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# Recent Developments in the Labor Market in Maine

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# **Recent Developments in the Labor Market in Maine**

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## **Executive Summary**

This report examines recent developments in Maine's labor markets. This study also calculates a projection of recent labor market trends into the future to show the likely changes ahead unless significant policy changes are made. The intent of this report is to provide some factual context that will be useful for policy analysis for the State. These are our main findings.

- In the 1990s, the six counties served by the Eastern Maine Development Corporation experienced the highest growth rates in per capita income and net job growth. This was the only district that grew at rates comparable to the national average. There was a significant increase in the labor force participation rate in the region (toward the Maine and U.S. averages).
- Lincoln and Sagadahoc Counties experienced the lowest growth in income per person in the last decade. After accounting for inflation, average weekly wages fell substantially between 1993 and 2000 in this region. On the other hand, this region had the highest rate of net immigration.
- Real per capita income, real weekly wages, and net job growth increased only slightly in Kennebec and Somerset Counties during the last decade.
- Aroostook Country experienced a large loss of people in the 1990s. Net job loss, however, was small because of a sharp rise in its labor force participation rate (toward the Maine and U.S. averages). Its per capita income and average weekly wages grew at rates comparable to the rest of the state.

- Average weekly wages in Androscoggin, Franklin, and Oxford Counties increased faster than in the rest of the state. On the other hand, this region lost people during the last decade.
- Average weekly wages increased the fastest in Cumberland and York Counties in the 1990s. This region also gained people. However, labor force participation rate fell (toward the Maine and U.S. averages). As a result, per capita income growth and net job growth in the district were about the same as in the rest of the state.
- In the last decade, per capita income in northern areas of the state grew just as fast (actually slightly faster) as in southern areas. That is, in terms of income per capita (and in terms of average weekly wages) the “Two-Maines” problem did not worsen in the 1990s.
- In terms of net migration, the “Two-Maines” problem did worsen in the 1990s. There was a pronounced movement of people toward coastal areas.
- Unemployment rates in Maine’s southern coastal areas were below the national average, and unemployment rates in northern and eastern areas were above the U.S. average. These differences in unemployment rates across regions appeared to be a significant driving force behind the migration of people toward the coast.
- Despite concentrations in certain natural resources-based industries, Maine’s overall employment structure is very similar to that in the rest of the country. Maine has no more of a traditional resource-based economy than does the country as a whole. Maine’s economy, just like the American economy, is not based on the consumption of natural resources.

- Employment structures are also similar across Maine's economic development districts.
- Employment in Maine, as in rest of the country, has been increasing in services and decreasing in manufacturing. This trend is expected to continue in the current decade.
- The largest net job losses this decade in Maine are expected in the footwear and pulp industries. The largest net job growth this decade in Maine is expected in the retail trade and health sectors.

## **Introduction**

Almost two-thirds of income in Maine is from labor earnings. Thus, recent developments in the labor market are critical for economic prosperity. This report examines these recent developments in labor markets in the state, as well as in each of the state's five economic development districts plus Lincoln and Sagadahoc counties (which are treated as a "district" in the analysis that follows). The abbreviations in the subsequent figures are:

AVCOG – Androscoggin Valley Council of Governments (Androscoggin, Franklin and Oxford Counties)

EMDC – Eastern Maine Development Corporation (Hancock, Knox, Penobscot, Piscataquis, Waldo and Washington Counties)

KVCOG – Kennebec Valley Council of Governments (Kennebec and Somerset Counties)

LS – Lincoln and Sagadahoc Counties

NMDC – Northern Maine Development Commission (Aroostook County)

SMEDD – Southern Maine Economic Development District (Cumberland and York Counties)

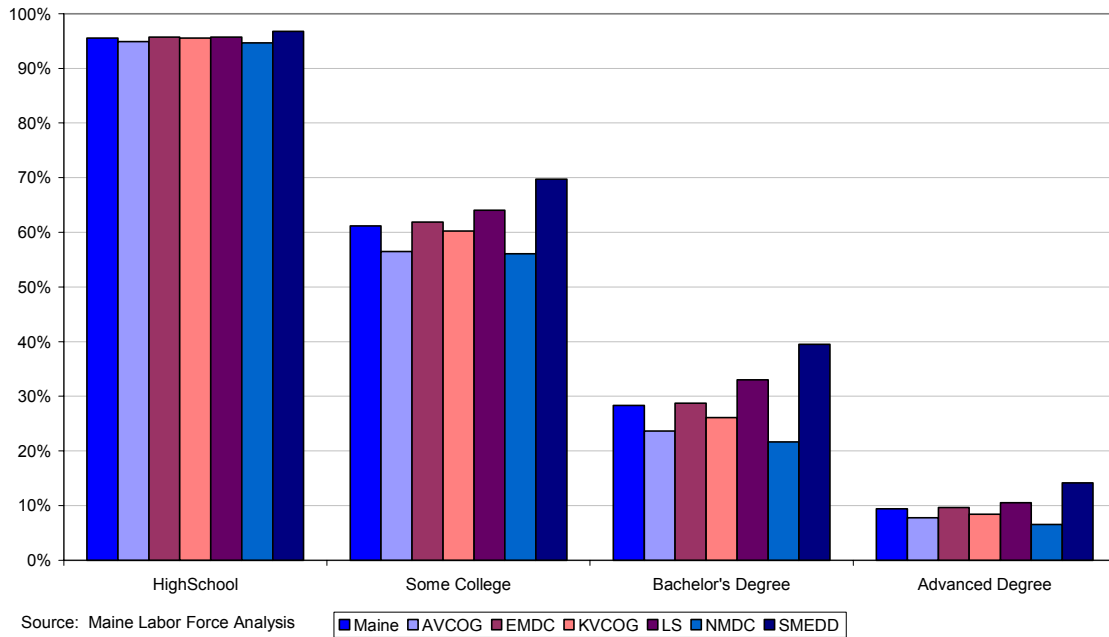
## **Education**

Using data from the Maine Labor Force Analysis,<sup>1</sup> Figure 1 shows the percentages of workers between the ages of 25 to 64 with at least various levels of educational attainment for workers in the six districts. Figure 2 shows the same information, but perhaps in a more revealing way. That is, Figure 2 shows the percentage difference in the educational attainment in the districts compared to the overall state levels.

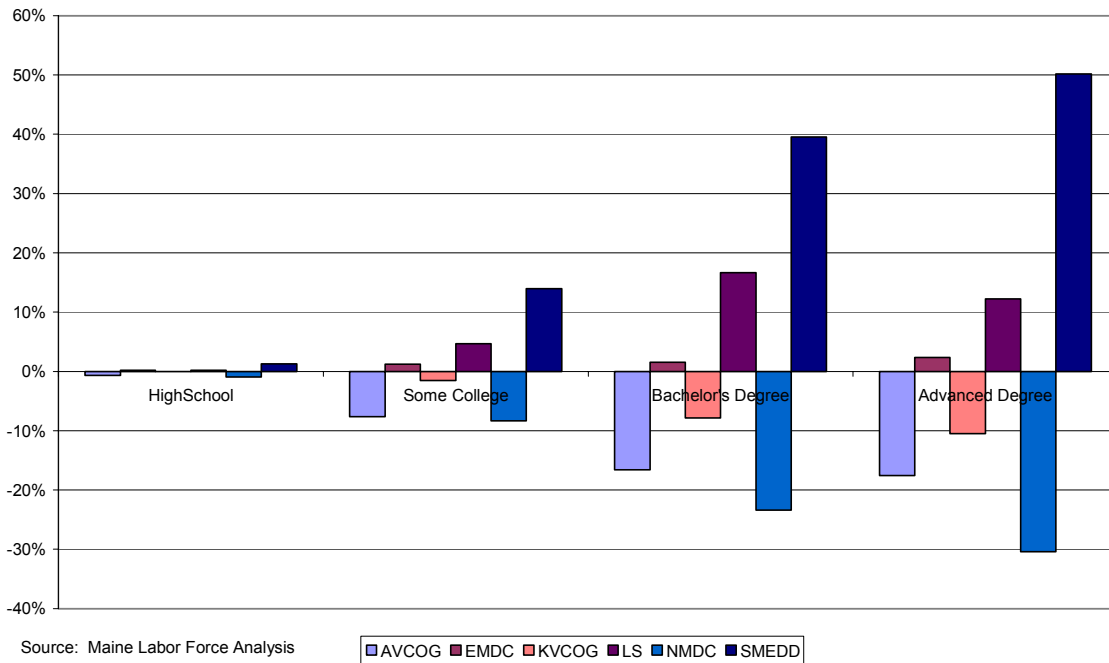
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<sup>1</sup> The Maine Labor Force Analysis was conducted by the Center for Business and Economic Research at the University of Southern Maine in the latter half of 1999 and the first half of 2000. It is a survey of 6,817 employees and 3,637 employers.

**Figure 1  
Educational Attainment  
(1999-2000)**



**Figure 2  
Percentage Difference in Educational Attainment**



The proportion of the 25-64 year-old workforce with at least a high school diploma is about the same in all of the economic development districts. However, there

are, significant differences in the proportions with various levels of higher education. On average, workers in the Southern Maine district have much more higher education than in any other district.<sup>2</sup> Workers in Lincoln and Sagadahoc counties have somewhat more higher education than the rest of the state. Workers in the Eastern Maine district have about the same education as the state as a whole. Educational attainment is somewhat below the state average in the Kennebec Valley district, followed by the Androscoggin Valley district. Higher education attainment is lowest in the Northern Maine district.

### **Income**

Figure 3 shows real per capita income over the past decade for the state, the region, and the country. Although economic prosperity generally increased in Maine, it did not match that in the rest of the country and in the rest of New England. Income per person in Maine fell a little further behind in the last decade. In 1990 Maine's per capita income was 11 percent below that for the country and 24 percent below that for New England. In 2000, the differences increased to 14 percent and 29 percent.

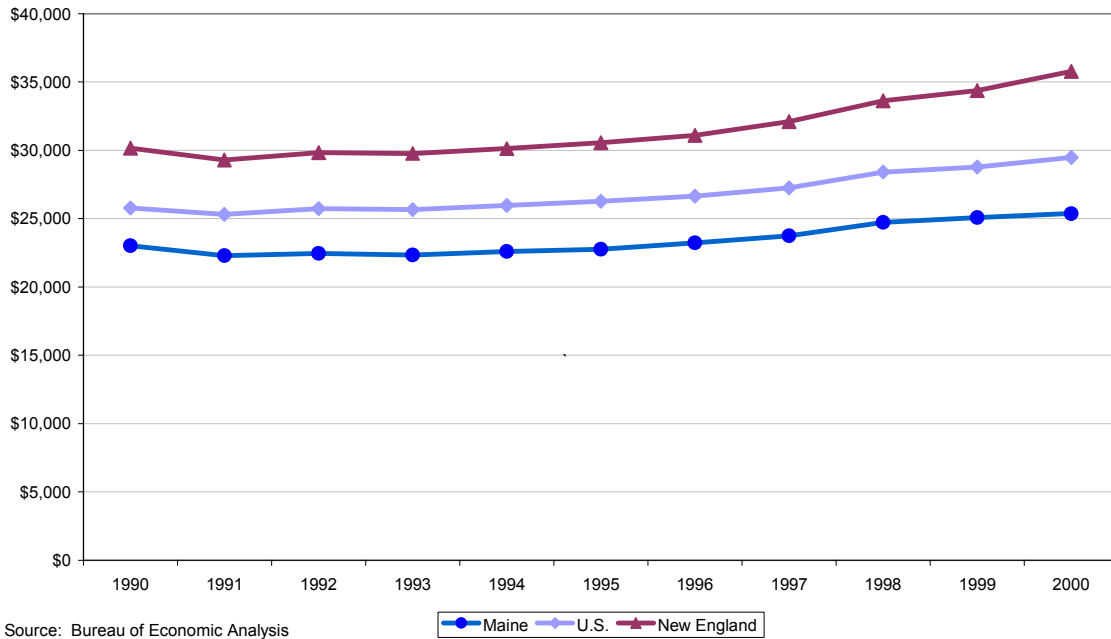
Figure 4 shows per capita income in the six economic development districts. The general pattern is the same in all the districts. That is, they all follow the basic U.S. pattern shown in Figure 3. There was very little growth in income per person in the early part of the decade, followed by robust growth in the latter part of the 1990s. Two of the districts, the Lincoln-Sagadahoc area and the Kennebec Valley area, did not fare quite as well as the rest of the state. Per capita income in Lincoln and Sagadahoc counties grew at

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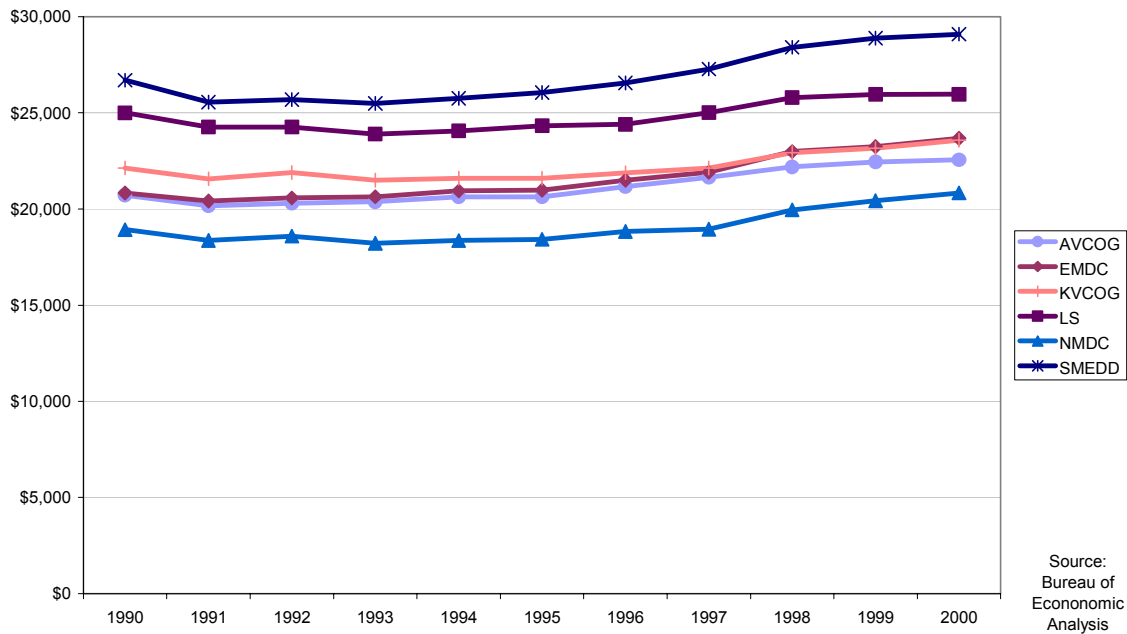
<sup>2</sup> Moreover, Figure 2 understates the difference between the Southern Maine district and the rest of the state because the SMEDD numbers are obviously included in the Maine numbers, and SMEDD comprises over a third of the Maine total. SMEDD's proportion with at least a Bachelor's degree is 50 percent higher than the rest of the state, and its proportion with advanced degrees is 65 percent higher than the rest of the state.



**Figure 3**  
**Per Capita Income**  
 (Adjusted for Inflation - in 2000 \$)



**Figure 4**  
**Per Capita Income**  
 (Adjusted for Inflation - in 2000 \$)

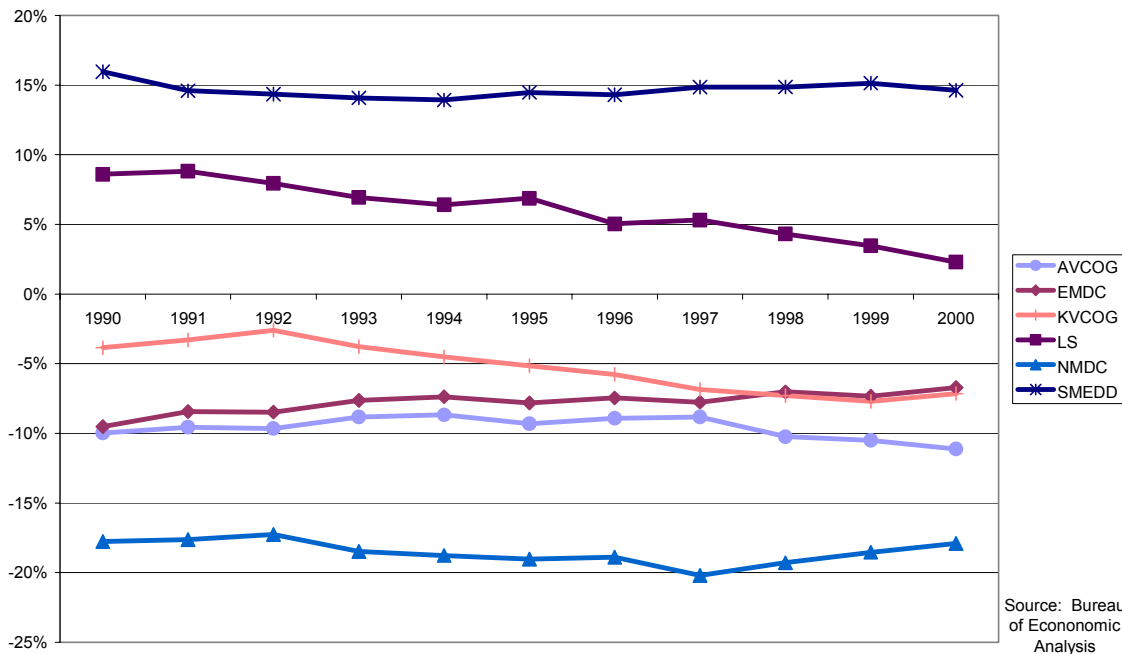


an average annual rate of only 0.39 percent in the 1990s. Per capita income in the Kennebec Valley counties grew at 0.64 percent per year on average. Income per capita in

the state as a whole grew at 1.00 percent. The only district that did better than the state as a whole was Eastern Maine, with an average annual rate of 1.30 percent.<sup>3</sup> Per capita income growth in this region almost matched that in the rest of the country (1.36 percent). However, none of the regions matched the New England's annual income growth rate of 1.75 percent.

Figure 5 probably better reveals the relative performance of the six economic development districts. It shows the percentage difference in per capita income from the overall state average. Lincoln and Sagadahoc counties went from having a per capita income that was 8.6 percent higher than the state as a whole in 1990, to only 2.3 percent higher in 2000. The Kennebec Valley District went from having a per capita income that was only 3.9 percent lower than the state

**Figure 5**  
Percentage Difference in Per Capita Income



<sup>3</sup> The average growth rates of per capita income in the Androscoggin Valley, Northern Maine, and Southern Maine districts were 0.86, 0.99, and 0.89 percent, respectively.

average in 1990, to 7.1 percent lower in 2000. On the other side, the six counties in Eastern Maine went from having a per capita income that was 9.5 percent lower than the state average in 1990, to 6.7 percent lower in 2000.

Figures 4 and 5 also reveal considerable income disparity across the six economic development districts. Per capita income in the Southern Maine district averaged almost 15 percent higher than that for the state as a whole, while per capita income in the Northern Maine district averaged almost 19 percent below the state average. This aspect of these data is hardly surprising. The so-called “Two-Maines” phenomenon is well known.<sup>4</sup>

What might be surprising, though, is that the geographic disparity in per capita income did not increase over the decade (in percentage terms). That is, contrary to widespread opinion, the “Two-Maines” problem did not worsen (at least in terms of income per person, which is generally considered the best available measure of economic prosperity). Indeed, the three lowest growth rates in per capita income in the 1990s occurred in Lincoln, Sagadahoc, and York counties. The three highest growth rates occurred in the eastern coastal counties. Waldo, Washington, and Knox, followed by Penobscot and Piscataquis counties. In terms of growth rates of income per capita, Aroostook County (7<sup>th</sup>) was just behind Cumberland County (6<sup>th</sup>). Thus, in percentage terms of per capita income, the two-Maines problem improved very slightly in the 1990s.

Figures 4 and 5 are also consistent with the hypothesis that differences in per capita income are in large part due to differences in average attainment of higher education. The rankings of the six economic development districts are the same for both

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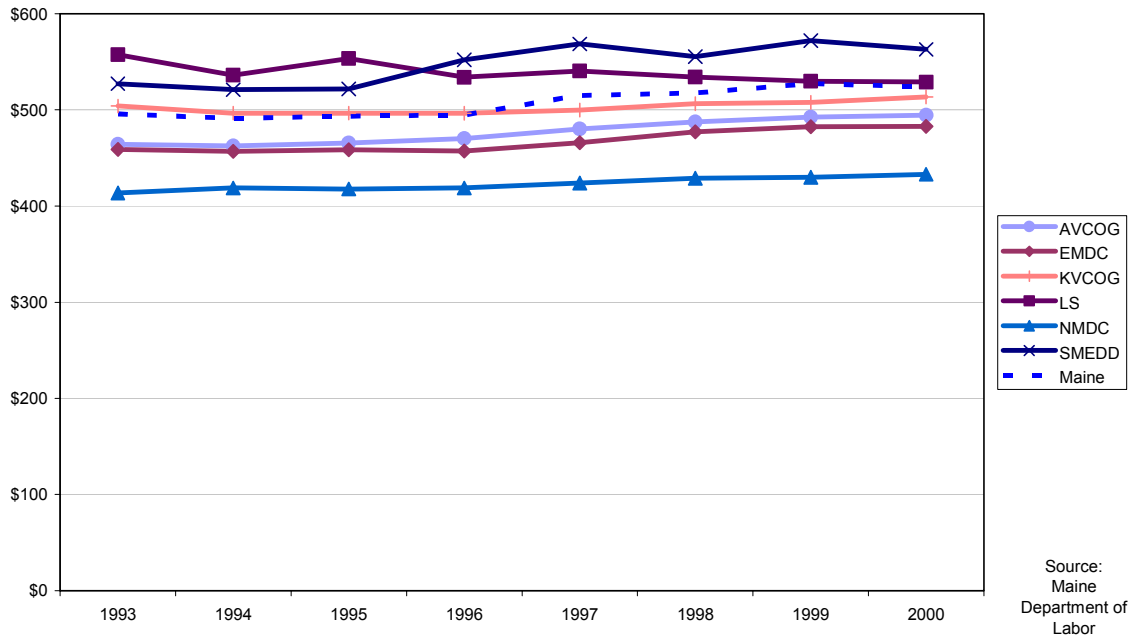
<sup>4</sup> For example, the *Bangor Daily News* published an acclaimed series on “The Two Maines” in September 1998.

per capita income and proportion of the workforce with Bachelor's degrees. The Southern Maine district has far higher proportions with Bachelor's and advanced degrees. It also has the highest per capita income by far. The Lincoln-Sagadahoc district is second in terms of both higher education attainment and income per person. Androscoggin Valley and Northern Maine are distinctly 5<sup>th</sup> and 6<sup>th</sup>, respectively, in both categories. The only slight break in the correlation is that higher education attainment in Eastern Maine is noticeably greater than in Kennebec Valley, but year 2000 per capita income in Eastern Maine exceeded that in Kennebec Valley only slightly (however, recent trends indicate that per capita income in the Eastern Maine region may exceed that in the Kennebec Valley region by a larger proportion in the future).

### **Wages**

Figure 6 shows real average weekly wages from 1993 to 2000 in the six economic development districts along with the overall state average for comparison. Given that about two-thirds of personal income is from labor earnings, changes and differences in average weekly wages explain a large part of the changes and differences in per capita income. The two districts that experienced relatively low growth in real income per capita not surprisingly also experienced relatively low growth in real wages. In fact, after accounting for inflation, average weekly wages fell by an average of 0.72 percent per year in the Lincoln-Sagadahoc region. Real weekly wages in the Kennebec Valley region rose at an average rate of only 0.27 percent. After subtracting the effect of inflation, weekly wages in the state as a whole grew at an average annual rate of 0.80 percent. Unlike for per capita income, however, the highest growth rates in weekly wages were in

**Figure 6**  
**Average Weekly Wages**  
 (Adjusted for Inflation - in 2000 \$)



the Southern Maine and Androscoggin Valley regions (0.97 and 0.92 percent, respectively).

Interestingly, within just four years average weekly wages in Lincoln and Sagadahoc Counties went from being 6.1 percent higher than in the Southern Maine counties in 1995, to 7.4 percent below in 1999. Over this period average wages within the Lincoln-Sagadahoc region went from being 12.2 percent above the state average, to just 0.5 percent above. Weekly wages in the Kennebec Valley counties went from being 1.6 percent greater than the state average in 1993, to 2.0 percent less in 2000. Average weekly wages in the other four districts grew at rates that were roughly similar to that for the state as a whole.

The Two-Maines phenomenon is also seen in average weekly wages, although the geographic disparity in wages is not quite as great as in per capita income. Wages averaged almost 8 percent higher in the Southern Maine district than for the state as a

whole (compared to almost 15 percent for per capita income). Wages averaged almost 17 percent lower in the Northern Maine district than for the state as a whole (compared to almost 19 percent for per capita income). Moreover, other than in these two districts, average weekly wages in 2000 were very similar across the rest of the state. As with per capita income, the Two-Maines problem in terms of average wages was roughly constant over the 1993 to 2000 period.

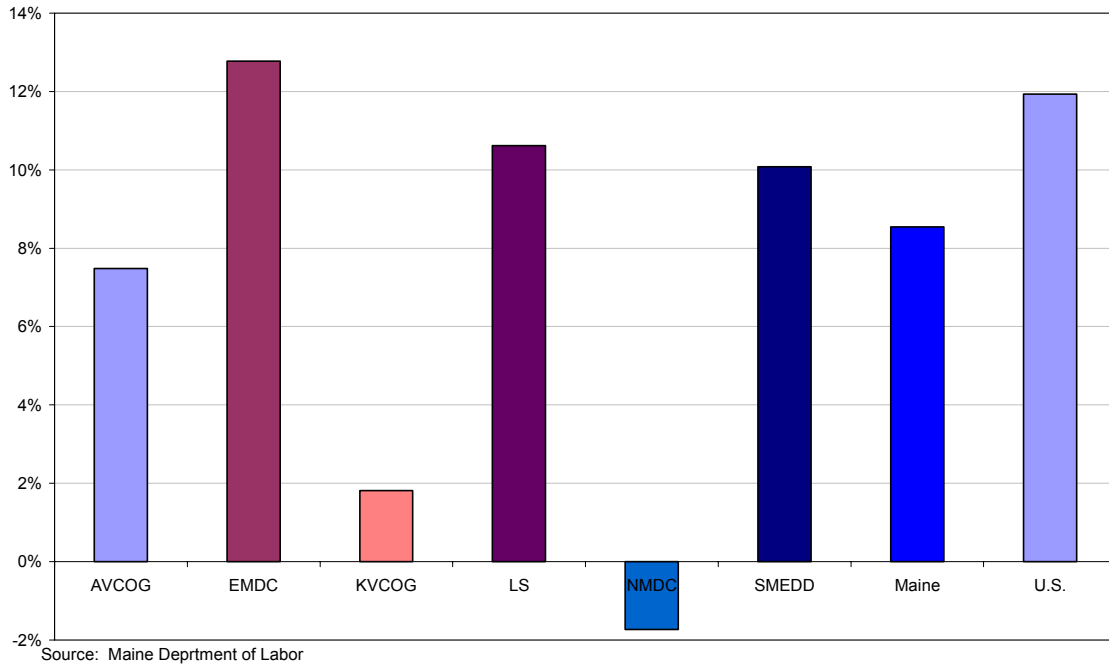
### **Labor Force**

Maine's workforce grew by 8.5 percent from 1990 to 2000. This is somewhat lower than the country's labor force growth of 11.9 percent. This is shown in Figure 7, along with the growth in the economic development districts. This chart reveals large differences in labor force growth across the districts. The fastest growth over the decade, 12.8 percent, occurred in the Eastern Maine region. The Lincoln-Sagadahoc region was second at 10.6 percent, followed closely by the Southern Maine region at 10.1 percent. On the other end, the workforce in the Northern Maine region contracted by 1.7 percent, and the Kennebec Valley region grew by only 1.8 percent over the decade.

In terms of labor force growth, the Two-Maines phenomenon did increase in the last decade. The labor force grew faster than the state average in the three economic development districts on the coast, and slower than the state average in the three non-coastal districts. Moreover, all the faster-than-the-state growth in the Eastern Maine region occurred in its coastal counties. The migration toward the coast was pronounced in the 1990s.

The changes in the labor force are only partly due to migration, however. Across the state's economic development districts there were important changes in the 1990s in

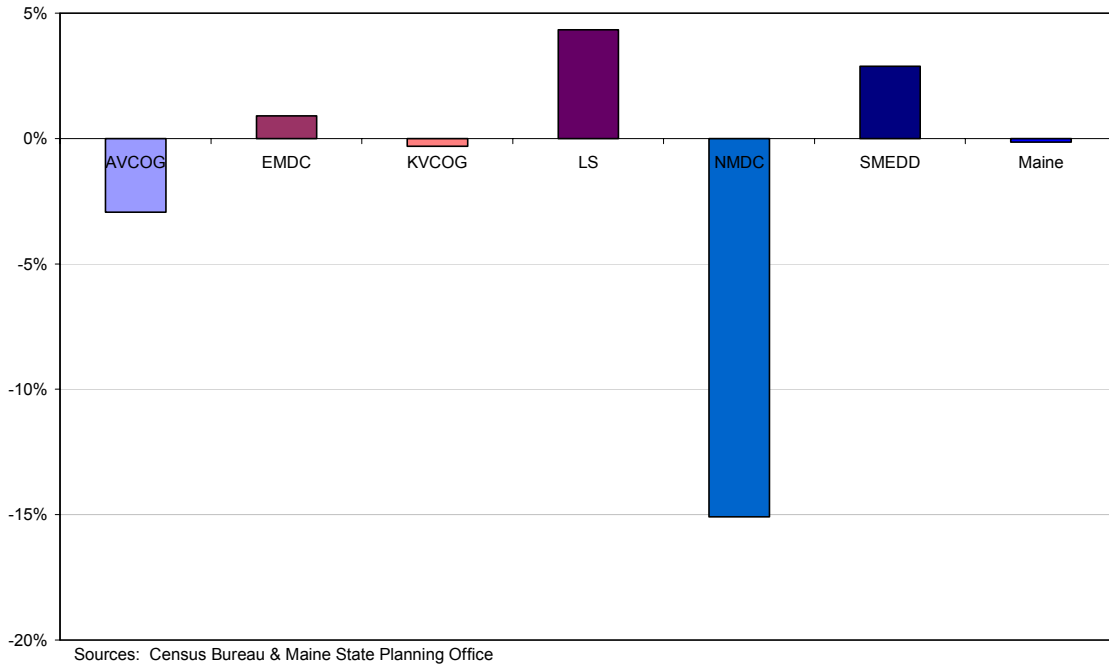
**Figure 7**  
**Percentage Growth in the Labor Force from 1990 to 2000**



both net migration and in labor force participation. Figure 8 shows the districts’ net migration in the last decade as a percentage of their 1990 populations. In percentage terms, the Lincoln-Sagadahoc district was the state leader in net migration, followed by the Southern Maine and Eastern Maine districts. These coastal districts were the only net gainers. The three non-coastal regions lost people between 1990 and 2000. The Northern Maine region was the big loser of people. Its net emigration over the decade was an astonishing 15 percent of its 1990 population.

Labor force growth and net migration in the 1990s are similar in that the economic development districts on the coast were the leaders, and the non-coastal districts were the trailers. Other than this similarity, however, the rankings in these two measures are different. The Eastern Maine district led in labor force growth percentage, but was 3rd in net migration percentage. The Lincoln-Sagadahoc district was 2nd in labor force growth, but 1st in net migration. The Kennebec Valley district was a distant 5<sup>th</sup> and

**Figure 8**  
**Percentage Net Migration from 1990 to 2000**



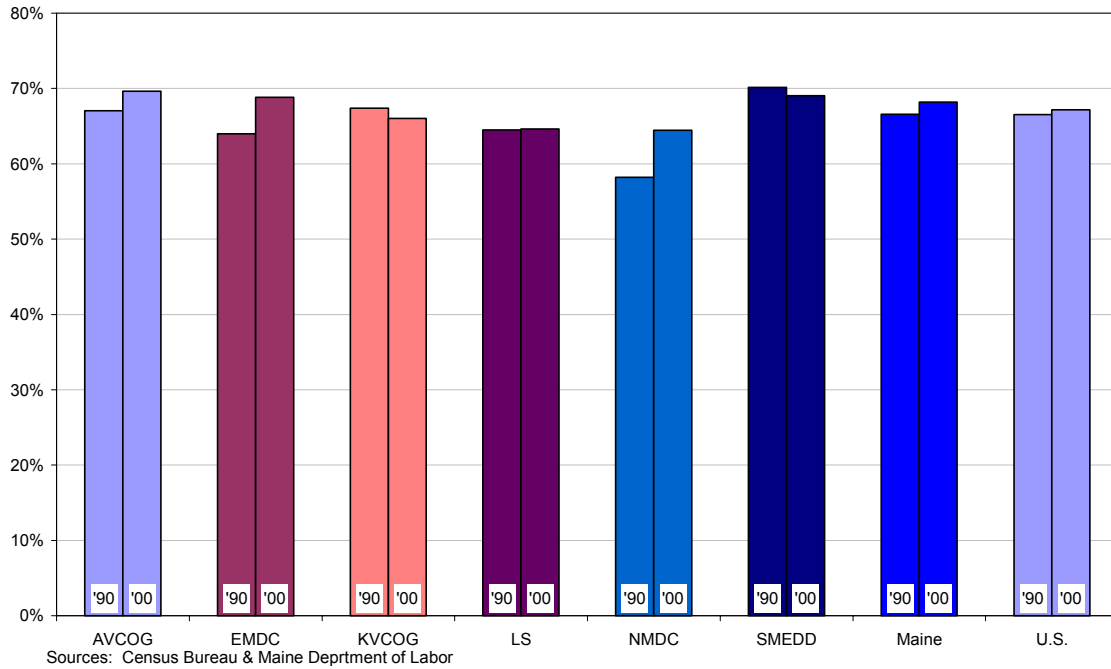
way below the state average in labor force growth, but 4<sup>th</sup> and essentially the same as the state average in net migration. The only consistent ranking was for the Northern Maine district (last in both labor force growth and net migration), although the magnitudes of the percentage changes are dramatically different.

The main reason for the differences in the two measures is that labor force growth also depends on labor force participation, and there were noticeable differences in labor force participation across the economic development districts. In addition, this is also the main reason why per capita income and average weekly wages did not behave in roughly the same way in all the districts in the 1990s. Figure 9 shows the labor force participation rate in the districts in 1990 and 2000.<sup>5</sup> In 2000 the district percentages are within the narrow range of 64.5 to 69.6 percent. Although the districts' labor force participation rates are very similar in 2000, they evolved very differently in the 1990s. The labor force

<sup>5</sup> The labor force participation rate is the labor force as a fraction of the population aged 16 and older.



**Figure 9**  
**Labor Force Participation Rate**



participation rate fell slightly over the decade in the Kennebec Valley and Southern Maine regions, it was essentially unchanged in the Lincoln-Sagadahoc region, and it rose in the other three regions.

The respective declining and unchanging labor force participation rates in Southern Maine and Lincoln-Sagadahoc explain why the percentage growth in their labor forces were not the highest in the state despite having the highest rates of net immigration. The declining labor force participation rate in the Kennebec Valley district explains why it experienced very low relative growth in its labor force while experiencing essentially no net migration. The increase in Eastern Maine's labor force participation rate by 4.8 percentage points is the main reason why it experienced the state's highest percentage labor force growth. Net migration into Eastern Maine in the 1990s played only a small role. The increase in Androscoggin Valley's labor force participation rate by 2.6 percentage points allowed its labor force growth to remain close

to the state average despite its sizeable net outflow of people. The increase in Northern Maine's labor force participation rate by 6.3 percentage points (an increase from its 1990 rate by almost 11 percent) is the reason why its labor force contracted by only 1.7 percent while experiencing a massive loss in its population. Although Northern Maine's labor force participation rate in 2000 was still the lowest in the state (just barely below that in Lincoln-Sagadahoc), there is clearly limited room for its rising trend to continue. Thus, if its large net emigration of people continues, then Aroostook County will experience a dramatic fall in its workforce in the future.

The different trends in labor force participation across the economic development districts are also an important part of the explanation of why per capita income did not mimic average weekly wages in all the districts in the 1990s. The declining labor force participation rate in Southern Maine explains why its average growth rate of per capita income was slightly below the rest of the state despite having the highest average growth rate of weekly wages. The increasing labor force participation rate in Eastern Maine is the main reason why it experienced the state's highest average growth rate in per capita income while having an average growth rate of weekly wages that was slightly below that for the state as a whole. The large increase in Northern Maine's labor force participation rate is what kept its per capita income at an essentially constant percentage of the state's per capita income. Northern Maine's average growth rate of wages was slightly below the state average in the 1990s. Thus, without the increase in its proportion of adults in the labor force, Aroostook County would have fallen a little further behind in per capita income. It should be kept in mind, though, that Northern Maine's labor force

participation only increased toward the state average. It is not the case that Northern Mainers had to work more than Southern Mainers to keep from falling further behind.

### **Unemployment**

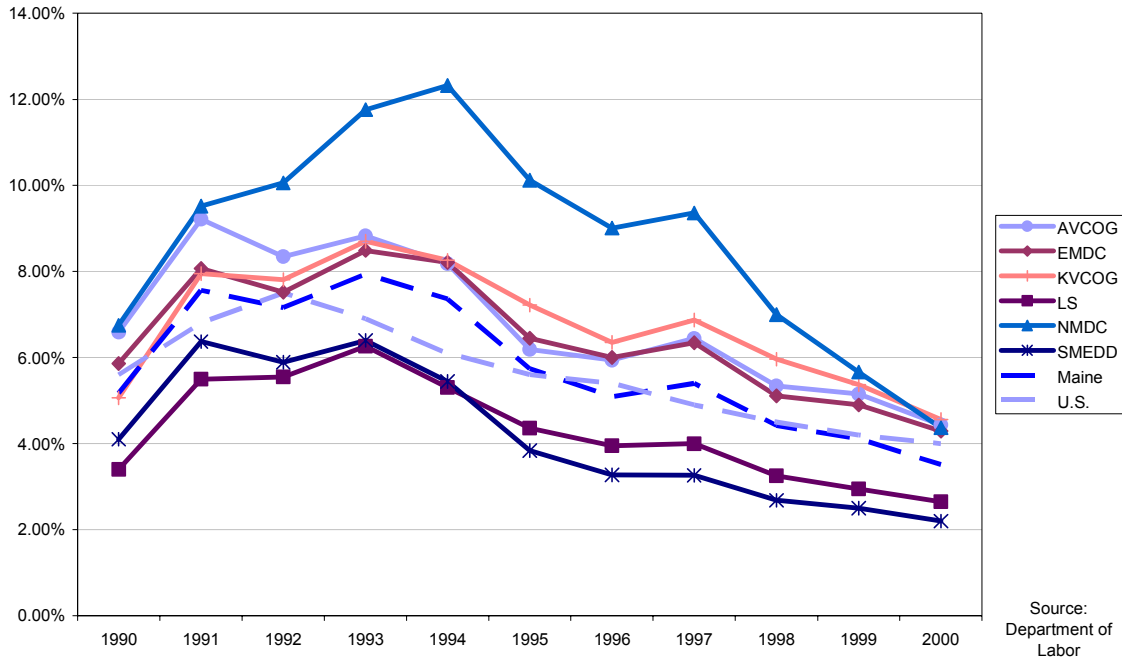
Unemployment in Maine in the 1990s generally followed the U.S. pattern. That is, unemployment in Maine rose in the early part of the decade during the U.S. recession and, except for a blip in 1997, fell continuously for the rest of the decade during the long and strong U.S. expansion. This is shown in Figure 10. Moreover, except for in 1993 and 1994, the state's unemployment rate was very close to the national rate throughout the decade.<sup>6</sup>

The unemployment pattern in the state's economic development districts also followed the pattern in the rest the country. However, the levels of unemployment in the economic development districts were very different. That is, although the general time trends were the same, the extent of unemployment differed considerably across the state.

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<sup>6</sup> In the more recent U.S. economic slowdown, though, the unemployment rate in Maine has been well below that for the country.

**Figure 10**  
**Unemployment Rate**



Unemployment rates in the southern coastal counties, such as in the Lincoln-Sagadahoc and Southern Maine regions, were lower than in the rest of the state and the rest of the country throughout the decade. Unemployment rates in the other four regions were higher than the state and U.S. averages throughout the decade (with the exception of the Kennebec Valley region in 1990). Unemployment rates in the Androscoggin Valley, Eastern Maine, and Kennebec Valley regions were remarkably similar throughout the 1990s (except that it was somewhat higher in Androscoggin Valley in the first two years). With the exception of the year 2000, unemployment rates were always the highest in the Northern Maine region, and particularly so from 1992 to 1997.

Clearly the costs of unemployment were not felt evenly across the state. The average unemployment rate in Northern Maine over the last decade was 8.7 percent, compared to 6.8 percent in the Androscoggin Valley counties, 6.7 percent in the Kennebec Valley counties, 6.5 percent in the Eastern Maine counties, 4.3 percent in

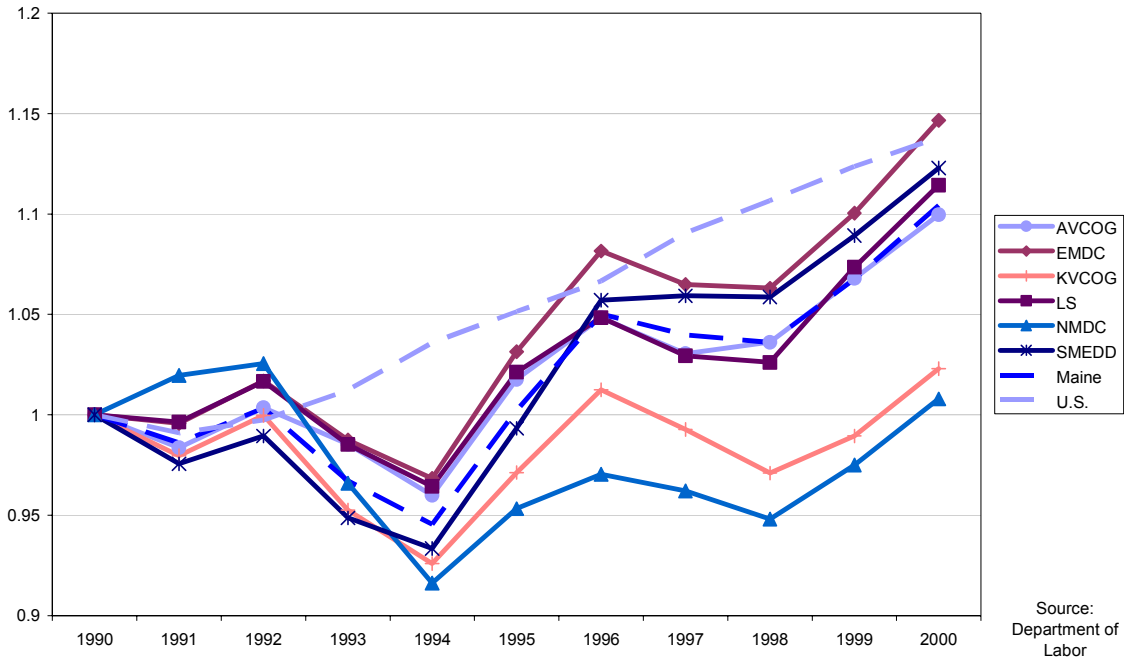
Lincoln and Sagadahoc counties, and 4.2 percent in the Southern Maine counties. The state and country had average unemployment rates of 5.8 and 5.6, respectively.

Moreover, there is a strong negative correlation between the decade unemployment rate and net migration in the economic development districts. That is, the relative net migration percentages shown in Figure 8 are the opposite of the average unemployment rates over the decade. The relative unemployment rates appear to have been an important driving force behind the migration of people from the northern part of the state to the coast.

### **Employment**

Another way of looking at the migration issue is in terms of employment. Changes in unemployment and net migration are driven mainly by changes in net job creation. Figure 11 shows the evolution of employment in the last decade. In this chart each region's employment level in each year is measured against its 1990 value (hence they all start at 1). Not surprisingly, employment growth shown in Figure 11 and the unemployment rate shown in Figure 10 move in opposite directions. Employment growth in Maine lagged U.S. employment growth in the first half of the decade, and this is reflected in the state's higher unemployment rate during this period. Maine's employment growth was also more volatile than the country as a whole, thus Maine's unemployment rate was more volatile than the U.S. unemployment rate.

**Figure 11**  
**Employment Relative to 1990**



As with labor force growth and net migration, the leading economic development districts for job growth were the three coastal regions. The average annual growth rate of employment in the Eastern Maine district was 1.42 percent, and was the only region to exceed the U.S. average of 1.31 percent. The average annual growth rates in the Southern Maine and Lincoln-Sagadahoc districts followed at 1.22 and 1.13 percent, respectively. The overall state average annual growth rate of employment was 1.04 percent. The three non-coastal regions were again below the state average. The Androscoggin Valley district was only slightly behind at 0.99 percent. The Kennebec Valley and Northern Maine districts, however, trailed far behind at 0.28 and 0.13 percent, respectively. In fact, employment in these regions only returned to their 1990 levels in the year 2000. Indeed, the employment level in Aroostook County in 2000 was still below its peak in 1992.

### **Industry Composition**

## **Industry Composition**

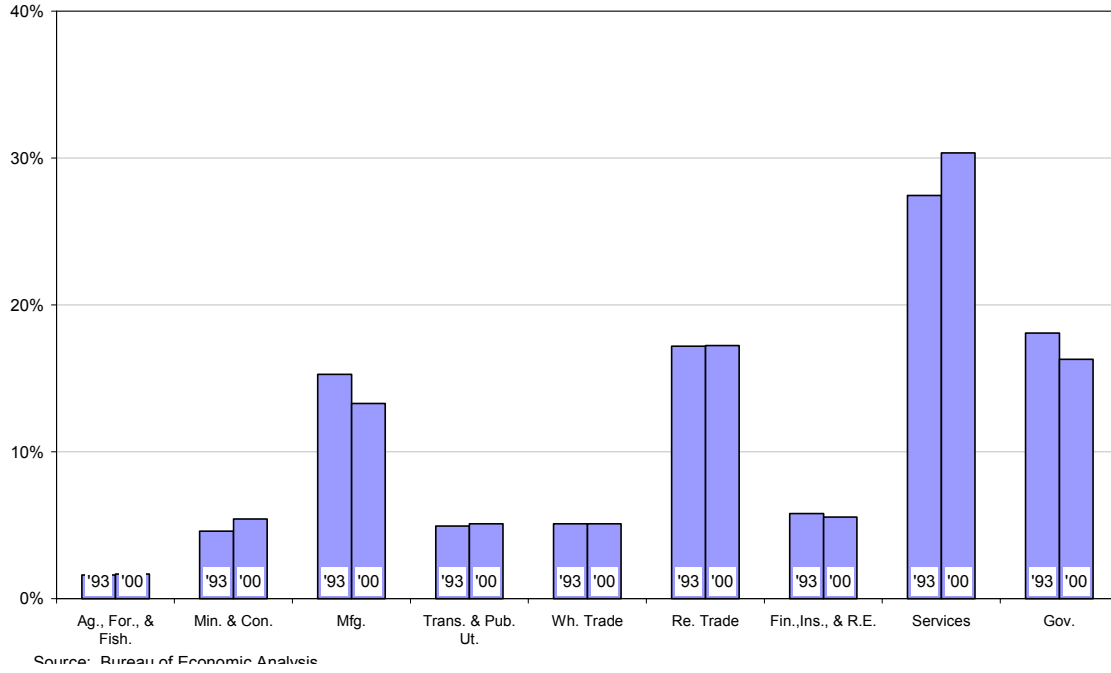
An examination of recent trends in the state's industrial structure concludes this brief overview of recent labor market conditions. Changes in industrial composition are the driving force behind net job creation, which in turn drives unemployment, net migration, and so on. Figure 12 shows the industry shares for U.S. employment in 1993 and 2000 (1993 is the earliest year of readily-available data at the county level). It reveals the well-known trend of a relative decline in manufacturing employment and a relative rise in service employment. It also reveals a relative decline in government employment.

Contrary to some popular wisdom, Maine's industrial structure is very similar to that in the rest of country. Maine's industry employment structure is shown in Figure 13 below. It looks very similar to Figure 12. Maine has no more of a traditional resource-based economy than does the country as a whole.<sup>7</sup> In fact, agricultural services, forestry, and fishing comprise a slightly smaller fraction of the state's employment (1.61 percent during 1993-2000) than in the country as a whole (1.64 percent). Employment in mining is a trivial percentage in the U.S., and is even smaller in Maine. Despite the popular notion of the importance of the timber and fishing industries in our state, the data indicate that they make a relatively small direct contribution to our state's

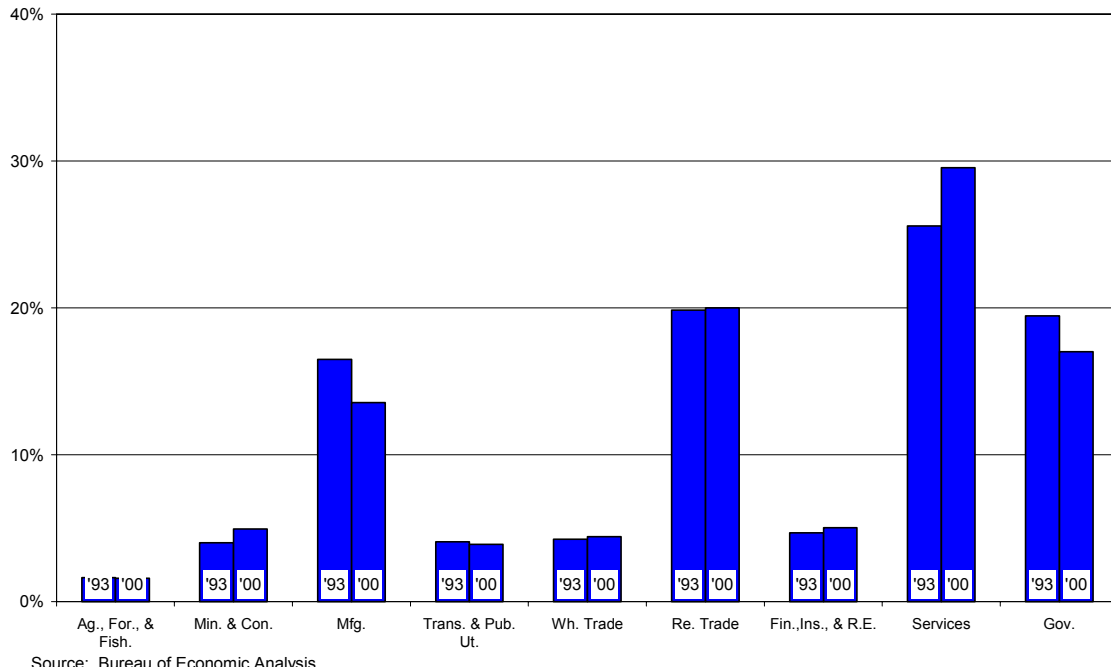
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<sup>7</sup> This ignores the role of natural resources in creating tourism, however.

**Figure 12**  
**U.S. Industry Employment Shares**



**Figure 13**  
**Maine Industry Employment Shares**



prosperity. Maine's economy, just like the American economy today, is not based on the consumption of natural resources.

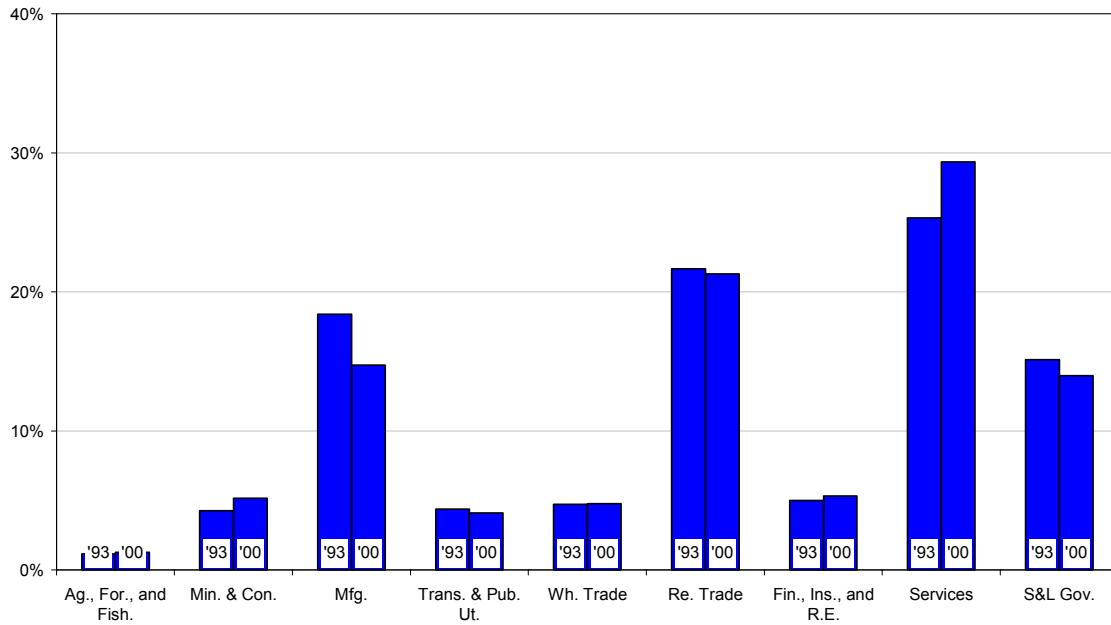


The economies in modern America and Maine are also less manufacturing based. As with natural based industries, Maine is not particularly more manufacturing-based than the country as a whole. Over the 1993-2000 period, 15.0 percent of Maine's employment was in manufacturing. For the U.S. it was 14.3 percent. Moreover, the manufacturing employment in Maine fell faster than in the rest of the country during the 1990s. Thus, in 2000 the percentage-point difference in the shares was 0.25. Similarly, employment in services rose relatively faster in Maine than in the rest of the country. In 2000, Maine's share of employment in services was 0.79 percentage points below the national share. Overall, the industry employment shares in Maine are practically the same as in the rest of the country. The only noticeable differences are that Maine has relatively more employment in retail trade and in government, and a little less in everything else except manufacturing.

County-level data on industry employment are only available for workers covered by state unemployment insurance, which is a slightly smaller population than that used in the previous figures. "Covered" employment is a smaller population mostly because self-employed and federal workers are not included. The same basic picture is shown in these data (Figure 14). Figure 14, using covered employment, is very similar to Figure 13.

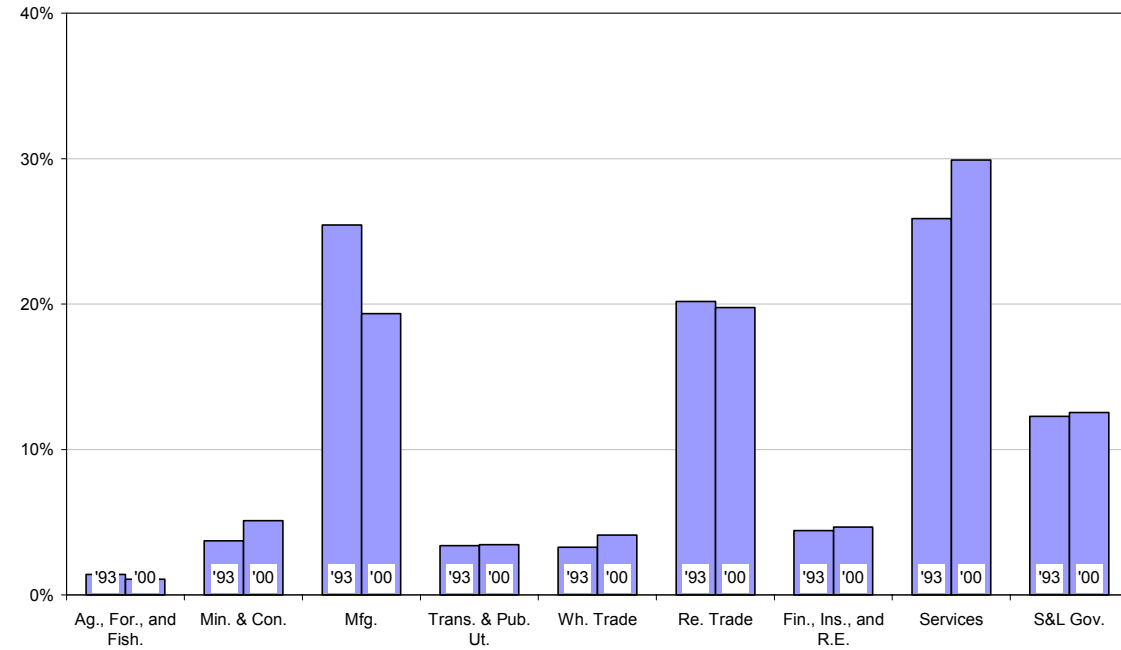
Figures 15 through 20 show the industry employment shares (using "covered employment") in the economic development districts in 1993 and 2000. These figures are much more similar than most people would probably guess. Services, retail trade, and manufacturing are the three most important industries in every district in both 1993 and

**Figure 14**  
**Maine Industry Employment Shares**  
**(Using "Covered Employment")**

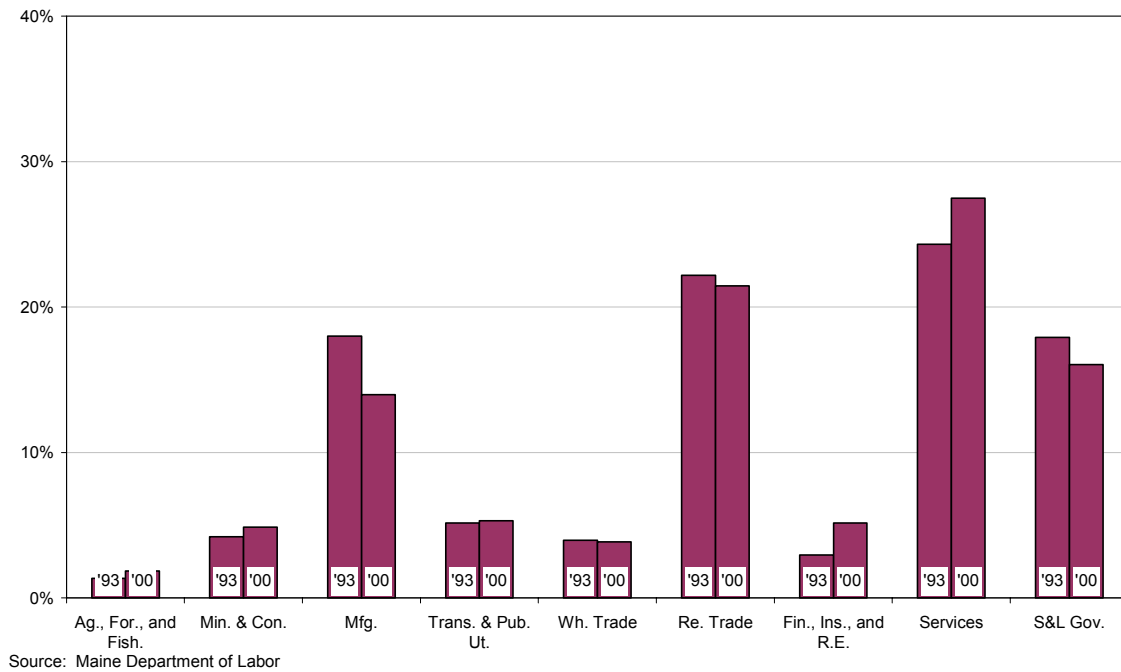


2000. Moreover, the highest employment share is in services in both years every district with the exception of the Lincoln-Sagadahoc region, where it was second. Retail trade and manufacturing had the second and third highest shares, respectively, with the exception of the Lincoln-Sagadahoc region in 1993, and in the Lincoln-Sagadahoc region. In 2000, the services shares in the districts were within the narrow range of 24.6 to 30.9 percent (and all except Lincoln-Sagadahoc were above 27.5 percent). The retail trade shares in 2000 were within the range of 19.0 to 23.6 percent. Moreover, the exceptions to the pattern, Lincoln-Sagadahoc, and to a lesser extent, Androscoggin Valley, moved rapidly toward the state pattern from 1993 to 2000. The manufacturing employment share plummeted in the Lincoln-Sagadahoc district from 38.4 percent to 28.9 percent, while the services share rose from 19.4 percent to 24.6 percent. In the Lincoln-Sagadahoc region the manufacturing employment share fell from 25.4 percent in 1993 to 19.3 percent in 2000.

**Figure 15**  
**AVCOG Industry Employment Shares**



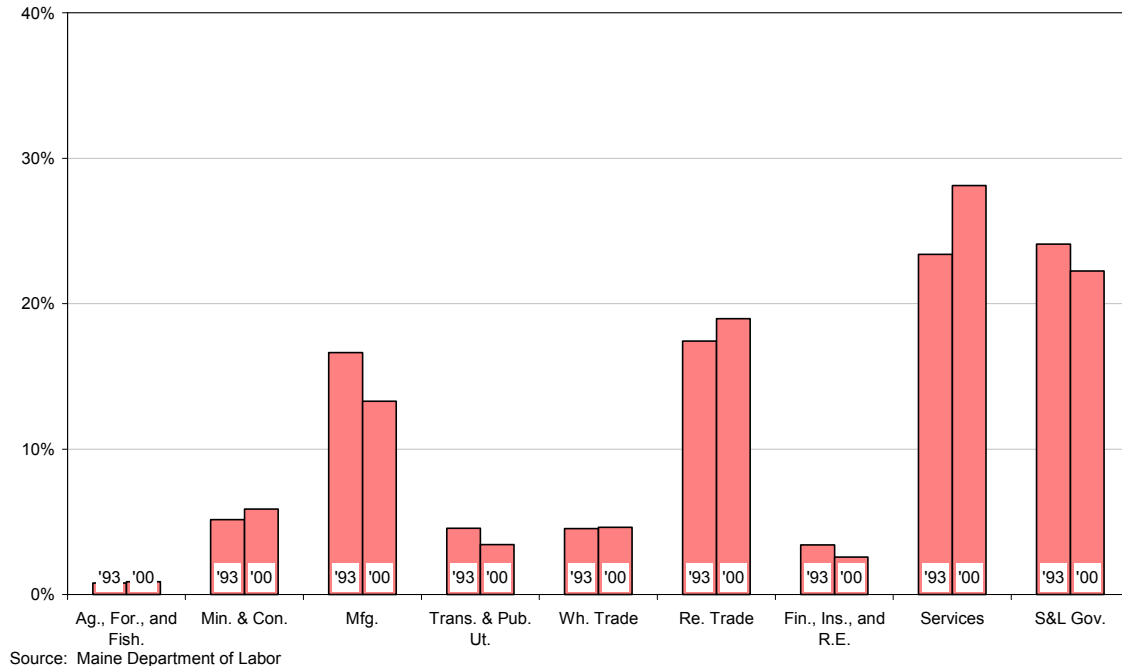
**Figure 16**  
**EMDC Industry Employment Shares**



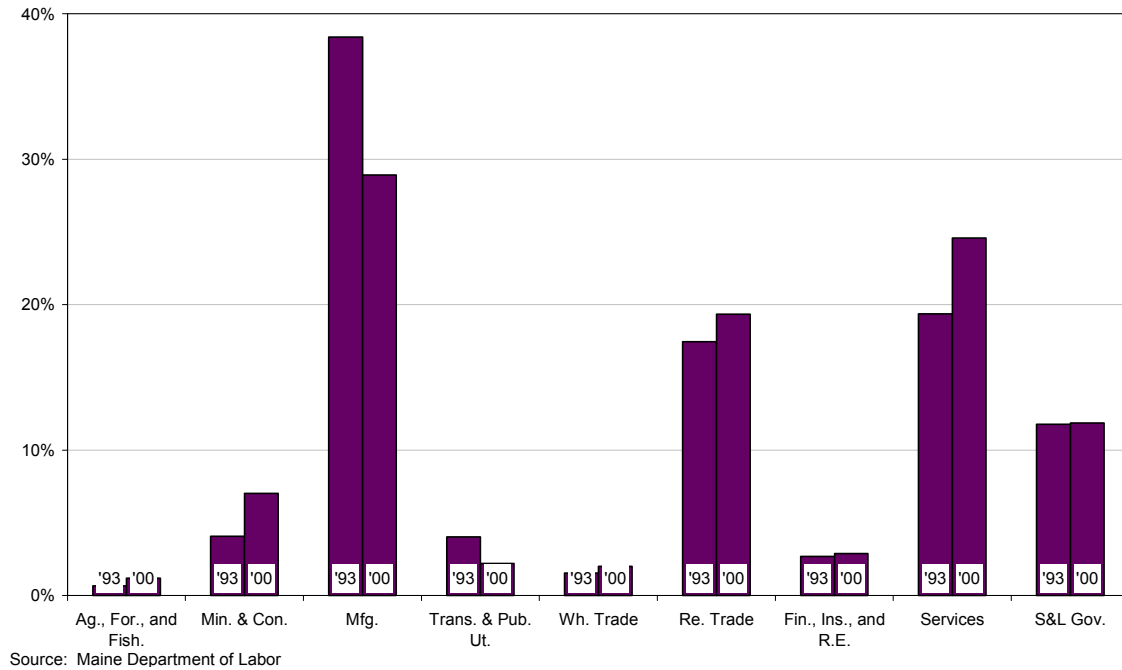
The employment shares across the economic development districts in the other industries are also fairly similar (and fairly small). The Southern Maine region had

relatively

**Figure 17**  
**KVCOG Industry Employment Shares**



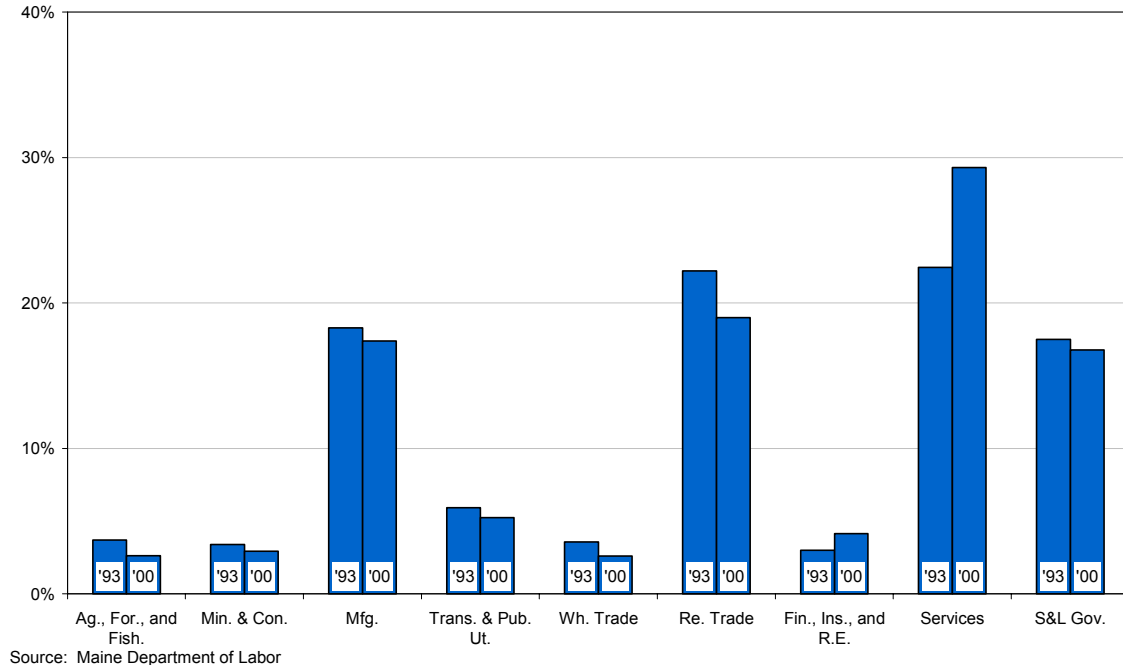
**Figure 18**  
**LS Industry Employment Shares**



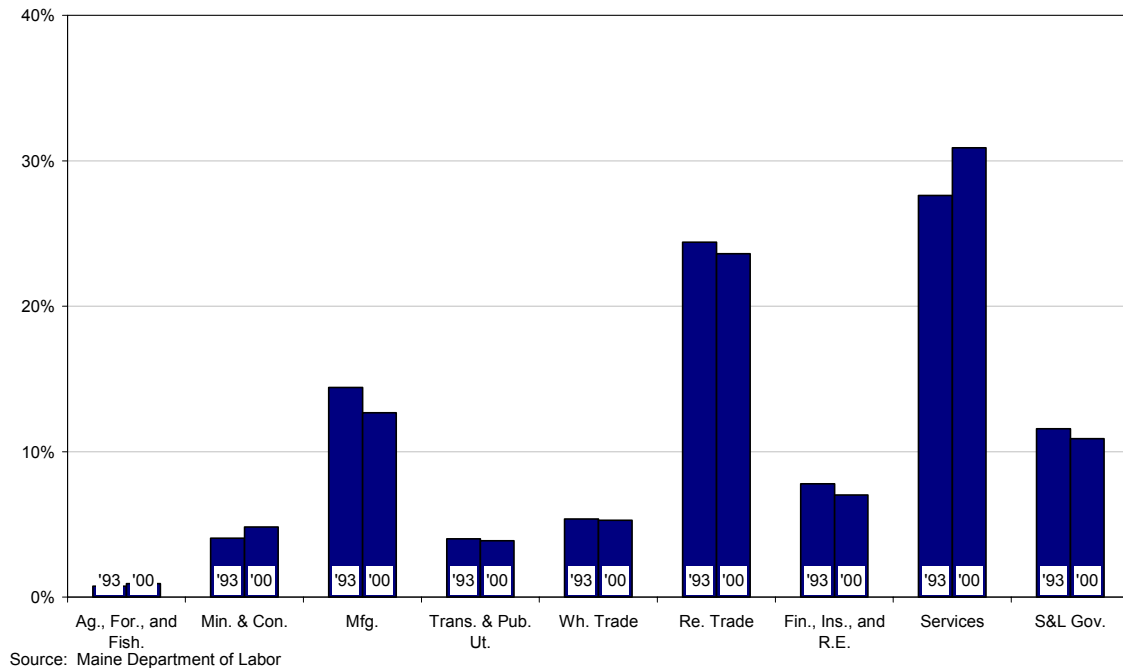
much more employment in finance, insurance, and real estate than in the other regions

(although it grew very quickly in the Eastern Maine region over the period). Employment in this

**Figure 19**  
**NMDC Industry Employment Shares**



**Figure 20**  
**SMEDD Industry Employment**



industry was relatively low in the Lincoln-Sagadahoc, Kennebec Valley, and Northern Maine regions. The Southern Maine region also had relatively more employment in wholesale trade than in the other regions. The Lincoln-Sagadahoc region also had relatively little employment in this industry. The Northern Maine region had relatively more employment in agricultural services, forestry, and fishing than in the other regions, although it was still small (and falling). Even in Aroostook County, the economy is not resource-based. The Kennebec Valley region, not surprisingly, had a much higher employment share in state and local government. The Eastern and Northern Maine districts also had relatively high shares of government employment.

### **If Recent Labor Market Trends Continue**

The final part of this report provides a projection of recent labor market trends into the future. That is, this section shows how labor markets in Maine are likely to change over the next several years. The inspiration for this is a series of publications from the Maine Department of Labor.<sup>8</sup> This section updates their projection of job changes in the state by using data that are two years more recent.<sup>9</sup> The primary purpose of this exercise is to provide information about the likely changes ahead in Maine's job structure.

It should be stressed, however, that what follows is a projection, not a prediction. One of the few sure things that we can truly count on is unanticipated change. Thus, if we had to make a prediction, it would be that the following projection for Maine's labor markets in 2010 will turn out to be "wrong" in some important respects. The projection

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<sup>8</sup> Maine Department of Labor, "Maine Employment Outlook to 2008", 2000; "Projected Employment Opportunities Indicator", 2001; and "Hot Jobs in Maine", 2001.

<sup>9</sup> Another slight difference is that the projections are presented down to the level of the six economic development districts, rather than down to the level of the Maine Department of Labor's four regional workforce investment areas.

that follows only shows what we can expect if current trends continue, and we can be sure that some trends will not continue (if we only knew which ones!). Moreover, policy changes can affect these trends. Hence, this is not prediction of what will happen in Maine and in its economic development districts. It is a projection of what may happen if nothing is done.

### **Methodology**

The approach used to generate the projection follows that used by the Maine Department of Labor in their earlier projection, which followed the approach developed by the U.S. Department of Labor. First, the U.S. Department of Labor constructs a ten-year projection for U.S. industry employment. This projection is based on recent trends for changes in industrial composition and business staffing patterns. Thus, a projection for industry employment is produced under the assumptions of continuing movement from manufacturing to services, labor-saving technological changes in agriculture and manufacturing, greater reliance on computers, etc. From this a ten-year projection for U.S. occupational employment is also constructed. Occupational employment naturally depends on the mix of products being produced (i.e., on industry employment) as well as on labor-saving and labor-augmenting technological changes.

The ten-year projection for relative changes in U.S. industry employment is then applied to Maine's industry structure in 2000. That is, projected growth rates of employment in each of the 184 industries in the U.S. Department of Labor projection are applied to the most recent data on Maine's industry employment. The assumption is that employment in each of Maine's industries will grow at the same rate as in the rest of the country.

## **Industry Employment**

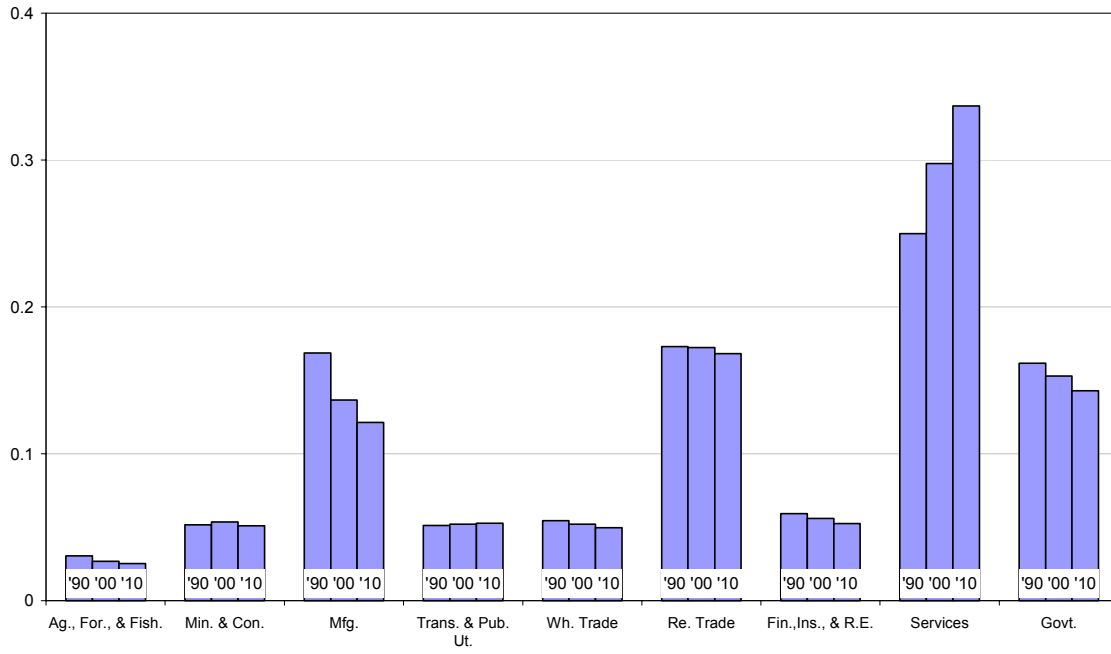
Projected 2010 employment shares in broad industry categories in the U.S. are shown in Figure 21.<sup>10</sup> Not surprisingly, most of the projected job growth in this decade is in the service sector. Projected net job creation from 2000 to 2010 is 22.16 million, which is 15.2 percent growth for the decade. Well over half of this employment growth, 12.89 million jobs, is expected in the service sector. Employment in services is expected to grow by almost a third (which is down from the 44 percent growth experienced in the 1990s). Although employment is projected to expand in every broad sector (with the exception of services and transportation, communications, and public utilities) each sector's the share of total employment is projected to fall. The slowest employment growth is expected to continue to be in manufacturing. Figures 22 and 23 show some of

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<sup>10</sup> The employment shares for 1990 and 2000 in Figure 21 are slightly different from those in Figure 12 mainly because of different treatments of self-employed workers by the Department of Labor and the Bureau of Economic Analysis.



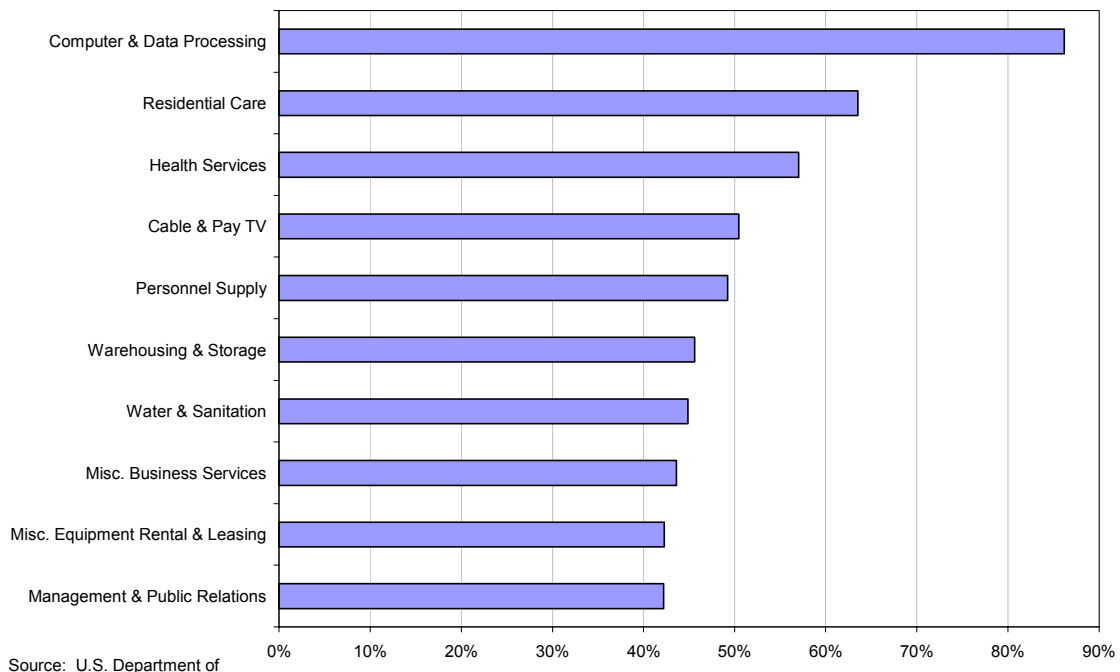
**Figure 21**  
**Projected U.S. Industry Employment Shares**



Source: U.S. Department of Labor

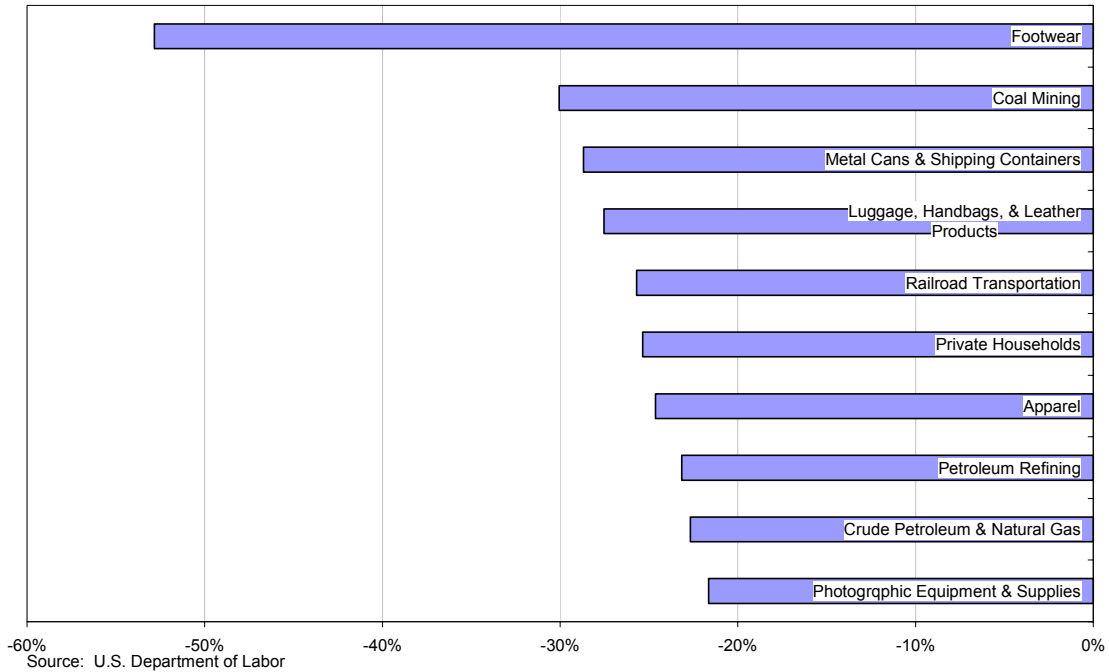
the more specific projected industry winners and losers. In particular, the top ten and bottom ten industries in the projected rate of employment expansion are shown in Figures

**Figure 22**  
**U.S. Industries with the Fastest Projected Growth in Employment from 2000 to 2010**



Source: U.S. Department of

**Figure 23**  
**U.S. Industries with the Fastest Projected Contraction in Employment from 2000 to 2010**

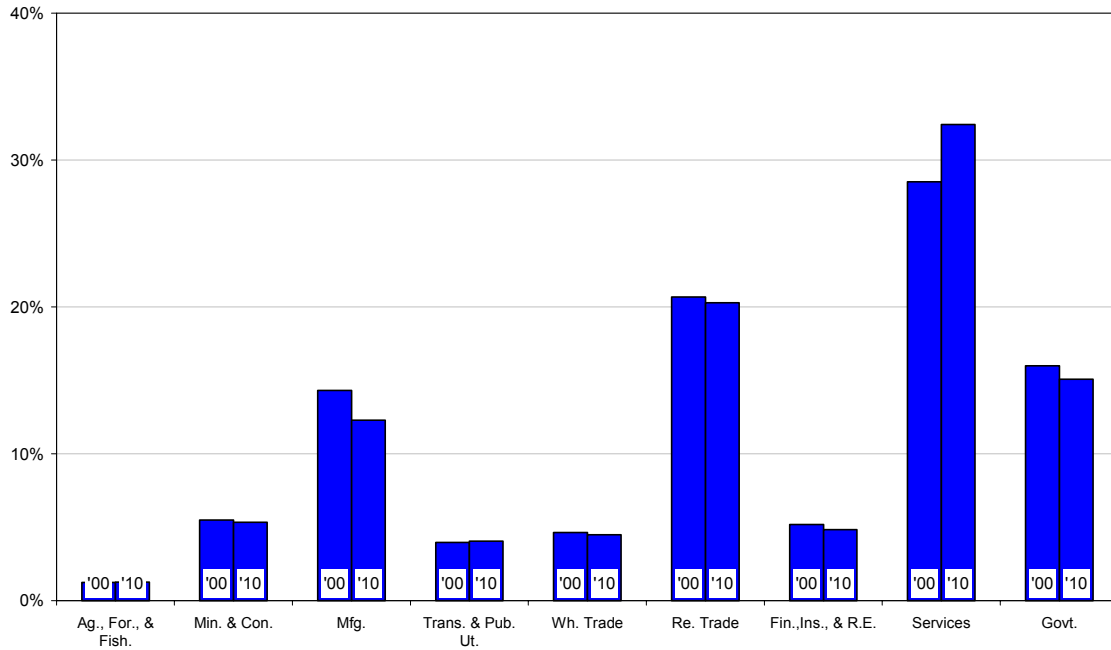


22 and 23, respectively.<sup>11</sup> Seven of the projected top ten growing industries are in the service sector. Six of the projected bottom ten industries are in manufacturing.

Figure 24 shows Maine's projected 2010 employment shares in the broad industry categories. The pattern is again very similar to that for the country as a whole. Projected net job creation in the state from 2000 to 2010 is 89,621, which is 15.1 percent growth for the decade. 52,287 (58.3 percent of the total) of these net jobs created are expected in the service sector. Unlike in the rest of the country, though, the decline in the number of manufacturing jobs is projected to continue as it did in the 1990s. That is, Maine's share of employment in manufacturing is projected to continue to decline faster than in the rest of the country. Figures 25 and 26 show the biggest projected industry winners and losers in terms of the number of jobs. The biggest job gains are projected to be in retail trade

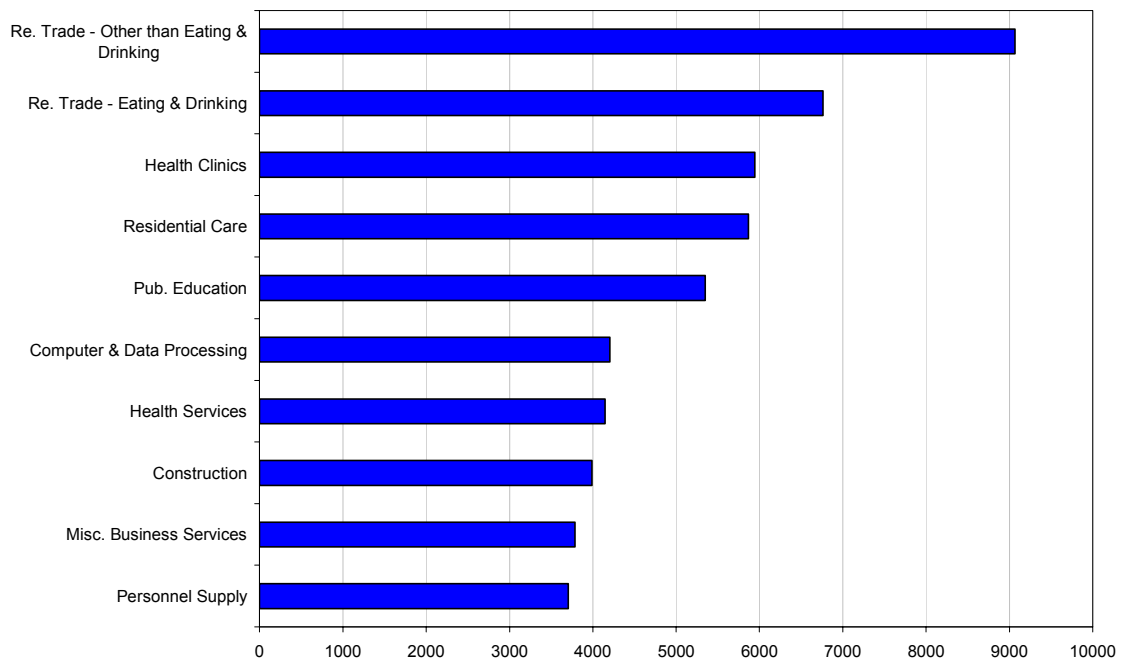
<sup>11</sup> Actually, manufacturing of watches and clocks is projected to be the most rapidly declining industry, but its 2000 employment is so small (5,300 jobs, which is 0.00036 percent of total employment) compared to the other sectors that it is omitted in Figure 23.

**Figure 24**  
**Projected Maine Industry Employment Shares**

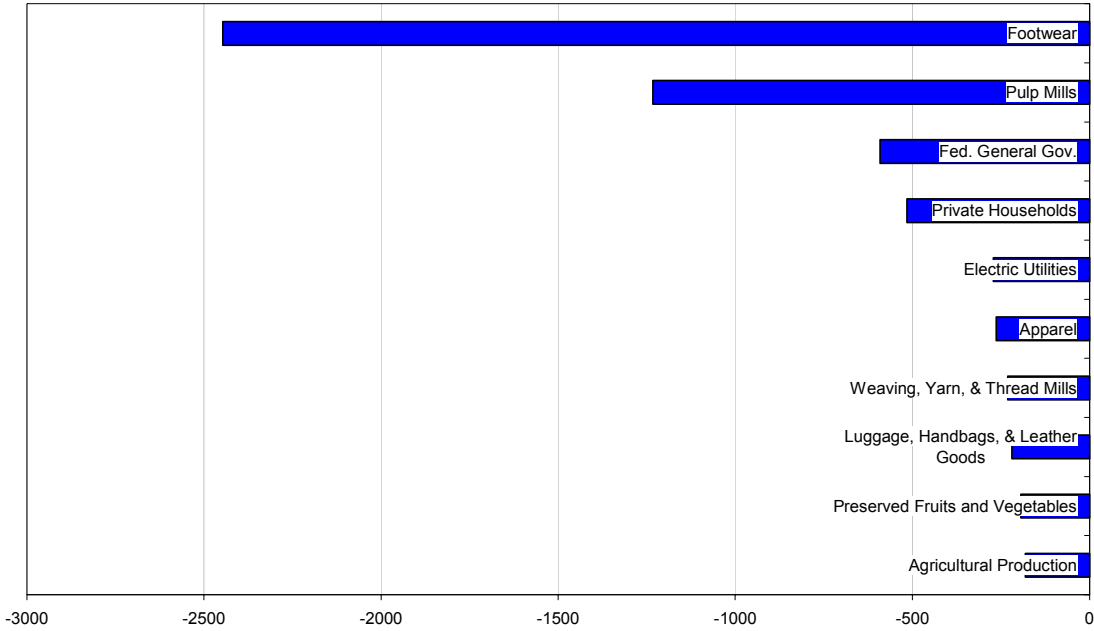


and health services. The two retail trade sectors combined account for 17.7 percent of the projected net job growth. The four health service sectors combined account for 17.6

**Figure 25**  
**Maine Industries with the Largest Projected Employment Growth from 2000 to 2010**



**Figure 26**  
**Maine Industries with the Largest Projected Employment Contraction**  
**from 2000 to 2010**



percent of the projected growth in employment. The biggest job losses are projected to be in footwear and pulp mills. Combined, these sectors are expected to lose 3,679 jobs between 2000 and 2010.