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Unemployment and Labor Market Rigidities: Europe versus North America

Stephen Nickell

Here is the received wisdom. The European job market is rigid and inflexible. Result: high unemployment. The North American job market is dynamic and flexible. Result: low unemployment. So Europeans had better do something about their labor markets unless they want permanent double digit unemployment.

In fact, this is not *totally* wrong. There are features of the labor markets in some European countries that help sustain high levels of unemployment. Some of these features can be thought of as rigidities. However, there are many other so-called rigidities that do not cause high unemployment and, indeed, may serve a useful purpose. So it is important to know which features of the labor market cause high unemployment and which do not. This is the subject of what follows.

Labor Market Outcomes in Europe and North America

While it is sometimes convenient to lump all the countries of western Europe together in order to provide a suitable contrast to North America, most of the time it is a rather silly thing to do. Different European countries are effectively different labor markets with the intercountry movement of labor being very small, mainly because of language and cultural barriers. Partly as a consequence of these differences, labor markets in Europe exhibit enormous diversity; in fact, differences within Europe are much greater than are the difference between the European average and North America. This section looks at some of these differences, first

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Table 1
Unemployment Rates in the OECD

	1983–96	1983–88		1989–94			
	<i>Total</i>	<i>Total</i>	<i>Short-term</i>	<i>Long-term</i>	<i>Total</i>	<i>Short-term</i>	<i>Long-term</i>
Austria	3.8	3.6	na	na	3.7	na	na
Belgium	9.7	11.3	3.3	8.0	8.1	2.9	5.1
Denmark	9.9	9.0	6.0	3.0	10.8	7.9	3.0
Finland	9.1	5.1	4.0	1.0	10.5	8.9	1.7
France	10.4	9.8	5.4	4.4	10.4	6.5	3.9
Germany (W)	6.2	6.8	3.7	3.1	5.4	3.2	2.2
Ireland	15.1	16.1	6.9	9.2	14.8	5.4	9.4
Italy	7.6	6.9	3.1	3.8	8.2	2.9	5.3
Netherlands	8.4	10.5	5.0	5.5	7.0	3.5	3.5
Norway	4.2	2.7	2.5	0.2	5.5	4.3	1.2
Portugal	6.4	7.6	3.5	4.2	5.0	3.0	2.0
Spain	19.7	19.6	8.3	11.3	18.9	9.1	9.7
Sweden	4.3	2.6	2.3	0.3	4.4	4.0	0.4
Switzerland	1.8	0.8	0.7	0.1	2.3	1.8	0.5
U.K.	9.7	10.9	5.8	5.1	8.9	5.5	3.4
Canada	9.8	9.9	9.0	0.9	9.8	8.9	0.9
U.S.	6.5	7.1	6.4	0.7	6.2	5.6	0.6
Japan	2.6	2.7	2.2	0.5	2.3	1.9	0.4
Australia	8.7	8.4	5.9	2.4	9.0	6.2	2.7
New Zealand	6.8	4.9	4.3	0.6	8.9	6.6	2.3

Source: OECD Employment Outlook, U.K. Employment Trends, U.S. Bureau of Labor Statistics.

with regard to unemployment and then with regard to other labor market outcomes, notably job and worker mobility, and wage flexibility.

Table 1 sets out some information on unemployment¹ where we focus on the recent past, namely the period following the major recession of the early 1980s. The first column provides an up-to-date summary picture; the other columns present averages over two subperiods, which will be used for more detailed analysis. The immediate point that stands out is the enormous variation in European rates. Taking the period 1983–1996, these stretch from 1.8 percent in Switzerland to 19.7 percent in Spain. This variation means that around 30 percent of the popu-

¹ Table 1 uses OECD standardized rates, with the exception of Austria, Denmark and Italy. For Austria and Denmark, the table presents national registered rates. For Italy, the table presents the unemployment rate as calculated by the U.S. Bureau of Labor Statistics “on U.S. concepts.” Aside from Italy, the OECD rates and BLS rates are very similar. For Italy, the OECD rates appear to include the large number of Italians who are registered as unemployed but have performed no active job search in the previous four weeks. Finally, the unemployment rate here is for *West* Germany, both to maintain comparability across time and because including a “transition economy” in the data would weaken comparability across countries.

lation of OECD Europe lives in countries and operates in labor markets with average unemployment rates lower than that of the United States.

A closer look at Table 1 raises two additional points. First, the European countries with the lowest unemployment rates (Austria, West Germany, Norway, Portugal, Sweden and Switzerland) are not noted for the flexibility of their labor markets. Britain, on the other hand, has always had the most flexible labor market in Europe on standard measures and yet has an average unemployment rate higher than half of its European neighbors.

Second, it is worth remarking on the fact that the variation in short-term unemployment is substantially smaller than that in long-term unemployment, where long-term is defined as a duration of more than a year. Thus, while countries require some short-term unemployment, long-term unemployment appears to be an optional extra. The reason is that long-term unemployment, in contrast to the short-term variety, contributes very little to holding down wage pressure and hence inflation (OECD, 1993, p. 94). The long-term unemployed are far enough away from the active labor market that their presence has little influence on wages. So if some suitable microeconomic policy can eliminate long-term unemployment, this will have few adverse macroeconomic implications. That is, it will not require much of a rise in short-term unemployment to maintain stable inflation.

Instead of concentrating on unemployment rates, some commentators prefer to focus on total employment, noting, for example, that North American employment has risen much faster in recent years than has European employment. Such a contrast is not helpful, however, because there is no control for different rates of growth in the population of working age. Controlling for this by normalizing on the size of the labor force takes one back to unemployment. A more reasonable alternative is to focus on employment/population ratios, although these tend to be strongly influenced by all the social and cultural factors that affect the labor market participation of married women. Table 2 presents evidence on alternative labor supply measures, like the employment/population ratio.

The first two columns of Table 2 show the ratio of employed persons to the total working-age population and the ratio for males ages 25–54. The cross-country variation in overall employment/population ratios is due to a variety of factors. Particularly important are variations in the participation rates of married women (which are very low in southern Europe), variations in the retirement rates of those over the age of 55 (OECD, 1996, p. 188) and variations in the employment rates of prime-age men, shown in the second column of the table. The third column of the table shows annual hours worked by the average worker in these different economies. Differences in this column are dominated by the extent of part-time working and by variations in weekly hours and annual holiday entitlements. Many countries in continental Europe have low annual hours actually worked even excluding part-time workers, because of their low weekly hours and long annual holidays compared to those of the United States and Japan. This does not imply that European workers would like to work more paid hours per year. Indeed, across the EC, more people would like to work *fewer* paid hours than would like to work more paid hours at

Table 2
Alternative Labor Supply Measures

	<i>Employment/Population Ratio (%) (whole working age population)</i>	<i>Employment/Population Ratio (%) (males age 25–54)</i>	<i>Annual Hours Worked per Worker</i>	<i>Overall Labor Supply (%)</i>
Austria	67.3	86.6	1600	51.6
Belgium	56.1	87.4	1580	42.6
Denmark	75.0	86.6	1510	54.5
Finland	67.1	82.4	1770	57.1
France	59.8	87.9	1650	47.4
Germany (W)	65.2	87.0	1600	50.0
Ireland	53.2	80.3	1750	44.8
Italy	54.0	84.3	1730	44.9
Netherlands	62.2	86.5	1510	45.2
Norway	73.3	87.4	1430	50.4
Portugal	69.3	90.6	2000	66.6
Spain	47.5	81.5	1820	41.6
Sweden	75.6	88.2	1510	52.0
Switzerland	78.6	94.7	1640	62.0
UK	69.6	86.7	1750	58.6
Canada	70.6	84.7	1740	59.0
U.S.	73.1	88.2	1940	68.2
Japan	73.4	95.9	1960	69.2
Australia	68.2	86.5	1870	61.3
New Zealand	68.0	86.6	1830	59.8

Source: *OECD Employment Outlook* (1996), Tables A, B and C.

given hourly rates (European Economy, 1995, Table 25a). The final column, “overall labor supply,” combines the annual hours worked and employment/population ratios. Take the annual hours worked as a percentage of 2080 hours, which represents a full-time year of working 40 hours a week for 52 weeks. Multiply this by the employment/population ratio. The result can be thought of as the proportion of total “potential” hours worked in the economy. Total labor supply varies enormously across countries, with Japan, Portugal and the United States all supplying about two-thirds of potential hours, while Spain and Belgium supply barely 40 percent of potential.²

Another way of putting the unemployment/rigidity story into a broader perspective is to look at job and worker mobility. Job turnover is defined as the sum of the gross job creation and job destruction rates across companies; that is, the total of all new jobs generated plus all old jobs destroyed. Worker mobility includes

² Of course, these numbers exclude unmeasured labor input into, for example, the “black economy.” However, these total labor supply numbers are worth bearing in mind when comparing GDP per capita across countries.

all job turnover, but also includes the numerous occasions where workers enter or leave a job in a company when the overall number of jobs remains fixed, because of quits, retirements and so on. Of course, there are problems of comparability with cross-national data such as these (Contini et al., 1995), but there is no evidence that jobs are created and destroyed at a more rapid rate in North America than they are in Europe. However, workers do appear to circulate faster through the existing jobs in North America (OECD, 1996, Tables 5.1, 5.2). This is also consistent with the finding that the United States has relatively high levels of regional mobility: about 3 percent of U.S. households change their region of residence in a year, compared to closer to 1 percent in the United Kingdom, Germany and France, and even lower in Italy and Spain. However, regional mobility rates in Norway and Sweden are similar to those in the United States (OECD, 1990, Table 3.3). Since the encouragement of regional mobility has always been a feature of Norwegian and Swedish labor market policy, this outcome is no surprise.³

A final perspective on the aggregate labor market is to look at the evidence on wage flexibility. Table 3 presents some measures of the responsiveness of overall wages to unemployment, derived from both aggregate time series and individual survey data. Of course, this is only one feature of wage flexibility; for example, it is not informative about the flexibility of relative wages across different groups. However, for this particular aspect of wage flexibility, there is no dramatic contrast between Europe and North America. If anything, Canada and the United States veer toward the inflexible end of the spectrum.

To summarize, the contrast between Europe and North America is more complex than is commonly realized. Unemployment is higher in the majority of European countries than in the United States, but there is considerable variation across Europe. Rates of job turnover are no higher in North America than in Europe and neither are overall wages any more flexible, but it does seem that U.S. workers are more mobile than are many Europeans both geographically and between jobs. The next step is to focus on a large number of separate features of the labor market and to try to isolate those that have some responsibility for the high levels of unemployment in many European countries.

What Features of the Labor Market Generate High Unemployment?

Our aim in this section is to pinpoint precisely which features of the labor market generate unemployment and which do not. Then we can discuss how these facts relate to the view that high unemployment in Europe is due to rigid and inflexible labor markets.

The first step is to look at labor market characteristics in different countries. Table 4 presents direct measures of labor market rigidities and summary statistics

³ The "regions" in all these countries are comparable in size, so these comparisons have some meaning.

Table 3

Wage Flexibility: The Percentage Increase in Wages in Response to a One Percentage Point Fall in the Unemployment Rate

	<i>Aggregate Time Series Measure</i>		<i>Microeconomic Measure</i>
	<i>Short-run</i>	<i>Long-run</i>	
Austria	1.43	3.11	2.43
Belgium	0.65	4.06	
Denmark	0.66	1.74	
Finland	0.48	1.55	
France	2.22	4.35	
Germany (W)	0.55	1.01	2.06
Ireland	0.80	1.82	2.35
Italy	2.07	12.94	1.32
Netherlands	0.66	2.28	1.98
Norway	1.96	10.59	1.95
Spain	0.17	1.21	
Sweden	2.31	12.16	
Switzerland	1.32	7.33	7.06
U.K.	0.98	0.98	0.82
Canada	0.50	2.38	0.92
U.S.	0.32	0.94	1.52

Source: Aggregate time series measures; Layard et al. (1991), chapter 9, Table 2. Microeconomic measures; Blanchflower and Oswald (1994), Table 9.1. These later numbers are derived by dividing the Blanchflower/Oswald numbers by the average unemployment rate, because they only report the elasticity of wages with respect to unemployment.

on the treatment of the unemployed. The employment protection index in the first column was drawn up by the OECD and is based on the strength of the legal framework governing hiring and firing. The countries are ranked from 1–20, with 20 being the most strictly regulated. The countries of southern Europe have the toughest regulations and, roughly speaking, these regulations get weaker as one moves further north. Switzerland, Denmark and the United Kingdom have the weakest laws in Europe, and these laws are comparable to those in place outside Europe.

The labor standards index in the second column was also drawn up by the OECD and refers to the strength of the legislation governing a number of aspects of the labor market. The index ranges from 0 to 10, with each country being scored from 0 (lax or no legislation) to 2 (strict legislation) on each of the five dimensions: working time, fixed-term contracts, employment protection, minimum wages and employees' representation rights (on works councils, company boards and the like). The scores are then added up. The picture is similar to the employment protection column. The United Kingdom and the United States have very weak legislation in this area, whereas Spain and Italy have many strict rules and regulations. So it is undoubtedly true that if we are to think of inflexibility as referring to legal restric-

Table 4
Features of OECD Labor Markets I, 1989–1994

	Direct Rigidities		Treatment of the Unemployed		
	1 Employment Protection	2 Labor Standards	3 Benefit Replacement Rate (%)	4 Benefit Duration (years)	5 Active Labor Market Policies
Austria	16	5	50	2	8.3
Belgium	17	4	60	4	14.6
Denmark	5	2	90	2.5	10.3
Finland	10	5	63	2	16.4
France	14	6	57	3	8.8
Germany (W)	15	6	63	4	25.7
Ireland	12	4	37	4	9.1
Italy	20	7	20	0.5	10.3
Netherlands	9	5	70	2	6.9
Norway	11	5	65	1.5	14.7
Portugal	18	4	65	0.8	18.8
Spain	19	7	70	3.5	4.7
Sweden	13	7	80	1.2	59.3
Switzerland	6	3	70	1	8.2
U.K.	7	0	38	4	6.4
Canada	3	2	59	1	5.9
U.S.	1	0	50	0.5	3.0
Japan	8	1	60	0.5	4.3
Australia	4	3	36	4	3.2
New Zealand	2	3	30	4	6.8

Source: OECD *Jobs Study* (1994), Part II, Table 6.7, column 5. OECD *Employment Outlook* (1994), Table 4.8, column 6 (extended by author). U.S. Department of Health and Social Services, *Social Security Programmes Throughout the World* (1993). OECD *Employment Outlook* (1995), Table T.

tions on the operation of the labor market, southern and continental Europe are the most inflexible. As an offset to this, however, it is worth remarking that southern Europe also has the highest rate of self-employment in the OECD (OECD, 1994, Table 6.8). The self-employed are, presumably, among the most flexible of all workers.

Benefit systems vary quite dramatically. The “replacement rate,” which shows what share of income is replaced by unemployment benefits, and the duration of these benefits (four years means indefinite duration) are typically fairly generous by U.S. standards (50 percent replacement rate for six months). Italy, however, barely had an unemployment benefit system at all for most of the postwar period.⁴

⁴ Until recently, the unemployed in Italy were entitled to 800 lira per day (around 50 cents). A small proportion of the “unemployed” would be covered by the CIG scheme for industrial workers who are in danger of being laid off. These typically do not amount to more than 1 percentage point of unemployment.

Some of the countries with the most generous benefit levels have strictly time-limited systems, notably in Scandinavia, like Sweden's 80 percent replacement rate, which is limited to 1.2 years. The next column, "active labor market policies," refers to expenditures on activities for the unemployed that are geared to help them back into work and are popular in many, although not all, European countries. These include labor market training, assistance with job search, subsidized employment and special measures for the disabled. The numbers in this column are derived by taking active labor market spending per unemployed person as a percentage of GDP per member of the labor force. Thus, Sweden's figure of close to 60 shows that expenditure on active policies per unemployed person is nearly 60 percent of national output per potential worker, which is extraordinarily high. Spain, on the other hand, is notable for its combination of a generous benefit system and a low level of expenditure on active labor market policies.

The first few columns of Table 5 present variables that summarize the structure of wage determination systems. In most European countries, with the exception of the United Kingdom and Switzerland, trade unions play a very significant role in wage determination. The union density column shows the proportion of trade union members as a percentage of all wage and salary earners. However, this does not tell the whole story. In many nations, union wage negotiations determine the wages of workers who are not explicitly part of the union. In Spain and France, for example, only about 10 percent of workers are union members, but the wages of over 70 percent of all workers are covered by union bargaining. Thus, the "union coverage index" presents a summary of the share of workers actually covered by union bargaining, where 3 means over 70 percent covered, 2 means from 25–70 percent, and 1 is under 25 percent.

The next column of the table shows the extent of coordination in wage bargaining, on the part of both unions and employers. In each country, the degree of union and then employer coordination is ranked from a low of 1 to a high of 3. In some of these countries, both unions and, more significantly, employers coordinate their wage bargaining activities, particularly in central Europe and Scandinavia. In those countries where unions play a lesser role, although still an important one—like the United Kingdom, Switzerland, and all non-European countries except the United States—there is very little coordination over wage bargaining, with the notable exceptions of Switzerland and Japan, where employer coordination is very important.

The final two columns of the table give information on the tax burden on labor. First we have the payroll tax rate, defined as the ratio of labor costs to wages (less unity) and then we show the total tax rate, which is the sum of the average payroll, income and consumption tax rates. The latter are based on aggregate tax and income data. The payroll tax rate varies dramatically across countries, with Denmark levying no payroll taxes and France and Italy with a rate close to 40 percent. The total tax rate is less variable and represents a crude measure of the tax wedge between real labor costs and real take-home pay. This is arguably the correct measure of the tax burden on labor.

Table 5
Features of OECD Labor Markets II, 1989–1994

	1 Union Density (%)	2 Union Coverage Index	3 Co-ordination		4 Payroll Tax Rate (%)	5 Total Tax Rate (%)
			Union	Employer		
Austria	46.2	3	3	3	22.6	53.7
Belgium	51.2	3	2	2	21.5	49.8
Denmark	71.4	3	3	3	0.6	46.3
Finland	72.0	3	2	3	25.5	65.9
France	9.8	3	2	2	38.8	63.8
Germany (W)	32.9	3	2	3	23.0	53.0
Ireland	49.7	3	1	1	7.1	34.3
Italy	38.8	3	2	2	40.2	62.9
Netherlands	25.5	3	2	2	27.5	56.5
Norway	56.0	3	3	3	17.5	48.6
Portugal	31.8	3	2	2	14.5	37.6
Spain	11.0	3	2	1	33.2	54.2
Sweden	82.5	3	3	3	37.8	70.7
Switzerland	26.6	2	1	3	14.5	38.6
U.K.	39.1	2	1	1	13.8	40.8
Canada	35.8	2	1	1	13.0	42.7
U.S.	15.6	1	1	1	20.9	43.8
Japan	25.4	2	2	2	16.5	36.3
Australia	40.4	3	2	1	2.5	28.7
New Zealand	44.8	2	1	1	—	34.8

Source: Layard et al. (1991), Annex 1.4, and *OECD Employment Outlook* (1994), p. 175–85. Centre for Economic Performance (LSE), OECD data set.

Overall, therefore, there are quite substantial differences between European and North American labor markets as well as important differences within Europe. The consequences of these differences for unemployment and labor supply form our next topic.

The Labor Market and Unemployment

Our purpose in what follows is to investigate the relations between unemployment and other measures of labor supply, and labor market institutions. Table 6 presents three regressions relating to unemployment. Each regression is based on two cross-sections dated 1983–88 and 1989–1994. The dependent variables are the unemployment rates reported in Table 1, and the values of the independent variables for the time period 1989–1994 are from Tables 4 and 5. The corresponding values of the independent variables for 1983–88 are not presented here but are available from the author. Some variables take the same values for both periods,

Table 6
Regressions to Explain Log Unemployment Rate Percentage
(20 OECD countries, 1983–88 and 1989–1994)

	1 <i>Total</i> <i>Unemployment</i>	2 <i>Long-term</i> <i>Unemployment</i>	3 <i>Short-term</i> <i>Unemployment</i>
Employment Protection (1–20)	–0.0032 (0.03)	0.051 (0.034)	–0.046 (0.024)
Replacement Rate (%)	0.011 (0.0050)	0.011 (0.0080)	0.011 (0.0060)
Benefit Duration (years)	0.088 (0.055)	0.25 (0.089)	0.043 (0.062)
Active Labor Market Policies ^a	–0.024 (0.0087)	–0.039 (0.013)	–0.012 (0.0098)
Union Density (%)	0.012 (0.0063)	0.010 (0.0096)	0.0082 (0.0071)
Union Coverage Index (1–3)	0.45 (0.22)	0.83 (0.35)	0.39 (0.24)
Co-ordination (Union + Employer) (2–6)	–0.46 (0.087)	–0.54 (0.15)	–0.37 (0.11)
Total Tax Rate (%)	0.026 (0.0087)	0.023 (0.013)	0.025 (0.010)
Change in Inflation (% pts. p.a.)	–0.17 (0.11)	–0.30 (0.17)	–0.18 (0.10)
Dummy for 1989–94	0.20 (0.095)	0.30 (0.16)	0.17 (0.089)
<i>R</i> ²	0.76	0.84	0.60
<i>N</i> (countries, time)	40 (20, 2)	38 (19, 2)	38 (19, 2)

Notes: Estimation is by GLS random effects using two time periods (1983–88 and 1989–1994). Standard errors are in parentheses.

^a The variable is instrumented. Because the active labor market policies variable refers to percentage of GDP normalized on *current* unemployment, this variable is highly endogenous. So we renormalized the current percentage of GDP spent on active labor market measures on the average unemployment rate in 1977–79 to create the instrument. Insofar as measurement errors in unemployment are serially uncorrelated, this will help with the endogeneity problem.

but many are different. We chose to use six-year averages in order to smooth out both the cycle and year-on-year noise. On the other hand, we felt there was enough useful information here to warrant the use of two cross-sections rather than one 12-year average. The regression coefficients are estimated using the standard random effects generalized least squares procedure, which is essentially ordinary least squares corrected for the fact that the two successive observations for each country cannot be treated as independent random draws. Finally, note that the dependent variables are the logs⁵ of the unemployment rate (column 1), the long-term rate (column 2) and the short-term rate (column 3). Thus, if the right-hand side of the equation increases by 0.1, log unemployment goes up by 0.1, so unemployment rises by just over 10 percent. From a baseline unemployment rate of 5 percent, this would represent an increase of half a percentage point to 5.5 percent.

In Table 7 we report similar regressions explaining other aspects of labor supply, notably the employment/population ratios and overall labor supply reported

⁵ The use of the log of the unemployment rate follows from the fact that many investigations of wage determination find that the use of $\log u$ in a wage equation is preferable to the use of u . See Blanchflower and Oswald (1994), for example.

Table 7
Regressions to Explain Labor Supply Measures
(20 OECD countries, 1983 and 1989–1994)

	<i>Employment/Population Ratio (%)</i>		
	<i>1</i> <i>Whole Working</i> <i>Age Population</i>	<i>2</i> <i>Males Aged</i> <i>25–54</i>	<i>3</i> <i>Overall Labor</i> <i>Supply</i>
Employment Protection (1–20)	–0.94 (0.30)	0.040 (0.18)	–0.70 (0.39)
Replacement Rate (%)	–0.026 (0.072)	–0.052 (0.043)	–0.037 (0.091)
Benefit Duration (years)	–1.26 (0.63)	–0.61 (0.43)	–0.32 (0.73)
^a Active Labour Market Policies	0.16 (0.11)	0.081 (0.073)	–0.028 (0.14)
Union Density (%)	–0.082 (0.086)	–0.11 (0.053)	–0.18 (0.11)
Union Coverage Index (1–3)	–0.96 (2.54)	–1.36 (1.74)	–2.24 (2.84)
Coordination (Union + Employer) (2–6)	5.03 (1.23)	2.71 (0.74)	4.20 (1.58)
Total Tax Rate (%)	–0.24 (0.12)	–0.16 (0.075)	–0.26 (0.16)
Change in Inflation (% pts. p.a.)	–2.12 (0.93)	–0.97 (0.72)	–2.02 (0.97)
Dummy for 1989–94	1.87 (0.79)	–2.09 (0.63)	0.041 (0.83)
<i>R</i> ²	0.81	0.63	0.51
<i>N</i> (countries, time)	(20, 2)	(20, 2)	(20, 2)

Notes: Estimation is by GLS random effects using two time periods (1983, 1989–1994). Standard errors are in parentheses.

^a Active labor market prices are instrumented as in Table 6.

in Table 2. Again we use two cross-sections with the same independent variables. In this case, the dependent variables are not in logs.

Before we go on to discuss particular rigidities, it is worth commenting briefly on the status of these results. First, we see them as a helpful overview of the correlations in the data and nothing more. Like all simple cross-section correlations, care must be taken with their interpretation because of issues of reverse causality and the like. Second, despite the use of six-year averages, there may still be significant long-term variations across countries in the stance of macroeconomic policy. We control for the average change in inflation as one attempt to deal with this problem. Third, there may be factors that explain cross-country differences in unemployment that are not associated with the labor market. For example, it can be argued that higher levels of product market competition tend to reduce unemployment (Layard, Nickell and Jackman, 1991, chapters 7 and 9, for example). Unfortunately, it has not proved possible to obtain measures of product market competition that are consistent across enough countries to include in the regressions.

Finally, and most importantly, why focus only on the 1980s and 1990s? Underlying this question is the reasonable argument that in the 1960s, the unemployment rankings across countries were completely different but, roughly speaking, the labor market institutions were the same. So how can the labor market institutions have

anything to do with unemployment? Part of the answer has to be that the institutions had a big impact on the way in which each of the economies of the different countries responded to the major adverse shocks of the 1970s *and* the way in which some of these responses, notably unemployment, persisted through the 1980s and 1990s. In part, this effect is what our regressions are picking up. There remain a number of unanswered questions concerning the evolution of labor markets since the 1960s. Here, our main concern is much more limited, namely the question of which institutions, for whatever reason, appear to be important in understanding recent unemployment levels across the OECD. So let us consider various institutions in turn.

Direct Rigidities

Labor market legislation is typically put in place to protect employees from arbitrary, unfair or discriminatory actions on the part of employers. In so doing, it may raise the effective cost to firms of employing workers and/or raise the effective cost of adjusting levels of employment. The impact of the former on unemployment depends crucially on the extent to which the extra costs are shifted onto employees by a suitable adjustment of the wage. The general evidence on payroll taxes (as we shall see) is that the major part of the burden of such costs is typically shifted onto workers in the long run, thereby nullifying their impact on unemployment. While this obviously cannot be the case for minimum wages, there is no evidence in our data that high labor standards overall have any impact on unemployment whatever. For example, if we add our labor standards variable (Table 4, column 1) to our unemployment regression (Table 6, column 1), it has a negligible and completely insignificant coefficient.⁶

Laws that raise the cost of employment adjustment, notably those relating to employment protection, will tend to reduce the inflow into unemployment and, because they make firms more cautious about hiring, will also reduce the flow out of unemployment into work. This will almost certainly reduce short-term unemployment (via the reduced inflow) and raise long-term unemployment (via the reduced outflow). The overall impact on unemployment is likely to be rather small, as these effects would tend to cancel out. The results in the first row of Table 6 are entirely consistent with this discussion and confirm the analysis of Bentolila and Bertola (1990).

However, as the coefficients in the first row of Table 7, columns 1 and 3, indicate, there is some evidence of a negative correlation between employment protection and measures of labor supply that go beyond unemployment (see also Lazaar, 1990). Much of this correlation arises, in fact, because participation rates among married women in southern Europe are very low and employment protection laws in these countries are very tough (OECD, 1994, Table 6.9). Thus, as the first row of Table 7 also indicates, if we focus on prime-age men (column 2), there

⁶ The coefficient is 0.019 with a standard error of 0.063.

is no effect. A speculative hypothesis might be that low female participation and tough employment protection laws in southern Europe are both consequences of a culture that places a great deal of weight on the position of the (male) head of household, which is not to be undermined either by the presence of a high-earning wife or by the loss of a job.

The Treatment of the Unemployed

There are two aspects of the treatment of unemployed individuals, which might be termed passive and active. The passive is exemplified by the payment, as of right, of unemployment benefit for a given period. Active policies, on the other hand, consist of measures that attempt to ensure that the unemployed individual is able and willing to take up work.

On the passive side, generous benefit systems influence unemployment via two mechanisms. First, they reduce the fear of unemployment and hence directly increase upward pressure on wages from employees (via unions, for example). Second, they reduce the “effectiveness” of unemployed individuals as potential fillers of vacancies, by allowing them to be more choosy. The impact of a high benefit replacement ratio on unemployment is well documented (Layard, Nickell and Jackman, 1991; OECD, 1994, chapter 8) and is confirmed by the significant coefficient on the replacement rate in Table 6. The other important feature of the benefit system is the duration of entitlement. Long-term benefits generate long-term unemployment (Table 6, row 3; OECD, 1991, Chart 7.1B). Of course, it can be argued that countries might introduce more generous benefit systems when unemployment is a serious problem, so that in cross-country correlations, the causality runs from unemployment to benefits rather than the other way round. However, the microeconomic evidence on the positive impact of benefit levels and entitlement durations on the duration of individual unemployment spells (Narendranathan, Nickell and Stern, 1985; Meyer, 1990) suggests that at least part of the observed cross-country correlation can be taken at face value.

The impact of a relatively generous benefit system might be offset by suitable active measures to push the unemployed back to work. Such policies seem to work particularly well when allied to a relatively short duration of benefit entitlement, reducing long-term unemployment while alleviating the social distress that might be caused by simply discontinuing benefits without offering active assistance toward a job. Their effects are well summarized in OECD (1993, ch. 2), and their significant impact in reducing long-term unemployment is illustrated in the fourth row of Table 6.

While benefits affect unemployment, our evidence suggests that the benefit system seems to have little impact on overall labor supply as shown in Table 7. There is a suggestion here that while high benefits lead to high unemployment, they also lead to high participation because they make participation in the labor market more attractive, because participation is necessary to be eligible for the high benefits. This is consistent with a weak impact of benefits on employment/popu-

lation ratios, because the higher unemployment effect and the higher labor market participation effect tend to cancel out.

Wage Determination and Unions

The key features of wage determination systems are the extent to which wages are determined collectively, via union bargaining (union coverage), and the degree to which employers and unions coordinate their wage bargaining activities given that wages are determined collectively. Of course, if wages are not generally determined collectively, as in the United States, the extent of coordination simply does not apply.

Unions tend to raise pay, and thus one would expect the extent of union activity in an economy to influence unemployment. This is confirmed by the results in rows 5 and 6 of Table 6, where greater union density and especially union coverage tend to raise unemployment. However, Table 6, row 7, also shows that this is offset if unions and employers can coordinate their bargaining activities. For example, leapfrogging is a common feature of decentralized, uncoordinated, union-dominated systems; that is, each union tends to take an earlier pay settlement in a related sector as a baseline to be exceeded in its own negotiations. This generates an additional source of inflationary pressure that requires more unemployment to quash it. If unions and employers can coordinate their wage bargaining activities, such leapfrogging may be eliminated.

It is important to note that coordination does not mean centralization, which typically implies government involvement in wage bargaining. Both Japan and Germany have a high degree of coordination in wage bargaining, particularly across employers, but neither system is centralized. And as OECD (1994, Table 5.16) makes clear, coordination appears to have a significant negative impact on wages, whereas the centralization of wage bargaining does not. To summarize, therefore, unions are bad for jobs, but these bad effects can be nullified if both the unions and the employers can coordinate their wage bargaining activities.

Labor Taxes

Lowering payroll taxes is a very popular recommendation by those concerned with reducing unemployment (OECD, 1994; Phelps, 1994). It is easy to understand this advice if a payroll tax is viewed as a tax on jobs. Things are not, however, quite as they seem. The first point to recognize is that, broadly speaking, the key tax rate for the labor market is the sum of the payroll tax rate, the personal income tax rate and the consumption tax rate. Switching between these taxes will not have an important impact, so payroll taxes, per se, are of little consequence. This result has nothing to do with the incidence of these taxes, which we shall address later. It derives from the logic of supply and demand.

Consider a simple example. Suppose we have a labor market where total labor costs per employee are \$100, payroll taxes paid by the employer are \$10 (so pretax wages are \$90), income taxes paid by the employee are \$10, and post-tax wages are \$80. Suppose this labor market is in equilibrium. Thus, firms are just willing to

employ at \$100 all the workers who are willing to work at \$80. Now suppose that income taxes are reduced to \$5 and payroll taxes are raised to \$15 to maintain revenue. Further, suppose that as a result of this change, firms pay pretax wages of \$85. Then labor costs per employee are \$100; post-tax wages are \$80. This remains an equilibrium because firms are still willing to employ at \$100 all the workers who want to work at \$80. Nothing substantive has changed except that pretax wages have fallen from \$90 to \$85. But this is irrelevant; the only prices that interest the agents in this economy are labor costs per employee and post-tax wages.

But what about consumption taxes? Employees are interested in what their wages can buy. So if their income taxes are cut by 10 percent and the cost of consumption is raised by 10 percent, post-tax real wages are unchanged and so is labor market behavior. So, broadly speaking, what really counts is the sum of payroll taxes, income taxes and consumption taxes; the total tax burden on labor. Of course, this is not exactly correct for a variety of reasons. For example, income tax is charged on nonlabor income whereas payroll tax is not, so that a cut in payroll tax and a rise in income tax will reduce nonlabor income, raise labor supply and reduce unemployment. But, in practice, this is not important because individuals who are likely to become unemployed have little or no nonlabor income.⁷ Our conclusion is that payroll taxes, *per se*, can be expected to have little impact on unemployment but the total tax burden might.

The fundamental question, therefore, is whether or not this total tax burden is entirely shifted onto labor. That is, does real labor cost per worker remain unaffected by variations in the total tax burden, at least in the long run?

If capital is internationally mobile and labor is not, then we should expect to see labor bearing all of the tax burden. In this case, employment and unemployment will, in the long run, remain unaffected by changes in the overall tax rate on labor. There is, however, one situation where it is impossible to shift payroll taxes onto workers. That is where there is a rise in the payroll tax and an employee is already receiving the minimum wage. The burden of the extra tax must then fall on the employer because the wage cannot adjust.

What happens in practice? The balance of the evidence suggests that lowering payroll taxes and raising consumption taxes will have no long-run impact on unemployment (OECD, 1990, Annex 6A; OECD, 1994, Table 9.5).⁸ This result is confirmed by the fact that if we include the payroll tax rate in any of the regressions in Table 6 or 7, its coefficient is always negligible.⁹ It also helps to explain why Denmark, which uniquely has no payroll taxes, has unemployment on a par with

⁷ For example, in Britain in 1987–88, only 7 percent of the unemployed had savings in excess of 3,000 pounds, enough to produce an annual interest income of around 10 percent of unemployment benefit (Layard, Nickell and Jackman, 1991, Table A6).

⁸ There are some individual country time series results that appear to give a role to payroll taxes in individual countries—see OECD (1994, Chapter 9, p. 247) for a summary. However, in relatively short time series, it is often very difficult to distinguish between long-lasting short-run effects and long-run effects.

⁹ For example, in columns of Table 6 its coefficient is -0.014, with a standard error of 0.06.

the European average and appears to derive no special employment benefit from its lack of these taxes.

The evidence on the total tax burden is less clear. One careful cross-country study has ruled out any long-run impact of the total tax burden on employment (OECD, 1990, Annex 6A). However, the results in Tables 6 and 7, row 8, which are in agreement with the findings of Bean, Layard and Nickell (1986), suggest that the overall tax burden may raise unemployment and reduce labor supply. A 10 percentage point fall in the total tax burden reduces unemployment by around 25 percent and raises labor supply by around 2 percentage points on every measure. Of course, a 10 percentage point fall in the total tax burden is enormous. Most countries find permanently reducing expenditure by 1 percent of GDP an extremely difficult task. To generate a 10 percentage point shift would mean, for example, transferring the whole of the UK health service to the private sector.¹⁰

Minimum Wages

While it is impossible to produce a single cross-country variable that captures the impact of minimum wage laws or related legislation (like extending union pay bargains to the nonunion sector), it is still worth discussing the potential impact of minimum wages on unemployment. A reading of Card and Krueger (1995) and its various reviews in the July 1995 issue of the *Industrial and Labor Relations Review* reveals that there is no consensus on the impact of minimum wages on unemployment. However, the following conclusions do seem to be consistent with the evidence. First, where the minimum wage applies, it is low enough not to have an important effect on the unemployment rates of adult men. Second, minimum wages do have a significant though small adverse impact on youth unemployment rates, particularly in countries like France and Spain where payroll taxes are high and there is little in the way of an age adjustment to the minimum wage (Dolado et al., 1996; Abowd et al., 1996).

Labor Supply Measures

Two much-canvassed solutions to unemployment are reduced hours of work and early retirement. Advocates of these measures often seem to imagine that there is some exogenously given level of work to be done. In fact, all historical evidence shows that, for a given institutional structure, the amount of work to be done tends to adjust in line with the available supply of labor, leaving equilibrium unemployment unaffected. So we can expect that an *imposed* cut in hours or reduction in the labor force will raise wage pressure in a way that can only be offset by an equivalent cut in jobs. Indeed if, in a standard wage equation, we allow wages to depend

¹⁰ Even if there were some macroeconomic benefits to this, there could easily be substantial costs; for example, total health expenditure in the United Kingdom is 4–5 percentage points of GDP less than health expenditure in the United States, without there being notable differences in the overall health of the two populations. Moving health care to the private sector might impair efforts to hold down costs, or result in greater inefficiency.

separately on (the logs of) labor force and employment instead of on unemployment, we typically obtain equal and opposite coefficients. This indicates that a fall in the labor force relative to employment raises wage pressure just as much as a rise in employment relative to the labor force (Layard, Nickell and Jackman, 1991, p. 504; Jackman, Layard and Nickell, 1996, p. 28). Similarly, if one adds measures of labor supply like hours worked per worker to the unemployment regressions in Table 6, no significant effect is found.

Shifts in the Demand for Skills and Unemployment

It has become commonplace to argue: “The rise in joblessness in Europe is thus the flip side of the rise in earnings inequality in the U.S.” (Freeman, 1995, p. 19). This view is based on the notion that first, in all countries, there has been an increase in the relative demand for skilled workers (as against unskilled workers) that has been greater than the increase in their relative supply. Then the argument goes that in Europe, the inflexibility of the labor market has turned this shift into higher unemployment whereas in the United States, labor market flexibility has translated this shift into increased inequality. Finally, this shift explains the majority of the rise in European unemployment relative to that in the United States.

Despite this being a commonly held view, a variety of facts cast doubt on it (Card, Kramarz and Lemieux, 1995; Nickell and Bell, 1995, 1996; Nickell, 1996; Jackman et al., 1996). First, it appears to be the case that in Britain and the United States the demand for skill outran the supply by more than in the rest of Europe. Second, for a variety of European countries including Britain, the evidence suggests that skill shifts account for between 0 and 20 percent of the rise in unemployment from the 1970s. There is no evidence that this number is lower in “flexible” Britain than it is anywhere else in Europe. In any event, the vast majority of the rise in European unemployment is due to other factors. Third, there has been a substantial rise in unskilled unemployment in the United States since the early 1970s (over 100 percent) despite (because of?) the fall in unskilled real wages. Fourth, the adverse impact of the fall in the relative demand for unskilled workers on the wages and unemployment of this group is strongly attenuated in those countries whose education and training systems are particularly effective at raising the human capital of those at the lower end of the ability range (notably middle Europe¹¹ and Scandinavia).

Overall, therefore, there is no evidence that these skill shifts have made a substantial contribution to the rise in European unemployment nor that labor market inflexibility per se is associated in any simple way with such effects as have been observed.

Special Cases and the Demand Side

Our aim has been to understand what generates high average levels of unemployment over long periods. Business cycle effects and autonomous demand shocks of

¹¹ That is, Switzerland, Austria, Germany and Holland.

various kinds should wash out if we take a long enough period—and our focus has been on 1983–1996, a 14-year stretch. Despite the length of this period, it is possible to argue that because of exceptional problems, policy mismanagement, very high levels of hysteresis and the like, the average unemployment figures give a distorted picture of the underlying equilibrium rate. If we were just considering the 1990s, this argument might be applied to a number of countries, such as Sweden. But over the longer period, there is only one country where truly exceptional problems have distorted the long period average dramatically, namely Finland. In the three years from 1990 to 1993, Finnish unemployment rose from 3.4 to 17.7 percent. This increase was generated first by the collapse of an enormous domestic credit boom, which was, in its turn, brought about by a mismanaged deregulation of the financial sector. Real house prices fell by over 50 percent between 1990 and 1993. This disaster was reinforced by the more or less complete elimination of Soviet trade over the same period, which had previously been responsible for about one-third of Finnish exports. Without these exceptional events, there is no question that average unemployment would have been substantially lower over the relevant period and this lower number would more accurately reflect the equilibrium rate in Finland.

Conclusions

High unemployment is associated with the following labor market features: 1) generous unemployment benefits that are allowed to run on indefinitely, combined with little or no pressure on the unemployed to obtain work and low levels of active intervention to increase the ability and willingness of the unemployed to work; 2) high unionization with wages bargained collectively and no coordination between either unions or employers in wage bargaining; 3) high overall taxes impinging on labor or a combination of high minimum wages for young people associated with high payroll taxes; and 4) poor educational standards at the bottom end of the labor market.

Labor market rigidities that do not appear to have serious implications for average levels of unemployment include the following: 1) strict employment protection legislation and general legislation on labor market standards; 2) generous levels of unemployment benefit, so long as these are accompanied by pressure on the unemployed to take jobs by, for example, fixing the duration of benefit and providing resources to raise the ability/willingness of the unemployed to take jobs; and 3) high levels of unionization and union coverage, so long as they are offset by high levels of coordination in wage bargaining, particularly among employers.

Suppose we define high unemployment as above 120 percent of the U.S. rate over the 1983–1996 period (7.8 percent). Then, looking at Table 1, we see there are eight European countries in this category out of 15, as well as Canada. These eight include three major countries (France, Spain and United Kingdom) of which the last has far and away the most flexible labor market in Europe, as normally measured. The remaining countries with high unemployment are Belgium, Denmark, Finland, Ireland and the Netherlands.

Unemployment is high in these countries (excluding Finland, for reasons already explained) partly because, on average, they have reasonably generous benefits with very long periods of entitlement and little in the way of active policies to push the unemployed into work. Wages are typically bargained collectively, so unions apply pressure on wages, but coordination is not high, particularly among employers. Education levels at the lower end of the ability range are generally weak. Of course, not all of these apply to every country, and the country to which they apply least, the Netherlands, is now moving out of the high-unemployment group. Most importantly for the topic of this paper, many features of the labor market that are popularly viewed as serious rigidities apply no more to this high-unemployment group than they do to the low-unemployment group. These include high payroll taxes, high overall taxes, strict employment protection legislation, high labor market standards (legally enforced), high unionization and high benefit replacement rates.

It is clear that the broad-brush analysis that says that European unemployment is high because European labor markets are "rigid" is too vague and probably misleading. Many labor market institutions that conventionally come under the heading of rigidities have no observable impact on unemployment.

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