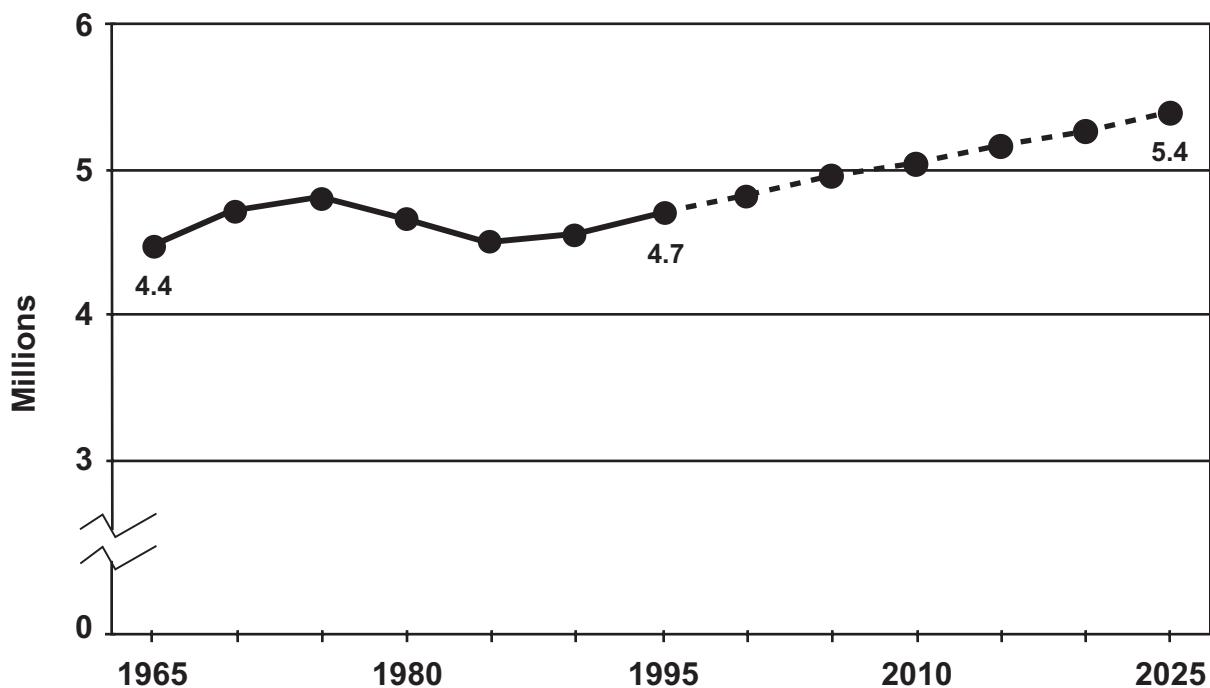
- a full employment economy throughout the forecast period,
- steady population growth, but not matching the stronger overall U.S. growth rate, led by the West and South and
- faster growth in households than population as average household size continues to shrink.

After their adoption, the Regional Forecast Totals will be used as "control totals" to guide the small area portion of the 2025 RDF. That is, the small area numbers for 1,442 traffic analysis zones and 233 local communities must add up to the Regional Totals. The small area portion of RDF is scheduled for completion in early 2000. SEMCOG's Regional Transportation Plan will use the small area numbers of jobs and households as the basis for its analysis of future travel demand in the region.

## Population

In 1965, Southeast Michigan was still growing at a strong pace. When birth rates dropped sharply in the mid-'60s, the 20-year post-war baby boom came to an end. The region's population stood at 4.4 million (Detroit Regional Transportation, "data base," 1965).

Figure 2  
Population, Southeast Michigan, 1965-2025



Sources: Detroit Regional Transportation, "data base," 1965; SEMCOG, *Population*, 1976 and 1986; U.S. Bureau of the Census, 1970, 1980 and 1990; and SEMCOG DataCenter.

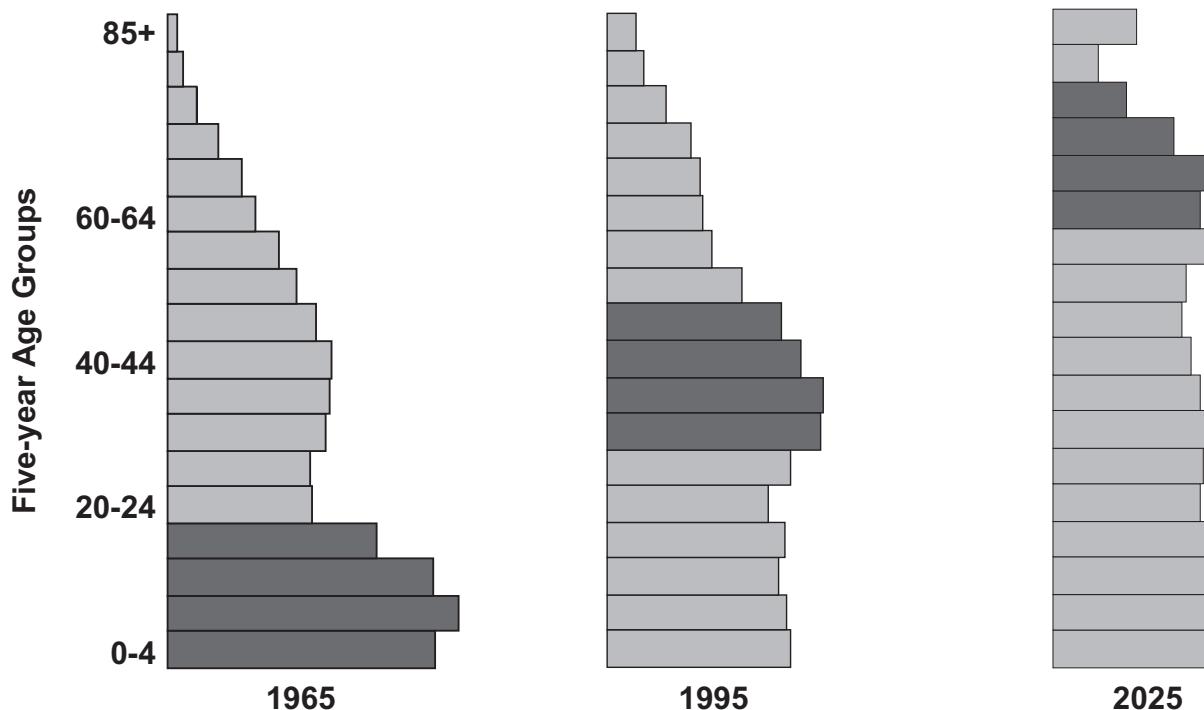
The '70s and '80s were rocky times for the auto industry and oil embargoes and plant closings reverberated through our population (SEMCOG, *Population*, 1976 and 1986; U.S. Bureau of the Census, 1970, 1980 and 1990). Many young adults left the region for better economic opportunities in the South and West. The result was that the region began the '90s three percent lower in total population than in 1970. With stabilization of the region's economy, Southeast Michigan is now growing at about one-half percent per year. That growth will continue throughout the forecast period, putting the region at 5.4 million people in 2025, a gain of 15 percent since 1995. This is in contrast to the six percent increase in the previous 30-year period, 1965-1995.

Underlying the steady growth in the future are some key assumptions and implications. By 2010, it is expected that the region will experience positive net migration for the first time since the '60s, a condition that will continue to the end of the forecast period. This means that more people will be moving into Southeast Michigan from other parts of the country than are leaving the region. Southeast Michigan will receive modest amounts of direct immigration from outside the U.S. Birth rates in the U.S. and the region will be close to current levels and there will be continued increases in longevity. Smaller households will result from the aging population, creating more "empty nest" households. There will be more elderly, healthy and able to live independently. There will also be more young adults who are able to afford to live on their own.

### Population Age Groups

Significant changes have occurred in the region's age structure since 1965. In Figure 3, in 1965, the baby boomers are the darker four bars, those 0-19 years of age (Detroit Regional Transportation, "data base," 1965). The older age groups are

Figure 3  
Population Age Groups, 1965, 1995 and 2025



Source: Detroit Regional Transportation, "data base," 1965; Grimes, "Michigan Forecast," 1998; Wang, "Population Projections," 1994; and SEMCOG DataCenter.

stacked on top, forming what demographers call a “population pyramid,” because through most of history there were many more young people and few older people. Figure 3 combines males and females so this graphic is in the shape of half a pyramid. In 1965, the top of the pyramid tapered sharply as there were only 16,000 people aged 85 and over.

Thirty years later, in 1995, the graphic has the shape of a potbellied man (Grimes, “Michigan Forecast,” 1998; and Wang, “Population Projections,” 1994). The reason is those large numbers of baby boomers who fill the 30-49 age groups. The bulge of those age groups would be even larger if the economic problems of the ‘70s and early ‘80s had not caused a major out-migration of about 400,000 baby boom adults. With increases in life span, the 85+ group has now grown to 57,000.

Fast forward to 2025, and the half pyramid is now more of a column. Baby boomers will be 60-79 years old and most of them will still be living (*ibid*). And note what has happened to the very old, those 85 and older. Since 1965, their numbers have swelled more than 10-fold to 186,000 in 2025.

The region’s steady growth and shifting age structure has major implications for Southeast Michigan communities. Growth in people and households will crowd schools in some places and smaller households will empty them in others. More land will be used for new housing. Redevelopment in Detroit will more and more balance out the city’s population losses. And retirement age baby boomers will need more condos, retirement centers and age-appropriate cultural and recreational opportunities.

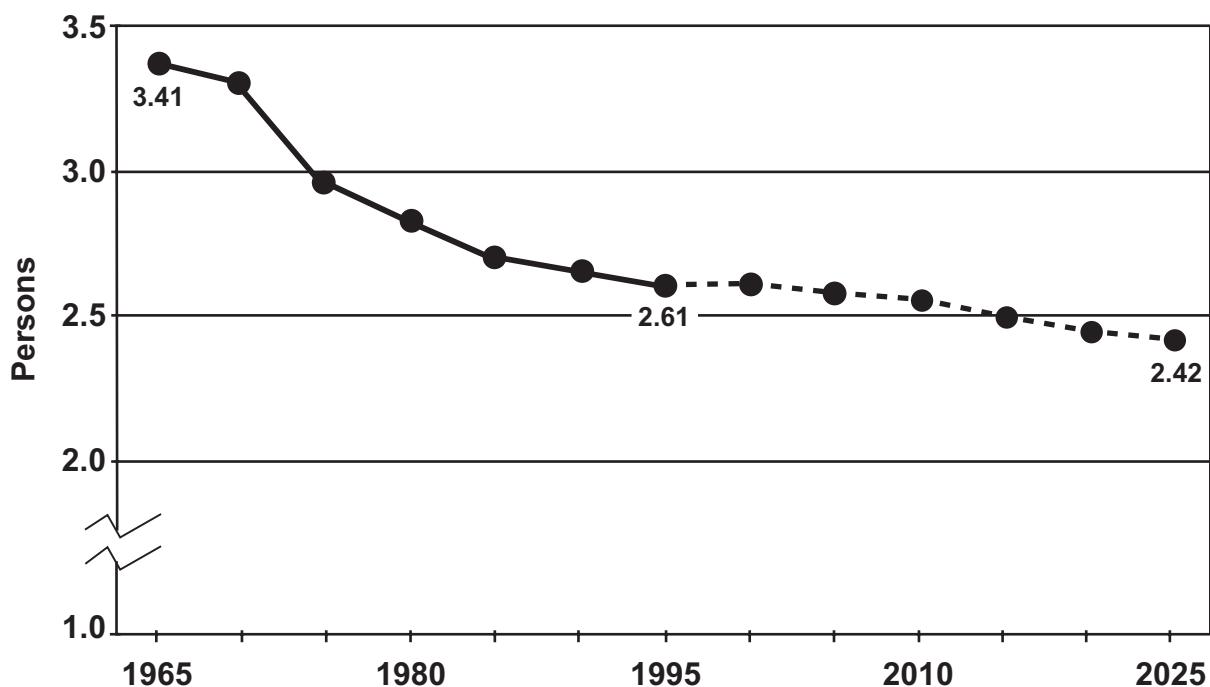


## Households

### Household Size

Changes in household size since 1965 reflect both the end of the baby boom and the increase in divorce and single parenting which accelerated through the '70s (Detroit Regional Transportation, "data base," 1965; SEMCOG, "Population," 1976 and 1986; U.S. Bureau of the Census, 1970, 1980 and 1990).

Figure 4  
Persons per Household, 1965-2025



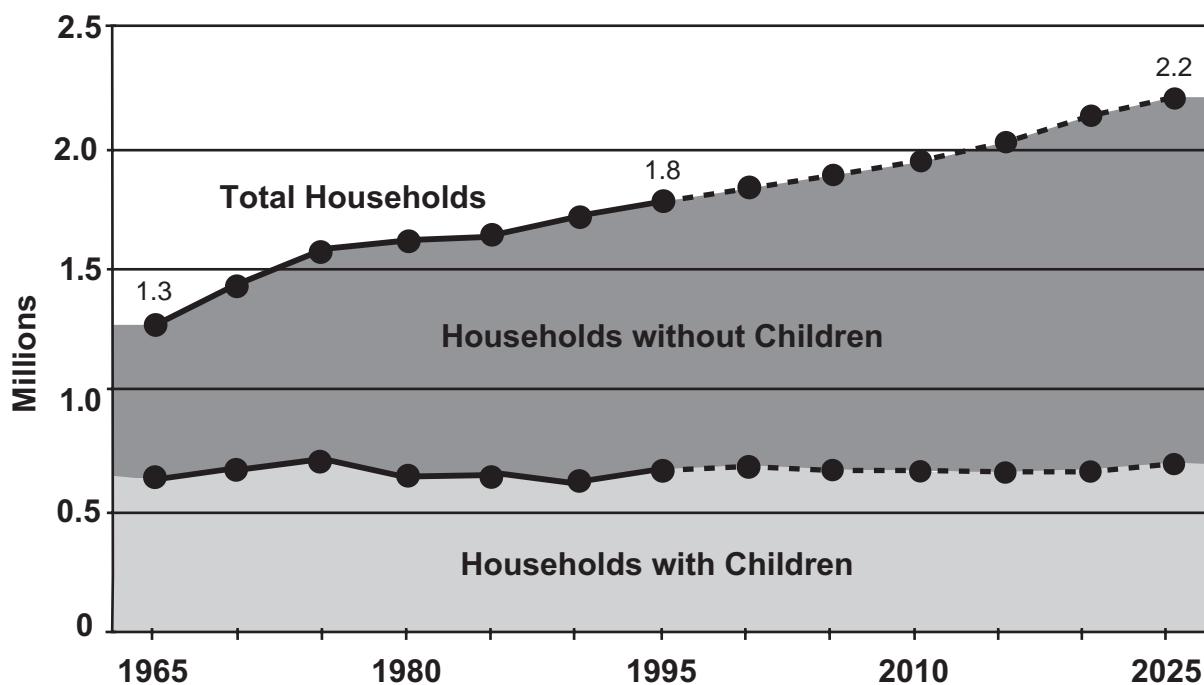
Sources: Detroit Regional Transportation, "data base," 1965; SEMCOG, *Population*, 1976 and 1986; U.S. Bureau of the Census, 1970, 1980 and 1990; and SEMCOG DataCenter.

The 2.61 average household size in 1995 was nearly one full person smaller than the 3.41 persons per household in 1965 (Detroit Regional Transportation, "data base," 1965). By 2015 or so, most of the baby boomers will no longer have children living at home. Other factors causing the continued drop in household size are more young adults delaying marriage and living alone and the improved health and longevity of older people. By 2025, average household size will fall even further to 2.42.

## Households

Households have grown at a faster rate than population during the last 30 years and will continue to do so through the forecast period. In 1965, there were 1.3 million households. (Detroit Regional Transportation, "data base," 1965). Unlike population, households continued to grow during the economic stagnation of the '70s and '80s (U.S. Bureau of the Census, 1970 and 1980; SEMCOG, "Small Area Forecast," 1980 and 1984).

Figure 5  
Households, Southeast Michigan, 1965-2025



Sources: Detroit Regional Transportation, "data base," 1965; SEMCOG, "Small Area Forecast," 1980 and 1984; U.S. Bureau of the Census, 1970, 1980 and 1990; and SEMCOG DataCenter.

By 1995, households totaled 1.8 million, a 39 percent increase over 1965. This trend is forecasted to continue, with households reaching 2.2 million in 2025, an increase of 24 percent over the next 30 years, compared to the 15 percent increase in population projected during the same time span.

How can households increase faster than population? This can be explained by the changing composition of households over time. There has been a significant increase in the number of households without children, though households with children have

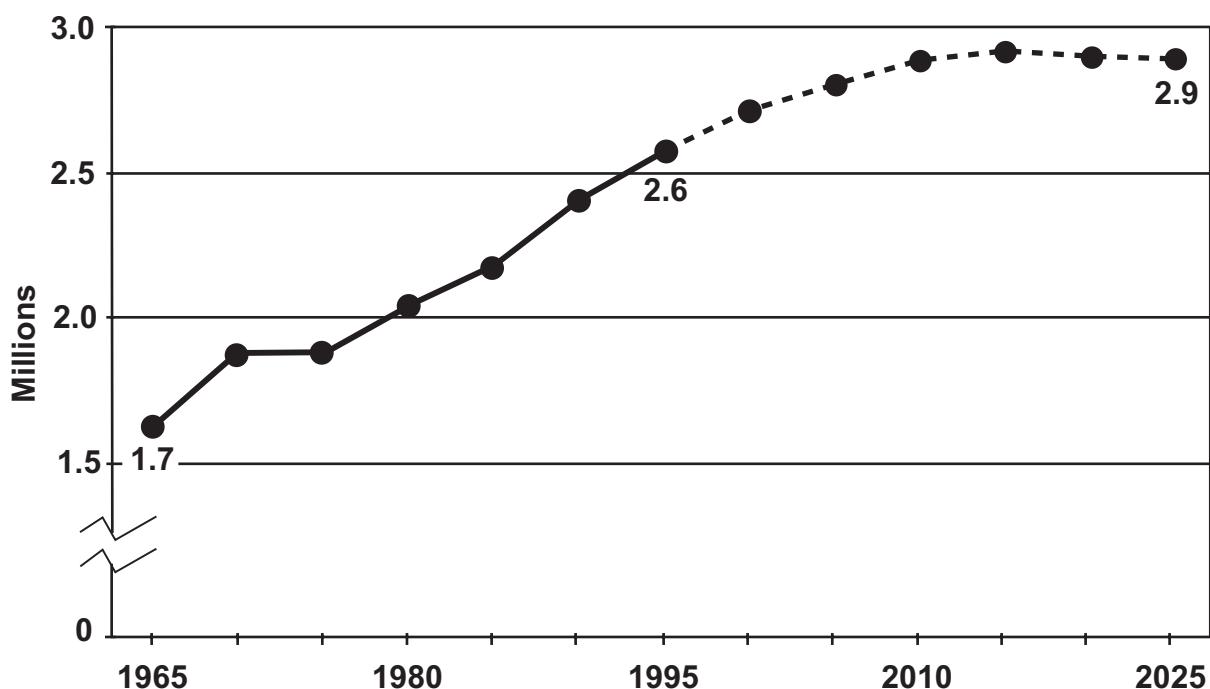
remained relatively constant over time. As baby boomers grew up and left home, the number of households with children grew by just 47,000 between 1965 and 1995 (Detroit Regional Transportation, "data base," 1965). On the other hand, households without children increased by 449,000 during the same time period. This trend is forecasted to continue during the next 30 years, as baby boomers themselves become empty nesters and age beyond childbearing years, flattening the birth rate. Households with children remain virtually constant from 1995 to 2025; households without children will account for almost all of the overall growth in total households — 395,000 out of the projected 420,000 total increase in households.



## Jobs

Southeast Michigan's economy produced moderate growth in jobs through the late '60s, the '70s and early '80s, as shown in Figure 6 (Detroit Regional Transportation, "data base," 1965; Bureau of Economic Analysis, 1994).

Figure 6  
Jobs, Southeast Michigan, 1965-2025



Sources: Detroit Regional Transportation, "data base," 1965; Bureau of Economic Analysis, 1994; and SEMCOG DataCenter.

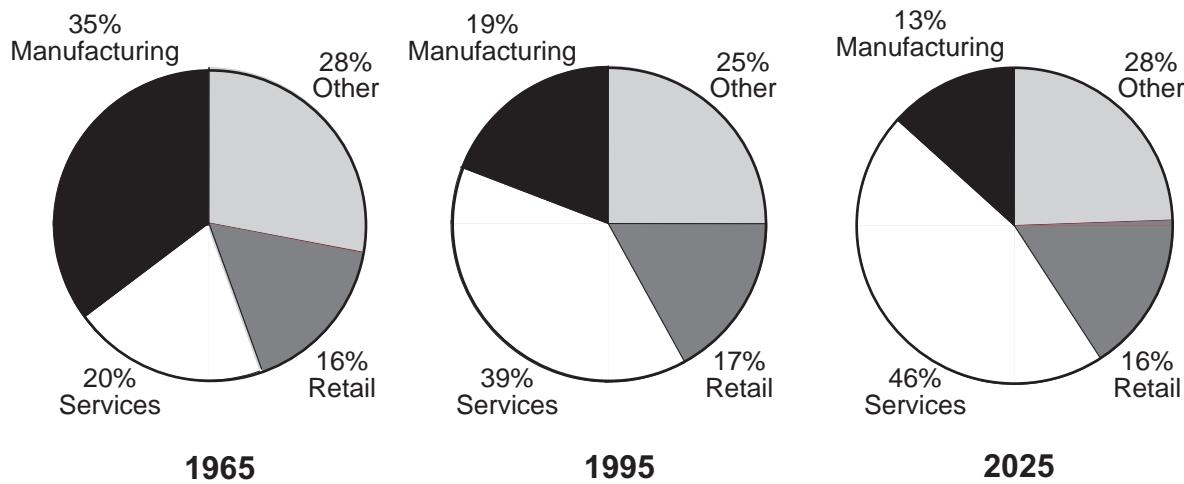
Not apparent in Figure 6 are several downturns in jobs, especially during the severe recession of 1979-1982. Because the graphic shows five-year time points, the dips in jobs between these years are not apparent.

Strong job growth characterizes the current decade. The Regional Forecast Totals forecast a gain of 289,000 jobs between 1990 and 2000. Growth will continue to 2010, but then stops. The main reason for the halt in job growth centers around aging baby boomers. The prime working age population (ages 18-54) will grow only 16,000 from 1995 to 2010. From 2010 to 2025, it will shrink by 166,000. SEMCOG's forecast implies that more older workers will stay in the labor force as a result of their improved health as well as economic demand. That will help keep the number of jobs stable between 2010 and 2025.

The economists who advised on the forecast believe the region will have a full employment economy through the forecast period. That is, jobs will be available for those who are capable and want to work. Manufacturing industries will need to continue productivity gains to stay globally competitive, so some jobs will be eliminated. Services will grow ever larger. Because of the aging population, the labor force cannot grow beyond year 2010. There will, however, be opportunities that will increase the labor force participation of workers over age 55.

The mix of jobs in Southeast Michigan's economy has changed markedly since 1965. Figure 7 shows the three largest groups of jobs — manufacturing, services, retail — plus other. In 1965, manufacturing accounted for 35 percent of all jobs.

**Figure 7**  
**Jobs by Industrial Class, 1965, 1995 and 2025**



Sources: Bureau of Economic Analysis, 1994; Detroit Regional Transportation, "data base," 1965; U.S. Bureau of the Census, "1970 Census," 1970; U.S. Bureau of the Census, "County Business Patterns," 1965 and 1970; and SEMCOG DataCenter.

By 1995, with automation, downsizing and productivity gains in manufacturing, that sector shrank to 19 percent of all jobs. Meanwhile, the diverse services group grew to be the largest group at 39 percent, with retail steady at about 16 percent of jobs.

SEMCOG's forecast indicates that the mix of jobs will continue this shift to 2025, with manufacturing jobs decreasing to 13 percent. Though the numbers of manufacturing jobs will decrease, the motor vehicle industry and its suppliers will continue to power

Southeast Michigan's economy. Some older factories may be upgraded or replaced, just as we have seen five plants close and five new plants open since 1980. The continuing growth in service sector jobs will demand construction of more office buildings.

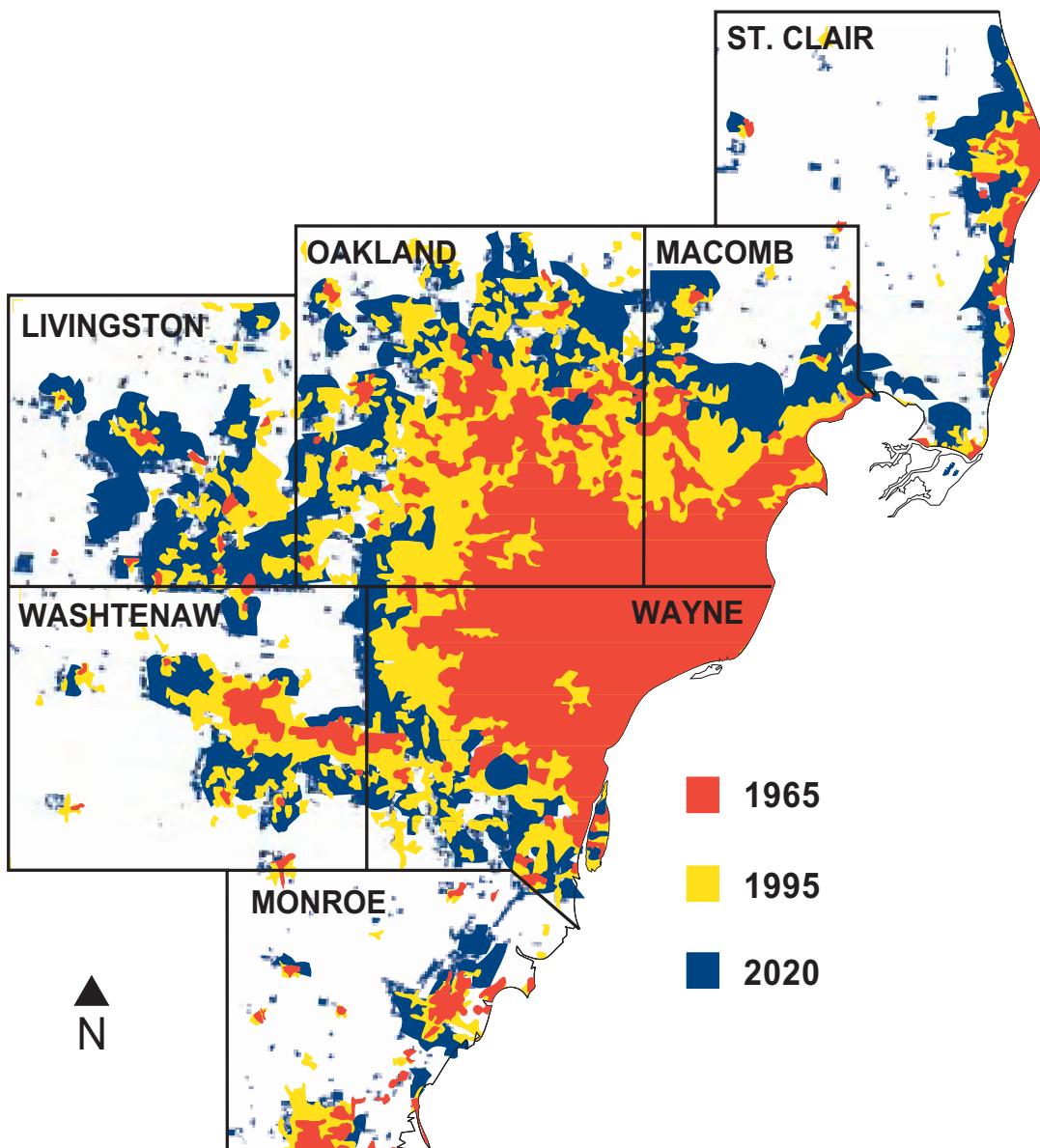
The full employment economy and an aging workforce together will create such a shortage of workers that many older workers will stay in the labor force. There will be a growing demand for better educated workers. The shortage will put strong upward pressure on wage rates, could cause an adjustment in U.S. immigration policy and could support raising ages for Social Security eligibility.



## Land Use

Urbanization of land in 1965 reflected the phenomenal growth in households and employment over the years since settlement of Southeast Michigan began (Detroit Regional Transportation, "Generalized Land Use," 1968).

Figure 8  
Urbanization, Southeast Michigan, 1965, 1995 and 2020



Sources: Detroit Regional Transportation, "Generalized Land Use," 1968; and SEMCOG DataCenter.

The region's development pattern in 1965 also reflected extensive suburbanization that occurred in the region before and after World War II. This was a time when the region's population was still growing and, as the City of Detroit filled up, urbanization spread outward. In the mid-'50s, the region's urban core began to lose population and jobs, fueling suburban growth. New subdivisions appeared, soon followed by shopping centers and industrial buildings along many of the major arterial roads in Macomb, Oakland and western Wayne counties. Smaller concentrations of development appeared adjacent to cities and towns in the outlying counties, with scattered development in rural areas just beyond the urban fringe.

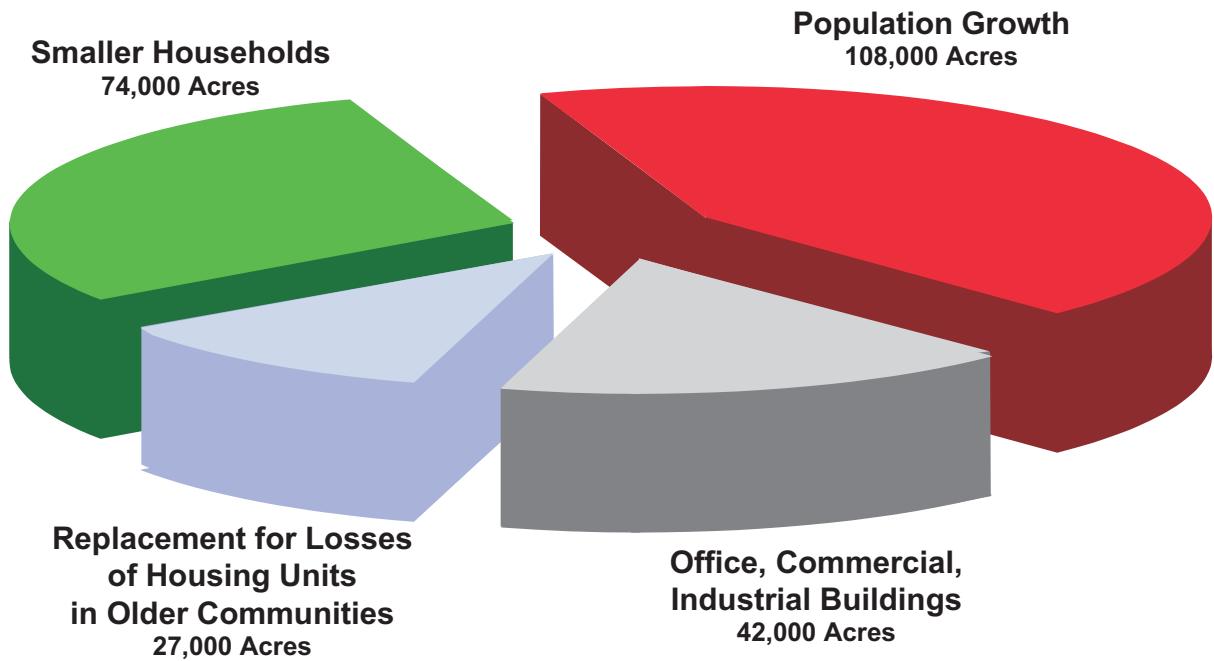
Over the 30-year period 1965-1995, suburbanization in Southeast Michigan continued unabated, propelled largely by the 40 percent increase in households that also occurred in this time span. Other factors in the increase in urbanized land included job growth and movement to suburban locations, increases in size of lots for housing and continued major losses of households and jobs from Detroit.

Two types of urban growth were prominent in the development pattern over the past 30 years. Denser urbanization featured residential subdivisions and apartment complexes, shopping centers, offices and industrial buildings located adjacent to previously developed areas. The second type of growth was the scattering of new homes and some businesses in more rural areas along county roads and in scattered subdivisions. Macomb, Oakland and western Wayne counties experienced most of the growth in the region, along with areas around the cities of Ann Arbor and Ypsilanti, southern Monroe County and the southeastern part of Livingston County. This development pattern continues in the '90s, boosted by gains in overall population growth — expanding the urbanized area farther out and scattering development across rural areas.

The expansion of the urbanized land area will likely continue in the future. SEMCOG's previous Regional Development Forecast which extended to year 2020, predicted the need for some 400,000 new and replacement housing units and nearly 423,000 new jobs (SEMCOG, 2020 *Regional*, 1996, pp.7, 10). While some of these housing units and jobs will locate in existing urbanized areas as a result of redevelopment and infill, the vast majority will likely be in the development fringe and rural areas of the region.

The anticipated growth in the region, coupled with the trend toward scattered low density development, will result in 33 percent more land (an additional 251,000 acres) becoming urbanized, between 1990 and 2020. As shown in Figure 9, much of the region's future urbanization will need to accommodate the anticipated population growth. The other factors affecting future urbanization are smaller households, land needed for new non-residential development and, to a much lesser degree than in the past, people leaving older urban areas.

Figure 9  
Sources of Future Urban Land Consumption, Southeast Michigan, 1990-2020



Source: SEMCOG, *2020 Regional*, 1996; and SEMCOG DataCenter.



## Appendices

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## Appendix A - Definitions

### **Population**

Total population includes all residents of the community, whether they reside in housing units or group quarters (nursing homes, college dormitories, correctional facilities, etc.). Group quarters population estimates in nursing homes extends to 2025, while all other group quarters population is adjusted forward only to year 2000 and held constant from that point forward.

### **Households**

Total households equal the total number of occupied housing units. The households with children group is those households with one or more persons under 18 years of age. A household not containing any person under 18 is in the households without children group. Note that the 1990 total households figure is based on sample census data and may differ slightly from the 100 percent count total. Also note that neither population nor household numbers have been adjusted to reflect the 1990 Census undercount.

Household income quartiles consist of four income classes. Each class contains one-fourth of the region's total households. Households are arranged in order of income, lowest to highest. In terms of 1989 income, as reported in the 1990 Census, the quartile boundaries are:

- Quartile 1 Less than \$16,717
- Quartile 2 \$16,717 to \$34,302
- Quartile 3 \$34,303 to \$55,585
- Quartile 4 More than \$55,585

Because future dollar values of income quartiles cannot be projected accurately, forecast households are simply reported as number of households by quartile, with no dollar value specified.

### **Persons per Household**

Persons per household is an average, calculated by dividing household population by the total number of households. The household population is considered to be all persons occupying housing units — defined as houses, apartments, manufactured homes or other structures intended as separate living quarters where occupants live and eat separately from any other persons in the building.

### **Employment**

Total employment measures the number of jobs, both full-time and part-time in the region. This includes self-employed proprietors. These jobs may be held by residents of the region or by nonresidents who commute into the seven county area. Employment is broken down into nine types, called "industrial classes," which describe the

predominant purpose and major product or service of the business, agency or governmental department for which a person works. Note that although manufacturing jobs occur mainly in plants and factories, they can also be found in warehouses, research facilities and office buildings. Retail trade jobs occur mainly in stores, shops and eating and drinking establishments, but also occur in warehouses and office buildings. Services is a very diverse class, including hotels and motels, repair shops, barber and beauty shops, hospitals, schools at all levels, business service firms and offices for health practitioners, consultants, architects, engineers and lawyers. Other groups include agricultural services/mining, construction, transportation/communications/utilities, wholesale trade, finance/insurance/real estate and public administration. Note that the military is not included in RDF employment.

## Appendix B - Regional Forecast Totals

Table 1  
**Regional Forecast Totals**  
**Population, Population by Age Group and Persons per Household**  
**Southeast Michigan, 1990-2025**

| Population                     | 1990      | 1995      | 2000      | 2005      | 2010      | 2015      | 2020      | 2025      | Numeric Change 1995-2025 | Percent Change 1995-2025 |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------|--------------------------|
| <b>Total Population</b>        | 4,590,468 | 4,708,460 | 4,864,375 | 4,965,771 | 5,071,383 | 5,179,293 | 5,301,019 | 5,429,025 | 720,565                  | 15.3%                    |
| Household Population           | 4,521,180 | 4,634,364 | 4,786,273 | 4,885,250 | 5,093,869 | 5,210,410 | 5,329,293 | 694,929   | 15.0%                    |                          |
| Group Quarters Population      | 69,288    | 74,096    | 78,102    | 80,521    | 82,170    | 85,424    | 90,609    | 99,732    | 25,636                   | 34.6%                    |
| <b>Population by Age Group</b> |           |           |           |           |           |           |           |           |                          |                          |
| Age 0 to 4 years               | 347,129   | 345,709   | 328,184   | 315,986   | 324,143   | 338,254   | 349,964   | 357,149   | 11,440                   | 3.3%                     |
| Age 5 to 15 years              | 704,564   | 734,798   | 773,152   | 761,919   | 721,466   | 713,524   | 738,674   | 773,053   | 38,255                   | 5.2%                     |
| Age 16 to 17 years             | 131,538   | 142,319   | 136,857   | 149,786   | 152,937   | 143,435   | 139,709   | 144,949   | 2,630                    | 1.8%                     |
| Age 18 to 24 years             | 485,781   | 428,554   | 449,530   | 464,280   | 500,749   | 497,635   | 472,396   | 467,977   | 39,423                   | 9.2%                     |
| Age 25 to 34 years             | 807,887   | 749,787   | 679,648   | 608,633   | 618,948   | 655,924   | 693,391   | 685,331   | -64,456                  | -8.6%                    |
| Age 35 to 44 years             | 710,489   | 775,484   | 787,026   | 740,098   | 662,631   | 594,199   | 604,714   | 646,038   | -129,446                 | -16.7%                   |
| Age 45 to 54 years             | 474,827   | 583,900   | 689,520   | 762,151   | 771,373   | 726,704   | 652,743   | 588,522   | 4,622                    | 0.8%                     |
| Age 55 to 64 years             | 394,960   | 379,715   | 433,940   | 549,136   | 648,145   | 720,004   | 731,694   | 693,350   | 313,635                  | 82.6%                    |
| Age 65 to 74 years             | 323,062   | 333,355   | 317,967   | 317,788   | 366,650   | 468,407   | 554,102   | 621,309   | 287,954                  | 86.4%                    |
| Age 75 and older               | 210,231   | 234,839   | 268,551   | 295,994   | 304,341   | 321,207   | 363,632   | 451,347   | 216,508                  | 92.2%                    |
| <b>Persons per Household</b>   | 2.66      | 2.61      | 2.61      | 2.59      | 2.56      | 2.50      | 2.46      | 2.42      | -0.19                    | -7.3%                    |

Source: SEMCOG DataCenter

**Table 2**  
**Regional Forecast Totals**  
**Households by Income Quartile\* and whether Children Present in Household**  
**Southeast Michigan, 1990-2025**

| Households                    | 1990             | 1995             | 2000             | 2005             | 2010             | 2015             | 2020             | 2025             | Numeric Change 1995-2025 | Percent Change 1995-2025 |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------------|--------------------------|
| <b>Total Households</b>       | <b>1,698,819</b> | <b>1,775,478</b> | <b>1,832,327</b> | <b>1,885,210</b> | <b>1,950,211</b> | <b>2,033,871</b> | <b>2,117,064</b> | <b>2,202,781</b> | <b>427,303</b>           | <b>24.1%</b>             |
| Quartile 1 without Children   | 300,929          | 314,561          | 331,423          | 348,893          | 367,760          | 391,299          | 412,844          | 435,942          | 121,381                  | 38.6%                    |
| Quartile 2 without Children   | 290,430          | 298,128          | 310,043          | 328,396          | 350,215          | 374,759          | 393,767          | 408,352          | 110,224                  | 37.0%                    |
| Quartile 3 without Children   | 245,792          | 260,347          | 269,909          | 285,067          | 303,053          | 322,289          | 335,890          | 347,693          | 87,346                   | 33.5%                    |
| Quartile 4 without Children   | 240,783          | 231,700          | 235,792          | 247,086          | 266,013          | 287,627          | 303,083          | 314,821          | 83,121                   | 35.9%                    |
| <b>Total without Children</b> | <b>1,077,934</b> | <b>1,104,736</b> | <b>1,147,167</b> | <b>1,209,442</b> | <b>1,287,041</b> | <b>1,375,974</b> | <b>1,445,584</b> | <b>1,506,808</b> | <b>402,072</b>           | <b>36.4%</b>             |
| Quartile 1 with Children      | 123,755          | 129,309          | 126,659          | 122,409          | 119,793          | 117,169          | 116,422          | 114,753          | -14,556                  | -11.3%                   |
| Quartile 2 with Children      | 134,292          | 145,741          | 148,038          | 142,906          | 137,337          | 133,708          | 135,499          | 142,343          | -3,398                   | -2.3%                    |
| Quartile 3 with Children      | 178,935          | 183,522          | 188,173          | 186,236          | 184,500          | 186,179          | 193,376          | 203,003          | 19,481                   | 10.6%                    |
| Quartile 4 with Children      | 183,903          | 212,170          | 222,290          | 224,217          | 221,540          | 220,841          | 226,183          | 235,874          | 23,704                   | 11.2%                    |
| <b>Total with Children</b>    | <b>620,885</b>   | <b>670,742</b>   | <b>685,160</b>   | <b>675,768</b>   | <b>663,170</b>   | <b>657,897</b>   | <b>671,480</b>   | <b>695,973</b>   | <b>25,231</b>            | <b>3.8%</b>              |

\*Note: Quartiles consist of four income classes, each containing 1/4 of the region's total households, with households arranged in order of income, lowest to highest. Because further dollar values of quartiles cannot be projected accurately, forecast households are simply reported as households by quartile, with no values specified.

Source: SEMCOG DataCenter.

**Table 3**  
**Regional Forecast Totals**  
**Jobs by Industrial Class**  
**Southeast Michigan, 1990-2025**

| Industrial Class                          | 1990             | 1995             | 2000             | 2005             | 2010             | 2015             | 2020             | 2025             | Numeric Change 1995-2025 | Percent Change 1995-2025 |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------------|--------------------------|
| Agricultural Services*, Mining & Farming  | 30,424           | 29,419           | 29,898           | 29,684           | 31,425           | 32,779           | 33,697           | 34,593           | 5,174                    | 17.6%                    |
| Construction                              | 93,654           | 106,427          | 119,414          | 119,748          | 122,904          | 124,941          | 125,753          | 127,334          | 20,907                   | 19.6%                    |
| Manufacturing                             | 486,644          | 501,455          | 486,963          | 458,552          | 453,141          | 431,279          | 406,500          | 383,106          | -118,349                 | -23.6%                   |
| Transportation, Communication & Utilities | 124,287          | 120,427          | 117,414          | 125,732          | 132,785          | 135,947          | 137,744          | 140,354          | 19,928                   | 16.5%                    |
| Wholesale Trade                           | 121,200          | 134,643          | 141,226          | 148,577          | 153,821          | 156,364          | 155,894          | 154,935          | 20,292                   | 15.1%                    |
| Retail Trade                              | 441,167          | 439,973          | 466,024          | 482,612          | 488,103          | 488,926          | 481,415          | 473,744          | 33,771                   | 7.7%                     |
| Finance, Insurance, & Real Estate         | 173,122          | 182,830          | 185,203          | 185,274          | 184,276          | 181,207          | 176,532          | 172,646          | -10,184                  | -5.5%                    |
| Services                                  | 904,892          | 1,011,583        | 1,121,954        | 1,201,442        | 1,268,837        | 1,299,046        | 1,316,220        | 1,341,163        | 329,580                  | 32.6%                    |
| Public Administration                     | 68,502           | 72,256           | 65,230           | 69,851           | 73,770           | 75,526           | 76,524           | 77,975           | 5,719                    | 7.9%                     |
| <b>Total Employment</b>                   | <b>2,443,892</b> | <b>2,599,013</b> | <b>2,733,326</b> | <b>2,821,473</b> | <b>2,909,063</b> | <b>2,926,015</b> | <b>2,910,280</b> | <b>2,905,850</b> | <b>306,837</b>           | <b>11.8%</b>             |

\*Note: Agricultural services include not only jobs in businesses that service farms, but also such businesses as lawn services, landscaping and veterinarians, and it is growth in these businesses that produces a net gain in the industrial class's total employment.

Source: SEMCOG DataCenter.



## Appendix C

### Tables of Population and Age Groups, Households and Whether Children Present, Jobs by Industrial Class

Table 4  
Population, Southeast Michigan, 1965-2025

| Year | Population |
|------|------------|
| 1965 | 4,446,000  |
| 1970 | 4,738,000  |
| 1975 | 4,755,000  |
| 1980 | 4,682,000  |
| 1985 | 4,511,000  |
| 1990 | 4,590,000  |
| 1995 | 4,708,000  |
| 2000 | 4,864,000  |
| 2005 | 4,966,000  |
| 2010 | 5,071,000  |
| 2015 | 5,179,000  |
| 2020 | 5,301,000  |
| 2025 | 5,429,000  |

Sources: Detroit Regional Transportation, "data base," 1965; SEMCOG, *Population*, 1976 and 1986; U.S. Bureau of the Census, 1970, 1980 and 1990; and SEMCOG DataCenter.

**Table 5**  
**Population by Age Group, 1965, 1995 and 2025**

| <b>Age Group</b> | <b>1965</b>      | <b>1995</b>      | <b>2025</b>      |
|------------------|------------------|------------------|------------------|
| 85+              | 16,000           | 57,000           | 186,000          |
| 80-84            | 28,000           | 66,000           | 100,000          |
| 75-79            | 55,000           | 112,000          | 165,000          |
| 70-74            | 95,000           | 157,000          | 277,000          |
| 65-69            | 132,000          | 176,000          | 347,000          |
| 60-64            | 161,000          | 183,000          | 333,000          |
| 55-59            | 199,000          | 196,000          | 360,000          |
| 50-54            | 230,000          | 254,000          | 300,000          |
| 45-49            | 265,000          | 330,000          | 288,000          |
| 40-44            | 300,000          | 367,000          | 313,000          |
| 35-39            | 291,000          | 409,000          | 333,000          |
| 30-34            | 286,000          | 403,000          | 348,000          |
| 25-29            | 260,000          | 347,000          | 337,000          |
| 20-24            | 261,000          | 306,000          | 334,000          |
| 15-19            | 376,000          | 334,000          | 354,000          |
| 10-14            | 482,000          | 325,000          | 343,000          |
| 5-9              | 525,000          | 340,000          | 354,000          |
| 0-4              | 484,000          | 346,000          | 357,000          |
| <b>Total</b>     | <b>4,446,000</b> | <b>4,708,000</b> | <b>5,429,000</b> |

Sources: Detroit Regional Transportation, "data base," 1965; Grimes, "Michigan Forecast," 1998; Wang, "Population Projections," 1994; and SEMCOG DataCenter.

**Table 6**  
**Households and whether Children Present, Southeast Michigan, 1965 - 2025**

| <b>Year</b> | <b>Total Households</b> | <b>Households with Children Present</b> | <b>Households without Children Present</b> |
|-------------|-------------------------|---|--|
| 1965        | 1,279,000               | 624,000                                 | 655,000                                    |
| 1970        | 1,422,000               | 672,000                                 | 750,000                                    |
| 1975        | 1,569,000               | 717,000                                 | 852,000                                    |
| 1980        | 1,623,000               | 633,000                                 | 990,000                                    |
| 1985        | 1,636,000               | 653,000                                 | 983,000                                    |
| 1990        | 1,699,000               | 621,000                                 | 1,078,000                                  |
| 1995        | 1,775,000               | 671,000                                 | 1,105,000                                  |
| 2000        | 1,832,000               | 685,000                                 | 1,147,000                                  |
| 2005        | 1,885,000               | 676,000                                 | 1,209,000                                  |
| 2010        | 1,950,000               | 663,000                                 | 1,287,000                                  |
| 2015        | 2,034,000               | 658,000                                 | 1,376,000                                  |
| 2020        | 2,117,000               | 671,000                                 | 1,446,000                                  |
| 2025        | 2,203,000               | 696,000                                 | 1,507,000                                  |

Sources: Detroit Regional Transportation, "data base," 1965; SEMCOG, "Small Area Forecast," 1980 and 1984; U.S. Bureau of the Census, 1970, 1980 and 1990; and SEMCOG DataCenter.

**Table 7**  
**Jobs, Southeast Michigan, 1965 - 2025**

| <b>Year</b> | <b>Jobs</b> |
|-------------|-------------|
| 1965        | 1,745,000   |
| 1970        | 1,940,000   |
| 1975        | 1,950,000   |
| 1980        | 2,100,000   |
| 1985        | 2,230,000   |
| 1990        | 2,444,000   |
| 1995        | 2,599,000   |
| 2000        | 2,733,000   |
| 2005        | 2,821,000   |
| 2010        | 2,909,000   |
| 2015        | 2,926,000   |
| 2020        | 2,910,000   |
| 2025        | 2,906,000   |

Sources: Detroit Regional Transportation, "data base," 1965; Bureau of Economic Analysis, 1994; and SEMCOG DataCenter.

**Table 8**  
**Jobs by Industrial Class, 1965, 1995 and 2025**

| <b>Industrial Class</b>                   | <b>1965</b>      | <b>1995</b>      | <b>2025</b>      |
|---|------------------|------------------|------------------|
| Agricultural Services, Farming & Mining   | 21,000           | 29,000           | 35,000           |
| Construction                              | 92,000           | 106,000          | 127,000          |
| Manufacturing                             | 615,000          | 501,000          | 383,000          |
| Transportation, Communication & Utilities | 105,000          | 120,000          | 140,000          |
| Wholesale Trade                           | 113,000          | 135,000          | 155,000          |
| Retail Trade                              | 287,000          | 440,000          | 474,000          |
| Finance, Insurance & Real Estate          | 97,000           | 183,000          | 173,000          |
| Services                                  | 354,000          | 1,012,000        | 1,341,000        |
| Public Administration                     | 62,000           | 72,000           | 78,000           |
| <b>Total Jobs</b>                         | <b>1,745,000</b> | <b>2,599,000</b> | <b>2,906,000</b> |

Sources: Bureau of Economic Analysis, 1994; Detroit Regional Transportation, "data base," 1965; U.S. Bureau of the Census, "1970 Census," 1970; U.S. Bureau of the Census, "County Business Patterns," 1965 and 1970; and SEMCOG DataCenter.

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## Appendix D – Bibliography

Bureau of Economic Analysis. "Regional Economic Information System, Full-time and Part-time Employees by Major Industry." Washington, D.C.: Bureau of Economic Analysis, 1994.

Detroit Regional Transportation and Land Use Study. "data base summary." Detroit: Detroit Regional Transportation and Land Use Study, 1965.

\_\_\_\_\_. "Generalized Land Use 1965." Detroit: Detroit Regional Transportation and Land Use Study, 1968.

Grimes, Donald. "State of Michigan: Revised Forecast 7/8/98." Ann Arbor: Institute of Labor and Industrial Relations, The University of Michigan, 1998.

SEMCOG, the Southeast Michigan Council of Governments. *2020 Regional Development Forecast: Summary Report*. Detroit: SEMCOG, 1996.

\_\_\_\_\_. *Population and Occupied Dwelling Units in Southeast Michigan, 1975*. Detroit: SEMCOG, 1976.

\_\_\_\_\_. "Population and Occupied Dwelling Units, 1985." Detroit: SEMCOG, 1986.

\_\_\_\_\_. "Small Area Forecast, Version '80." Detroit: SEMCOG, 1980.

\_\_\_\_\_. "Small Area Forecast, Version '84." Detroit: SEMCOG, 1984.

Treyz, George I., Dan S. Rickman and Gang Shao. "The REMI Economic-Demographic Forecasting and Simulation Model." *International Regional Science Review* 14 (Number 3, 1992): 221-253.

U.S. Bureau of the Census, "1970 Census of Population." Washington, D.C.: U.S. Bureau of the Census, 1970.

\_\_\_\_\_. "1980 Census of Population." Washington, D.C.: U.S. Bureau of the Census, 1980.

\_\_\_\_\_. "1990 Census of Population." Washington, D.C.: U.S. Bureau of the Census, 1990.

\_\_\_\_\_. "County Business Patterns, Michigan: 1965." Washington, D.C.: U.S. Bureau of the Census, 1965.

\_\_\_\_\_. "County Business Patterns, Michigan: 1970." Washington, D.C.: U.S. Bureau of the Census, 1970.

Wang, Ching-Li. "Preliminary Population Projections to Year 2020." Lansing: Michigan Department of Management and Budget. 1994.