

Explaining European unemployment.

Olivier Blanchard *

April 5, 2004

1. Unemployment, shocks, and institutions.

Anybody attempting to explain the evolution of unemployment in Europe over the last 30 years must confront the following set of facts:

- High unemployment is not a European trait. Until the end of the 1960s, unemployment was very low in Europe and the talk then was of the “European unemployment miracle.” The miracle came to an end in the 1970s, when unemployment steadily increased. It kept increasing in the 1980s. It appeared to turn around in the mid-1990s, but the decline is (temporarily?) on hold. For the European Union as a whole, the current unemployment rate is still very high, around 8.0%.
- The evolution of the average European unemployment rate hides large cross-country differences.
In the four large continental countries—France, Germany, Spain, and Italy—the unemployment rate has steadily increased and remains very high, around 10%. (The Spanish unemployment rate has been cut in half since its peak, but remains above 10%.)
In a number of smaller countries, notably Ireland and the Netherlands, unemployment increased until the early 1980s, but has steadily decreased since then. Unemployment is below 5% in both countries today.

* MIT and NBER. Visiting scholar, Russell Sage Foundation. Written for the NBER Reporter, 2004

In a number of other countries, notably Sweden and Denmark, unemployment has remained consistently low—except for a bout of high cyclical unemployment at the start of the 1990s. Unemployment is below 5% in both countries today.

- At a given unemployment rate, individual unemployment duration is substantially longer, flows in and out of unemployment substantially lower, in Europe than in the US.¹ And the increase in European unemployment reflects an increase in duration rather than an increase in flows. As a result, duration is high. In Germany and Italy for example, more than half of the unemployed today have been unemployed for more than one year.
- If one takes the change in inflation as a rough indicator of whether the rate of unemployment is above or below the natural rate, one must conclude that, apart from cyclical movements in the early 1980s and early 1990s, the broad movements in the unemployment rate have reflected movements in the natural rate. In particular, over the last few years, inflation has declined only slightly, suggesting that the natural rate today is lower than, but close to, the actual unemployment rate.

Shocks. The initial increase in unemployment in the 1970s coincided with a number of adverse shocks—some worldwide, some specific to Europe. Thus, much of the initial research naturally focused on the role of shocks in explaining the increase in the natural rate of unemployment:

- In the 1970s, raw materials prices rose sharply. More importantly, but less visibly at the time, the high rate of productivity growth that had characterized the post-war period came to an end. To the extent that workers did not fully adjust to these changes, these shocks could plausibly have led to an increase in the cost of labor, and so to the increase in unemployment. In the 1980s, tight money led to a prolonged period of high real interest rates, and so to a large increase in the user cost of capital. This in turn could have led to low capital accumulation, and by implication, lower employment growth, higher unemployment.

This is why initial explanations focused on shocks. Looking at it however from today's vantage point, an explanation of unemployment based on shocks runs into two main difficulties:

1. See Blanchard and Portugal [2001].

- Shocks were largely similar across countries. The decline in productivity growth was largely common to all European countries. The same is true of most other shocks: While the increase in interest rates varied across countries, real interest rates increased in all countries from the early 1980s on. Yet, as we have seen, the evolutions of unemployment have been very different across countries.
- The oil price increases of the 1970s turned into decreases in the 1980s. Underlying productivity growth has remained low, but it is hard to believe that 25 years later, workers' expectations have not adjusted to the new reality. Yet, as we have seen, the natural rate of unemployment remains high in Europe today. This requires either very long lasting effects of shocks, or the advent of new adverse shocks. The quantitative evidence on new adverse shocks, such as an increased pace of reallocation due to technological progress and globalization, is, however, mixed at best.

Institutions. By the mid 1980s, these difficulties led researchers to turn their attention increasingly to labor market institutions as the main factor behind high unemployment.

Many of these institutions are inherently multidimensional, so it is hard to summarize their evolution over time in a simple way. The evidence, such as it is, suggests the following:

- Social protection is high in Europe. Unemployment insurance is more generous than in the US, both in terms of the replacement rate and of the length for which benefits are given. Employment protection often has a large administrative and judicial component. The tax wedge between labor costs and take-home pay is high, although this reflects in large part the higher proportion of services that are provided by the state rather than by the market in Europe.

Explanations of European unemployment based on institutions run however into two difficulties:

- European labor market institutions did not come into being in the early 1970s. For the most part, both the architecture and the level of social protection were put in place earlier, and were then consistent with low unemployment. In many (but not all) countries the increase in unemployment in the 1970s was associated with a small further increase in the generosity of unemployment insurance, a small increase in

employment protection, and an increase in the tax wedge. Since the mid-1980s on, most reforms have moved in the opposite direction. They have been typically limited and non-systemic, eliminating the worse distortions while maintaining the existing degree of social protection.

- Labor market institutions differ across European countries. There is however no obvious relation between the degree of social protection and the unemployment rate today. For example, the Netherlands has returned to low unemployment while continuing to offer high social protection. Scandinavian countries have maintained both high social protection and a low natural rate of unemployment.

My initial forays into European unemployment were aimed at explaining the dynamic effects of shocks on the natural rate, and the role of institutions in shaping these effects. In work with Lawrence Summers, I focused on how, when wages were set in collective bargaining, shocks could have long-lasting effects on the natural rate (the “hysteresis” hypothesis). In work with Peter Diamond, I explored the effects of shocks in models with explicit flows and individual bargaining. In work with Larry Katz, I developed simple models of the determination of the natural rate and the Phillips curve. This research was summarized in an NBER Reporter article in 1995.

Starting in the mid-1990s, I explored whether I could develop a coherent story for the evolution of European unemployment both across time and across countries, whether I could account for the set of facts presented above. I have followed two strategies, the first based on a structural approach, the second on a reduced-form approach.

2. The structural approach.

If higher unemployment is due to excessive wage demands, one should see it in the data. One should see an increase in wages given unemployment, and a subsequent decrease in employment. One should also see a decrease in the profit rate, an effect on capital accumulation and on subsequent employment. If higher unemployment is due instead to an increase in the real interest rate, one should see lower capital accumulation, leading in turn to lower employment over time.

These simple ideas underly the strategy I followed in this first approach.² I assumed that, in the absence of shocks, each European economy would have grown on a balanced growth path, with Harrod-neutral technological progress, a stable unemployment rate, a stable output-capital ratio, and real wages growing at the underlying rate of technological progress. I then measured deviations of these variables from their balanced growth path values, and with simple identification restrictions, obtained empirical series for “labor supply shifts”—shifts in wages given unemployment and the level of technology—for “user cost shifts”—shifts in the cost of capital—and for “labor demand shifts”—shifts in wages given employment, capital and the level of technology.

The strength of this approach is to provide a simple interpretative grid, not just for movements in unemployment but, more generally, for the joint movements in capital, employment, output, real wages, and user costs over time. Its limits are equally clear: It cannot tell where the shifts themselves come from, if for example “labor supply shifts” come from increased union militancy or from changes in institutions; but it tells us where to look. Applying this methodology to each European country yielded a number of interesting findings:

Most findings confirmed prevailing wisdom. In most countries, the main proximate cause of the increase in unemployment in the 1970s and the early 1980s was indeed a series of adverse “labor supply shifts”, that is a series of steady increases in wages given unemployment and the level of technology. By the mid-1980s however, this movement was reversed, and wage moderation prevailed. By the early 1990s, in most countries, the early adverse labor supply shifts had been fully reversed. And wage moderation was indeed stronger in some of the countries with the sharpest turnaround in unemployment: The dramatic decreases in unemployment in Ireland and the Netherlands were indeed associated with unusually large wage moderation from the early 1980s on.³

Some findings were however more puzzling. In particular, wage moderation from the early 1980s did not translate into the increase in employment that one would have expected. For Europe as a whole, real wages are now back on (or below) their benchmark growth path, yet unemployment remains high. Another reflection of the same fact is the dramatic decline in the labor share which has taken place in Europe since the early 1980s. In many countries, the share of labor in the business sector has declined by 5 to 10 percentage

2. See Blanchard [1997], Blanchard [1998]

3. See Blanchard [2000b] Lecture 1]

points of GDP, a very large shift by historical standards.

In my interpretative model, these shifts were simply labelled “labor demand shifts”. This is however just giving a name to a phenomenon, not providing an explanation for it. In principle, these shifts may come from one of two sources: They may reflect non-Harrod-neutral technological progress, in which case one would like to understand whether this non-neutrality was endogenous—triggered by some of the factors affecting unemployment—or exogenous—due to the nature of technological progress during that period. Or they may reflect instead changes in the nature of price or wage setting: An increase in monopoly power will for example increase prices given wages, and so reduce the real wage at any given level of employment, and reduce the labor share. In a series of papers, I explored whether these shifts could be explained by deregulation in labor and goods markets.⁴ While these papers are, I think, successful in providing a way of thinking about the macroeconomic effects of regulation and deregulation, I do not feel they provide a satisfactory explanation for what lies behind the “labor demand shifts” documented above. More needs to be done on what is an important and still mysterious part of the story of European unemployment.

3. The reduced form approach.

This second approach, which I explored first with Justin Wolfers⁵, came from the need to organize and assess the quantitative evidence on unemployment, shocks, and institutions.

The approach was straightforward. For each country and each year, I constructed time series for the main shocks identified in previous research, namely changes in the rate of technological progress, changes in the real interest rate, and labor demand shifts. For each country, relying on the work of the OECD and others, I constructed quantitative measures of labor market institutions, from replacement rates and length of benefits for unemployment insurance, to indexes of employment protection, to indexes of coordination in collective bargaining. For a few of these institutions, time series could be constructed; for others, they could not.

I then ran panel-data regressions of unemployment for each year (or more precisely for each five-year period) and each European country, on shocks, institutions, and shocks interacted with institutions. In one variant, unemployment was run on time effects and time effects

4. See Blanchard [2000b, Lecture 2], Blanchard and Giavazzi [2003]

5. See Blanchard and Wolfers [2000]

interacted with institutions. This alternative specification allows for a more agnostic and flexible specification of shocks over time (the shocks are captured by time effects), but implicitly imposes the assumption that shocks have been the same across countries.

The main results were the following:

- Shocks could explain the general evolution of European unemployment since the 1970s. But they could not explain the heterogeneity of evolutions across countries. For example, measures of shocks were quite similar in Spain and Portugal, while unemployment evolutions in the two countries have been extremely different. Portugal has avoided high unemployment.
- Based on the evidence on the evolution of the limited number of institutions for which we had time series, institutions could not explain much of the evolution of unemployment over time.
- Interactions between shocks and institutions could account both for the time series evolution and the heterogeneity of experiences across data. This was true whether explicit measures of shocks or time effects were used. In either case, the econometric evidence suggested that, for a given adverse shock, countries with either long lasting unemployment benefits, or high employment protection, or little coordination and centralization of collective bargaining, experienced a larger and longer increase in unemployment. In other words, these particular institutions appeared to generate a larger and longer lasting effect of shocks on unemployment.

The panel data approach used in that paper has been tested by a number of other researchers, and the conclusions appear fairly robust. Let me mention however one qualification and one extension, both of which I see as important.

Relying on some new evidence on the time evolution of institutions, Steve Nickell⁶ has argued that the evolution of institutions has played a stronger role in the evolution of unemployment than Wolfers and I had concluded. This may well be the case, and the issue can only be settled by the use of better time series on institutions.

Looking more closely at some of the “unemployment miracles,” in particular the dramatic decline in unemployment in the Netherlands, I concluded that the large wage moderation did not come so much from changes in institutions than from the behavior of unions, which had become convinced that wage moderation was key to a decrease in unemployment.

6. Nickell [2003]

It appeared that Dutch unions had accepted the argument by firms that they needed to reestablish profit margins in order to increase employment. This led me to explore, with Thomas Philippon, the role of trust between capital and labor in the evolution of unemployment.⁷ Using various measures of trust between firms and unions, we found that differences in trust could indeed explain much of the differences in the evolution of unemployment across countries. Adding trust to the other institutions in the Blanchard Wolfers specification, we found trust to also be strongly significant. A tentative conclusion is that, in an environment in which collective bargaining is central to wage determination, not only formal labor market institutions, but also good labor relations, are crucial to reducing the effects of adverse shocks on unemployment.

This set of results, as a whole, has a number of policy implications: Labor market institutions matter; they affect both the size and the duration of the effects of the shocks on unemployment. High social protection is not inconsistent with low unemployment. It must however be provided efficiently.

This raises in turn two broad questions. In those countries where social protection is inefficient, will governments reform labor market institutions? In a recent paper, I speculate that reforms in goods and financial markets will indeed force reforms in the labor market.⁸ The other question is normative. If governments want to reform their labor market institutions, how should they do it? To answer this last question, Jean Tirole and I have started working on the optimal design of labor market institutions.⁹ This will hopefully be the topic of another NBER Reporter article in the future.

7. Blanchard and Philippon [2004]

8. Blanchard [2004]

9. Blanchard and Tirole 2003], Blanchard and Tirole [2004]

Bibliography

Olivier Blanchard, "The medium run," *Brookings Papers on Economic Activity*, 1997-2, 89-158

Olivier Blanchard, "Revisiting European unemployment: Employment, capital accumulation, and factor prices," NBER WP 6566, *Geary Lecture*, ESRI, June 1998.

Olivier Blanchard, "The economics of unemployment. Shocks, institutions, and interactions," *Lionel Robbins lectures*, 2000 (b)

Olivier Blanchard, "The economic future of Europe," NBER WP 10310, and *Journal of Economic Perspectives*, forthcoming 2004.

Olivier Blanchard and Francesco Giavazzi, "The macroeconomic effects of labor and product market deregulation," NBER WP 8120, and *Quarterly Journal of Economics*, 118-3, August 2003, 879-909

Olivier Blanchard and Thomas Philippon, "The decline of rents, and the rise and fall of unemployment in Europe," NBER WP xx, 2004

Olivier Blanchard and Pedro Portugal, "What hides behind an unemployment rate. Comparing Portuguese and US unemployment," NBER WP 6636, and *American Economic Review*, 91-1, March 2001, 187-207

Olivier Blanchard and Jean Tirole, "Contours of employment protection," MIT WP 03-35, September 2003

Olivier Blanchard and Jean Tirole, "The optimal design of unemployment insurance and employment protection," NBER WP xx, 2004

Olivier Blanchard and Justin Wolfers, "The role of shocks and institutions in the rise of European unemployment," NBER WP 7282, and *Harry Johnson Lecture, Economic Journal*, Vol 110, March 2000 (a), 1-33

Steve Nickell, "Labour market institutions and unemployment in OECD countries," CE-SIFO DICE Report 1, no 2, 2003, 13-26