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Olivier Blanchard; Juan F. Jimeno

The American Economic Review, Vol. 85, No. 2, Papers and Proceedings of the Hundredth and Seventh Annual Meeting of the American Economic Association Washington, DC, January 6-8, 1995 (May, 1995), 212-218.

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STRUCTURAL SLUMPS AND PERSISTENT UNEMPLOYMENT[†]

Structural Unemployment: Spain versus Portugal

By OLIVIER BLANCHARD AND JUAN F. JIMENO*

The increase in European unemployment over the last two decades has made clear that the *natural rate of unemployment* is all but natural, and all but constant. A considerable body of research has explored the determinants of what is now and more appropriately called the *structural rate of unemployment*. Much of this research was summarized in the book by Richard Layard et al. (1991). This year has seen two new and important contributions: an in-depth empirical study by the Organization for Economic Cooperation and Development (OECD, 1994), and a theoretical exploration by Edmund Phelps (1994).

How much closer are we to understanding the differences in structural rates across countries, and their movements over time? To answer those questions, we decided to take up what may be the biggest empirical challenge facing theories of structural unemployment, the dramatic difference in the unemployment experiences of Portugal and Spain. Both countries have had a remarkably similar history over the last 20 years. Yet one, Spain, has the highest unemployment rate in the European Union, 24.4 percent, while the other, Portugal, has—save

for Luxembourg—the lowest one, 6.8 percent. This paper presents our conclusions. A short summary is that humility and more research are in order.

I. Basic Facts

A. Some Background

Similarities between Spain and Portugal are striking. The countries are neighbors, at the southwest corner of Europe: both spent much of the 20th century governed by dictators; in both, dictatorship came to an end in the mid 1970's, in 1975 in Spain with the death of Franco, and in 1974 in Portugal with a revolution. In both countries the late 1970's were characterized by a social and wage explosion, and the 1980's by a return to economic and political stability. Both countries joined the European community in 1986. And in both, the current prime ministers have now been in power for a decade or so.

There are some obvious differences as well. Spain has about four times the population of Portugal and is less open. Spain is also richer; its GDP per capita, measured at PPP (purchasing-power parity) prices, stands at 70 percent of the OECD average. GDP per capita in Portugal stands at only 47 percent of the OECD average, or about 67 percent of the Spanish level.

B. The Evolution of Unemployment

Figure 1 shows the evolution of unemployment rates in both countries since 1971. Figures 2 and 3 show the evolution of the inflation (using the CPI) and unemployment rates for each country; the shaded parts represent the major periods of disinflation.

[†]*Discussants:* Laurence J. Kotlikoff, Boston University; Robert J. Gordon, Northwestern University; Robert King, University of Virginia.

*Blanchard: Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139 and NBER; Jimeno: Universidad de Alcalá de Henares and FEDEA, Jorge Juan 46, Madrid 28001, Spain. We thank David Coe, Richard Eckaus, Silvia Luz, Laurence Kotlikoff, Antonio Melo, Robert Solow, members of the CEPR group on Spanish Unemployment, and participants at a seminar at the Bank of Portugal for help and comments.

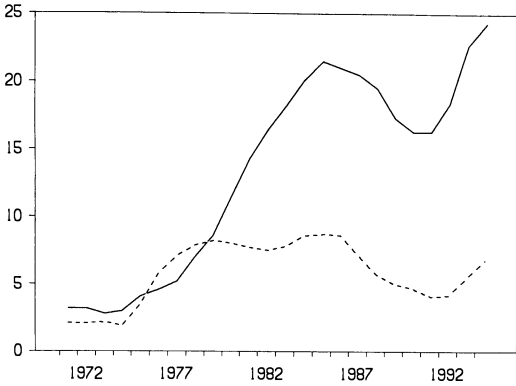


FIGURE 1. UNEMPLOYMENT RATES (PERCENTAGES) FOR SPAIN (SOLID CURVE) AND PORTUGAL (DASHED CURVE), 1971-1994

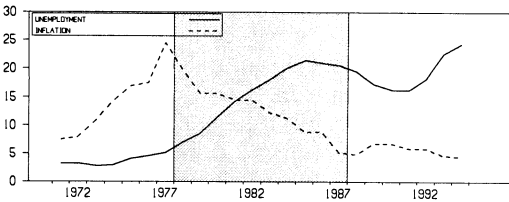


FIGURE 2. UNEMPLOYMENT RATE (PERCENTAGE; SOLID CURVE) AND INFLATION RATE (PERCENTAGE; DASHED CURVE) FOR SPAIN, 1971-1994

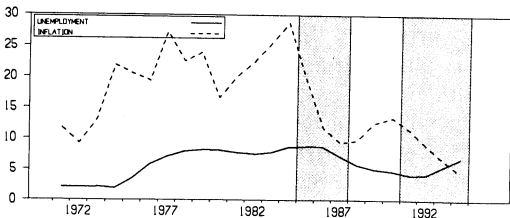


FIGURE 3. UNEMPLOYMENT RATE (PERCENTAGE; SOLID CURVE) AND INFLATION RATE (PERCENTAGE; DASHED CURVE) FOR PORTUGAL, 1971-1994

The sharp divergence between the two unemployment rates dates back to the late 1970's. As in the rest of Europe, the 1960's had been years of very low unemployment. The 1970's were characterized, in both countries, by an increase in unemployment. By 1978, the unemployment rate was 7.0

percent in Spain, and 7.8 percent in Portugal.

From 1978 on, priority was given in Spain to the reduction of inflation. By 1987, the inflation rate was down to 5 percent, nearly 20-percent below the rate 10 years earlier. But the unemployment rate stood at 20.5 percent. Since then, the unemployment rate has fluctuated around this new level, going down to 16 percent in the European expansion of the late 1980's, and going up again to its current level of 24 percent in the European recession of the early 1990's.

In contrast not only to Spain but also to most of Europe, inflation remained high in Portugal in the first half of the 1980's. Disinflation was accomplished in two major steps, the first from 1984 to 1987, with inflation decreasing from 28 percent to 9 percent, and the second from 1991 on, with inflation going down from 12 percent to under 5 percent today. In neither case was disinflation associated with much increase in unemployment.

Estimated wage and price inflation/unemployment equations confirm the visual impression.¹ They suggest, for Spain, a small wage response to unemployment, and a dramatic increase in the structural rate in the first half of the 1980's. For Portugal, they typically show a roughly unchanged structural rate since the early 1980's, and one of the largest wage responses to unemployment across European countries.

II. Are the Differences in Unemployment Rates for Real?

The differences in unemployment rates across Spain and Portugal are not statistical artifacts.² Official unemployment numbers in both countries are based on large labor-force surveys, using identical questions to assess whether somebody is unemployed. There is no obvious source of bias in the

¹For Spain, see the Centre for Economic Policy and Research report (CEPR, 1994). For Portugal, see the Organization for Economic Cooperation and Development report on Portugal for 1991-1992 and Silvia Luz and Maximiano Pinheiro (1994).

²For more details, see CEPR (1994).

way the sample is designed or the way the survey is administered.

Registered unemployment numbers give a different image. Since 1990, the registered unemployment rate in Spain has decreased below the official unemployment rate. It stands today at 17 percent for Spain, compared to 8 percent for Portugal, a difference of "only" 9 percent. But registered unemployment numbers depend on the individual costs and benefits of registration; those vary over time and place, and there appears to be no reason to use registered unemployment numbers in preference to official numbers for comparison across countries.

There is no evidence that unemployment in Portugal is disguised in either higher self- or part-time employment, or lower participation rates. Self-employment and part-time employment rates are similar in Spain and Portugal. Participation rates are actually much higher in Portugal than in Spain, 68 percent versus 57 percent. There is also no evidence of divergent trends across the two countries: current participation rates are nearly identical to their 1978 values. Agricultural employment—which can hide unemployment—is higher in Portugal than in Spain; but, as a share of total employment, it has decreased in both countries by more than 10 percent over the last 20 years.

Evidence on the underground economy is, by definition, hard to establish. A survey designed to measure unreported activity in 1985 in Spain concluded that between 10 percent and 15 percent of employment was irregular (i.e., not properly registered with the social security system). But it also concluded that most of those jobs were held by people already employed, so that adjustment for the underground economy could decrease the unemployment rate by 3.5 percentage points at most.

Finally, the lower Portuguese unemployment rate does not hide higher out-migration. Independence of the Portuguese colonies led to large in-migration in Portugal in the mid 1970's; in the 1980's, average net out-migration from Portugal has been low, about 0.35 percent a year. Over the 1980's, out-migration from Spain has been equal to zero. More generally, the

growth of the population of working age has been identical in both countries: 1.1 percent on average annually since 1975.

III. The List of Potential Suspects

Our theories of structural unemployment offer a long list of potential suspects. We focus here on what we see as the main four.³

A. Fiscal Policy

Fiscal policy affects the "wedge," the difference between the cost of labor to firms and after-tax take-home pay to workers. In some theories, the long-run incidence of the wedge is such that the wedge has no long-run effect on structural unemployment. In others, at least some components of the wedge can affect structural unemployment even in the long run.

In his 1994 book, Phelps has pointed also to the effects of fiscal policy through the interest rate. If the wage paid by firms depends negatively on the interest rate, then higher government spending, higher deficits, and higher debt, to the extent that they contribute to higher interest rates, also lead to higher unemployment.

Can differences in fiscal policy explain the difference between unemployment in Spain and Portugal? No. In this respect, Spain and Portugal are surprisingly similar.

Both countries have seen large increases in the share of government. The ratio of general government receipts to GDP was equal to 27 percent in 1978 in Spain; it

³We looked at a much longer list. Some of our reasons for eliminating other potential suspects are as follows (in no particular order). The ratio of the minimum to the median wage is roughly the same in both countries; so are measures of wage inequality. The amount of reallocation, measured by the standard deviation of rates of change in one-digit sector employment, has been and is similar. An explanation based on geography is not promising: unemployment rates in Extremadura and Galicia, the two main Spanish provinces bordering Portugal, are 28.0 percent and 18.0 percent, respectively.

stands at 39 percent today; the corresponding numbers for Portugal are 29 percent and 46 percent. This evolution puts them today in the middle of the European pack.

Both countries have run high deficits in the 1980's. As a result, the ratio of (gross) government debt to GDP has increased in Spain from 14 percent in 1978 to 60 percent today; in Portugal, it has increased from 37 percent to 68 percent.

B. Collective Bargaining

Much research has looked at the relation between the structure of collective bargaining and structural unemployment. The theme has been that the nature of the game being played, and thus the unemployment outcome, depends on labor-market *institutions*. Here again however, Spain and Portugal are surprisingly similar.

The number of workers covered by bargaining is around 70 percent in both countries. In both Spain and Portugal, two unions, one communist and one socialist, have fought each other and dominated the scene since the fall of dictatorship.

Labor-market institutions are also similar. The OECD (1994) study classifies countries along two dimensions: level of bargaining (central, sectoral, or plant) and coordination between bargaining units (none, limited, or high). Both Spain and Portugal fall in the same box (predominantly sectoral, with limited coordination), the box which appears to be empirically associated with the worst unemployment outcomes.

An examination of collective bargaining *practices* however, reveals larger differences. Distrust among the government, unions, and business organizations has led to the suspension of national agreements in Spain since the mid 1980's. They are still occasionally used in Portugal. Sectoral bargaining in Portugal typically set lower, less binding, floors on firm-level wages than in Spain. Firm-level bargaining is rarer in Portugal than in Spain. These differences are important. But they appear to us as endogenous—more so than labor market institutions. Sources of what appears to be

weaker bargaining power on the part of workers must be found elsewhere.

C. Employment Protection

That excessive employment protection is an important cause of high unemployment is one of the main themes of the OECD (1994) study. The theory is less sanguine here. Firing costs decrease efficiency and thus are likely to decrease the wage offered by firms. By making the unemployed worse substitutes for the employed, they increase the bargaining power of the employed workers; this may also increase equilibrium wages and unemployment. But higher firing costs also lead to smaller gross flows; *ceteris paribus*, this effect leads to lower unemployment.⁴ In short, it is clear that firing costs decrease reallocation; it is not clear that they generate high unemployment.

Theoretical ambiguities turn out to be irrelevant here however: Spain and Portugal have roughly the same degree of employment protection. The OECD study computes an index of employment protection, based on both pecuniary and time costs. Portugal has the *highest* value of the index, 16; Spain has the second highest, 15. For comparison, the index is equal to 6 in France, 2 in the United Kingdom.

Both countries also have roughly similar evolutions, a slow decrease in protection since the mid 1980's. Spain introduced fixed-term employment contracts in 1984; as a result, the proportion of fixed-term employment increased from 10 percent of employment then to over 30 percent today. A 1994 reform has increased restrictions on fixed-term employment and has decreased firing restrictions; it is too soon to see the effects. Reform in Portugal has been more timid. The proportion of fixed-term contracts, which was higher to start with because of the higher share of seasonal em-

⁴In many efficiency-wage or bargaining models, what is determined in equilibrium is the exit rate from unemployment, the ratio of the flow to the stock of unemployed. Everything else equal, a lower flow leads to a proportionately lower stock.

ployment (agriculture and construction) has remained stable at roughly 20 percent.

It is often said in Portugal that many small firms escape firing restrictions. Indirect evidence suggests that this is probably not quantitatively important. Flows in the labor market in Portugal are the lowest in Europe. The average monthly flow out of registered unemployment in Portugal is about 0.15 percent of the labor force; this compares to 0.4 percent and 1.0 percent in the rest of Europe. Flows were similarly low in Spain before the introduction of fixed-term contracts; they are now 2–3 times larger than in Portugal. Alternative measures of flows, based on transitions computed from the labor-force survey, yield the same conclusions: both countries have high employment protection and low flows in the labor market.

D. Unemployment Benefits

That higher unemployment benefits lead to higher structural unemployment is one of the oldest themes in the theory of unemployment. Here again, at first glance, Spain and Portugal are surprisingly similar.

Unemployment insurance systems differ in many dimensions. To compare countries, the OECD (1994) study has constructed replacement rates for different wage levels, family status, and duration of unemployment. This construction yields nearly identical numbers for the two countries. The average replacement rate in Spain is 70 percent for those unemployed less than a year, 30 percent for 2–3 years, 0 percent thereafter. The corresponding Portuguese numbers are 65 percent, 37 percent, and 0 percent.

A more careful assessment, however, yields an important difference. Eligibility rules—which are not taken into account in the OECD computation—are different. Workers are eligible if they have worked 6 months out of the last 4 years in Spain (1 year out of the last 4, since a 1992 reform), but only if they have worked 1.5 years out of the last 2 years in Portugal. This difference is reflected in the propor-

tion of unemployed receiving benefits. The ratio of benefit recipients to the number of unemployed is 59 percent in Spain versus 41 percent in Portugal; the difference would be larger if we corrected for the fact that the proportion of long-term unemployed, (and therefore the proportion of the unemployed who have exhausted unemployment benefits), is higher in Spain.

The evolutions have also been very different here. Unemployment benefits did not exist in Portugal 20 years ago. The OECD-constructed average replacement ratio for Portugal stands at 34 percent today. It stood at 25 percent during 1987–1991, at 7 percent during 1979–1985, and at 1 percent during 1973–1977.

IV. A Tentative Explanation

Our examination of potential suspects has yielded a meager crop. Only unemployment benefits appear to be substantially different across the two countries, and more so in the past than today. Can this difference explain the disparity between unemployment rates in the two countries?

It seems difficult to explain anything like a 15-percent difference in unemployment rates by the difference in eligibility rules for unemployment. Admittedly, we do not have a formal model, and therefore a metric which would yield a more convincing answer. But the evolution of unemployment rates in both countries seems hard to reconcile with the history of unemployment benefits. And cross-country regressions suggest much smaller effects of unemployment benefit rules than would be needed here (see e.g., Layard et. al., 1991).

We believe, however, that the difference in unemployment benefits may explain the current levels of unemployment through its effect on *persistence*. Our tentative explanation goes as follows. In Spain, high employment protection and unemployment benefits have led to small effects of labor-market conditions on wages. This led to large adverse effects of disinflation on unemployment in the first half of the 1980's. And high persistence since then explains why un-

employment has remained high since. In Portugal, in contrast, low unemployment benefits have led, despite the presence of high employment protection, to a higher response of wages to unemployment. This has led to smaller adverse effects of disinflation on unemployment. And it has led to less unemployment persistence.

It is clear that our explanation leaves open a number of questions:

1. It remains to be shown that the different combinations of employment protection and unemployment benefits can explain the magnitude of the difference in unemployment persistence across the two countries. For this, a theoretical model, and calibration, are needed.
2. The evidence in Spain is not only of high persistence, but of nearly unit-root persistence. An open question is whether persistence has been reinforced through further hysteresis mechanisms, which arise at high unemployment. Sustained high unemployment leads to a high proportion of long-term unemployed. Much research has explored whether this may lead to additional persistence, through the disenfranchisement of the long term unemployed, and thus a steadily smaller effect of unemployment on wages (see e.g., Blanchard, 1991). Due to the lack of good longitudinal data in Spain, direct evidence is still scant. The stronger evidence is indirect and, admittedly, by default. We cannot identify reasons for the increase in structural unemployment in the mid 1980's other than hysteretic effects.
3. The timing of disinflations is intriguing. Disinflation in Spain took place while the price of oil had just increased, and while the labor share was still high from the wage explosion of the 1970's. Disinflation coincided with a need for a shift in income distribution away from labor, toward capital and oil producers. In contrast, disinflation in Portugal came later, when the labor share had substantially decreased and while the price of oil was falling. Thus, disinflation was mostly a

question of coordination, without a need for a shift in income distribution away from labor income. A tempting hypothesis is that the timing of disinflations mattered.

V. Conclusions

As we indicated in the Introduction, we feel that humility is in order. We believe that economists are still a long way from understanding movements in structural unemployment rates across countries and time. Nonetheless, we feel that our study warrants two conclusions:⁵

1. There is no simple mapping from observable characteristics of labor-market institutions and rules to structural unemployment. Spain and Portugal are probably more similar in that respect than any other pair of European countries; yet their unemployment rates differ by 15 percent.
2. The evidence strongly suggests that one must allow for the role of persistence and thus of the history of shocks in explaining structural unemployment. It also suggests that labor-market rules and institutions, such as the system of unemployment benefits here, have important effects on the degree of persistence.

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