

**THE ECONOMIC OUTLOOK FOR  
WASHTENAW COUNTY  
IN 2011–13**

Prepared by

George A. Fulton  
Donald R. Grimes

Institute for Research on Labor, Employment, and the Economy



Prepared for



March 2011

This report was prepared in connection with the March 10, 2011, Ann Arbor.com edition featuring the outlook for the Washtenaw County economy. The full report is available on the Web (updated each year) at [www.irlee.umich.edu/clmr](http://www.irlee.umich.edu/clmr) and also at [www.AnnArbor.com](http://www.AnnArbor.com)

## **The Economic Outlook for Washtenaw County in 2011–13**

*By GEORGE A. FULTON, research professor, and DONALD R. GRIMES, senior research specialist, Institute for Research on Labor, Employment, and the Economy, University of Michigan*

### **Introduction**

The Great Recession has been officially designated as ended in the United States, and we now have fairly solid evidence, as well, that our extended run of job loss for Washtenaw County finally turned to significant net gains in 2010. It is clear, though, that a technical end to the downturn is a subtlety that the public, in general, does not appreciate. For the county, it indicates only that the broad decline in employment appears to have ended. It does not mean that the economy is back to normal; indeed, the economic struggles will continue for many residents, and they take little comfort in the knowledge that the worst is over at some level outside of where they operate.

That's not to say that news of a solid overall rebound in employment isn't most welcome and long awaited. Gaining jobs is far better than losing them, particularly after suffering through four years of accelerating employment shrinkage, cumulating to a loss of 13,400 jobs between 2005 and 2009, or 7 percent of the county work force. This is a turnaround that we foresaw in last year's forecast, but a great deal of skepticism among several commentators accompanied that prognostication, revealing the lingering sentiment of pessimism and dissatisfaction with current economic conditions. It turns out that skepticism was not unwarranted, but in the opposite direction. What we didn't foresee was how strong the rebound would be in 2010, or how broad-based it would be across major industry divisions. The resurgence in the Washtenaw economy appears to

be no fluke, and raises hope that it will be sustained and eventually include far greater numbers of residents.

In this report we present our view of whether the recovery in Washtenaw will be sustained, and if so, how strong will it be and what will be the lead sectors? What are our prospects of returning to the peak job levels of mid-2002 by the end of our forecast horizon in 2013? And how much will we be able to bring down the stubbornly high unemployment rate over the next three years? These are all compelling questions, and we address each of them in the report.

Washtenaw's longer-term prospects are influenced by the economic fundamentals it brings to the table. The county's assets, and how industry is currently structured, foreshadow the region's future economic success. In this report we also consider how Washtenaw is positioned in terms of its economic foundation as it emerges from the structural and cyclical declines of recent years, and we include comparisons with other regions of the country.

The local forecast is generated from a regional model constructed specifically for this study at the University of Michigan's Institute for Research on Labor, Employment, and the Economy. The regional model uses as inputs national economic indicators from the University's Research Seminar in Quantitative Economics. Before considering our perspective on how the Washtenaw County economy will evolve over the next three years, we first take a look at 2010, to learn more about how good a year it was and to gauge how well we anticipated developments as 2010 began.

### **Review of the Forecast for 2010: A Report Card**

A year ago (March 28, 2010), our twenty-fifth annual economic outlook for Washtenaw County (coterminous with the Ann Arbor metropolitan area) was published in an edition of Ann Arbor.com. Last year's forecast of employment, unemployment, and inflation for 2010 can now be compared with estimates of the outcome for that year, to see how accurate our forecast was.

We are heartened by one aspect of our performance in forecasting county job growth for 2010, and disappointed in another. The greatest challenge in forecasting is to correctly anticipate turning points in the economy, which in our case would mean to time the reversal from declining to increasing employment trends in the county. In last year's report, we stated that "...our forecast shows the county turning around to add jobs in the first quarter of 2010," a prediction that subsequently was met with much skepticism by a number of commentators. Data since released for the first half of 2010 by the Michigan Department of Energy, Labor & Economic Growth confirm that employment indeed began increasing at the start of 2010. That is the heartening part of our forecast record for last year.

Our disappointment is that we missed the magnitude of the improvement by numbers unprecedented in our forecast record over the years. Our record is summarized in table 1. Our forecast error for overall job growth was 2.3 percent, or 23 workers per 1,000. Our error was the largest in our tenure of forecasting the Washtenaw economy, and was well in excess of our average error of 0.7 percent over the past twenty-five years. So, we anticipated correctly that the Washtenaw economy would begin adding jobs again

**Table 1**  
**Report Card:**  
**Track Record over the Years**

Year of forecast	Percentage forecast error for total jobs
1986	-1.4
1987	-0.8
1988	-1.2
1989	-0.6
1990	+0.8
1991	+1.4
1992	+0.5
1993	+1.3
1994	n.a.
1995	+0.2
1996	+0.3
1997	+0.4
1998	-0.5
1999	0
2000	0
2001	+0.3
2002	+0.3
2003	+1.0
2004	+0.2
2005	+0.4 (estimate)
2006	+0.7
2007	0
2008	+0.6
2009	+1.0
2010	-2.3

(Positive numbers indicate that the forecast was too high;  
negative, too low.)

Average absolute forecast error 1986-2010: 0.7%
---

	Forecast 2010	Actual 2010
Unemployment rate	8.9%	8.6%
Consumer inflation rate	1.8%	0.8%

Forecast date: March 2010

in 2010, but we did not expect that the pace would be so strong so soon after the extended downturn.

What lies behind this unanticipated strength? One encouraging, and promising, aspect of the improvement is that it was fairly broad-based across several major industry divisions. Of the industry groupings that overshot our expectations, we highlight four here. The largest shortfall among our underpredictions was in government. This sector continues to outperform our annual forecasts despite the well-known budget constraints faced by governmental units at all levels. The data indicate healthy growth in particular in state government, which in the county is dominated by the institutions of higher education (including the University of Michigan Health System).

Another noteworthy underprediction was for manufacturing, including the much-maligned auto industry. We simply did not anticipate as rapid a recovery from the auto bankruptcy proceedings as what transpired, and that ties in with our being too pessimistic on such auto-related activities as plastics and fabricated metals. Outside of autos within manufacturing, we were also too bearish on medical equipment and supplies.

The third area of underprediction was in temporary employment services, which had declined precipitously in 2008 and 2009, but made a strong turn in 2010, in part due to hiring by industries related to the resuscitating auto manufacturers. The last category of underprediction includes retail trade as well as leisure and hospitality services, two major industries that are sensitive to the overall well-being of the local economy. In retail, two industries that outperformed our expectations were health and personal care stores and department stores. In hospitality, restaurants and fitness centers showed more strength than we foresaw.

There were also some sectors where we were too bullish in our outlook. One is construction, where we did forecast continued losses, but it was worse than we expected, particularly among special trade contractors. Another is health services, where we were too high on job growth, especially in nursing and residential care. For the rest of the major industry divisions, our errors were small.

The observed and forecast numbers for the unemployment and local consumer price inflation rates in 2010 are reported at the bottom of table 1. We came very close on our forecast of the county unemployment rate, with the recently posted rate of 8.6 percent falling a little below our projection of 8.9 percent made a year ago. Considering our “underexuberance” on employment, it is not surprising that we were a little high on the jobless rate. Local consumer inflation was weaker than we anticipated, registering a mere 0.8 percent increase compared with our forecast increase of a still-moderate 1.8 percent.

This review gives us some idea of the rebounding Washtenaw County economy in 2010. We need to take a more detailed look at the current state of the economy, however, before we attempt to anticipate developments beyond 2010.

### **The Current State of Washtenaw County’s Economy**

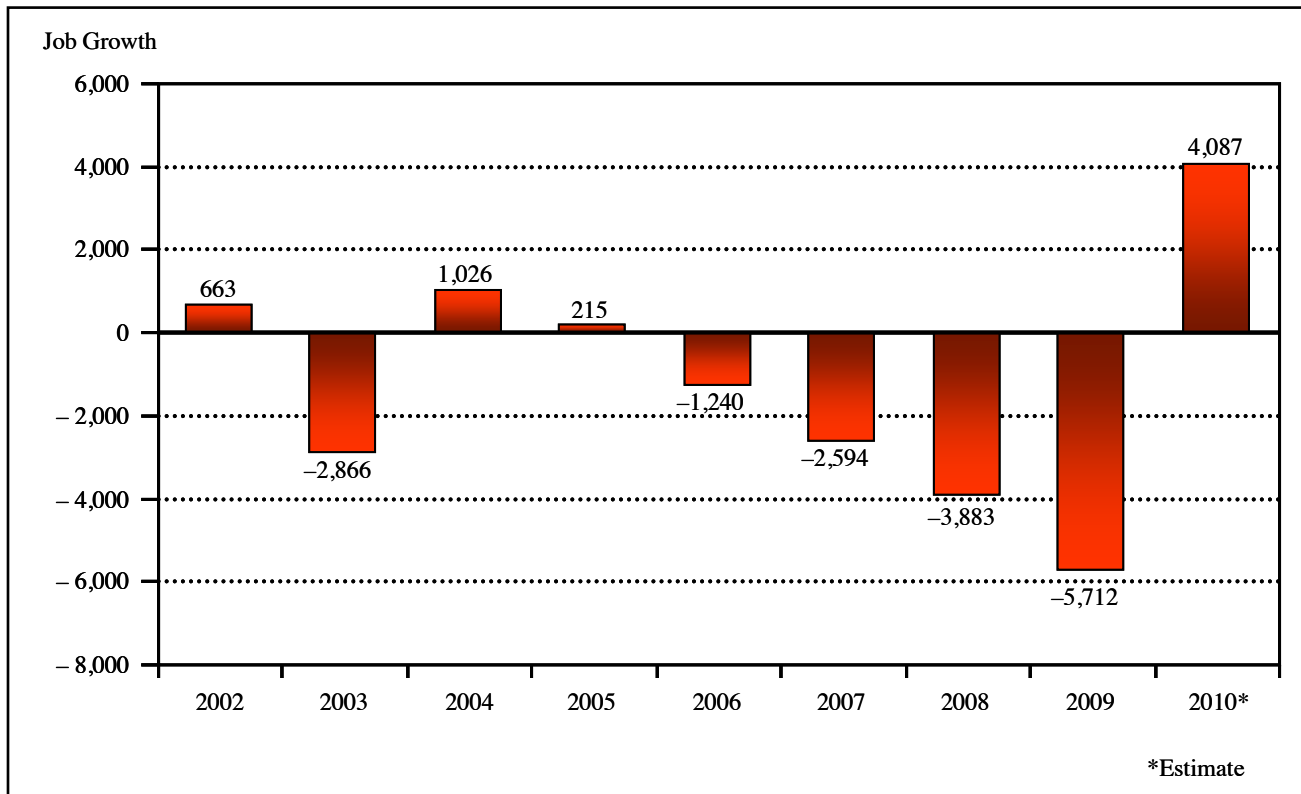
To lay the groundwork for the forecast, we need to put together a picture of where we are at present in the local economy. We first look at how the county economy has performed recently by examining its path for total job growth since 2002. Following that, we assess the profile of the Washtenaw economy with the unemployment rate as the measure of performance. Finally, we consider how Washtenaw is positioned with some of its economic fundamentals as it emerges from the structural and cyclical declines of

recent years. In particular, we assess how Washtenaw stacks up against other local economies in some of the characteristics we view as promoting economic success over the longer term.

*Employment Path of the Washtenaw County Economy*

Washtenaw County's performance in job creation since 2002, measured by the net annual change in jobs, is shown in figure 1. The local economy was on a rollercoaster ride during the first half of the decade of the 2000s, contracting sharply in 2003 before rebounding to post modest job gains in 2004 and 2005. It was all downhill after that, with four years of accelerating job loss from 2006 through 2009.

**Figure 1**  
**Job Growth in Washtenaw County**  
**2002 -10**





The free-fall to a record loss of 5,712 jobs in 2009 stemmed from the continuing shrinkage of the Detroit Three automakers at the confluence of a severely slumping housing market nationwide, exacerbated locally by Pfizer's departure, and culminating in the Great Recession and bankruptcy proceedings for both General Motors and Chrysler. The job declines did slow in the second half of 2009, however, as the nation emerged from the most severe recession since the 1930s and General Motors and Chrysler exited bankruptcy with a lower cost structure and less debt.

So, are we now on the way back up? As indicated in the previous section of the report, it appears that we are, backed by improvements in the U.S. economy, a more stable housing situation, and especially a reborn auto industry. In fact, data for the first half of 2010 suggest that the local rebound is fairly strong, broad-based, and not related to any unusual events, all reasons to increase our confidence that the recovery will be sustained. In the forecast section of the report, we will provide in detail our outlook for Washtenaw's employment situation through 2013.

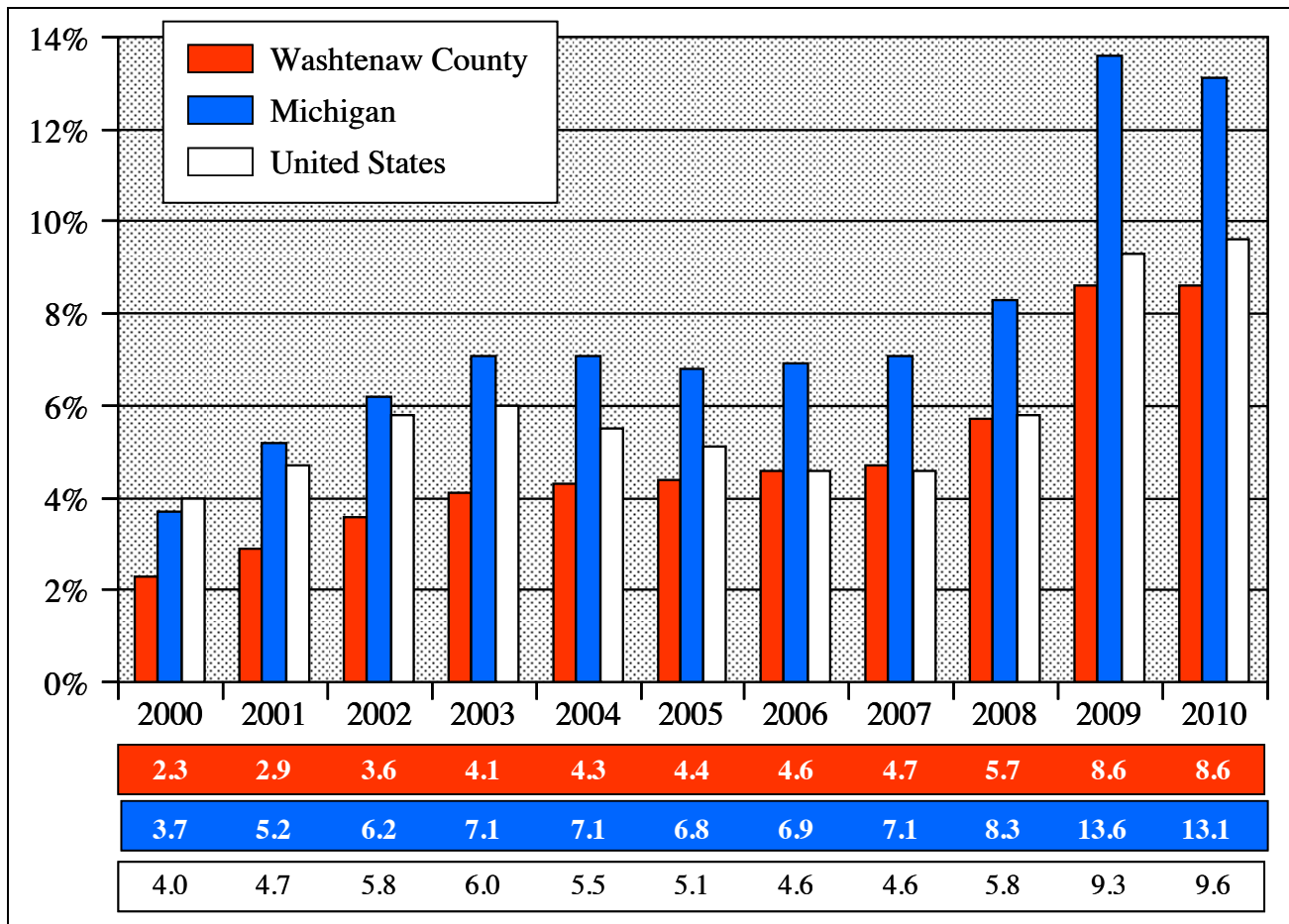
#### *Unemployment Path of the Washtenaw County Economy*

The performance of the economy can also be evaluated with unemployment as the measure. The path of Washtenaw County's yearly unemployment rate since 2000 is shown in figure 2. (Note that this rate is for the county, and should not be confused with the rate for the city of Ann Arbor.) The rates for Michigan and the United States are included for comparison.

The unemployment rate for Washtenaw County has increased systematically between 2000 and 2009, first moving up from 2.3 percent in 2000 to 5.7 percent in 2008, at the time the highest rate since 1990 and well above the rate of 3.6 percent averaged

between 1990 and 2007. From that unenviable position, the rate then soared to 8.6 percent in 2009, where it held for 2010.

**Figure 2**  
**Unemployment Rates for Washtenaw County, for Michigan,**  
**and for the United States, 2000–10**



As high as the unemployment rate in the county was in 2010, it was still 4.5 percentage points below the rate for Michigan as a whole, highlighting Washtenaw's favorable economic situation compared with most of the state. More noteworthy, though, is that Washtenaw's jobless rate was a full percentage point lower than the nation's in 2010, after being similar to the national rate from 2006 to 2008.

Even though the county is in a more favorable position than either the nation or the state, its jobless rate remains painfully high—a signal that we are still far from being out of the woods. While job growth has resumed in the county, for many residents economic recovery has not yet arrived. How much improvement can we expect in the unemployment situation, and how quickly? That is a topic that is addressed in the local forecast section of the report.

*Washtenaw County's Economic Fundamentals Compared with Other Regions*

In assessing Washtenaw County's prospects for future economic success, it is helpful to consider how the county stacks up on a series of measures that, in our judgment, represent a foundation for prosperity. In an ongoing research study, we are in the process of identifying socioeconomic characteristics that are related to economic success for metropolitan areas of the country. Preliminary results suggest that after controlling for the differing mix of industries across regions, some of the most important characteristics are those identified in table 2. Washtenaw County is coterminous with the Ann Arbor Metropolitan Statistical Area (MSA), and its rank for each of the characteristics among the 366 MSAs in the country is shown in the table for 1990 and 2000.<sup>1</sup>

In our research, we have found that the most consistently significant factor for economic success in a local economy is the educational attainment of its residents, measured here by the share of the local population with a bachelor's degree or higher. Washtenaw is near the top of the heap in this category, ranking second among the 366

---

<sup>1</sup>A lower number for the rank indicates a better position for bachelor's degrees, post-secondary enrollments, and patents. A higher number for the rank indicates a better position for poverty and crime. The rank for population is provided for information purposes; it has no value connotation. We thank CLOSUP at the Ford School, as well as the Provost's Office, for financial support of this ongoing research.

metro areas in the country in both 1990 and 2000. In post-secondary enrollments per 100,000 residents, it ranked tenth in 2000.

**Table 2**  
**Ann Arbor Metropolitan Area (Washtenaw County)**  
**Rank among 366 Metropolitan Areas**  
**in Selected Socioeconomic Characteristics**

	<u>2000 Rank</u>	<u>1990 Rank</u>
Population	140	139
Share of population with bachelor's degree or higher	2	2
Total post-secondary enrollments per 100,000 population	10	16
Total patents per 100,000 population	8	5
Share of population in poverty	218	204
Total crimes per 100,000 population	211	72

Note: A lower number for the rank indicates a better position for bachelor's degrees, post-secondary enrollments, and patents. A higher number for the rank indicates a better position for poverty and crime. The rank for population is provided for information purposes; it has no value connotation.

Another factor correlated with economic success is an entrepreneurial environment, which we proxy here by the number of (useful) patents awarded per 100,000 residents. By this measure, Washtenaw ranked an impressive fifth in 1990 and eighth in 2000.

Washtenaw also has a comparatively low share of its population in poverty, with a rank of 218 out of 366 metro areas in 2000. The crime rate improved in rank, from number 72 on the list in 1990 down to 211 in 2000. Overall, there are not many regions in the country with a more favorable composite profile for succeeding in the New Economy.

We explore the structure of the Washtenaw County economy further in table 3, which identifies eighteen "peer" counties around the country, where peers are defined as those counties with total employment between 100,000 and 400,000 in 2009

(Washtenaw's employment is 181,000), and that have more than 5 percent of their employment in universities. The information in the table focuses on employment in universities, hospitals, and selected technology sectors among the eighteen counties. The data on university employment highlights the ultra-concentration of Washtenaw in this sector, comprising 18.5 percent of its total employment; no other county among the peers is remotely close.

**Table 3**  
**Washtenaw County and Its Peers:**  
**Employment in Universities, Hospitals, Scientific Research and Development,**  
**Software Publishing, and Computer Systems Design, 2009**

	Total Employment	Universities		Hospitals		Selected Technology Sectors			Share of Total
		Univ. Emp.	Share of Total	Hospital Emp.	Share of Total	R&D	Software Pub.	Computer Systems	
<b>Washtenaw, MI</b>	<b>181,178</b>	<b>33,507</b>	<b>18.5%</b>	<b>24,873</b>	<b>13.7%</b>	<b>2,610</b>	<b>1,388</b>	<b>1,642</b>	<b>3.1%</b>
Monroe, NY	368,606	20,331	5.5%	20,270	5.5%	409	194	3,824	1.2%
New Haven, CT	349,334	20,242	5.8%	19,629	5.6%	1,641	188	3,441	1.5%
Baltimore city, MD	326,608	26,313	8.1%	42,409	13.0%	1,641	49	3,134	1.5%
Prince George's, MD	304,010	15,848	5.2%	5,868	1.9%	2,121	462	9,482	4.0%
Dane, WI	294,272	16,539	5.6%	14,935	5.1%	3,906	3,960	2,715	3.6%
East Baton Rouge, LA	259,862	14,104	5.4%	13,046	5.0%	144	122	1,440	0.7%
St. Louis city, MO	219,755	17,115	7.8%	20,424	9.3%	676	224	1,853	1.3%
Durham, NC	179,348	9,616	5.4%	24,946	13.9%	9,880	421	3,085	7.5%
Fayette, KY	170,140	10,772	6.3%	12,537	7.4%	269	114	2,204	1.5%
Orleans, LA	168,532	13,601	8.1%	11,091	6.6%	145	44	1,077	0.8%
Utah, UT	164,183	9,363	5.7%	5,497	3.3%	672	2,590	4,006	4.4%
Richmond, VA	150,781	7,845	5.2%	11,094	7.4%	272	104	1,210	1.1%
Ingham, MI	150,482	14,264	9.5%	8,034	5.3%	476	120	2,279	1.9%
Leon, FL	138,891	8,388	6.0%	4,834	3.5%	306	48	1,827	1.6%
Borden, TX	123,042	7,059	5.7%	7,596	6.2%	114	423	158	0.6%
Alachua, FL	116,419	12,142	10.4%	16,230	13.9%	290	243	630	1.0%
St. Joseph, IN	114,516	8,802	7.7%	5,499	4.8%	29	20	444	0.4%

Source: BLS, QCEW. George Fulton and Donald Grimes, University of Michigan. Peers are counties with more than 5 percent of employment in universities and total employment between 100,000 and 400,000 in 2009. Missing data are estimated.

Health care has been the most robust growth area of the past decade, both locally and nationally. With the rapid expansion of the older age cohorts set for the decades to come, the prospects for health care remain strong. Washtenaw is a center for health care, as suggested by its ranking among the top three peer counties in hospital employment.

Among the selected technology sectors of scientific research and development, software publishing, and computer systems, Washtenaw's rank is a little lower, at fifth among the eighteen counties. This is a respectable showing, but Washtenaw has the potential to do a little better. Another observation that can be gleaned from the table is that higher concentrations of university employment do not necessarily yield high levels of technology activity. Although a university presence can be a significant influence, it is neither a necessary nor a sufficient condition for a vibrant technology sector.

We now extend our analysis into the future, starting with a summary of the national outlook.

### **National Outlook: 2011–13**

The outlook for the Washtenaw County economy is influenced by what happens in the national economy. Forecasts of economic indicators for the U.S. economy in 2011–13 come from an internal release by the Research Seminar in Quantitative Economics (RSQE) at the University of Michigan. The national outlook is summarized here by three key economic indicators in figures 3–7.

Last September, the Business Cycle Dating Committee of the National Bureau of Economic Research (NBER) officially designated the end of the 2008–09 Great Recession, setting the trough month for business activity as June 2009. Although economic stimulus measures pulled the economy back from the brink of depression, it is

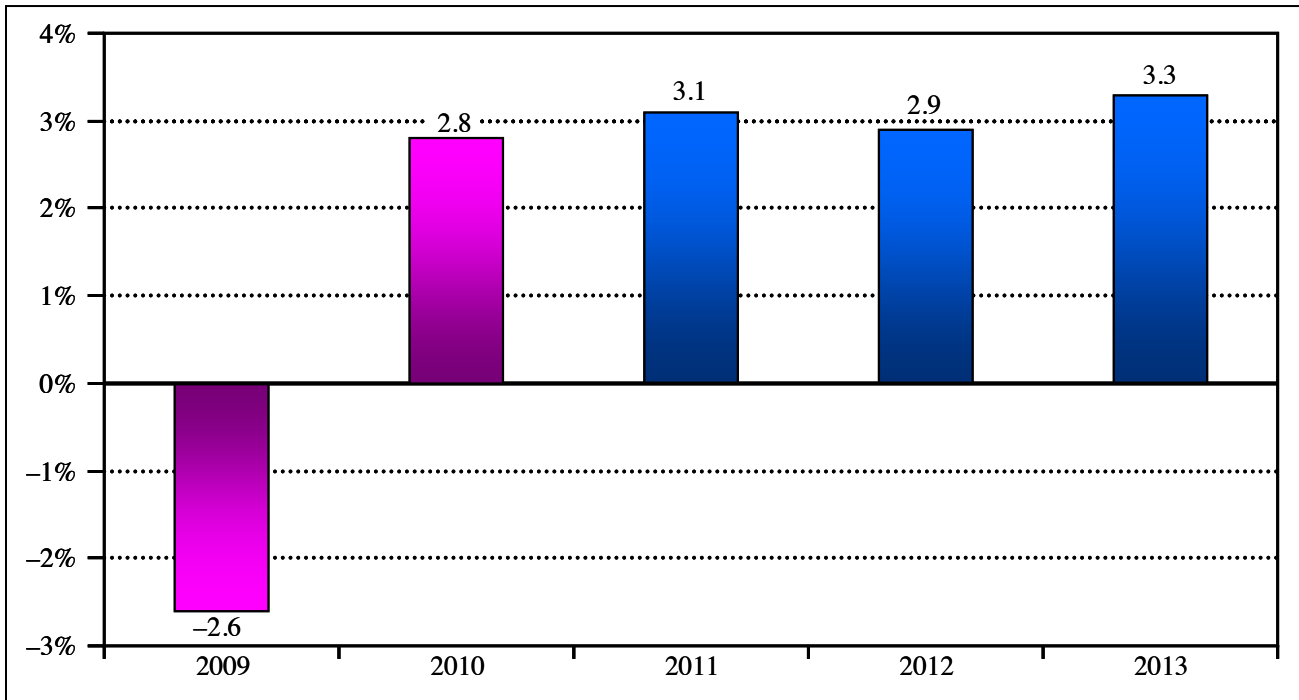
now apparent that we are facing a slow climb out of a deep hole. Output fell by 4.1 percent, the economy lost more than 8 million payroll jobs, and the national unemployment rate topped 10 percent. Climbing out of that depth has proven to be difficult.

In the post-World War II era, business cycles have exhibited either sharp declines followed by rapid recoveries, as in the 1970s and 1980s; or shallow recessions with slower recoveries, as in the 1990s and 2000s. The most recent cycle appears to embody the worst of both worlds: a sharp downturn followed by a relatively shallow recovery. Why hasn't it been stronger? The recovery has been battling a number of economic headwinds, although recent indicators have been a bit more encouraging.

Historically, recoveries after financial crises have been less vigorous; the present financial system is still suffering from the overhang of bad loans. No one has found a magic bullet for the housing crisis; distressed home sales are keeping downward pressure on prices. Nor have consumers been the engine of growth that they were in the past. Household wealth took a substantial hit when home prices plummeted and the stock market tanked, and households have been paying down debt. More recently, home prices have begun to stabilize, the stock market has partially recovered, and households have reduced their liabilities.

Inflation-adjusted Gross Domestic Product is forecast to be steadier and a bit stronger over the next three years, averaging about 3 percent in calendar years 2011 and 2012, then increasing to 3.3 percent in 2013, as shown in figure 3. Consumer spending is expected to outpace 2010, business spending on equipment remains strong, and the homebuilding sector improves.

**Figure 3**  
**Growth in U.S. GDP**  
**2009 –13**

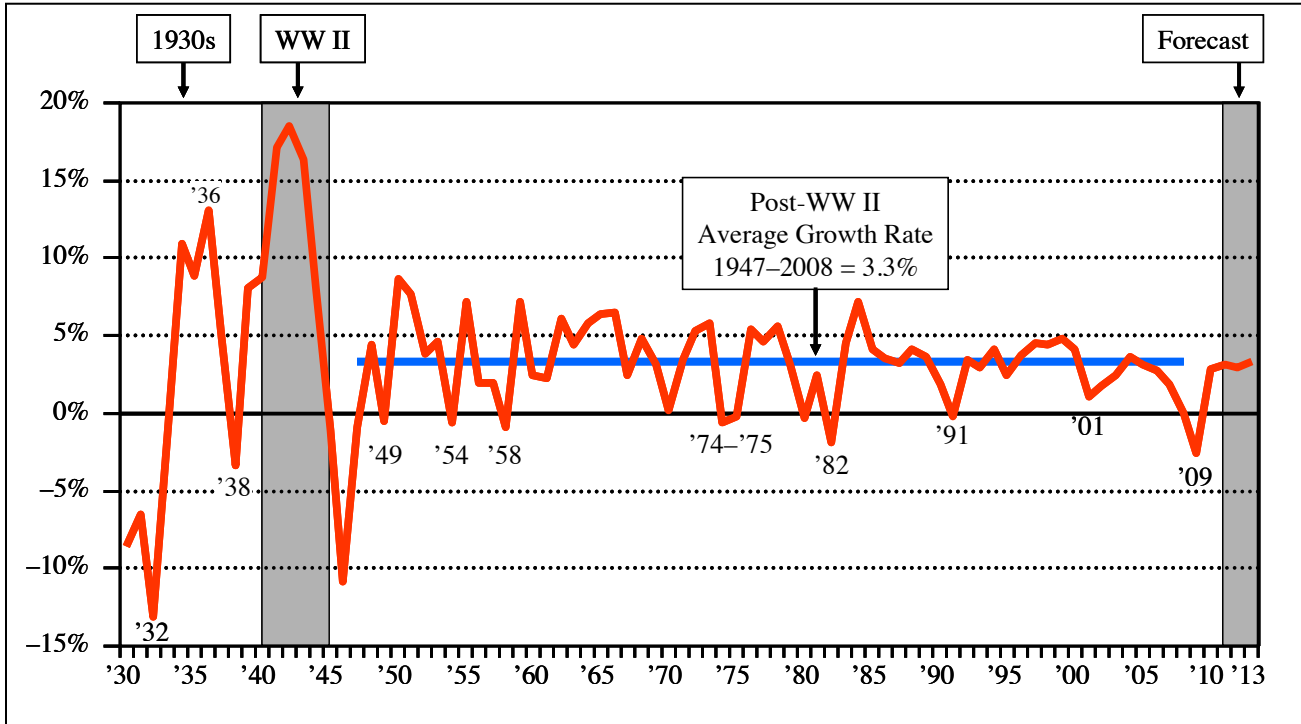


Output growth in the neighborhood of 3 percent might be fine for the mature phase of a business cycle expansion, but for the recovery phase it's subpar. The long-run growth rate for the U.S. economy from 1947 to 2008 was 3.3 percent, as shown in figure 4, a yearly rate not expected in the current recovery until 2013. More to the point, the average growth for three-year intervals following a period of output decline is a much higher  $4\frac{3}{4}$  percent.

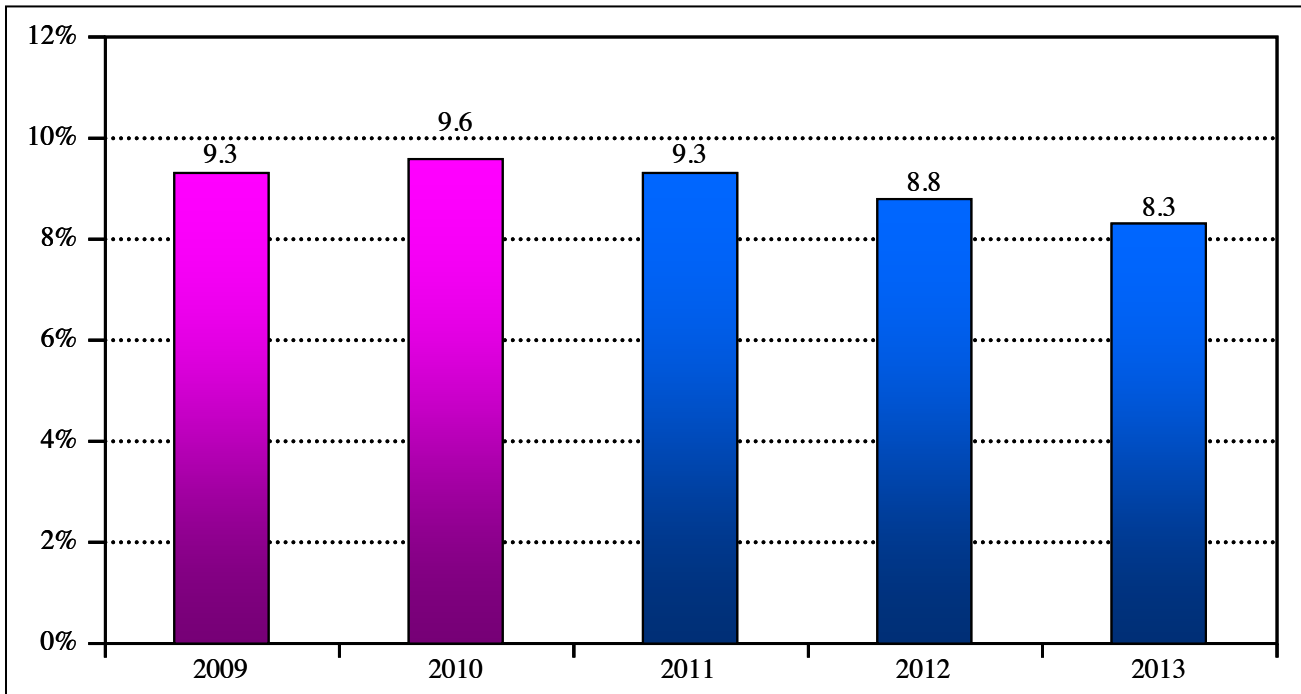
The moderate pace of economic growth implies slow recovery in the labor market. The unemployment rate is forecast to improve slowly from a 9.6 percent average in calendar year 2010 (and in the fourth quarter of that year), to average 8.3 percent three years later, as shown in figure 5. As workers who had left the labor market return to look



**Figure 4**  
**U.S. GDP Growth, 1930–2010**  
**and Forecast 2011–13**

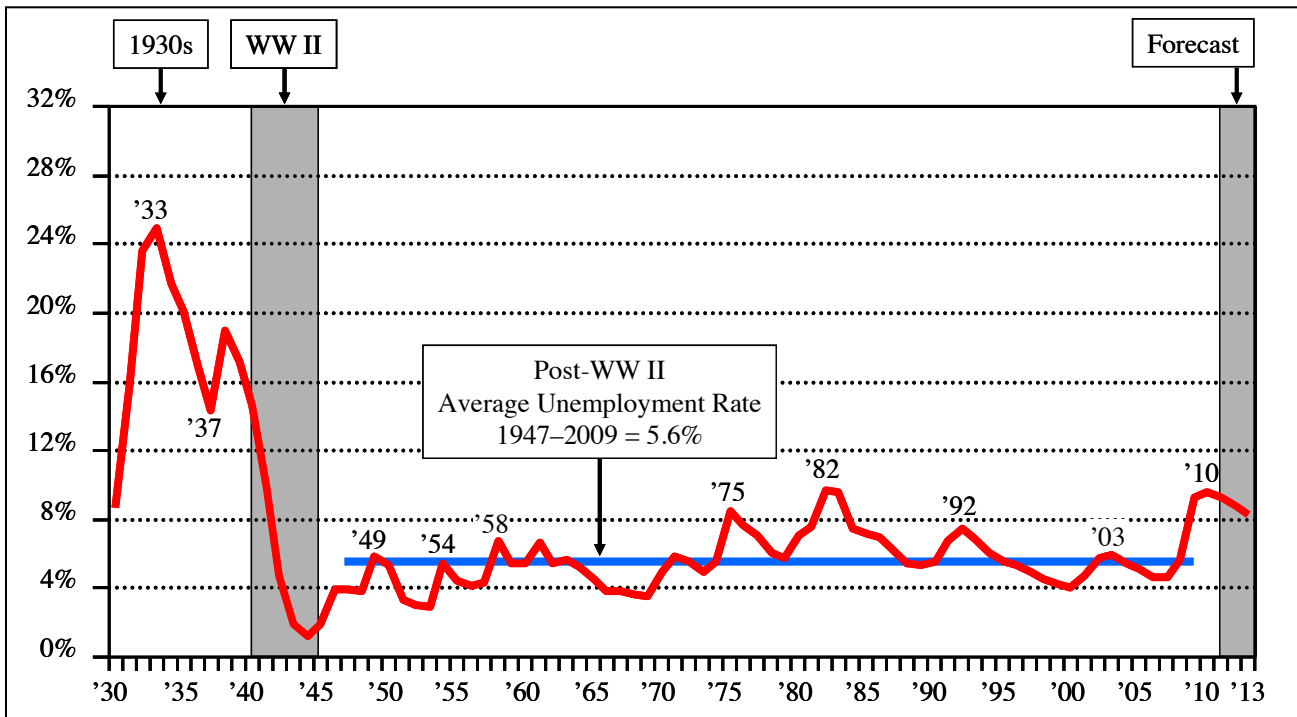


**Figure 5**  
**U.S. Unemployment Rate, 2009–13**



for work, their presence in the numbers acts to slow the reduction in the unemployment rate. Even an improved 8.3 percent unemployment rate projected for calendar year 2013 exceeds all annual readings since 1982–83, as shown in figure 6, and the rate remains well above the post-World War II average of 5.6 percent.

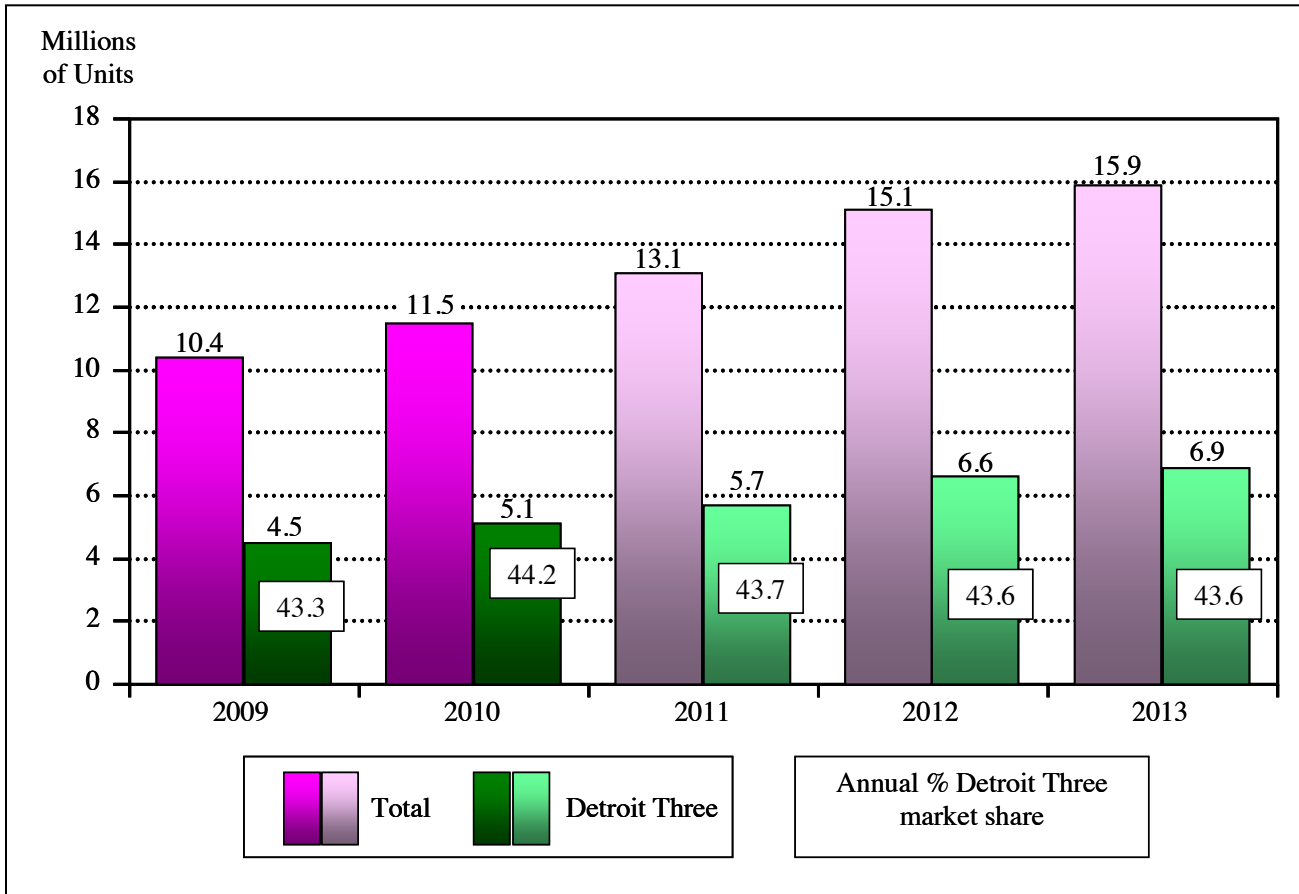
**Figure 6**  
**U.S. Unemployment Rate, 1930–2010**  
**and Forecast, 2011–13**



Total unit sales of U.S. light vehicles—cars, minivans, sport utility vehicles, crossovers, and pickup trucks—rebounded from 10.4 million in 2009, the lowest annual sales total since 1982, to 11.5 million units in 2010. We expect sales will continue to improve, totaling 13.1 million units this year and climbing to about 15 million in 2012 and nearly 16 million a year later, as shown in figure 7. At 15 million units, light vehicle sales would be back to the levels of the mid-1990s. Sales do not recover over the forecast period to the 16- to 17-million-unit pace achieved in the years from 1999 to 2007,

peaking at 17.3 million in 2000; but as a result of restructuring, the companies' break-even levels are now lower than they were previously.

**Figure 7**  
**U.S. Light Vehicle Sales**  
**Total vs. Detroit Three, 2009–13**



The Detroit Three's share of the light vehicle market turned up in 2010, the first annual increase since 1995, and then is forecast to settle into a relatively stable position through 2013. The projections for total sales and the Detroit Three's share of that market, taken together, yield our outlook for Detroit Three sales, which move up progressively from 4.5 million units in 2009 to 6.9 million in 2013.

We now turn to our view of the prospects for the local economy through 2013.

**Washtenaw County Outlook: 2011–13**

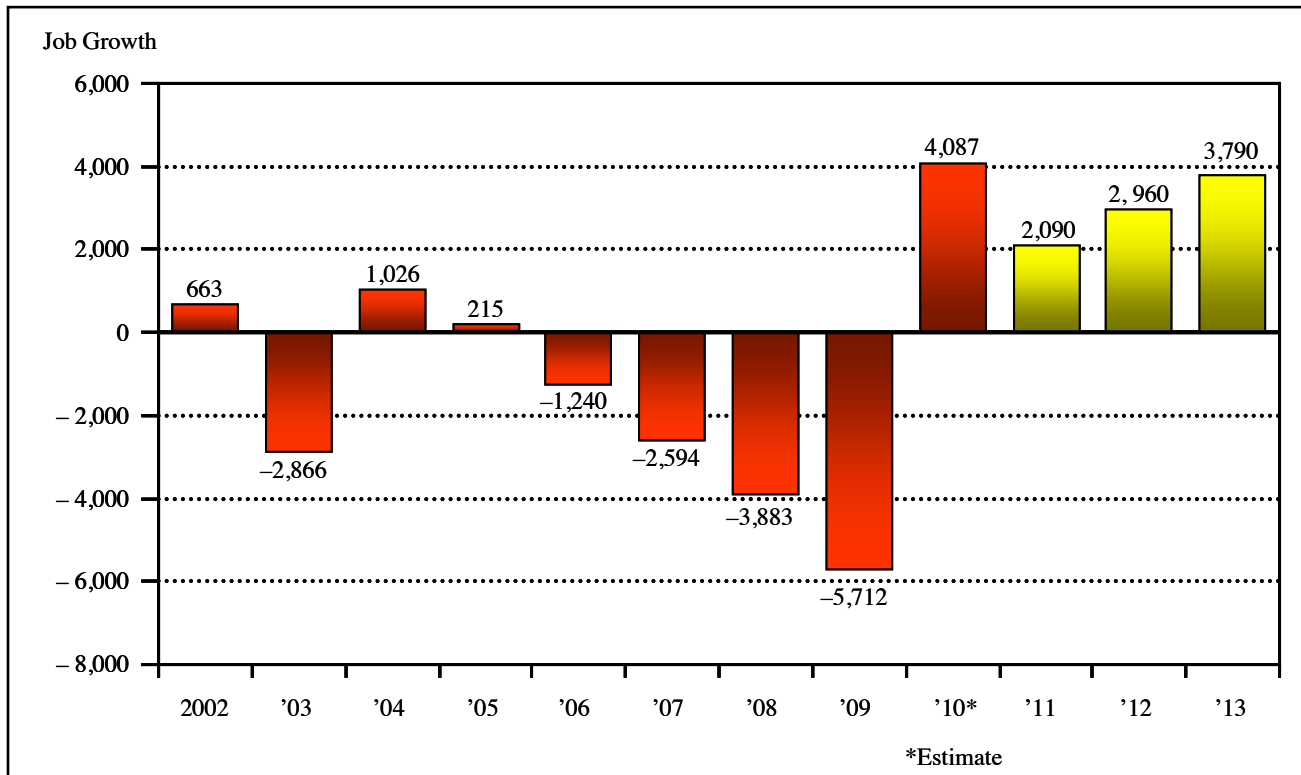
The economic outlook for Washtenaw County through 2013 is measured using information on employment and unemployment. First, we evaluate the county's prospects for total job growth, putting that in context with recent job market developments. Second, we consider the quarterly path of job movements through the end of 2013. Third, we break out the industry detail underlying the forecast. Finally, we present forecasts of the county unemployment rate and price inflation in the Detroit region.

As mentioned in our discussion of the current state of the Washtenaw economy, employment appears not only to have turned the corner to positive growth in 2010, but to have done so at a vigorous pace. As shown in figure 8, we estimate that the county added an impressive 4,087 jobs in 2010 (this number includes two quarters of preliminary data and two forecast quarters). This is the third-largest single year of job gain in the past two decades—remarkable considering that the job market was in virtual free-fall shortly before then. As mentioned previously, the gains were supported by improvements in the U.S. economy and in the post-bankruptcy domestic auto industry, which has become profitable again two years after heading to Washington to seek emergency aid. That might be the most significant development in the region over the past year.

We are forecasting that job growth will be sustained through 2013, the end of our forecast period. The pace of growth seen for 2010 is not sustainable, however, and we see less robust, but still respectable, job additions of 2,090 for 2011. Economic conditions improve over the following two years: job growth accelerates to 2,960 in 2012

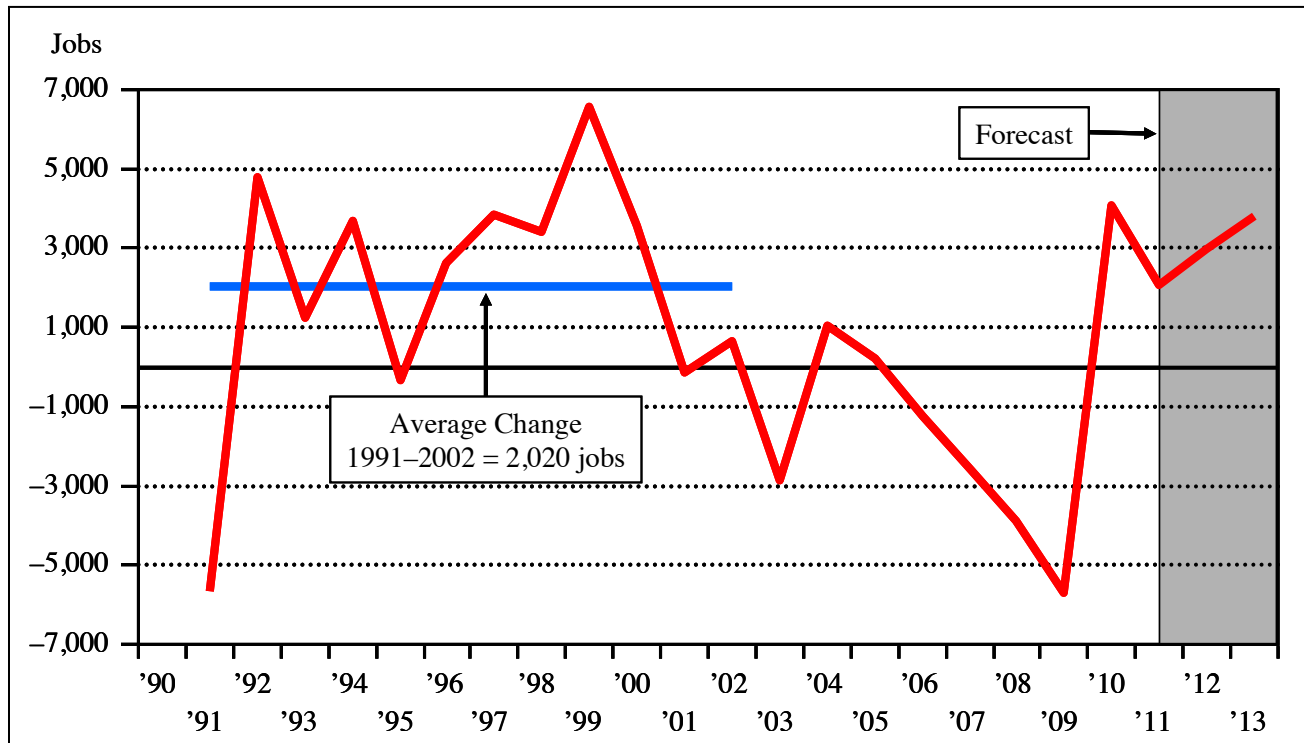
and 3,790 in 2013. This sums to almost 13,000 job additions over the four years from 2010 to 2013, just 500 shy of replacing the cumulated losses of the previous four years.

**Figure 8**  
**Job Growth in Washtenaw County**  
**2002 –13**



Our calendar-year forecast of job growth is put in context in figure 9, which shows the annual change in jobs going back to 1991. The job growth of 2,090 projected for 2011 is slightly higher than the average number of jobs gained in the county between 1991 and 2002, prior to the extended weakness of the 2000s. We then expect 2012 and 2013 to create jobs at a pace well above this average.

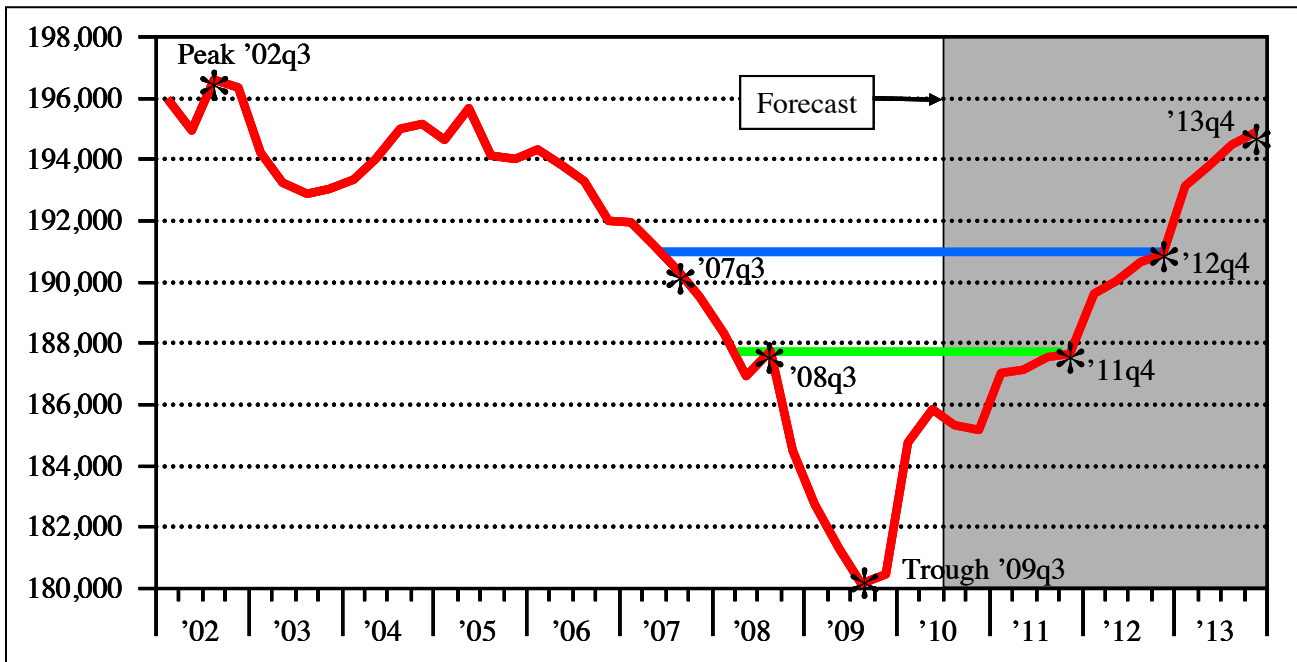
**Figure 9**  
**Job Change in Washtenaw County, 1991–2010**  
**and Forecast, 2011–13**



Annual comparisons mask some of the detail behind movements in the economy over time. Shown in figure 10, the quarterly path of county employment from the start of 2002 to the end of 2013, adjusted for seasonal variations, adds some information and reinforces findings gleaned from the annual data. Indeed, this elongated V-shaped graph neatly summarizes Washtenaw County's recent economic history and our view of its near-term future. The dramatic decline in jobs from the beginning of 2006 through the summer of 2009 stands out, as does the strong rebound recorded for the first half of 2010 and the healthy recovery we are forecasting thereafter. From the end of 2010 to the end

of 2013, we are projecting that the county will add 9,750 jobs, a robust growth rate averaging 1.7 percent per year.<sup>2</sup>

**Figure 10**  
**Total Establishment Employment in Washtenaw County, Seasonally Adjusted**  
**First Quarter of 2002 to Fourth Quarter of 2013**



The recovery forecast over the next three years can also be put in context with recent history. As highlighted in the figure, we are forecasting that by the end of 2011, employment will return to levels last seen in the summer of 2008, and by the end of 2012, to the levels of mid-2007. The county will not quite return to the peak job levels of the summer of 2002 by the end of 2013; it will take at least into 2014 to make up the 1,700 job shortfall. This would still be remarkable, considering that in the summer of 2009 the

<sup>2</sup>Since employment generally does not grow or decline evenly over the quarters of a year, employment changes measured from the end of one year to the end of the following year will usually differ from the more commonly cited employment changes based on calendar-year averages. Both calculations are correct; the discrepancies simply reflect differences in timing, and thus take on a different perspective.

county had lost 16,437 jobs from the peak reached seven years earlier—that’s a great deal of ground made up.

The detail of the employment forecast presented in table 4 includes for twenty-four major industry categories the level of employment in 2009; the estimated calendar-year change in employment in 2010 (including two quarters of preliminary data); the forecast change for 2011, 2012, and 2013; and the cumulative change over the four-year period 2009–13. The table also includes the average annual wage for each industry in 2009.<sup>3</sup> Greater detail on the employment forecast can be found in the appendix, which covers 173 industries.

The private sector contributes over 8,000 job additions from 2009 to 2013, 90 percent of them from the private service-providing sector and the remaining 10 percent from the goods-producing sector. In the table, the goods sector is comprised of two categories: the natural resources, mining, and construction industry grouping; and manufacturing.

The natural resources and mining component of the first category has only about 200 workers (mostly wage and salary farm workers) and shows little movement over the forecast period. The construction industry has been hit hard by the plunge in the building market, and it has been propped up only modestly by federal stimulus program funding. From 2005 to 2010, the local industry work force was cut in half. With the improving local economy and some pickup in building, construction employment crawls onto the

---

<sup>3</sup>The average annual wage includes both full- and part-time workers, weighted equally. Consequently, the average wages for industries that employ a disproportionately large number of part-time workers, such as retail trade and leisure and hospitality, are much lower than they would be if the wages were calculated only for full-time workers.



**Table 4**  
**Forecast of Employment in Washtenaw County by Major Industry Division\***  
**2011–13**

	Actual 2009	Employment Change					Average Annual Wage 2009
		Estimate '09–'10	'10–'11	Forecast		'09–'13	
			'11–'12	'12–'13			
<b>TOTAL JOBS (Number of persons)</b>	<b>181,171</b>	<b>4,087</b>	<b>2,090</b>	<b>2,960</b>	<b>3,790</b>	<b>12,927</b>	<b>\$48,925</b>
(Annual percentage change)	(-3.1)	(2.3)	(1.1)	(1.6)	(2.0)		
TOTAL PRIVATE	113,216	2,082	1,445	2,001	2,505	8,033	46,867
GOODS-PRODUCING	16,210	174	145	238	246	803	64,564
Natural resources, mining, construction	3,647	-364	-24	81	157	-150	48,473
Manufacturing	12,564	538	169	156	89	952	69,233
Motor vehicles	4,161	408	79	131	58	676	97,871
Other manufacturing	8,403	130	90	25	31	276	55,055
PRIVATE SERVICE-PROVIDING	97,007	1,907	1,300	1,763	2,259	7,229	43,910
Trade, transportation, and utilities	23,642	228	238	380	495	1,341	38,594
Wholesale trade	4,451	7	82	117	175	381	64,842
Retail trade	16,162	194	11	111	166	482	26,082
Transportation, warehousing, and utilities	3,030	25	145	152	154	476	66,780
Information	3,569	145	-12	40	57	230	63,638
Financial activities	5,474	100	86	130	149	465	52,291
Professional and business services	22,873	961	489	513	608	2,571	62,457
Professional, scientific, and technical	12,547	148	233	268	348	997	78,617
Management of companies and enterprises	1,381	-23	41	30	43	91	81,263
Administrative support and waste management	8,945	837	214	215	217	1,483	36,886
Private education and health services	23,399	160	105	307	499	1,071	45,327
Leisure and hospitality	13,384	331	347	312	343	1,333	15,682
Other services	4,665	-24	54	81	107	218	28,865
Unallocated private services	0	6	-6	0	0	0	
GOVERNMENT	67,954	2,007	644	959	1,284	4,894	52,353
State government	52,391	1,348	1,056	918	1,139	4,461	53,759

\*Some subtotals do not add to totals due to rounding of annual average computations.

positive side of the ledger by 2012. In 2012 and 2013 combined, construction adds 238 jobs, amounting to a small dent in the 3,141 jobs it lost since 2005.

The most encouraging development in the Washtenaw economy in the past year is the apparent return to stability of a manufacturing industry whose local work force has been severely reduced in recent years. In 2009 alone, the industry's job count decreased by 18.5 percent, on the heels of a 14 percent decline in 2008 and a 10.7 percent drop in 2007. Indeed, over the ten-year period from 1999 to 2009, manufacturing lost almost 60 percent of its work force, amounting to 17,814 jobs. In 2010, at long last, the industry has gone from job cutting to job adding, by our estimate contributing 538 jobs. We see manufacturing continuing to add jobs over the forecast period, cumulating to 952 from 2009 to 2013. These are relatively modest numbers, but they stand in the most striking contrast with recent history among the major industries.

At the core of manufacturing's improvement is the bounce-back in the domestic auto industry, which is now in the black two years after seeking emergency federal aid. This has to be the region's business story of the year, particularly considering the industry's leverage in many other parts of the economy. The local motor vehicle industry<sup>4</sup> led manufacturing's decline over the 1999–2009 period, jettisoning an astounding 73 percent of its work force (11,186 jobs). It is also expected to lead its recovery, contributing 676 jobs, or over 70 percent of the gains in manufacturing from 2009 to 2013, despite the closure of the General Motors Willow Run transmission plant at the end of 2010.

---

<sup>4</sup>Officially this industry is the transportation equipment manufacturing industry, but since virtually all of the jobs in this aggregate category in Washtenaw County are in motor vehicle parts manufacturing, we refer to it as motor vehicle manufacturing.

Nonvehicle manufacturing added 130 jobs to the county work force in 2010, following the broader national recovery in manufacturing, and is expected to gain another 146 jobs over the next three years. A few of the auto-related manufacturing industries are projected to see the largest job gains over the period 2009–13, including plastics manufacturing (226) and fabricated metal products (174). Some manufacturing industries do lose jobs over the period, including printing, especially book printing (295); and computer and electronic products (127).

The large trade, transportation, and utilities industry grouping (TTU) has also shrunk recently, losing jobs in each of the three years 2007, 2008, and 2009, including a 7.1 percent drop in 2009. But as in manufacturing, declines turned into gains in 2010 for this industry grouping as well, with the addition of 228 jobs, and the increase is expected to be sustained, accelerating to 495 in 2013. Wholesale trade has ties to the resurgent manufacturing sector, and contributes 381 of the 1,341 job expansion expected in the TTU grouping from 2009 to 2013.

Retail trade is the largest component of TTU, and its fortunes appear to be on the upswing with the substantial improvements seen for the local economy through 2013. After declining every year save one from 2001, and losing over 16 percent of its jobs since then, retail added jobs in 2010, and is forecast to gain 482 from 2009 to 2013, which is heartening since it has been one of the most stagnant industries for several years now. The largest gains are in department stores (128), clothing stores (124), and building materials stores (89). Growth in bookstores is muted by the problems at Borders Group, Inc. The bookstore chain elected to file for bankruptcy protection last month, and we are

assuming at this point that they will survive, but in a more compact form, including the closing of the Arborland store.

The transportation, warehousing, and utilities component of TTU contributes 476 jobs from 2009 to 2013. The strength in this sector reflects increased production by local manufacturers.

Like many industries in the local area, information lost jobs for much of the decade of the 2000s. Unlike most other industries, however, it turned around to show job growth in 2008 and 2009. We see this growth continuing over the forecast horizon, with a net gain of 230 jobs expected in the 2009–13 period. We stress a “net” gain, because the industry has components that are growing, such as software publishers (which includes Google) and telecommunications, and those that are in decline, such as newspaper, book, and directory publishers. It’s old meets new, as information delivery moves increasingly from hard copy to electronic media.

The financial activities industry includes banking, insurance, and real estate. This industry is another one that grew, albeit modestly, in 2008 and 2009. Although the financial crisis had a major impact on this industry nationally and in many localities, here financial institutions as a whole were stable, adding jobs again in 2010. We see this trend continuing over the next three years, accelerating in 2012 and 2013. Banking and other financial institutions make up most of the gains between 2009 and 2013, while real estate loses employment over the period.

Among the major industry divisions, the greatest job gains through 2013 are forecast to be in the large professional and business services grouping. This industry grouping was a mainstay of the county economy in the 1990s, but similar to most other

sectors, it faltered during the 2000s, losing 6,670 jobs from 2000 to 2009, 22.6 percent of its work force. Professional and business services added jobs again in 2010 to the tune of 961 workers, benefiting from an improved environment for both commercial activity and the employment services industry, and we see the industry grouping contributing an additional 1,610 jobs over the next three years.

Four out of ten jobs gained in professional and business services from 2009 to 2013 are forecast to come from the professional, scientific, and technical component. After three years of job loss (2007 to 2009), growth resumed in 2010, and by 2013 the industry makes up a little over half of those losses. The largest job gains between 2009 and 2013 are associated with scientific research and development (329), management and technical consulting (184), and computer systems design (160).

Jobs at local corporate offices (labeled management of companies and enterprises in table 4) tanked from 2005 to 2009, falling by 935—sidelining over 40 percent of the workers in the industry. Corporate downsizing continued in 2010, but at a much subdued pace, shrinking by 23 jobs. The industry is projected to begin adding jobs again in 2011 and through 2013, but at a modest pace, tracking the pickup in the local economy. The Borders bankruptcy plans do not include cuts at the company's headquarters, although eventual reductions seem likely.

Almost six out of ten jobs gained in professional and business services from 2009 to 2013 are projected to emanate from the administrative support and waste management component. The majority of the job losses in this category in 2008 and 2009 (930 jobs out of 1,450) were in employment services, which includes temporary help, and we anticipate that most of the gains from 2009 to 2013 (1,458 jobs out of 1,483) will come

from there as well. Just as the economic environment was wrong for employment services in 2008 and 2009, it now appears to be right for those activities.

Private education and health services is the one major industry division in Washtenaw County to have bucked the trend of economic weakness over the past decade, adding to employment every year starting in 1999. The industry continued to add jobs in 2010, 160 of them, and we project that it will continue to contribute to employment through 2013, in fact at an accelerating pace from 2011 to 2013, cumulating to 1,071 jobs over the four-year period 2009–13. Almost two-thirds of these gains occur in private health care, and the rest are in private educational services. Within the health care category, job growth is forecast for ambulatory health care services (490), particularly in offices of physicians and home health care services, as well as for hospitals (394). We are now on the threshold of an explosion in the number of people reaching retirement age, which bodes well for the health care industry in the longer term.

Leisure and hospitality saw a loss of 362 jobs, a drop of 2.6 percent, in the inhospitable local environment of 2009. In the more hospitable 2010, we estimate that the industry grew by 331 jobs, and we expect it to maintain that annual rate of increase, more or less, through 2013. From 2009 to 2013, the number of jobs expands by 1,333, nine out of ten of them in food services and drinking places. Not surprisingly, one of the beneficiaries of a more robust local economy is the restaurant scene, including both full-service restaurants and limited-service eating places.

The miscellaneous industry category labeled “other services” in the table includes repair and maintenance services, personal and laundry services, membership associations and organizations, and private households. This grab-bag of activities lost 109 jobs in

2009 (2.3 percent), and continued to decline in 2010, shrinking by 24 jobs. We are forecasting a turnaround to positive growth in 2011, which then accelerates through 2013. This miscellaneous industry contributes 218 jobs over the 2009–13 period, three-quarters of them coming from membership associations and organizations.

The government sector increased by a whopping 2,007 jobs, by our estimate, in 2010. Two-thirds of that increase occurred in state government, which in Washtenaw is dominated by the institutions of higher education, including both the campus and the University of Michigan Health System. Undoubtedly, much of the increase came from the U-M Health System, but we don't have evidence of that. We are forecasting that the government sector will then add another 2,887 jobs in the following three years, all of them coming from state government.

Federal government gained 716 jobs in 2010, and most of that is attributable to an upswing in federal hospital employment in the first half of the year. The additions to federal government employment in 2010 also include the hiring of temporary census workers, but they had departed by the end of the year. Employment in this sector then declines by 214 jobs over the following three years, hit by the initial loss of census workers and the continuing retrenchment of the U.S. Postal Service as more and more people turn to email and other forms of digital communication to deliver information instead of using traditional mail services.

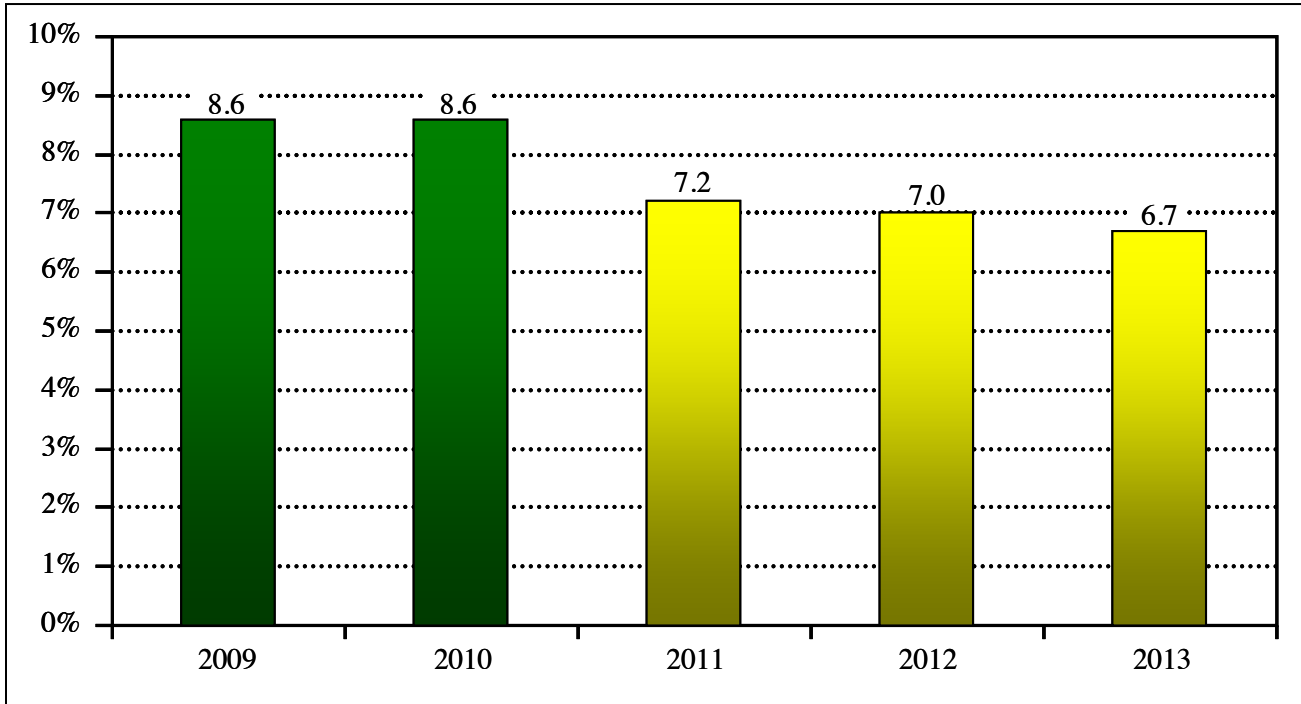
Local government employment falls by 69 jobs between 2009 and 2013, as persistently tight budgets force local government agencies to downsize and contract out staff functions even as the economy begins to recover.

Washtenaw County's unemployment rate came in at 8.6 percent for both 2009 and 2010, uncomfortably high despite being lower than the U.S. rate and much lower than the Michigan rate. Much of the discontent among residents over economic conditions is focused on the unemployment situation. We anticipate that healthy job growth over the forecast period will trigger a systematic reduction in the jobless rate, falling to 7.2 percent in 2011, 7 percent in 2012, and 6.7 percent in 2013, as shown in figure 11. The return of additional job seekers to the labor market by 2011, drawn into the labor force by improving job opportunities, acts as a counterweight and keeps the jobless rate from falling as much as it otherwise would.

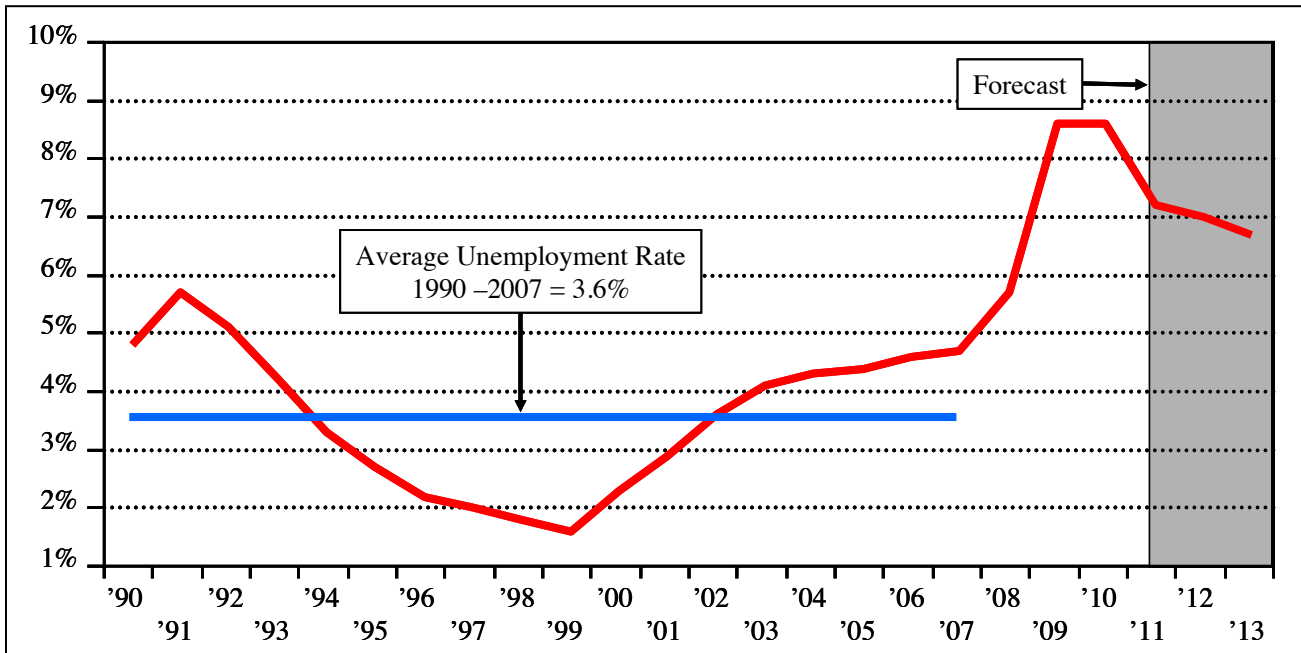
The decline in the unemployment rate by almost two percentage points over the period means that more residents will participate in the recovery, but not enough of them, as even the rate for 2013 is still historically high. This is shown in figure 12, where the Washtenaw unemployment rate is plotted annually from 1990 to 2013. The surge from 2007 to 2009 is evident, as is the much more moderate downward drift from 2010 to 2013. The rate for 2013 would still be above that for any single year from 1990 to 2008, and well above the 3.6 percent unemployment rate averaged from 1990 to 2007, prior to the rate surge.



**Figure 11**  
**Washtenaw County Unemployment Rate, 2009–13**

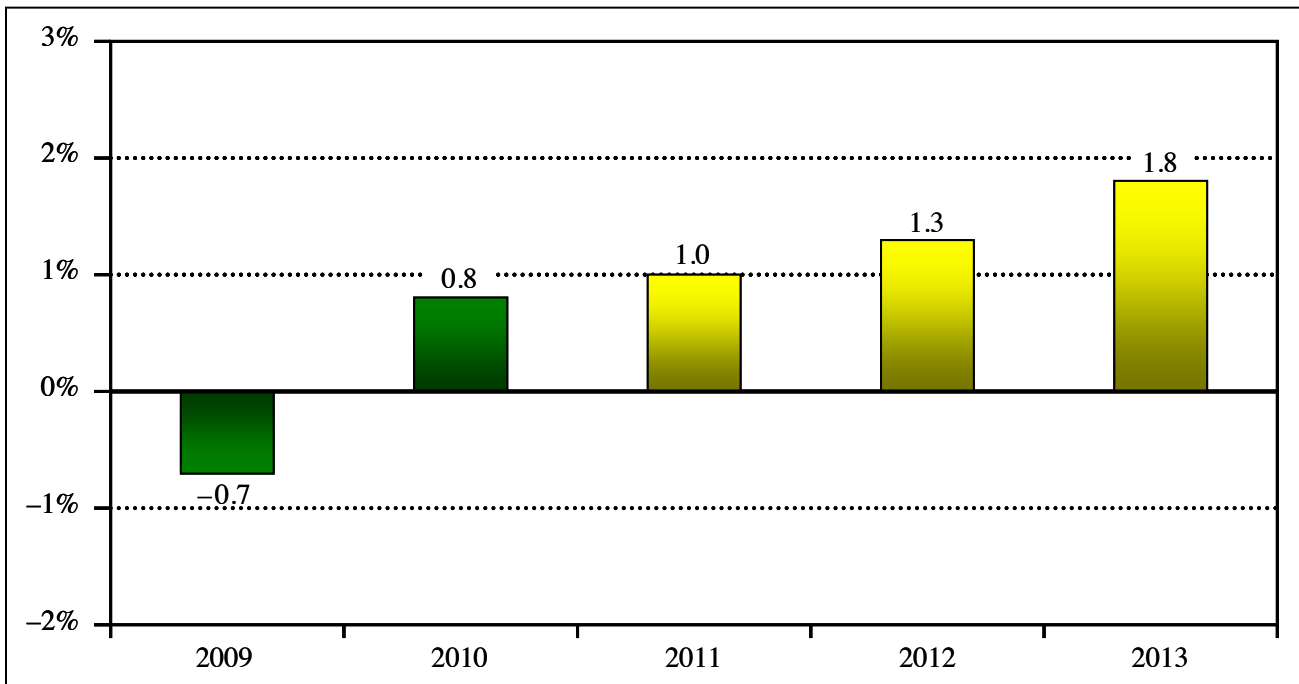


**Figure 12**  
**Washtenaw County Unemployment Rate, 1990–2010**  
**and Forecast, 2011–13**



Our forecast of local inflation, measured by the growth rate of the Detroit Consumer Price Index (CPI), is shown in figure 13. (Consumer price data are not compiled for the county in isolation.) In 2009, the region saw its first annual price deflation in sixty years, but local inflation returned in 2010 and is expected to accelerate over the following three years, associated with an improving regional economy and the moving up of oil prices. Local inflation still remains subdued in this forecast, not surpassing 2 percent in any year, but there is a significant risk of higher near-term inflation depending on the behavior of oil prices in the currently volatile Middle East political environment.

**Figure 13**  
**Inflation Rate, Detroit CPI**  
**2009–13**



## **Conclusion**

After delivering bad news to the Ann Arbor community by way of our annual forecast reports for too many years, we were more upbeat last March. We detected the approach of some sunbeams in our long night's journey toward daylight. Following four years of accelerated declines in employment, we anticipated that the local economy would reverse direction and start adding jobs again in early 2010. It turns out that we were correct in that assessment, but as events unfolded over the year, it became clear that we were not nearly upbeat enough.

Job creation sizzled in the first half of 2010, according to recently released numbers from the government data collection agencies. By our estimate, employment grew by 4,087 jobs in 2010, the third-best yearly performance in Washtenaw County in twenty years. Although we don't expect that pace of growth to be sustained, we do see the continuation of job gains over the next three years, through the end of our forecast period in 2013. Job creation falls back to a still respectable 2,090 for 2011, and then accelerates to 2,960 in 2012 and 3,790 in 2013. Growth is sufficiently healthy that by the end of 2013 the economy falls only 1,700 jobs short of its peak reached in the summer of 2002, prior to the extended downturn suffered during much of the rest of the decade. Considering how precipitous the drop was between the summers of 2002 and 2009—a loss of 16,437 jobs—the anticipated recovery would be as remarkable as the decline that preceded it.

We also expect the recovery to be fairly broad-based across major industry divisions, with all of them contributing net job gains by 2012. This includes not only traditional growth sectors such as health services and professional and business services,

but also the much-maligned manufacturing sector, which is already adding jobs rather than cutting a lot of them as it did throughout the past decade (shrinking from 30,378 jobs in 1999 to 12,564 in 2009). The return to stability of the domestic auto industry after the trauma of being on emergency life support is the region's biggest business story of the year, and has spillover effects throughout much of the rest of the local economy.

That's not to say that all of the news is good; there are less positive overtones as well. The unemployment rate, at 8.6 percent for 2010, is too high, and we don't see it coming down rapidly enough over the next three years to include as many residents in the recovery as one would hope. The rate projected for 2013 of 6.7 percent, although an improvement, is still higher than any yearly rate in the twenty years prior to 2009. For a number of residents, the dissatisfaction with economic conditions will continue—and understandably so.

There are some risks to any forecast, certain outcomes that could diverge from our expectations and affect the accuracy of the forecast. On downside risks—that is, risks that the forecast is too optimistic—perhaps the primary one currently is uncertainty over the extent of the political crises in the Middle East, and their effect on oil prices going forward. A sustained high-price environment could have a substantial dampening effect on our forecast, but the magnitudes are unknown at this time. The other downside risks refer to the headwinds that the recovery has been battling. We see some improvements in the financial system, housing market, and consumer spending, but any of these could make slower progress than we anticipate.

There are also risks on the upside, that is, risks that the forecast is too pessimistic. One of the upside risks involves the domestic auto industry. Last year, we were guilty of

undervaluing the robustness of the restructured industry, and that might prove to be true again this year. Ironically, in past forecasts we have consistently classified auto industry behavior as a downside risk. Another upside risk relates to the knowledge economy, particularly that part of it centered on research activities at the University of Michigan. We expect growing momentum in this area, but could easily see activities ratcheting up even more.

Although the short-term outlook for the economy comes with some uncertainties, there seems to be much less ambiguity about Washtenaw County's longer-term prospects. We suggest several measures in the report that in our view establish a foundation for prosperity. It is clear that whether we assess the Ann Arbor area in terms of how it is positioned in these economic fundamentals across all regions of the United States, or more restrictively among its peers, there are few local economies with a more favorable composite profile for succeeding in the New Economy. One can imagine scenarios where Washtenaw is less successful in the near term than we foresee, but it seems inconceivable not to see the county thriving in the longer term.

## Appendix

### Forecast of Employment in Washtenaw County by Detailed Industry Division

	Actual 2009	Estimated 2010	2011	Forecast 2012	2013	Average Wage 2009
Total wage and salary employment	181,171	185,258	187,348	190,308	194,098	\$48,925
Total government	67,954	69,961	70,605	71,564	72,848	52,353
Federal government	2,906	3,622	3,433	3,424	3,408	53,199
Post Office	604	577	559	551	549	53,640
Hospital	1,385	2,070	2,054	2,038	2,024	32,977
Other federal government	917	975	820	834	835	83,442
State government	52,391	53,739	54,795	55,713	56,852	53,759
Local government	12,657	12,599	12,377	12,427	12,588	46,343
Education and health services	7,948	7,978	7,820	7,885	8,031	45,417
Other local government	4,708	4,621	4,557	4,542	4,558	47,906
Total private	113,216	115,298	116,743	118,744	121,249	46,867
Goods-producing	16,210	16,384	16,529	16,767	17,013	64,564
Natural resources and mining	213	203	204	209	215	22,884
Construction	3,434	3,080	3,055	3,131	3,282	50,058
Buildings	735	657	654	687	718	52,061
Residential	375	350	357	391	418	35,187
Nonresidential	360	307	297	296	299	69,655
Heavy and civil engineering construction	518	438	401	414	480	42,531
Specialty trade contractors	2,181	1,985	2,001	2,030	2,085	51,169
Building foundation and exterior	305	287	290	291	292	35,641
Building equipment	1,122	1,025	1,000	1,002	1,026	60,051
Building finishing	441	405	432	452	471	43,673
Other specialty trade	312	268	278	285	296	45,025
Manufacturing	12,564	13,102	13,271	13,427	13,516	69,233
Food	665	664	679	681	685	38,922
Printing and related support activities	2,057	1,913	1,848	1,800	1,762	40,927
Books	1,561	1,426	1,363	1,318	1,283	40,934
Other printing and related	497	488	486	482	479	40,906
Chemicals	622	620	629	633	637	68,529
Plastics and rubber products	768	941	975	992	994	62,110
Fabricated metal products	866	962	1,015	1,027	1,040	47,956
Machine shops and threaded products	459	507	543	547	552	48,410
Other fabricated metal products	407	454	473	480	488	47,444
Machinery	922	948	974	989	1,006	63,783
Commercial and service industry	377	381	390	396	402	60,576
Metalworking	256	267	285	291	297	62,161
Other machinery	289	300	299	303	308	69,396
Computer and electronic products	947	831	825	821	820	70,077
Computer and peripheral products	172	84	73	67	62	93,351
Semiconductor and electronic components	327	330	330	334	339	75,470
Electronic instruments	430	368	373	375	377	56,145
Other computer and electronic products	18	50	49	46	43	82,987
Transportation equipment	4,161	4,569	4,648	4,779	4,837	97,871
Miscellaneous manufacturing	1,187	1,223	1,234	1,243	1,253	64,997
Medical equipment and supplies	788	829	837	842	847	75,271
Other miscellaneous manufacturing	399	394	397	401	406	44,672
Other manufacturing	370	431	445	462	481	49,818

## Appendix (continued)

## Forecast of Employment in Washtenaw County by Detailed Industry Division

	Actual 2009	Estimated 2010	2011	Forecast 2012	2013	Average Wage 2009
Private service-providing	97,007	98,914	100,214	101,977	104,236	\$43,910
Trade, transportation, and utilities	23,642	23,870	24,108	24,488	24,983	38,594
Wholesale trade	4,451	4,458	4,540	4,657	4,832	64,842
Merchant wholesalers, durable goods	2,117	2,098	2,131	2,167	2,215	63,940
Merchant wholesalers, nondurable goods	1,702	1,703	1,719	1,762	1,843	66,227
Electronic markets and agents and brokers	632	658	690	728	775	64,134
Retail trade	16,162	16,356	16,367	16,478	16,644	26,082
Motor vehicles	1,552	1,534	1,535	1,545	1,555	49,354
Automobiles	1,227	1,224	1,220	1,224	1,229	51,640
Other motor vehicles	325	309	315	321	327	40,715
Furniture and home furnishings	433	436	434	450	461	30,882
Electronics and appliances	963	908	923	949	977	37,127
Building materials and garden supplies	1,052	1,069	1,084	1,105	1,141	33,111
Food and beverages	4,294	4,265	4,285	4,302	4,337	23,145
Grocery stores	3,906	3,877	3,891	3,906	3,940	23,465
Specialty food stores	271	255	258	257	257	20,215
Beer, wine, and liquor stores	118	133	136	138	140	19,267
Health and personal care stores	885	1,032	991	967	954	28,390
Pharmacies and drug stores	593	746	709	687	675	26,653
Other health and personal care stores	292	285	282	280	279	31,913
Gasoline stations	461	504	516	525	534	16,755
Clothing and accessories	1,397	1,450	1,475	1,497	1,521	16,489
Sporting goods, hobby, book, music stores	1,050	947	935	959	993	17,820
Sporting goods and musical instruments	526	513	521	533	545	15,010
Books, periodicals, and music	524	434	414	426	448	20,643
General merchandise	2,896	3,070	3,055	3,041	3,030	20,410
Department stores	1,648	1,837	1,810	1,791	1,776	19,585
Other general merchandise stores	1,248	1,234	1,245	1,249	1,254	21,500
Miscellaneous store retailers	762	724	718	716	713	19,197
Nonstore retailers	417	418	417	421	428	31,785
Transportation and warehousing	2,556	2,564	2,709	2,859	3,011	54,109
Truck transportation	950	795	828	866	905	53,960
Other transportation and warehousing	1,606	1,770	1,881	1,993	2,107	54,198
Utilities	474	491	491	493	495	135,090
Information	3,569	3,714	3,702	3,742	3,799	63,638
Publishing industries, except Internet	2,138	2,098	2,092	2,105	2,126	71,055
Newspaper, book, and directory publishers	750	715	696	681	667	55,739
Software publishers	1,388	1,384	1,396	1,423	1,459	79,335
Telecommunications	298	307	321	335	349	63,028
Data processing, hosting, and related services	423	330	313	322	331	60,316
Other information	710	979	977	981	994	43,545
Financial activities	5,474	5,574	5,660	5,790	5,939	52,291
Finance and insurance	2,943	3,286	3,362	3,441	3,522	60,349
Credit intermediation and related activities	1,707	1,832	1,899	1,962	2,023	51,714
Depository credit intermediation	1,362	1,551	1,617	1,678	1,737	48,854
Other credit intermediation and related	345	280	282	284	287	63,007
Insurance carriers and related activities	837	911	914	923	934	66,142
Insurance carriers	321	403	408	415	423	73,007
Insurance agencies and brokerages	516	508	506	508	511	61,869
Other finance	399	543	549	556	564	85,121

## Appendix (continued)

## Forecast of Employment in Washtenaw County by Detailed Industry Division

	Actual 2009	Estimated 2010	2011	Forecast 2012	2013	Average Wage 2009
Financial activities (continued)						
Real estate and rental and leasing	2,531	2,289	2,298	2,349	2,418	\$42,921
Real estate	2,079	1,929	1,927	1,963	2,016	38,518
Lessors of real estate	931	979	979	987	1,000	37,780
Offices of real estate agents and brokers	445	382	366	374	396	37,091
Activities related to real estate	703	568	582	602	620	40,400
Rental and leasing services	330	228	231	237	242	36,193
Lessors of nonfinancial intangible assets	122	132	140	149	160	135,881
Professional and business services	22,873	23,834	24,323	24,836	25,444	62,457
Professional and technical services	12,547	12,695	12,928	13,196	13,544	78,617
Legal services	988	1,030	1,048	1,072	1,098	77,761
Accounting and bookkeeping	670	643	654	666	680	44,679
Architectural and engineering	3,547	3,317	3,367	3,427	3,491	85,106
Engineering	1,213	1,183	1,190	1,196	1,205	84,711
Testing laboratories	1,813	1,736	1,764	1,802	1,842	92,351
Other architectural and engineering	521	398	413	428	444	60,815
Specialized design	192	238	243	248	254	52,213
Computer systems design and related services	1,642	1,696	1,734	1,763	1,802	77,365
Management and technical consulting	1,793	1,833	1,848	1,898	1,977	87,280
Scientific research and development	2,609	2,775	2,841	2,880	2,938	90,429
Physical, engineering, and bio. research	2,374	2,550	2,613	2,653	2,700	94,308
Social science and humanities research	236	225	229	227	238	51,328
Advertising, PR, and related services	234	204	204	201	199	49,695
Other professional and technical services	872	960	988	1,041	1,104	42,013
Management of companies and enterprises	1,381	1,358	1,399	1,429	1,472	81,263
Administrative and waste services	8,945	9,782	9,996	10,211	10,428	36,886
Administrative and support services	8,638	9,498	9,710	9,920	10,131	36,385
Office administrative services	854	801	785	787	798	85,342
Employment services	4,566	5,475	5,683	5,863	6,024	27,691
Business support	831	796	796	795	795	61,472
Services to buildings and dwellings	1,963	2,009	2,033	2,061	2,097	24,895
Other administrative and support services	425	417	413	414	418	35,428
Waste management and remediation services	307	284	286	291	297	51,000
Private education and health services	23,399	23,559	23,664	23,971	24,470	45,327
Private educational services	2,279	2,467	2,499	2,548	2,664	31,847
Private elementary and secondary schools	928	888	889	910	946	31,478
Other private educational services	1,352	1,578	1,610	1,637	1,718	32,100
Private health care and social assistance	21,120	21,092	21,165	21,423	21,805	46,782
Ambulatory health care services	8,026	8,037	8,124	8,294	8,516	60,856
Offices of physicians	3,207	3,194	3,225	3,300	3,408	88,898
Offices of dentists	1,189	1,166	1,159	1,167	1,180	44,587
Offices of other health practitioners	660	638	638	656	677	30,852
Home health care services	1,612	1,657	1,676	1,694	1,715	36,237
Other ambulatory health care services	1,359	1,383	1,426	1,478	1,537	52,683
Nursing and residential care facilities	4,486	3,806	3,901	4,044	4,211	28,314
Community care facilities for the elderly	1,912	1,745	1,719	1,730	1,762	30,929
Other nursing and residential care facilities	2,574	2,060	2,182	2,314	2,449	26,371
Individual and family services	628	643	653	666	680	19,790
Child day care services	1,045	1,023	1,033	1,048	1,069	19,116



## Appendix (continued)

## Forecast of Employment in Washtenaw County by Detailed Industry Division

	Actual 2009	Estimated 2010	2011	Forecast 2012	2013	Average Wage 2009
Private health care and social assistance (cont.)						
Hospitals, emergency relief, and vocational rehabilitation services	6,935	7,584	7,454	7,371	7,329	\$49,053
Leisure and hospitality	13,384	13,715	14,062	14,374	14,717	15,682
Arts, entertainment, and recreation	1,925	1,949	2,016	2,088	2,172	17,893
Amusements, gambling, and recreation	1,642	1,656	1,718	1,779	1,852	15,169
Golf courses and country clubs	761	702	748	790	838	14,684
Fitness and recreational sports centers	618	651	659	678	700	15,901
Other amusements, gambling, recreation	263	303	311	311	314	14,852
Performing arts, spectator sports, museums, and parks	283	293	298	309	321	33,725
Accommodation and food services	11,459	11,766	12,046	12,287	12,545	15,310
Accommodation	1,288	1,189	1,183	1,183	1,184	18,707
Food services and drinking places	10,171	10,577	10,863	11,104	11,361	14,880
Full-service restaurants	4,963	5,163	5,359	5,509	5,673	15,622
Limited-service eating places	4,140	4,428	4,505	4,577	4,649	13,119
Special food services	435	343	348	353	357	24,887
Drinking places, alcoholic beverages	632	643	650	665	682	13,705
Other services	4,665	4,641	4,695	4,776	4,883	28,865
Repair and maintenance	887	848	852	855	859	37,913
Automotive repair and maintenance	741	734	740	743	749	35,263
Other repair and maintenance	146	115	113	112	111	51,381
Personal laundry services	1,499	1,429	1,440	1,471	1,512	26,560
Personal care services	963	921	936	964	999	29,905
Other personal and laundry services	536	508	503	507	513	20,551
Membership associations and organizations	1,769	1,810	1,848	1,887	1,935	29,732
Civic and social organizations	641	641	662	679	695	22,397
Labor unions and similar labor organizations	137	151	146	146	148	29,525
Other membership associations and org.	991	1,017	1,040	1,062	1,092	34,504
Private households	510	553	555	563	577	16,903
Unallocated private services	0	6	0	0	0	
<u>Addendum</u>						
Unemployment rate	8.6	8.6	7.2	7.0	6.7	N.A.