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Socio-Demographic Projections for Autauga, Elmore, and Montgomery Counties: 2005-2035

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INTRODUCTION

This document contains the results of the socio-demographic projections conducted by the Center for Demographic Research for the City of Montgomery, Alabama. The purpose of the project was to compile, evaluate, analyze, and present data for the Montgomery Metropolitan Planning Organization (MPO) area, which comprises three counties: Autauga, Elmore, and Montgomery.

Most baseline data used in this report came from the U.S. Census Bureau and its various agencies, state agencies and departments, as well as some statistics collected by the City of Montgomery's Transportation Planning Division. The Center for Demographic Research at Auburn University Montgomery conducted this sponsored research to assist the City of Montgomery in its efforts to make informed planning decisions based on the most valid and reliable statistics.

This report offers socio-demographic projections, not forecasts. Projections are mathematical models based on systematic study of past population changes. Projections look at past trends in fertility, mortality, and migration, as well as other relevant variables such as employment and household size. Then, several simulations are conducted and studied to derive the most plausible scenario that represents the future socio-demographic trends of a geographic area.

Hence, unlike forecasts that only extrapolate past trends assumed to be constant in the future, our socio-demographic projections combine the analysis of past trends with advanced mathematical modeling techniques to allow for changes in the future. In short, our models incorporate variations in socio-demographic patterns overtime.

Following the principles of socio-demographic projection methods, our baseline projection data are from July 1, 2005. We then projected all subsequent years to the same date: July 1. This is the mid-year population, which is the conventional projection date used by demographers and demographic institutions, including the U.S. Census Bureau.

Our results show that the total population of the MPO area will continue to increase during the next three decades at the rate of about 1.0 percent per year. Estimated at 343,522 people in 2005, the total population of the Autauga, Elmore, and Montgomery counties is expected to reach about 457,442 people by the year 2035. The fastest growing counties in the MPO will be Elmore, with some 54,314 more people expected to be added to its population by the end of the projection period.

This report examines how such changes in population size are also associated with changes in age structure, employment, housing, and income. Our key findings show that the next three decades will witness a fast growing aging population, lower fertility, and an increase in employment but also in level of poverty.

METHODOLOGY

Demographic Projections

The demographic projections are critical tools for socio-economic development and strategic planning activities. These projections are based on a systematic analysis of recent demographic trends, focusing on changes in mortality, fertility, and migration. The results of the demographic trends are then used in mathematical projection models to determine future population size and composition.

As such, the present projections derive from a combination of three analytical approaches: (1) time series analysis, (2) growth rate method, and (3) cohort component technique. Consistent with the principles of demographic projection methodology, our analysis are set for mid-year population, which is July 1st of each year reported herein.

Time series analysis

We used time series analysis to examine the trends in mortality and fertility rates for the past 7 years (2000-2006). This analysis was based on data from the Alabama Department of Public Health's Center for Health Statistics (see Tables A1.1 & A1.2 and Figures A1 & A2 in Appendix). Additional series were constructed for population growth for the period of 1990-2007, using the estimates from the Census Bureau (see Table A1.3 and Figure A3 in Appendix). Due to lower quality of migration data during the 2000-2006 period, and because population estimates were available, we estimated migration trends through the basic population composition equation*.

Three potential population scenarios emerged from this time series analysis: low, medium, and high. The low models were based on the lowest population growth rates. The medium or average models were based on average values and the high models were based on the highest values.

* The general population composition equation used to estimate migration is:

$$P_t = P_{t-1} + B_{t,t-1} - D_{t,t-1} + M_{t,t-1}$$

where P_t is population at time t (current year); P_{t-1} is population at time $t-1$ (previous year); $B_{t,t-1}$ is the number of births that occurred during the period between year t and year $t-1$; $D_{t,t-1}$ is the number of persons who died between year t and year $t-1$; and $M_{t,t-1}$ is the net migration between year t and year $t-1$.

Growth rate method

The three population growth rate scenarios deriving from the time series analysis were then applied to a demographic model of population growth rate to produce the first set of population projections for each of the three counties. Each of the projections was then studied and compared to the Census estimates to select the best model for each of the three counties. Additional adjustments were made to incorporate changes in migration trends.

We selected low growth models for Autauga and Elmore, and medium growth model for Montgomery. Further analysis of fertility and mortality patterns was conducted to determine the assumptions of future population trends. We distinguished three periods of changes: 2005-2015; 2016-2025; 2026-2035. Different levels of fertility and mortality were estimated for each of these three periods (see Table A2 in Appendix).

Cohort component method

The cohort component method was finally used to derive the age structure of the population. This was done by projecting the population by age group (5 years) under a specific mortality model, using the survival rates. Fertility and migration trends were also used to make adequate adjustments and to match projected total population with resulting population from the cohort component method. The results of cohort component analysis are essential for obtaining age-specific populations, such as preschool and senior citizen populations.

Other Projections

We projected other variables such as school enrollment, number of households, employment, and income by applying specific models and adjusting the results to the projected population figures. For example, our employment projections were based on the projected annual growth rate from 2004 to 2014 published by the Alabama Department of Industrial Relations. We applied this rate to the specific area, assuming constant growth throughout the projection period. For the period beyond 2014, we studied our projected demographic patterns (age composition, population growth) and adjusted the employment rates accordingly.

School enrollment projections were based on the analysis of the school-age population and estimated enrollment data. We conducted time series analysis to derive the most plausible models of projection estimates. Similar time series analyses were conducted for median household income and number of households. All these projections were adjusted to projected populations and changes in age structure.

RESULTS OF SOCIO-DEMOGRAPHIC PROJECTIONS

Total Population

As explained in the methodological section, our figures are for the mid-year, which is July 1st of each year. The data in Table 1 show that all three counties will register an increase in population size during the next three decades. Altogether, the MPO region is expected to have 113,920 more people in 2035 as compared to 2005. This difference represents a 33.2 percent increase between the two periods.

In terms of specific counties, Elmore will have the largest growth, adding 54,314 more people to its population by the year 2035, as compared to year 2005. This change represents 74.1 percent increase between 2005 and 2035. Autauga is second in growth rate with 51.7 percent change between 2005 and 2035. However, because of its smaller population base in 2005, Autauga County will only gain 24,752 people by the year 2035. In contrast, Montgomery County will register a smaller growth rate at 15.7 percent between 2005 and 2035. Yet, its population is expected to gain about 34,853 more people by the year 2035, compared to its original baseline population size in 2005.

Table 1. Projected Total Populations, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	47,917	53,372	56,754	60,359	64,202	68,300	72,669	24,752	51.7
Elmore	73,303	88,249	94,909	102,127	109,950	118,428	127,617	54,314	74.1
Montgomery	222,302	230,637	235,709	240,895	246,196	251,615	257,155	34,853	15.7
MPO Total	343,522	372,259	387,372	403,380	420,347	438,343	457,442	113,920	33.2

What triggered these differential changes in population sizes? A look at the fertility, mortality, and migration projections shows very different demographic regimes in the MPO area.

Autauga County's net migration is expected to decline slightly during the next 30 years. Although overall positive, the net migration values in 2035 will be lower than the one in 2005. As a result, the difference in net migration between the base year (2005) and last year (2035) is negative (Table 2). In contrast, both Elmore and Montgomery counties are expected to have positive net migration between the years 2005 and 2035.

Table 2. Projected Net Migration, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	720	544	550	556	563	570	578	-142	-19.7
Elmore	1,674	1,928	1,942	1,956	3,513	3,658	2,010	336	20.1
Montgomery	-944	617	615	648	647	692	693	1,637	-173.4
MPO Total	1,450	3,089	3,108	3,161	4,724	4,921	3,280	1,830	126.2

In terms of fertility, we expect declining trends for all three counties, but at different paces. In addition, we constructed our fertility models to allow changes per decade. For example, we considered Montgomery County's fertility rate to be at 15.0 births per 1,000 people during the period of 2005-2015. It is projected to drop to 14.0 per 1,000 in 2016-2025 and to 13.0 per 1,000 in 2026-2035. More moderate changes were considered for Elmore and Autauga counties (see Table A2 in Appendix). The application of these fertility regimes resulted in the projected number of births shown in Table 3.

Table 3. Projected Fertility (Total Births), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	674	694	738	754	803	820	872	198	29.4
Elmore	995	1,183	1,272	1,348	1,451	1,528	1,646	651	65.4
Montgomery	3,278	3,460	3,536	3,373	3,447	3,271	3,343	65	2.0
MPO Total	4,947	5,336	5,545	5,475	5,701	5,618	5,861	914	18.5

Once again, Elmore County is assumed to add more into its population through births, with a growth rate of 65.4 percent between 2005 and 2035. Autauga comes second with a growth rate of 29.4 percent during the same period. Despite its larger population, Montgomery County is expected to be last with only 2.0 percent more births in 30 years.

Similar differential patterns were projected for number of deaths or mortality (see Table 2A in Appendix). The data on the number of deaths in Table 4 show that somehow more people will die at the end of the projection period than in earlier years. These relatively higher numbers of deaths across the projected years reflect the population composition of residents in each of the counties.

Table 4. Projected Mortality (Total Deaths), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	407	480	511	513	546	546	581	174	42.8
Elmore	628	750	807	837	902	924	995	367	58.4
Montgomery	2,102	2,168	2,216	2,192	2,240	2,265	2,314	212	10.1
MPO Total	3,137	3,398	3,533	3,543	3,688	3,735	3,891	754	24.0

In short, our population projections suggest that Montgomery County's population size will register a moderate increase during the next three decades. This is due in large part to its moderate net migration, higher fertility level that is counterbalanced by a higher mortality rate. On the other hand, the spectacular population growth in Elmore County results from the county's higher net migration and moderate fertility and lower mortality.

Preschool Population

The data on preschool-age population are given in Table 5. These are children 0-4 years of age. As a whole, the MPO area is expected to have 6,700 more children of preschool age by the year 2035, as compared to the year 2005. This change represents a 28.4 percent increase in 30 years. However, there is a big difference between Elmore and the other two MPO counties.

Table 5. Projected Preschool Populations (age 0-4 years), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	3,317	3,529	3,780	3,772	4,088	4,212	4,590	1,273	38.4
Elmore	4,863	6,514	7,039	6,925	7,543	8,040	8,771	3,908	80.4
Montgomery	15,388	15,949	16,738	15,968	16,219	15,495	16,907	1,519	9.9
MPO Total	23,568	25,992	27,557	26,665	27,849	27,746	30,268	6,700	28.4

Clearly, Elmore County will have a significant increase in its preschool population, which is expected to almost double between 2005 and 2035. Such a sharp increase in preschool population indicates a need for more daycare services. At the same time, this population is growing and will require school infrastructures as these children reach school age in subsequent years.

Unlike Elmore, Autauga and Montgomery counties are expected to add fewer children into their respective populations. Autauga County is expected to have only a little more than 1,000 more preschool-age children in 2035 compared to its 2005 population. About the same pattern is predicted for Montgomery County.

School-Age Population

Our school-age population includes all children in the age group 5-19 years. As shown in Table 6, the school-age population is assumed to increase throughout the projection period for Autauga and Elmore counties. Autauga County is expected to have 1,069 more children aged 5-19 years in 2035 than in 2005. This increase is equivalent to 9.2 percent growth between the two periods.

The highest increase in school-age population will be observed in Elmore County. The number of children aged 5-19 will increase from 15,830 in 2005 to 25,227 in 2035. Such change represents 59.4 percent growth between the two periods.

Table 6. Projected School-Age Populations (age 5-19 years), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	11,650	11,540	11,880	11,921	11,996	12,225	12,719	1,069	9.2
Elmore	15,830	16,824	18,236	19,413	22,436	22,645	25,227	9,397	59.4
Montgomery	49,600	43,329	47,130	43,053	48,498	43,706	51,072	1,472	3.0
MPO Total	77,080	71,693	77,246	74,387	82,930	78,576	89,018	11,938	15.5

In contrast, the school-aged population of Montgomery County is expected to grow slightly in the next three decades. In fact, the Montgomery County population aged 5-19 is expected to fluctuate somehow, due to the impact of migration and change in population structure. Estimated to 49,600 in 2005, the Montgomery County school-age population is projected to reach 51,072 in 2035, corresponding to a growth rate of 3 percent.

Taken together, the MPO school-age population will increase from 77,080 in 2005 to 89,018 in 2035, adding thus 11,938 more children during the thirty year period. Now we will evaluate how this change translates into school enrollment.

K-12 School Enrollment

The baseline school enrollment data for the year 2005 were obtained from the Census Bureau's 2005 American Community Survey. However, because no data were available for Autauga in the 2005 American Community Survey, we estimated its 2005 school enrollment using the 2000 American Community Survey, for which we calculated a rate of enrollment to the county population. This rate was then applied to the 2005 population to obtain the estimated school enrollment figure.

Our school enrollment projections are based on both the baseline data on school enrollment in 2005 and the population of school-age children in subsequent years. The results are given in Table 7. These figures include both private and public school systems. Overall, all three counties are expected to experience an increase in school enrollment.

The biggest increase will be in Elmore County where 8,484 more K-12 students are projected to be added by the year 2035. This change will correspond to 59.4 percent increase during the period of 2005-2035. Although it is expected to add less than 1,000 more students into its school system by year 2035, Autauga County's school enrollment

is assumed to increase by 9.2 percent in the next three decades, from 10,377 students in 2005 to 11,333 in 2035.

Table 7. Projected School Enrollment Populations (Age 5-19 Years), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	10,377	10,282	10,585	10,622	10,688	10,892	11,333	956	9.2
Elmore	14,296	15,192	16,467	17,530	20,260	20,448	22,780	8,484	59.4
Montgomery	39,797	34,750	37,798	34,529	38,895	35,052	40,960	1,163	2.9
MPO Total	64,470	60,224	64,850	62,680	69,844	66,393	75,072	10,602	16.5

Montgomery County is expected to add 1,163 more students in its K-12 system in year 2035, compared to year 2005. Its school enrollment is expected to increase moderately from 39,797 in 2005 to 40,960 in 2035. This is a growth of 2.9 percent in 30 years. As a whole, the MPO area is projected to add 10,602 more students in all their K-12 school systems by the year 2035.

Higher Education Enrollment

Higher education projections are among the most difficult to construct because of several circumstances, including potential changes in school programs, job market, tuition, and other factors. Our higher education enrollment projections are based on data from all higher education institutions in the three counties, with the exception of the Community College of the Air Force for which we could not obtain adequate data.

We used enrollment data from 2000, 2005, and 2007-08 and examined them in relation to the total MPO population aged 20-29. The assumption is that most students in the MPO are in age group 20-29. We then modeled the population aged 20-29 with the estimated university/college enrollment from 2000, 2005, and 2007-08 to obtain the projected higher education enrollment populations for the MPO area.

The projected higher education enrollment figure for the MPO area in the year 2035 is 23,404, which is a 9.6 percent increase from the 21,358 figure estimated in the year 2005 (Table 8). At that level, the MPO area counties are expected to add 2,047 more students in their colleges and universities by year 2035, compared to year 2005. Montgomery County's higher education enrollment will decline by about 2,477 students by the year 2035, whereas both Autauga and Elmore are expected to see a relative increase in their college and university enrolled student populations.

The major schools of enrollment will remain about the same: Alabama State University and Auburn University Montgomery will continue to be the top schools with about one-fourth of the MPO student body each. Troy University – Montgomery campus will

absorb about one-fifth of the MPO area students, whereas Faulkner University will take nearly one-tenth. The rest will go to H. Councill Trenholm State Technical College, South University-Montgomery, Huntington College, and a few other small colleges.

Table 8. Projected Higher Education Enrollment, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	2,324	2,814	3,869	2,986	3,742	3,178	4,152	1,828	78.6
Elmore	4,211	4,068	5,439	4,482	5,652	5,001	6,907	2,696	64.0
Montgomery	14,822	14,078	12,093	12,573	10,894	12,035	12,345	-2,477	-16.7
MPO Total	21,358	20,960	21,401	20,041	20,288	20,214	23,404	2,047	9.6

Again, the above projections assume that no major change will be made in terms of tuition rate, program offerings, and population structures, except as modeled here.

Senior Population

As with other regions, the MPO area will see an increase in senior populations, or population aged 65+, in the next three decades. Due to their differences in age structures, each of the counties will have a unique senior population growth pattern.

The lowest growth rate is expected in Montgomery County, where the change will add 33,718 more people aged 65+ by year 2035, compared to the year 2005. Autauga County is second in growth rate with 13,062 more senior persons in 30 years. Elmore County ranks number one in aging population growth rate, adding some 23,670 more people aged 65+ in its population in year 2035. These statistics are given in Table 9.

Table 9. Projected Senior Populations (Age 65+ Years), MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	4,884	8,286	8,672	12,407	12,752	17,796	17,946	13,062	267.4
Elmore	7,868	14,302	15,152	21,988	22,679	31,380	31,538	23,670	300.8
Montgomery	26,165	30,492	36,282	43,039	53,602	63,002	59,883	33,718	128.9
MPO Total	38,917	53,080	60,107	77,433	89,033	112,177	109,367	70,450	181.0

These differences in growth of senior populations are primarily due to differences in mortality and migration across the MPO counties. Put together, the entire MPO senior population is expected to increase by 181 percent in the next three decades.

As a percentage of the total county population, the number of people age 65+ is expected to increase from 10.2 percent in 2005 to 24.7 percent in 2035 in Autauga. A similar increase is expected for Elmore from 10.7 percent to 24.7 percent during the same period. Montgomery County's senior population is expected to rise as well, from 11.8 percent of the total population in 2005, to 23.3 percent in 2035.

There are certainly many implications associated with such a sharp increase in the older population. Some of the issues include Medicare, retirement benefits, and senior housing facilities.

Number of Households

The number of households is an important variable for taxation and household amenities, such as electricity, water, gas, etc. As such, number of households is a variable of interest to county and municipal authorities, including private and public institutions that provide services or/and receive revenue from households.

We used household data from the U.S. Census Bureau for the year 2005, as our baseline year. We projected the number of household units in relation to changing population size from the year 2005 to 2035. Overall, the number of households in the MPO area is expected to increase from 130,128 in 2005 to 173,371 in 2035 (Table 10). This change corresponds to a growth rate of 33.2 percent for the entire period.

Table 10. Projected Number of Households, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	17,342	19,321	20,545	21,850	23,241	24,725	26,306	8,964	51.7
Elmore	25,173	30,269	32,554	35,030	37,713	40,621	43,773	18,600	73.9
Montgomery	87,613	90,871	92,869	94,913	97,001	99,136	101,319	13,706	15.6
MPO Total	130,128	141,086	146,814	152,881	159,312	166,132	173,371	43,243	33.2

At county level, Elmore is expected to register the most growth by increasing its number of households by 73.9 percent during the next three decades. Estimated at 25,173 households in 2005, Elmore is projected to have 43,773 household units in 2035. Autauga follows with a three decade growth rate of 51.7 percent, adding about 8,964 more households in 2035, compared to the year 2005. Montgomery County's expected growth rate is much smaller, at 15.6 percent in 30 years.

Total Employment

We obtained the employment figures for the year 2005 from the Bureau of Economic Analysis, U.S. Department of Commerce. Then, we applied the annual growth rate from

the Alabama Department of Industrial Relations for the period of 2005-2014. The information from the above sources was used to conduct socio-economic analysis. Finally, we applied various analytical models to derive the employment patterns that best fit each of the counties during the period of 2015-2035.

Our results suggest that employment growth will continue to grow for the entire period for all three counties. The results are given in Table 11. We expect an additional 115,282 employment positions in the MPO by the year 2035. This is a 53.1 percent increase from the 217,021 employment positions estimated in 2005.

Table 11. Projected Total Employment, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	18,518	20,127	21,729	22,837	24,002	26,696	29,692	11,174	60.3
Elmore	24,374	26,491	28,883	31,889	35,209	41,817	49,665	25,291	103.8
Montgomery	174,129	189,256	203,309	208,443	213,706	232,500	252,946	78,817	45.3
MPO Total	217,021	235,874	253,921	263,169	272,917	301,013	332,303	115,282	53.1

Montgomery County will have more new employment positions adding some 78,817 new jobs by 2035. In terms of rate of change, Elmore will have the highest growth rate at 103.8 percent between the years 2005 and 2035. Autauga is expected to have 11,174 more employment positions by 2035. This change in Autauga represents an increase of 60.3 percent between 2005 and 2035.

Retail Employment

Our analysis of employment patterns showed that retail employment will grow at a relatively slower rate than the total employment during the first ten years, before rising and reaching a growth rate similar to that of total employment around the year 2016. With that assumption, we found that the entire MPO area will have about 12,386 more new retail employment positions in year 2035, compared to year 2005 (see Table 12).

Table 12. Projected Retail Employment, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	2,932	3,168	3,420	3,594	3,778	4,202	4,674	1,742	59.4
Elmore	2,737	2,957	3,224	3,560	3,930	4,668	5,544	2,807	102.5
Montgomery	17,649	19,069	20,485	21,002	21,533	23,427	25,487	7,838	44.4
MPO Total	23,318	25,194	27,129	28,156	29,240	32,296	35,704	12,386	53.1

Most of the new positions will be in Montgomery County, with nearly eight thousand more retail positions added by year 2035. Elmore is expected to be second with almost three thousand new positions in retail business. Autauga will add a little less than one thousand new positions by year 2035.

Because of its substantial growth rate at 102.5 percent in 30 years, Elmore County will enjoy additional income and more prosperous gain from its retail employee population than Autauga and Montgomery counties. Montgomery County's big number of retail employees represents only 44.4 percent increase in 30 years. Autauga County's retail employment growth rate is 59.4 percent for the period between 2005 and 2035.

Non-retail Employment

Non-retail employment is the difference between total employment and retail employment. As of the year 2005, there were about 193,703 non-retail employment positions in the three MPO counties. Owing to their different population sizes, Montgomery County had the largest share of non-retail employment positions (156,480), followed by Elmore County (21,637) for the year 2005. Autauga County had 15,586 non-retail employment positions in 2005 (see Table 13).

Table 13. Projected Non-Retail Employment, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	15,586	16,959	18,309	19,243	20,224	22,494	25,018	9,432	60.5
Elmore	21,637	23,534	25,659	28,329	31,279	37,149	44,121	22,484	103.9
Montgomery	156,480	170,187	182,824	187,441	192,173	209,073	227,459	70,979	45.4
MPO Total	193,703	210,680	226,792	235,013	243,677	268,717	296,599	102,896	53.1

Our non-retail employment projection results show that the Montgomery County will continue to have the largest number of non-retail employment positions in the MPO region for the next three decades. Nonetheless, Elmore will experience the biggest growth, increasing its non-retail employment positions by 103.9 percent in three decades. Autauga is expected to add about 9,432 more non-retail jobs by the year 2035, which corresponds to a 60.5 percent increase.

Certainly these employment projections must be considered within the assumptions of our projections, namely that the population will increase at the specified rates and that there will be no major shift in job creation in the MPO region. For example, if employment booms in the area, we can experience a surge in both population and types of employment, whether it is retail or non-retail.

Median Household Income

Median income is more meaningful than mean or average income in studying wealth distribution in society. This is because median divides the study population into two groups: one half of the population is above the median value and the other half below that same value. Therefore, we used median household income in measuring changes in household income level during the period of 2005-2035.

Our data came from the U.S. Census Bureau. We examined past trends in household income during the last 15 years in order to project future trends for the next 30 years. As shown in Table 14, median household income was higher in Autauga County during the year 2005. However, this pattern is expected to change in the subsequent years, with Montgomery County becoming the top county in household income in the MPO region by the year 2035.

Table 14. Projected Median Household Income, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	46,929	54,941	64,280	75,208	87,993	102,952	120,454	73,526	156.7
Elmore	45,802	55,005	66,006	79,207	95,048	114,058	136,869	91,067	198.8
Montgomery	40,401	51,565	65,746	83,826	106,878	136,269	173,743	133,342	330.0
MPO Total	44,377	53,837	65,344	79,414	96,640	117,760	143,689	99,312	223.8

As a whole, the MPO region's median household income is expected to increase by more than 200 percent during the next three decades. The majority of increase will come from Montgomery County, where the median household income is expected to rise from \$40,401 in 2005 to \$173,743 in 2035.

Population in Poverty

After analyzing the trends in poverty level during the last 10 years, we projected the number of people who will be living in poverty. The baseline data came from the Census Bureau. We took into the consideration the changes in age composition and income during the projection period. Therefore, we distinguished three periods of poverty corresponding to each of the three decades covered in our projections.

During the initial year, about 50,256 people were living in poverty in the MPO area (Table 15). Of these, 36,323 were in Montgomery County, 8,913 in Elmore and the remaining 5,020 in Autauga. Autauga and Montgomery counties' number of people in poverty is expected to decrease during the period of 2005-2025. In contrast, Elmore's poor population is expected to increase during that period. These trends will be reversed during the period of 2025-2035.

Table 15. Projected Populations in Poverty, MPO Counties, Alabama 2005-2035

County	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	
								Number	Percent
Autauga	5,020	4,813	4,615	4,430	4,253	6,167	8,942	3,922	78.1
Elmore	8,913	9,665	10,481	11,110	11,776	11,128	10,516	1,603	18.0
Montgomery	36,323	33,940	31,714	30,128	28,622	38,639	52,163	15,840	43.6
MPO Total	50,256	48,418	46,809	45,668	44,651	55,935	71,621	21,365	42.5

Considering the entire projection period, all three counties are expected to see an increase in number of people living in poverty. Much of the increase will occur in Montgomery County where an additional 15,840 people are expected to be living in poverty in 2035, as compared to the year 2005. Autauga will have nearly 4,000 more people in poverty by the year 2035, corresponding to a 78.1 percent increase in three decades. Elmore is expected to have 1,603 more people in poverty by year 2035 than in year 2005.

Appendix

Table A1.1. Levels and Trends of Fertility in MPO Area 2000-2006

	BR00	BR01	BR02	BR03	BR04	BR05	BR06	Min	Avg.	Max
Autauga	13.4	14.3	13.2	13.5	13.8	13.2	12.9	12.9	13.5	14.3
Elmore	14.9	14.0	13.3	13.2	13.3	13.5	13.3	13.2	13.6	14.9
Montgomery	16.4	15.2	14.8	14.4	14.7	14.9	15.6	14.4	15.1	16.4

Note: BR00, BR01... stands for birth rates in years 2000, 2001, etc.

Table A1.2. Levels and Trends of Mortality in MPO Area 2000-2006

	DR00	DR01	DR02	DR03	DR04	DR05	DR06	Min	Avg.	Max
Autauga	8.2	8.1	8.5	8.6	7.9	8.6	9.1	7.9	8.4	9.1
Elmore	8.3	7.4	7.8	8.9	8.9	8.2	8.2	7.4	8.2	8.9
Montgomery	8.8	9.1	9.4	9.1	9.2	9.1	9.4	8.8	9.2	9.4

Note: DR00, DR01... stands for death rates in years 2000, 2001, etc.

Table A1.3 Levels and Trends in Population Growth Rates in MPO Area 1990-2007

	r90-91	r91-92	r92-93	r93-94	r94-95	r95-96	r96-97	r97-98	r98-99
Autauga	0.01912	0.02785	0.02690	0.03337	0.02425	0.02800	0.02564	0.02105	0.02035
Elmore	0.02522	0.03513	0.03296	0.02745	0.02993	0.02730	0.03120	0.02865	0.03384
Montgomery	0.01502	0.01437	0.01356	0.01007	0.00530	0.00357	0.00430	0.00193	-0.00301

r99-00	r00-01	r01-02	r02-03	r03-04	r04-05	r05-06	r06-07	Min	Avg.	Max
0.02127	0.01290	0.01645	0.01353	0.02586	0.02018	0.02488	0.01733	0.01290	0.02229	0.03337
0.02419	0.02029	0.01875	0.01945	0.01623	0.02779	0.02971	0.02708	0.01623	0.02677	0.03513
-0.00059	-0.00224	0.00033	-0.00196	-0.00172	0.00059	0.01453	0.00114	-0.00301	0.00442	0.01502

Notes: r90-91, r91-92... represent annual growth rates between years 1990 and 1991, 1991 and 1992, etc.

Table A2. Assumptions about Projected Fertility and Mortality Rates, MPO Area

	Fertility rates per 1,000			Mortality rates per 1,000		
	2005-15	2016-25	2026-35	2005-15	2016-25	2026-35
Autauga County	13.0	12.5	12.0	9.0	8.5	8.0
Elmore County	13.4	13.2	12.9	8.5	8.2	7.8
Montgomery County	15.0	14.0	13.0	9.4	9.1	9.0

Fig.A1. Observed Birth Rates for MPO Counties, Alabama 2000-2006, per 1,000

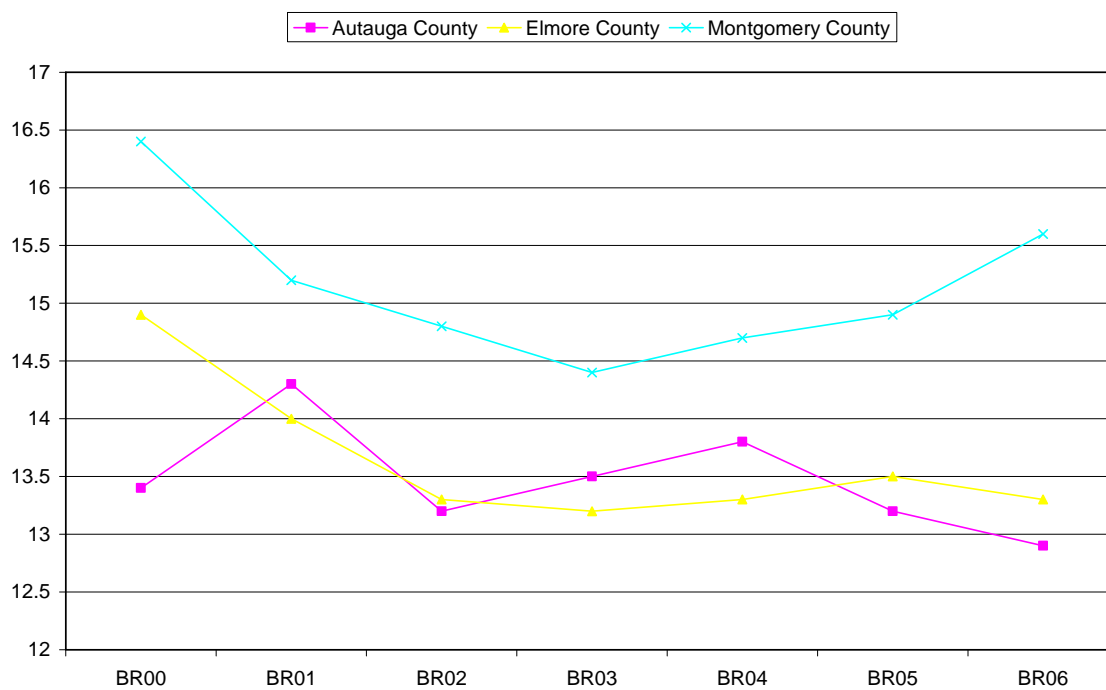


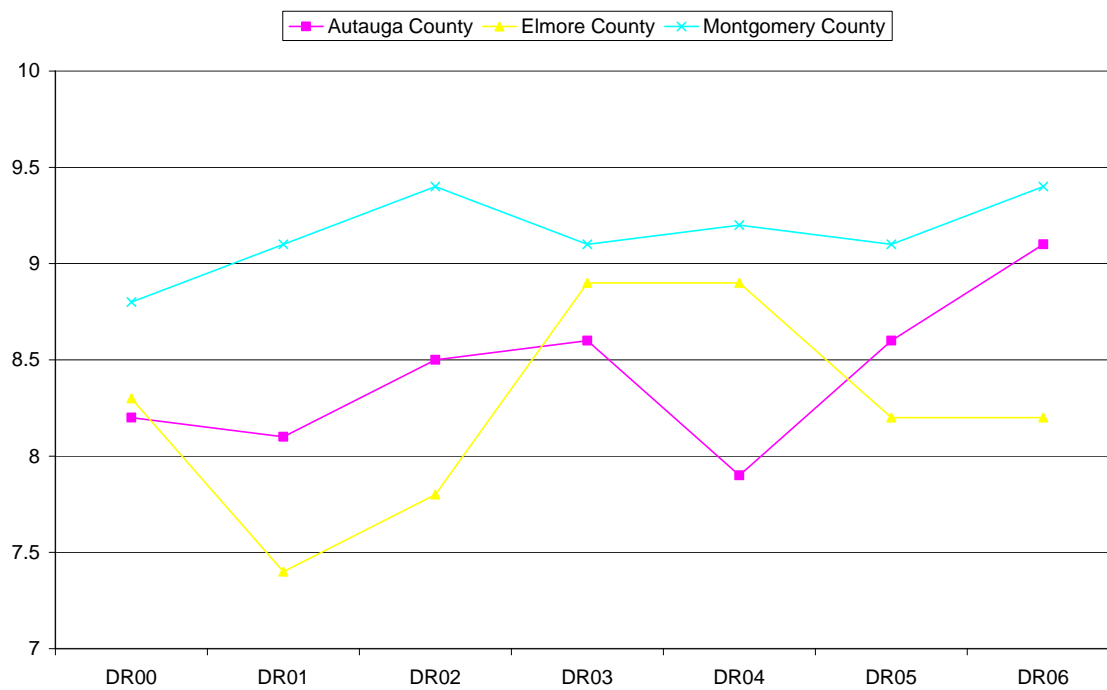
Fig. A2. Death Rates for MPO Counties, Alabama 2000-2006, per 1,000

Fig. A3. Annual Growth Rates for MPO Counties, Alabama 1990-2007

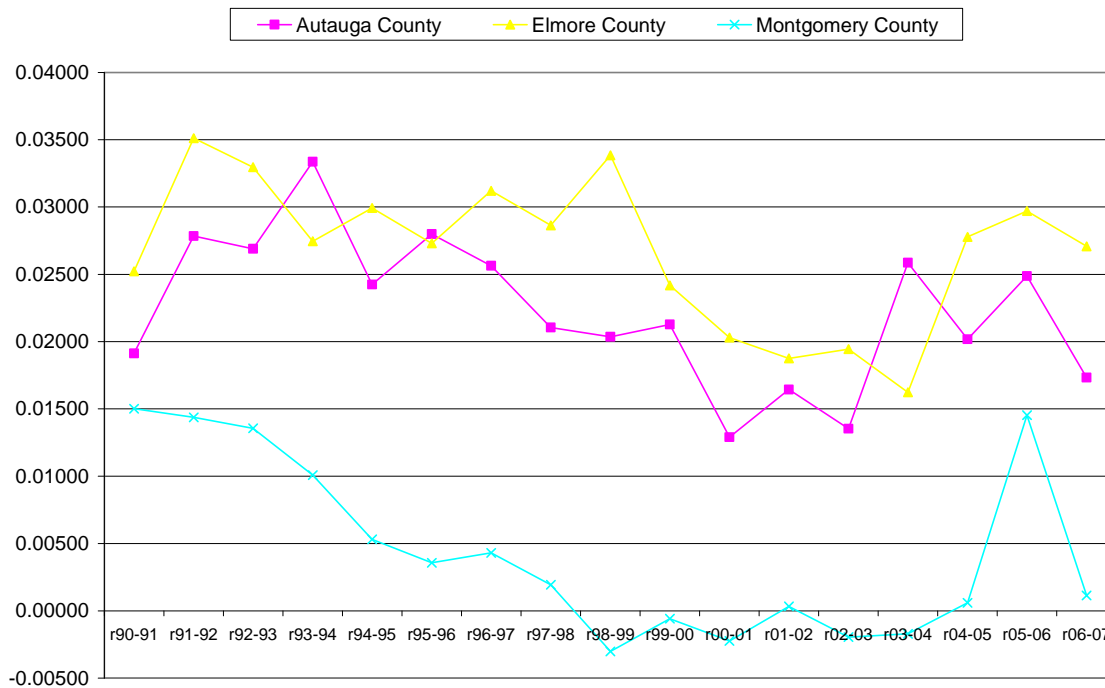


Table A3.1. Projected Population by Age Group, Autauga County, Alabama 2005-2035

<u>Age group</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>
0-4	3,317	3,529	3,780	3,772	4,088	4,212	4,590
5-9	3,970	3,598	4,344	3,863	3,766	4,208	4,321
10-14	4,101	3,578	4,082	3,829	4,459	3,376	4,924
15-19	3,579	4,364	3,454	4,229	3,771	4,640	3,474
20-24	2,572	4,621	3,471	4,343	3,439	4,751	3,913
25-29	2,976	2,095	5,762	2,783	5,491	2,833	5,996
30-34	3,322	2,500	2,584	4,672	3,508	4,470	3,711
35-39	4,387	2,364	3,605	1,793	6,811	2,520	6,452
40-44	4,028	4,435	2,429	3,508	1,918	6,481	2,878
45-49	3,322	4,532	4,032	2,672	3,265	2,174	5,947
50-54	2,860	3,594	4,280	4,269	2,599	3,470	2,275
55-59	2,514	3,041	3,471	4,431	4,200	2,756	3,503
60-64	2,085	2,835	2,786	3,788	4,136	4,613	2,739
65-69	1,686	2,420	2,534	3,118	3,460	4,641	4,340
70-74	1,255	2,135	2,002	3,062	2,656	4,177	4,075
75-79	911	1,644	1,720	2,485	2,543	3,311	3,580
80-84	562	1,412	1,151	2,457	1,815	3,594	2,573
85+	470	675	1,265	1,285	2,277	2,072	3,378
Total	47,917	53,372	56,754	60,359	64,202	68,300	72,669

Table A3.2. Projected Population by Age Group, Elmore County, Alabama 2005-2035

<u>Age group</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>
0-4	4,863	6,514	7,039	6,925	7,543	8,040	8,771
5-9	5,342	5,600	6,336	7,422	7,854	7,052	9,139
10-14	5,433	5,348	6,275	5,840	8,338	7,393	8,032
15-19	5,055	5,876	5,625	6,151	6,244	8,200	8,056
20-24	4,580	5,643	5,945	5,745	6,308	6,489	8,430
25-29	5,470	4,066	7,036	4,952	7,182	5,447	8,055
30-34	5,564	5,461	4,753	6,204	5,902	6,427	6,627
35-39	6,437	4,946	6,823	3,989	7,678	5,170	7,876
40-44	6,040	6,800	5,363	6,478	4,488	7,227	6,033
45-49	5,348	6,765	6,752	5,586	6,505	4,870	7,198
50-54	4,838	5,942	6,769	6,933	5,726	6,747	5,235
55-59	3,503	6,639	5,011	8,212	6,000	7,017	6,045
60-64	2,960	4,347	6,031	5,701	7,503	6,968	6,582
65-69	2,387	3,918	3,964	6,797	5,344	8,406	6,760
70-74	1,930	3,269	3,541	4,571	6,181	6,278	7,694
75-79	1,566	2,750	2,974	4,077	4,256	7,039	6,052
80-84	1,042	2,728	2,259	3,806	3,472	5,399	6,089
85+	945	1,639	2,414	2,737	3,426	4,257	4,943
Total	73,303	88,249	94,909	102,127	109,950	118,428	127,617

Table A3.3. Projected Population by Age Group, Montgomery County, Alabama 2005-2035

<u>Age group</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>
Montgomery County, AL							
0-4	15,388	15,949	16,738	15,968	16,219	15,495	16,907
5-9	16,227	14,317	16,202	15,581	16,138	15,187	16,740
10-14	16,210	14,976	14,573	15,022	15,790	15,065	16,461
15-19	17,164	14,036	16,355	12,449	16,570	13,455	17,872
20-24	18,465	14,685	15,466	13,948	13,582	14,328	15,752
25-29	16,910	18,914	13,396	16,058	12,419	14,395	13,711
30-34	15,338	17,388	17,454	13,622	14,778	12,634	14,341
35-39	17,137	12,447	20,487	13,919	16,066	11,669	16,192
40-44	16,842	16,174	12,248	19,925	13,297	15,958	11,940
45-49	15,245	17,351	14,761	12,526	18,467	13,486	15,926
50-54	13,399	16,083	15,507	15,620	10,821	20,516	12,331
55-59	9,832	17,003	11,734	20,360	10,882	14,672	15,323
60-64	7,981	10,823	14,506	12,859	17,563	11,755	13,775
65-69	7,405	7,295	10,901	13,508	12,794	16,792	12,487
70-74	6,415	7,240	6,521	11,300	12,016	13,523	16,079
75-79	5,501	6,169	6,589	6,270	10,737	11,785	13,979
80-84	3,619	7,054	3,871	9,605	3,286	19,625	6,640
85+	3,224	2,733	8,400	2,356	14,769	1,277	10,697
Total	222,302	230,637	235,709	240,895	246,196	251,615	257,155