

# UNORTHODOX SOLUTIONS

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## A New Look at U.S. and European Unemployment

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*Despite ongoing structural reforms, many European countries continue to suffer high rates of unemployment relative to the United States. The authors argue that reported unemployment statistics for both the EU-15 countries and the United States understate the degree of unemployment. Their work is based on an “age-adjusted” unemployment rate, which takes into account changes in the age and gender structure of the population. But they argue that without these factors, the reported unemployment rate is a misleading measure of the strength of the economy.*

**T**HE PAST DECADE brought significant changes in the governance of western Europe. Since the signing of the Maastricht treaty in 1992 and the subsequent adoption of the euro, the economic organization among member states has been restructured. On May 1, 2004, the European Union (EU) increased its membership from fifteen to twenty-five countries. The euro, after getting off to a slow

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start, appreciated significantly against the dollar, only to slide back again over the past year. Despite its claims of serving to liberalize economic relations among members and mediating trade relations between the EU and the rest of the world, the EU remains an organization of complex rules and regulations and a bureaucratic nightmare when significant reforms are on the table. The recent rejection of the new constitution by France and the Netherlands is only the most recent setback for the EU.

The closing decade of the twentieth century was marked by significant economic growth in the United States. Real gross domestic product (RGDP) grew at an annual rate of 3–4 percent for most of the 1990s. The reported unemployment rate declined from 7.5 percent of the civilian labor force in 1992 to only 4.0 percent in 2000. Inflation rates remained low by historical standards, and the federal government budget was actually in the black, albeit for a short time. Although the economy slowed during the first three years of this century, the performance of the U.S. economy has been stronger than Europe's over the last decade. Annual growth in RGDP in the United States was almost 1 percent higher than in the European Union before 2004 (EU-15)—3.23 percent versus 2.25 percent.<sup>1</sup> Over the same period, the average unemployment rate in the United States was 5.1 percent compared with 8.6 percent in the EU-15.

Although the unemployment rate in the EU-15 has fallen over the past ten years, it still remains well above the unemployment rate in the United States. The unemployment rate in France has hovered near or above 10 percent since the mid-1980s and has only recently fallen below 10 percent. Spain experienced even higher unemployment during the same period. During the mid-1980s and the 1990s, unemployment rates were close to 20 percent. Even the largest economy in Europe, Germany, has been plagued by unacceptably high unemployment rates. Numerous writers have argued that the institutional structure of European economies results in greater labor market rigidities. Relative to the United States, employers in Europe generally have less freedom to hire and fire workers, unemployed workers receive benefits that are a larger percentage of their income and for a longer

duration, and monetary authorities appear to place a greater weight on low inflation than on low unemployment. Despite ongoing EU competition policies, there remains greater state intervention in the economy than in the United States.

No matter what the economic organization, one undeniable fact is that with few exceptions, most countries in the euro zone continue to suffer high rates of unemployment relative to historical experience and in comparison to the United States. These high unemployment rates have come during a period when the population and labor force of most Western European countries is aging. Since younger workers, who have higher-than-average unemployment rates, comprise a smaller share of the workforce, the reported unemployment rate should fall. Conversely, if the demographics of the labor force had not changed, the unemployment rate would be higher than is reported. Thus, the poor unemployment record of the EU-15 would have been even worse.

This paper constructs age-adjusted unemployment rates for the United States and the European Union before 2004. Reported unemployment rates, which are calculated as the ratio of the unemployed to the labor force, do not take into account changes in the age and gender composition of the workforce. Although there are some differences in the way each country classifies workers as either unemployed or part of the labor force, this technique for calculating the unemployment rate is used in the United States and the EU-15. The alternative age-adjusted unemployment rate developed here controls for the changes in the age and gender composition of the labor force. It contends that the adjusted unemployment rates present a more accurate picture of the long-run unemployment situation.

## **Demographics of the Labor Force**

It is now well known that the population in the United States and even more so in Europe is aging. With fertility rates close to or lower than the replacement rate, the aging population is likely to impose a significant fiscal burden as the dependency ratio increases. What is

less clear is the impact of an aging population on the labor force and the unemployment rate. Table 1 presents the age and gender distribution of the labor force of the active population from 1984 to 2003 for the United States and the EU-15. A few observations are readily apparent from the data presented.

For both regions, the share of younger workers (age fifteen to twenty-four) in the labor force has declined substantially. Among the EU-15, the share of young men in the labor force fell from around 11 percent to 6.4 percent. Although young women represent a smaller share of the labor force than young men, their share has fallen as well. A similar pattern can be seen in the U.S. data. Young workers (men and women) accounted for just over 21 percent of the labor force in 1984. By 2004, they made up only 15.1 percent of the workforce.

Not only has the number of young workers decreased in relative terms, it has also fallen in absolute terms. From 1984 to 2003, the number of young workers in the United States fell from roughly 24 million to 22 million. This shift is even more dramatic in the EU-15, where the number of young workers has fallen from 29 million to 22 million. In France there were over 1 million more young workers in 1984 than in 2003. Young workers in the United Kingdom fell by close to 2 million, almost a 33 percent drop. In Italy the number of workers has fallen by 2 million, a 45 percent decrease since 1984.

As would be expected, the trend for older workers is the reverse of younger workers. In the EU-15, workers in the twenty-five- to fifty-four age groups increased their labor share from 68 percent to 76 percent. In the United States, these workers' labor share rose from 66 percent to 69 percent. For workers over fifty-five, labor force shares increased from 13 to 15.6 percent in the United States but remained relatively flat in the EU-15.

Besides an overall change in the demographics of the population, other factors may have influenced the changes in labor force shares. For young workers, one explanation may be that they are delaying entry into the workforce by going to school. In the EU-15, for example, although the population of people aged fifteen to twenty-four

Table I  
**Age and Gender Distribution of the Labor Force**

Age Group	1984		1990		1995		2000		2003	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
United States										
15-24	11.2	9.9	9.5	8.4	8.6	7.6	8.3	7.5	7.9	7.2
25-54	37.3	28.5	38.5	31.7	38.8	33.2	38.0	33.1	37.3	32.0
55-64	6.2	4.3	5.3	3.9	4.9	4.0	5.5	4.6	6.5	5.7
65+	1.5	1.0	1.6	1.2	1.7	1.2	1.7	1.3	1.9	1.5
European Union (15)										
15-24	11.0	8.9	9.6	8.0	7.5	6.1	6.7	5.6	6.4	5.3
25-54	42.5	25.5	42.5	28.8	43.5	32.0	43.0	33.5	42.3	33.8
55-64	7.2	3.6	6.6	3.3	6.2	3.5	6.2	3.8	6.6	4.3
65+	0.9	0.5	0.8	0.4	0.8	0.4	0.8	0.4	0.8	0.4

Source: The raw data used to calculate the labor force share was obtained from the Organization for Economic Cooperation and Development (OECD) "Labor Force Statistics" database ([www.oecd.org](http://www.oecd.org)).

fell by 15 percent, the labor force of people in that age group fell by 27 percent. The fact that the labor force share of older workers (fifty-five-plus) did not change in the EU-15 over this period, even though their population rose substantially, could reflect a desire to retire earlier in this region than in the United States due to generous pensions and health care.

### **Age-Adjusted Unemployment Rates in the EU-15 and the United States**

What the data make clear is that the labor force in both the United States and the EU-15 has aged over the last twenty years. Since the labor force shares of those with above-average unemployment rates— young workers—have fallen over time, the effect should be to reduce the unemployment rate below what it otherwise would have been. If the labor force shares had not changed, the unemployment rate would actually be higher.

The alternative “age-adjusted” unemployment rate (AAUR) that we develop here controls for the changes in the age and gender composition of the labor force by weighting each age and gender group’s unemployment rate by its respective share of the labor force in a given base year.<sup>2</sup>

The AAUR provides an accurate description of what the unemployment rate would have been had the age/gender composition of the workforce remained as it was in the base year. The AAUR in effect controls for changing demographic characteristics of a population such as a baby boom or bust, a change in retirement policies, or the influx of women into the labor force. If the AAUR is greater than the reported rate, then not taking into account changes in the age and gender structure of the labor force results in understating the unemployment rate.

The results for the United States and the EU-15 are presented in Table 2. We opted for 1984 as the base year in order to have a consistent series for both the EU-15 and the United States.

Since the mid- to late 1980s, the age-adjusted unemployment rate

Table 2

**Age-Adjusted Unemployment Rates (AAURs), 1984–2003**

	United States			European Union–15		
	AAUR	Rpted	Difference	AAUR	Rpted	Difference
1984	7.5	7.5	0.0	10.5	10.5	0.0
1985	7.2	7.2	0.0	10.6	10.6	0.0
1986	7.1	7.0	0.1	10.5	10.5	0.0
1987	6.3	6.2	0.1	10.3	10.3	0.0
1988	5.7	5.5	0.2	9.7	9.7	0.0
1989	5.5	5.3	0.2	8.9	8.9	0.1
1990	5.8	5.6	0.2	8.4	8.3	0.1
1991	7.1	6.8	0.3	8.8	8.6	0.2
1992	7.8	7.5	0.3	9.9	9.6	0.3
1993	7.2	6.9	0.3	11.1	10.7	0.5
1994	6.4	6.1	0.3	11.6	11.1	0.5
1995	6.0	5.6	0.4	11.2	10.6	0.6
1996	5.8	5.4	0.4	11.4	10.7	0.6
1997	5.3	4.9	0.4	11.2	10.6	0.6
1998	4.9	4.5	0.3	10.4	9.9	0.6
1999	4.5	4.2	0.3	9.7	9.2	0.6
2000	4.3	4.0	0.3	8.7	8.2	0.5
2001	5.1	4.7	0.4	7.8	7.4	0.5
2002	6.2	5.8	0.4	8.2	7.7	0.5
2003	6.5	6.0	0.5	8.6	8.1	0.6

Source: The data to calculate both the AAUR and the reported unemployment rate was obtained from the Organization for Economic Cooperation and Development (OECD) "Labor Force Statistics" database ([www.oecd.org](http://www.oecd.org)). For the EU-15, the reported rate is not the same as the "standardized" unemployment rate calculated by the OECD.

has exceeded the reported rate in both regions. This result indicates that the aging of the population has exerted a downward pressure on European and American unemployment rates, since the rates would have been higher had the age structure of the labor force remained constant.

This effect is most apparent when one considers the labor force shares and unemployment rates of younger workers. In both 1984 and 2003, although the unemployment rates of young workers fell in both the EU-15 and the United States, young workers' unemployment

rates were still roughly twice the overall unemployment rate. In the EU-15, for example, the unemployment rates for young men were 20.8 percent and 15.6 percent respectively. The overall unemployment rates, however, were 10.5 percent and 8.1 percent. In the United States, the unemployment rates for young men were 14.4 percent and 13.4 percent, with the overall unemployment rates 7.5 percent and 6.0 percent. Since the labor force shares of young workers fell, there is a downward pressure on the unemployment rate. Similarly, the increasing labor force shares of older workers, who have lower unemployment rates than the overall average, also put a downward pressure on the unemployment rate over time.

Although the differences between the age-adjusted and the reported rates may seem small at first glance, the differences are significant in absolute terms. In 2003, the reported unemployment rate for the EU-15 was 8.1 percent, and over 14 million were unemployed.

However, had the age and gender composition of the labor force remained the same since 1984, the unemployment rate would have been 0.6 percentage points higher. Given the size of the labor force, there would have been almost 1 million additional unemployed workers. The additional 0.5 percentage point in the United States would have resulted in just over 700,000 additional unemployed workers.

## **Concluding Comments**

This paper offers an alternative measure of the unemployment rate that takes into account changes in the demographics of the labor force. By adjusting the unemployment rate for age and gender changes, we are able to observe what the U.S. and EU-15 unemployment rates would have been had the labor forces not aged. The data presented here show that had the labor force not changed, the unemployment rates for the United States and the EU-15 would have been significantly higher. Although these observations are important in their own right, we must also answer the question “What significance does this have in terms of current and future economic policy?”

Over the period studied, the unemployment record in the United States is clearly superior to that of the EU-15. Although labor markets were slow to recover after the end of the recession in November 2001, the unadjusted unemployment rate in the United States fell to 5 percent in October 2005. Due to strong growth in the economy and perceived inflationary pressure, since June 2004, the Federal Reserve has gradually increased interest rates to moderate economic growth and price stability. Over the same period, the EU-15's economic recovery has been relatively modest compared to that in the United States. Although current unemployment rates have inched downward, they are still higher than they were four years ago. Despite a fragile recovery, the European Central Bank (ECB) increased its benchmark interest rate in December 2005 in an effort to bring inflation back down to its target of 2 percent.

Raising interest rates in both regions because of fear of inflation may be somewhat premature and unwarranted. The results presented in this paper suggest that there is more slack in labor markets than would normally be expected when the unemployment rate falls as low as it has. If true, economic growth at its current level is unlikely to lead to higher price inflation. Although monetary policy in both regions is formulated to maintain stable inflation expectations, the ECB has taken a stronger stance than the Federal Reserve. Further interest rate increases at this time may come at the cost of higher unemployment.

Finally, critics both inside and outside the European Union often cite the region's labor market rigidities as a contributing factor to high unemployment. Although our results do not bear directly on labor market rigidities, we do show that the unemployment problem in Europe is even greater than the reported numbers indicate. Most of Europe today seems to be unable to maintain high employment rates even with a population clustered around prime working ages.

## **Notes**

1. The member countries of the EU-15 are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

2. Formally, the adjusted unemployment rate  $u^*$  in year  $t$  is calculated as:

$$u_t^* = \sum_i LF_i \times u_{it},$$

where  $LF_i$  is the labor force share of group  $i$  in the base year, and  $u_{it}$  is the unemployment rate of group  $i$  in year  $t$ .

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