Massachusetts Institute of Technology
Department of Economics
Working Paper Series

ADJUSTMENT WITH THE EURO.
THE DIFFICULT CASE OF PORTUGAL.

Olivier Blanchard

Room E52-251
50 Memorial Drive
Cambridge, MA 02142

Adjustment within the euro. The difficult case of Portugal

Olivier Blanchard [*]

February 23, 2006

Abstract

In the second half of the 1990s, the prospect of entry in the euro led to an output boom and large current account deficits in Portugal. Since then, the boom has turned into a slump. Current account deficits are still large, and so are budget deficits. This paper reviews the facts, the likely adjustment in the absence of major policy changes, and examines policy options.

1

The Portuguese economy is in serious trouble: Productivity growth is anemic. Growth is very low. The budget deficit is large. The current account deficit is very large.

The purpose of this paper is to analyze the options available to Portuguese policy makers at this point. To do so however, the paper first returns to the past, then examines the likely adjustment process in the absence of major policy changes, and finally turns to policy options.

Section 1 reviews the past. To understand the situation today, one must go back at least to the second half of the 1990s. Triggered by the commitment by Portugal to join the euro, a sharp drop in interest rates and expectations of faster growth both led to a decrease in private saving and an increase in investment. The result was high output growth, decreasing unemployment, increasing wages, and fast increasing current account deficits.

The future however turned disappointing. Productivity growth went from bad to worse. The investment boom came to an end, and, with disappointed expectations, private saving increased. Fiscal deficits partly replaced private dissaving, but not by enough to avoid a slump. Overvaluation, the result of earlier pressure on wages during the boom, implied that current account deficits remained large.
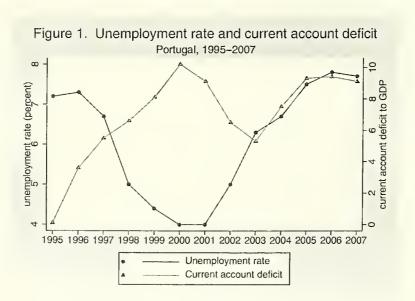
This is where Portugal is today. In the absence of policy changes, the most likely scenario is one of *competitive disinflation*, a period of sustained high unemployment until competitiveness has been reestablished, the current account deficit and unemployment are reduced. This process is analyzed in Section 2. It is a process fraught with dangers, both economic and political, and one which can easily derail. It makes it imperative to think about what policy can do. The options are basically two.

The first and obviously most attractive one is to achieve a sustained increase in productivity growth, and make sure it is not fully reflected in wage growth until unemployment and the current account deficits are reduced. Given the low level of income per capita in Portugal relative to the top EU countries, getting closer to the frontier would seem achievable. Section 3 focuses on which reforms and institutional changes are most likely to succeed.

The second is lower nominal wage growth. It is obviously less attractive than higher productivity growth. But it can potentially work much faster, in effect

achieving the required increase in competitiveness without a long period of unemployment. The main issue is that, in the current environment of already low wage inflation both in Portugal and the rest of the EU, such a strategy, if it is to work fast enough, would require a large decrease in the nominal wage. Section 4 focuses on whether and how it can be achieved.

Section 5 concludes. In short, in the absence of policy changes, the adjustment is likely to be long and painful. It can be made shorter, and less painful. Higher productivity growth and low nominal wage growth are not mutually exclusive, and the best policy is probably to combine both. Fiscal policy also has an important role to play. Deficit reduction is required, but its pace and its contents may be linked to reforms and wage moderation.

1   From boom to slump, and current account deficits

Figure 1. Unemployment rate and current account deficit
Portugal, 1995–2007

Source: OECD Economic Outlook December 2005. The numbers for 2006 and 2007 are OECD forecasts.

Figure 1 puts the current Portuguese economic situation in some historical perspective. It shows the evolution of the unemployment rate and the current

account deficit (as a ratio of GDP) since 1995. Two periods clearly come out: From 1995 to 2001, a steady decrease in unemployment and a rapidly growing current account deficit; since 2001, a steady increase in unemployment, and a continuing current account deficit, with the forecasts being for more of the same until at least 2007.[1]

Start with the boom. It is clear that its proximate cause of the boom was participation in the ERM and in the construction of the euro.[2] With the reduction of inflation, the elimination of country risk, and access to the euro bond market, Portuguese nominal interest rates declined from 16% in 1992 to 4% in 2001; over the same period, real interest rates declined from 6% to roughly 0%. Combined with expectations that participation in the euro would lead to faster convergence and thus faster growth for Portugal, the result was an increase in both consumption and investment. Household saving dropped, investment increased. The actual budget deficit decreased a bit. But discretionary fiscal policy was expansionary: From 1995 to 2001, the cyclically adjusted primary deficit—which adjusts for the effects of lower interest rates and output growth—increased by roughly 4%.

The result was high output growth, and a steady decrease in unemployment. (Basic numbers for 1995 to 2001, and for 2001 on, are given in Tables 1 and 2 respectively. I decided to use numbers from the OECD Economic outlook database rather than national numbers to facilitate comparisons with other countries.) With low unemployment, nominal wage growth was substantially higher than productivity growth, leading to growth in unit labor costs higher than in the rest of the euro area (an area which accounts for roughly 70% of Portuguese trade). The result of high output growth and decreasing competitiveness (I shall define competitiveness as the inverse of unit labor costs relative to those in the euro area) was a steady increase in the current account deficit, from close to 0% in 1995 to more than 10% in 2000.

---

1. Methodological changes in the Labor Force Survey imply a break in the unemployment series in 1998. It is estimated that, under the pre-1998 definition, the unemployment rate would be roughly 1% higher than it is today.
2. For more details, see for example Constâncio [8], Fagan and Gaspar [11] or Blanchard and Giavazzi [3].

Table 1. Macroeconomic evolutions, 1995-2001

	1995	1996	1997	1998	1999	2000	2001
GDP growth	4.3	3.6	4.2	4.7	3.9	3.8	2.0
(relative to euro)	1.9	2.1	1.5	1.9	1.1	0.0	0.1
Unemployment rate	7.2	7.3	6.7	5.0	4.4	4.0	4.0
Current account	-0.1	-3.6	-5.5	-6.6	-8.1	-10.2	-9.1
Household saving	13.6	11.8	10.3	9.9	8.6	10.9	11.9
Budget surplus	-5.3	-4.6	-3.4	-3.0	-2.8	-2.9	-4.3
Primary surplus (cycl adj)	1.9	1.3	0.8	-0.4	-0.7	-1.6	-2.3
Nominal wage growth	6.7	9.0	3.8	4.3	4.0	6.9	5.2
Productivity growth	5.8	3.6	2.4	2.6	3.1	1.8	0.3
Unit labor cost growth	1.0	5.4	1.3	1.8	0.9	5.1	4.9
(relative to euro)	-0.7	4.8	1.8	1.4	0.2	4.0	2.7

(Source: OECD Economic Outlook Database December 2005. "Current account": ratio of the current account balance to GDP. "Household saving": ratio to disposable income. "Budget surplus" and "Cyclically adjusted primary surplus": ratios to GDP. "Nominal wage growth" and "labor productivity" are for the business sector).

Should the government have aimed to limit the size of the boom and the size of the current account deficit through tighter fiscal policy? With hindsight, the answer is surely yes. But, at the time, the answer was less obvious:

- First, initial unemployment was clearly above the natural rate. While an unemployment rate of 7.3% in 1996 is not high by EU standards, it was a historically high rate for Portugal. Thus, some growth in excess of normal growth was justified. By the end of the 1990s however, unemployment had clearly become lower than the natural rate, and excess growth was no longer justified.
- Second, some current account deficit was also clearly justified. A lower real rate of interest and expectations of faster convergence both justify higher private spending, be it consumption and investment. And indeed, the boom was primarily driven by private spending. This does not by itself imply that the government should have just stood by (this would be true only if there were no other imperfections in the economy). But it

implies that the large current account deficits could be seen as largely benign, the manifestation of the advantages of tighter financial integration into the euro.[3]

Whether or not, given expectations at the time, policy should have been tighter is now an academic question—although an important and open academic question.[4] Starting in the early 2000s, the future turned out to be disappointing...

Table 2. Actual and projected macroeconomic evolutions, 2001-2007

	2001	2002	2003	2004	2005	2006	2007
GDP growth	2.0	0.5	-1.2	1.2	0.8	1.0	1.8
(relative to euro)	0.1	-0.4	-2.0	-0.6	-0.7	-1.1	-0.3
Unemployment rate	4.0	5.0	6.3	6.7	7.5	7.8	7.7
Current account	-9.1	-6.5	-5.3	-7.5	-9.3	-9.4	-9.1
Household saving	11.9	11.5	11.4	11.8	11.7	11.7	11.7
Budget surplus	-4.3	-2.8	-2.9	-3.0	-6.0	-4.9	-4.6
Primary surplus (cycl adj)	-2.3	0.0	1.3	1.2	-1.1	0.2	0.4
Nominal wage growth	5.2	3.8	3.5	3.0	3.0	2.9	2.7
Productivity growth	0.3	0.0	-1.1	0.6	0.8	0.4	1.1
Unit labor cost growth	4.9	3.8	4.6	2.4	2.2	2.5	1.6
(relative to euro)	2.7	1.9	3.2	1.9	1.1	1.8	0.7

Source and definitions: same as Table 1. The year 2001 is repeated for convenience. The numbers for 2006 and 2007 are OECD forecasts.

---

3. This was indeed the interpretation Giavazzi and I gave in [3]. Our discussant, Pierre Olivier Gourinchas [13], was more worried about the required adjustment. He was right.

4. Take a standard intertemporal open economy model, with tradables and non-tradables, and a fixed exchange rate. Assume away all imperfections. Then, a decrease in the world interest rate, or an increase in productivity growth will lead to an increase in consumption and investment, and so to a current account deficit. If labor supply is inelastic, the wage, and with it the price of non-tradables will increase. Later on, as the country pays interest on accumulated debt, the wage will decrease, and with it the price of non-tradables. There is no reason for the government to intervene. (A formal model along these lines is presented by Fagan and Gaspar[11]). Suppose however that wages adjust slowly to labor market conditions. Then, the increase in demand will lead not only to a current account deficit, but also to an increase in output above its natural level. Suppose the government can use fiscal policy to affect demand (because of finite horizons by private agents for example). Should it maintain output at the natural level, and in the process eliminate the (partly desirable) current account deficit? Or should it allow for some increase in output and some current account deficit? The question is of relevance not only for Portugal, but for many other countries.

- Higher productivity growth did not materialize. Instead, it nearly vanished, averaging 0.1% per year from 2001 to 2005. The investment boom came to an end. And, because of high accumulated debt and worse future prospects, household saving increased.

- The increase in private saving was partly offset by increasing public dissaving. The actual deficit steadily increased, reaching 6% in 2005. After an improvement in the early 2000s, the cyclically adjusted primary deficit again turned negative in 2005. The ratio of debt to GDP, using the Maastricht definition, reached 66% at the end of 2005.

- Lower growth and thus lower import demand should have led to a decrease in the current account deficit. But this was largely offset by a continuing increase in relative labor costs. True, nominal wage growth decreased; but whatever competitive advantage this would have given Portugal was more than offset by the decline in productivity growth. As a result, unit labor costs have increased by another 8% since 2001. Because Portugal is largely a price taker for its exports, export prices have not increased very much, if at all; the implication is that profitability in non-tradables has dramatically decreased.[5]

- The effects of overvaluation from the boom were compounded by composition effects in exports. A large proportion of Portuguese exports is in "low tech" goods, roughly 60% compared to an average of 30% for the euro area, goods where competition with emerging economies is strongest.[6] Also, remittances have steadily decreased, from 3% in 1996 (down from 10% in the 1980s...) to 1.5% today. This suggests that, in the absence of the boom-induced overvaluation, the current account balance would still have deteriorated.

Lower consumption and investment demand have led to an output slump. Growth was negative in 2003, and has averaged 0.3% since 2001. The unemploy-

---

5. Another logical possibility is that wages have increased much less in the tradable sector than for the economy as a whole. Computations from Quadros de Pessoal by Pedro Portugal suggest however that this has not been the case, at least up to 2002 (the latest date for which the information is available.) Bargained and actual wages have grown at the same rate in the textile or clothing sectors for example as in the private sector as a whole.

6. These numbers come from [17]. For more on export composition, see also Cabral [6]. Some other computations suggest however a less dire picture. For example, computations by Lionel Fontagne of the correlation of export shares with China's export shares, using disaggregated (HS6 level) sectoral data, suggest that this correlation is not higher for Portugal than it is for Germany, reflecting the fact that competition with emerging economies in medium tech goods is also relevant.

ment rate has increased back to 7.5%. As a result of increases in relative unit labor costs on top of adverse structural trends, the current account deficit has steadily increased, reaching 9.3% in 2005. And it increasingly reflects a large budget deficit, rather than low private saving or high investment.

2 What happens next?

What happens next, absent major policy changes and major surprises[7], is a period of "competitive disinflation": a period of sustained high unemployment, leading to lower nominal wage growth until relative unit labor costs have decreased, competitiveness has improved, the current account deficit has decreased, and demand and output have recovered.

The process is familiar from exchange rate-based stabilizations (see for example Rebelo and Vegh [15]), and from the competitive disinflation many countries went through in Europe in the 1980s and 1990s in order to join the euro. The evidence is that it is typically a long and painful process. In our study of the competitive disinflation process in France [4], Pierre Alain Muet and I concluded that, starting from equal inflation at home and abroad, a 20% gap in competitiveness, and an unemployment rate initially 2% above the natural rate, it took four years to reduce the competitiveness gap to 12% (and by then, the unemployment gap was still 1.2%), six years to reduce it to 8% (with an unemployment gap still equal to 0.8%).

Are there reasons to be more optimistic for Portugal, to think that, in the absence of major policy changes, the unemployment cost needed to reestablish competitiveness would be lower? The answer is probably not.

One can think of the effects of unemployment on wages and thus on competitiveness as depending primarily on two elements (I shall keep the argument in the text informal. A formal model is given in Box 1):

- The first is *real wage rigidities*, i.e. the effect of unemployment on the rate of change of real wages. The weaker the effect of unemployment, the slower the decrease in wages for a given unemployment gap, and thus the more total unemployment is needed to achieve a given improvement in competitiveness.

---

7. The usual warning here: Surprises will happen; only their sign is unknown.

Is there any reason to believe that real wages are more flexible in Portugal than they were in France in the 1980s and 1990s? I read the econometric evidence as giving a negative answer. Based on the sharp adjustment in real wages in the early 1980s, some researchers have concluded that wages were quite flexible in Portugal. But the main cause of the adjustment seems to have been the devaluations which took place at the time, rather than a strong response of wages to labor market conditions (see Dias et al [9]). Coefficients estimated over the more recent past suggest limited real wage flexibility.

As the econometric evidence is murky, it is useful to look at the wage bargaining institutional setup directly. Such a look suggests that, as wages are typically above those set in sectoral bargaining, there is substantial room for firms to decrease wages, that there is what Portugal and Cardoso call a substantial "wage cushion" (see [7].) It appears however that this wage cushion has been partly used by firms in recent years; this suggests that flexibility is indeed smaller today than it was in the early 2000s.

- The second is *nominal wage rigidities*. This expression is used however to describe two very different aspects of wage setting.

The first is the presence of lags in the response of nominal wages to prices—and of prices to nominal wages. The longer the lags, the slower the adjustment of wages for a given unemployment gap, thus the more unemployment is needed to achieve a given improvement in competitiveness. Empirical evidence suggests that, even if each lag is small, their joint presence can substantially increase the unemployment cost of the adjustment.

The second is however as relevant or more relevant today. It comes from the fact that workers may be reluctant to accept nominal wage declines. Indeed, in Portugal today, the labor law forbids "unjustified wage decreases" and in practice rules out decreases in nominal wages for economic reasons. The evidence on wage changes shows indeed the presence of substantial nominal rigidity of this type in Portugal (see for example the histograms of wage changes by year in [2], Box 2-5, and Dickens et al [10] for an international comparison).

In a world of low inflation, this second constraint, if present, sharply limits the speed at which competitiveness can be improved. Suppose for

example that nominal wages are increasing at 2% in the euro area, and that productivity growth in tradables is the same in Portugal and in the the rest of the euro area. Then, the most which can be achieved, i.e. nominal wage growth of 0% only leads to an improvement of competitiveness of 2% a year.

To summarize, real rigidities limit the speed of adjustment of the wage to labor market conditions. Nominal rigidities further slow down and may even stop the adjustment. The higher real or nominal rigidities, the larger the amount of unemployment needed to reestablish competitiveness.

What can be done to alleviate the unemployment cost of adjustment?

One way is to achieve higher productivity growth. Higher productivity growth is clearly desirable on its own as it implies a higher rate of growth of GDP per capita. And it will improve competitiveness so long as it is not fully reflected in wage growth. This points to reforms in the goods and financial markets.

Even with dramatic reforms, productivity growth is unlikely however to increase overnight. Thus, another and potentially much faster way to reestablish competitiveness is to decrease nominal wage growth—indeed, given the circumstances, to achieve a decrease in nominal wages—without relying on unemployment to do the job over time.

Are there other ways? The answer is basically no.

Outmigration, the main mechanism through which U.S. states return to low unemployment after an adverse shock, is not an option, at least on the scale in which it would have to take place to solve the problem in Portugal.

Fiscal policy could in principle be used to increase aggregate demand and reduce unemployment. This however would come at the cost of an even larger current account deficit, and, by decreasing unemployment and the downward pressure on wages, would slow down or even stop the improvement in competitiveness. It would thus imply larger and longer lasting current account deficits. Thus, even leaving aside the facts that the ratio of public debt to GDP is already high and would be getting higher, this would only postpone the macroeconomic adjustment, not solve it. I shall later argue that fiscal policy can help as part of a policy package. The point made here is that, by itself, it cannot solve both the competitiveness and the unemployment problems.

In this context, let me take up briefly a proposition that has appeared in some policy discussions, the proposition that a fiscal consolidation could, in the current context, be expansionary and perhaps even improve competitiveness. While there are indeed circumstances in which a fiscal consolidation can increase demand in the short run, I do not believe that this is the case for Portugal today. The main channel through which fiscal consolidation can increase demand in the short run is by allowing for a dramatic reduction in interest rates. This would not be the case for Portugal, as the nominal interest rate is determined for the euro area as a whole, and there is, for the time being, no risk premium on Portuguese bonds. Thus, while deficit reduction is needed, it would be unwise to expect it to lead, by itself, to higher demand and lower unemployment. For the same reason, it would be unwise to expect deficit reduction to lead to a boom in investment, and through capital accumulation, to a substantial improvement in competitiveness.

Box. Wage and price dynamics

Consider a small country which is part of a common currency area (the euro area), and which produces and consumes tradables and non-tradables.

Assume the wage equation is given by:

$$\Delta w = E\Delta p + E\Delta a - \beta(u - \bar{u}) \text{ where}$$

$$\Delta p \equiv \alpha\Delta p_N + (1 - \alpha)\Delta p_T$$

$$\Delta a \equiv \alpha\Delta a_N + (1 - \alpha)\Delta a_T$$

where w is the log of the nominal wage, so Δw is the rate of change of the nominal wages; p is the log of the consumption price deflator (itself a weighted average of the price of non tradables and the price of tradables); a is log productivity growth (a weighted average of productivity growth in non tradables and tradable production); u and $\bar{u}$ are the actual and natural unemployment rates respectively; E denotes an expectation. (A more general, and theoretically more appealing, formulation, would assume that wages follow an error correction mechanism, in which case an error-correction term would appear on

the right. Introducing such a term would complicate the presentation but not change substantially the points made below.)

The equation therefore states that wage inflation depends on expected price inflation, expected productivity growth, and the unemployment gap, the deviation of the unemployment rate from the actual rate.

Assume that home and foreign tradables are perfect substitutes, so the rate of change of tradables prices is equal to the rate of euro wage inflation minus the rate of euro productivity growth (euro area variables are denoted by asterisks):

$$\Delta p_T = \Delta p_T^* = \Delta w^* - \Delta a_T^*$$

Assume that the non-tradable sector produces under constant returns to labor, so the price of non-tradables is given by:

$$\Delta p_N = \Delta w - \Delta a_N$$

Finally define competitiveness as $z \equiv p_T - w + a_T$, the price minus unit labor cost in tradables, or equivalently $z = w^* - a_T^* - w + a_T$, the inverse of relative unit labor costs. The question: How much unemployment is needed to achieve a given improvement in competitiveness?

Assume first that expectations are equal to actual values. In this case, the equations above yield:

$$\Delta z = \frac{\beta}{1 - \alpha} (u - \bar{u}) \tag{1}$$

The change in competitiveness depends only on the unemployment gap. It is independent of the evolution of productivity in tradables and non-tradables. The coefficient β captures real wage rigidities. The lower that coefficient, the larger the unemployment needed to achieve a given improvement in competitiveness.

Now introduce nominal rigidities (of type 1), i.e. lags in the response of wages to prices. Maintain for the moment the assumption that expected productivity growth is equal to actual productivity growth, and assume both to be constant over time. But assume now that expected inflation is equal to lagged inflation:

$$E\Delta p = \Delta p(-1)$$

12

In this case, the equations above yield:

$$\Delta z = \alpha \Delta z(-1) - \beta(u - \bar{u})$$

Compare this equation with the equation obtained absent nominal rigidities. The effect of a given unemployment gap on competitiveness is now slower. This in turn implies that more unemployment is needed to achieve a given improvement in competitiveness.

Finally consider the effects of changes in productivity growth. To the extent that such changes are anticipated, equation (1) shows they have no effect on competitiveness. So we must look at the effects of unanticipated changes. Define $v_N \equiv \Delta a_N - E\Delta a_N$, $v_T \equiv \Delta a_T - E\Delta a_T$ and $v = \alpha v_N + (1 - \alpha)v_T$, so v is unanticipated aggregate productivity growth.

Assume, for simplicity, that expected inflation is equal to actual inflation. Then, the equations above imply:

$$\Delta z = \frac{\beta}{1 - \alpha}(u - \bar{u}) + \frac{1}{1 - \alpha}v$$

For a given unemployment gap, an unanticipated increase in productivity leads to an increase in competitiveness. This in turn implies that less unemployment is needed to achieve a given improvement in competitiveness.

An important implication is that it does not matter whether the unanticipated increase in overall productivity growth comes from the tradables or the non-tradables sector. What matters is v, not its composition.

v_T and v_N work however in very different ways. v_T directly improves competitiveness, but, for a given unemployment rate, has no further effect on the wage. v_N instead decreases the price of non tradables, which in turn decreases the wage, therefore improving competitiveness in the tradables sector. This also indicates when the equivalence breaks down. If wage inflation is already equal to zero for example, and wage inflation cannot be negative (the second type of nominal wage rigidity described in the text), productivity growth in non-tradables sector will not be fully reflected in wage inflation, and therefore will have no effect on competitiveness.

3 Increasing productivity growth

GDP per capita(at PPP prices) in Portugal is $16,4000. This is only 52% of GDP per capita in the top five EU members ($31,500). Given Portugal's membership in both the EU and the euro, one might think that this 48% gap would be easy to reduce, that Portugal could achieve substantially higher productivity growth than it currently does.[8]

A 2003 McKinsey study of productivity in Portugal [14] looks at the sources of this gap. Of the 48% gap, it attributes 16% to "structural" (geographic and other) factors, and the rest, 32% to "non-structural" factors which can be corrected through appropriate policies. If Portugal were able to make up for example half of the non-structural gap in 10 years, this would translate in an increase in productivity growth of 2.5% a year.[9]

Such an increase in productivity growth would clearly increase the growth rate of GDP per capita. It would decrease the current account deficit only to the extent that it improved competitiveness in the tradables sector, to the extent that wage growth was less than productivity growth in tradables. This might require wage agreements limiting real wage growth, but these are easier to achieve if productivity growth is high in the first place. Under these conditions, anticipations of higher income, and higher profitability could lead to an increase in consumption and investment demand and output, and thus reduce unemployment faster than under the adjustment path described earlier. In effect, this would look very much like the scenario many had in mind in the 1990s. Productivity growth decreased rather than increased however, and that scenario did not play out. This time, if productivity growth actually increased, it would.

Let me look at the scenario in more detail, and take up two issues.

- Would it be better for the increase in productivity growth to take place in the tradable sector or in the non-tradable sector? The perhaps surprising answer is that, to a first approximation, it does not matter.

  The reason is the following (the underlying algebra is given in Box 1): At a given wage and unemployment rate, higher productivity in tradables indeed translates directly into higher competitiveness. If the price

---

8. The evidence is that convergence is typically faster within common currency areas. See for example Frankel and Rose [12].

9. For comparison's sake: The rate of productivity growth in Poland over the last ten years has been close to 4.8%. Poland's PPP GDP per capita, about $10,000, is still however lower than Portugal's.

of tradables is given by the world market however, this has no further effect on the price level, and thus no further effect on the wage. Higher productivity in non-tradables on the other hand leads to a lower price of non-tradables, which leads (for a given real consumption wage) to a lower wage. Thus, it improves competitiveness through the lower wage rather than directly through higher productivity in tradables.

The argument also shows the limits of this equivalence result: If, for example, nominal wage growth is already equal to zero and cannot be negative, then, improvements in productivity in non-tradables have no effect on the wage, and thus no effect on competitiveness.

Still, even with this caveat, this equivalence is an important result. Improving productivity in the tradables sector, where large companies are more likely to be involved, and competition likely to be stronger, may be much harder than improving productivity in non-tradables. Put another way, improving zoning regulations or redefining the licensing process and the division of tasks between local and national authorities, may be as important—and easier to achieve—than helping create new high-tech exporting firms.

- Is it essential for Portugal to improve productivity in the high tech sector and increase its share of high-tech exports? The answer is, I suspect, no. First, Portugal does not have an obvious comparative advantage in high-tech: The levels of education and R&D spending are both low relative to other members of the EU. Labor market institutions, in particular the high level of employment protection, imply low labor mobility, and thus a limited ability to reallocate resources as the high-tech frontier moves on.

  A more obvious comparative advantage, and one which is likely to remain for a long time, is in tourism. Many Portuguese balk at the idea of the *Florida model*, the scenario in which Europeans come to retire in Portugal.[10] The experience of Spain suggests that this can be a major source of private transfers (as retirees transfer funds from their country of origin).[11] The "Florida model", as opposed to traditional tourism, also

---

10. Francesco Giavazzi has suggested calling it the "Tuscany model", which is relevant as well and sounds more attractive. The relevant point is that higher income retirees bring larger transfers.

11. There are 180,000 foreigners over the age of 65 in Spain; it is safe to assume most of them are retirees. If Portugal attracted the same number of retirees, and their pensions were equal

comes with derived demand for many products, for example sophisticated health care. Facilitating such a development through infrastructure and coordination seems more promising than starting a new high-tech sector from scratch.

What can actually be done to improve productivity? In answer to this question, one typically hears a long litany of reforms, from reform of the education system, to improvement in the judicial system, to deregulation of the goods market, to changes in labor market laws. How does one go beyond these generalities?

One approach is to use econometrics to relate growth to a number of measures of institutions for a broad cross section of countries, to see how Portugal fares, and how improvements in the different measures would increase Portuguese growth. This is the approach followed for example by Tavares [18], based on the measures of institutions developed by Shleifer et al (for example [16]) and by others.

Another, complementary, approach is to focus on specific sectors, to measure the productivity gap with other countries, and to try to identify the proximate and deeper sources of this gap. This is what the 2003 McKinsey study did. It focused on seven specific sectors. Let me present its findings for two of them, residential construction, and tourism.[12] I believe they give a good sense of what reforms may be most useful.

- The study found that productivity in residential construction was only 38% of the level in the benchmark country, in this case the United States. The main proximate causes behind this 62% gap were the lack of standardization in design and construction—for example underutilization of prefabricated materials—which accounted for 22% (one third of the gap); poor project design—for example high levels of rework—which accounted for another 15%; inefficient execution—for example underutilization of labor and machinery—which accounted for another 10%.

  What were the deeper, institutional, causes? The study concluded that it was, first and foremost, informality, allowing small inefficient firms to survive, and preventing economies of scale from being exploited; zoning and licensing rules, limiting the number of large scale developments

16

(15% in Portugal versus 70% in the Netherlands for example) and the associated economies of scale were also important.

- The study found that productivity in tourism (hotels) was only 44% of the level in the benchmark country, in this case France.

  The main proximate causes behind this 56% gap were low occupation rates (42% versus 59% for France), and a limited role of hotel chains (10-25% versus 34% for France).

  The deeper, institutional, causes, the study concluded, were labor regulation, making it difficult for hotels to adjust to seasonality and shift-based working schedules, and zoning and licensing laws, limiting the scope for large resort formats, and limiting the role of international chains.

These are only case studies. But they make a convincing case that reducing informality, improving zoning and licensing requirements, adapting employment protection laws to allow seasonal industries to use labor more efficiently, would go some way towards increasing productivity in both non-tradables and tradables. Reforms along these lines, rather than a high-tech plan, may yield larger results in terms of productivity growth and improved competitiveness.

In this particular context, how essential are reforms in the labor market? There are clear signs that the Portuguese labor market is dysfunctional: At a given rate of unemployment, average duration of unemployment is very long, even by Western European standards, and flows in and out of unemployment are very low. The main cause appears to be the high degree of employment protection. To the extent that productivity growth depends in large part on reallocation, this suggests that reducing employment protection could be one of the keys to higher productivity growth. The study Pedro Portugal and I did of job and worker flows in Portugal [5] suggests however a more nuanced conclusion. We found that job flows, that is the degree of reallocation of labor across establishments, was, surprisingly, similar to that of the United States. Worker flows however, including movements in and out of unemployment, were unusually low. One interpretation of these findings is that employment protection may not impede job reallocation as much as one might have guessed. It may however reduce the quality of matches between firms and workers, and thus imply a loss of productivity, if not of productivity growth. My (tentative) conclusion is that, while reform of employment protection is highly desirable on other grounds (such as a decrease in the average duration of unemployment, and better matching), it

may not be essential for the issue at hand, namely higher productivity growth.

4   Decreasing wages

Increasing productivity growth is not easy and will not happen overnight.[13] The other way to reestablish competitiveness is to decrease nominal wage growth, or even, in the current context of already low Portuguese and European wage inflation, to actually decrease nominal wages. The important point here is that, given productivity, this decrease in wages is needed to improve competitiveness. The issue is whether it is achieved over time through unemployment or if unemployment can be avoided, and the same decrease achieved through a voluntary and coordinated reduction of wages by workers.

The traditional way to achieve such a reduction is through a devaluation. If successful, a devaluation leads to an *increase in the price of tradables*, given the nominal wage and the price of non tradables. Put another way, it decreases the real consumption wage and the relative price of non-tradables, and increases profitability in the tradables sector. If workers can be convinced to accept the decrease in the consumption wage, and thus not to increase nominal wages in response to the increase in the price of tradables, the devaluation is successful and competitiveness is improved. This was for example the case in Italy in 1992, where a wage freeze, which had been agreed to with unions before the devaluation of the lira, was maintained after the devaluation—a devaluation in excess of 30%.

Given Portugal's membership in the euro, devaluation is not an option however (and I believe getting unilaterally out of the euro would have disruption costs which would far exceed any gain in competitiveness which might be obtained in this way). The same result can be achieved however, at least on paper, through a *decrease in the nominal wage and the price of non-tradables*, while the price of tradables remains the same. This clearly achieves the same decrease in the real consumption wage, and the same increase in the relative price of tradables.

---

13. In the second half of 2003, a large drop in inflation in Chile was partly attributed to reforms in the distribution sector [1] (through their effects on profit margins as much as on productivity). If true, this would be a nice example of how structural reforms can have rapid macroeconomic effects. The evidence is however not overwhelming that this was the main factor behind the decrease in inflation.

The question is: Can it actually be implemented? Let me take a number of issues and objections:

- Decreases in nominal wage run into both psychological and legal problems. (Indeed, as indicated above, such decreases would probably require a modification of existing labor laws to be implemented). Could the required change in relative prices be achieved through taxes rather than through wages?

  The answer is yes, but only to a limited extent. Consider a balanced budget shift from payroll taxes to VAT. Exporting firms will benefit: They pay less in payroll taxes, and are subject to the foreign, unchanged, VAT rate. Firms selling to the domestic market will lose: They pay less in payroll taxes, but pay on net more in VAT. Such a shift will therefore achieve an increase in competitiveness, without a change in nominal wages. In practice, the scope for such a measure to reestablish competitiveness is limited. The VAT rate was recently increased in Portugal from 19 to 21%. The increase required to improve competitiveness by, say 20% or so, would require a shift in taxation and an increase in VAT rates much larger than is realistic or feasible within the EU.

- Could a nominal wage freeze—which has been used in other countries on occasion, and is psychologically easier for workers to accept—rather than an actual decrease in nominal wages, be sufficient?

  The answer is that, in the current environment of low euro wage inflation and poor productivity growth in Portugal, it would not achieve much. Take the OECD forecasts for 2006: Wage growth and labor productivity growth in the business sector for the euro area are forecast to be 1.7% and 1.0% respectively, implying an increase in unit labor costs of 0.7%. Wage and productivity growth in the business sector in Portugal are forecast to be 2.9% and 0.4% respectively, implying an increase in unit labor costs of 2.5%, thus a further *increase* in labor costs vis-á-vis the euro area of 1.8%. A nominal wage freeze would imply instead a decrease in relative labor costs of 1.1%. At that rate, it would take very many years to reestablish competitiveness in Portugal.

- Can workers be induced to accept a decrease in nominal wages? The answer may well be no. Unions may disagree with the diagnosis, and thus disagree with the need to reestablish competitiveness. They may hope for faster productivity growth. Many years of high unemployment

may be needed to convince workers of the need for adjustment.

There are nevertheless three important points to make here. The first is, for given productivity growth, the adjustment of wages has to come sooner or later if competitiveness is to be improved; the question is whether the unemployment costs can be reduced. The second is that part of the unemployment cost comes from nominal rigidities, not real rigidities. Coordinating wage adjustments and thus reducing the role of nominal rigidities can decrease the unemployment cost of the adjustment. The third is that any decrease in nominal wages implies a smaller decrease in real (consumption) wages. Assume tradable prices remain unchanged, that non-tradable prices are set by a markup on wage costs, and the share of tradables is roughly 50%. Then a decrease in nominal wages of 20% leads to a decrease in consumption wages of only 10%. The reason is that the price of non-tradables decreases in proportion to wages. This is still a substantial decrease in real wages, but only half of the nominal decrease.

• Even if workers accept the two arguments above, they may still worry that things may not turn out as expected. There are at least two legitimate worries:

The first is that firms in the non-tradable sector may increase their margins rather than decrease their prices in line with labor costs, or simply that the passthrough from wages to non-tradable prices may be slow, implying a larger decrease in real wages for some time than implied by the computation above.[14]

An apparent solution to this would be to coordinate the decrease in wages and non-tradable prices simultaneously. But, just like price controls, this is likely to create major distortions: The reason is that producers of non-tradables use tradables as inputs in production, and do this in different proportions. This means that non-tradable prices will and should decline in different proportions. A potentially better solution is an ex-post contingent adjustment of nominal wages for inflation, if inflation turns out to be higher (or, in this case, deflation turns out to be smaller) than expected.

The second worry is that, even if competitiveness is improved, the de-

---

14. In many countries, the shift to the euro has been perceived by consumers, right or wrong, to have led to an increase in margins by firms. The same fears are likely to be present here.

crease in real wages may lead to a large decrease in consumption demand, and thus to a decrease in output and to more unemployment, at least in the short run. A potential solution here may be a commitment to use fiscal policy to sustain demand if needed. While, as discussed earlier, a fiscal expansion would on its own be both dangerous and counterproductive, it can, as part of a package of wage and fiscal commitments, help deliver improvements in competitiveness and unemployment.

- The nominal interest rate is set by the ECB in euros. To the extent that nominal wage decreases lead to anticipated deflation for some time, they will lead to large ex-ante real interest rates, which will affect demand and output adversely.

  This is an important difference with what happens when the adjustment is made through a devaluation. In that case, the nominal interest rate, post-devaluation, typically decreases—as the probability of another devaluation has decreased. At the same time, inflation and expected inflation typically increase, reflecting the higher price of imports. On both counts, the real interest rate is likely to decrease, not increase. Here, because the adjustment is made through a decrease in wages and non-tradable prices, the effect goes the other way.

  This raises the question of whether, on those grounds, it is better to have a large nominal wage decrease at the start, or instead to achieve smaller rates of wage decrease over a number of years. The answer is that this channel strengthens the argument for a large early nominal wage decrease. Take the extreme case where the nominal wage decrease were unanticipated, and the price of non-tradables did adjust to wages without lags. In that case, the deflation would be fully unanticipated, and there would be no effect on ex-ante real rates. Neither of these two assumptions is likely to be met, so that there will, in any case, be some anticipated deflation. But the argument remains: The more front-loaded the adjustment, the larger the unanticipated portion of the deflation, the smaller the effect on real interest rates.

5   Conclusions

I started by arguing that Portugal faced an unusually tough economic challenge: low growth, low productivity growth, high unemployment, large fiscal

and current account deficits.

I then examined various policy choices, from reforms increasing productivity growth, to coordinated decreases in nominal wages, and the use of fiscal policy in this context. I want to end on a more positive note. There is a large scope for productivity increases in Portugal, and a set of reforms which could achieve them. A decrease in nominal wages sounds exotic, but is the same in essence as a successful devaluation. If it can be achieved, it can substantially reduce the unemployment cost of the adjustment. Fiscal policy can also help. While deficits must be reduced, temporary fiscal expansion could be part of an overall package, facilitating the adjustment of wages. The challenge is there. But so are the tools needed to meet it.

References

[1] Banco Central de Chile. Monetary policy report. September 2004.

[2] Banco de Portugal. Annual report. 2004.

[3] Olivier Blanchard and Francesco Giavazzi. Current account deficits in the Euro area: The end of the Feldstein-Horioka puzzle? *Brookings Papers on Economic Activity*, 2:147–209, 2002.

[4] Olivier Blanchard and Pierre Alain Muet. France. *Economic Policy*, pages 12–56, April 1993.

[5] Olivier Blanchard and Pedro Portugal. What hides behind an unemployment rate. Comparing Portuguese and U.S. unemployment. *American Economic Review*, 91(1):187–207, March 2001.

[6] Sonia Cabral. Recent evolution of Portuguese export market shares in the European Union. *Banco de Portugal Economic Bulletin*, pages 79–91, December 2004.

[7] Ana Cardoso and Pedro Portugal. Contractual wages and the wage cushion under different bargaining settings. *Journal of Labor Economics*, 2005.

[8] Vítor Constâncio. European monetary integration and the Portuguese case. *The new EU member states; Convergence and stability*, October 2005. Carsten Detken, Vitor Gaspar, and Gilles Noblet, eds, ECB.

[9] Francisco Dias, Paulo Esteves, and Ricardo Felix. Revisiting the NAIRU estimates for the portuguese economy. *Banco de Portugal Economic Bulletin*, pages 39–48, June 2004.

[10] William Dickens, Lorenz Goette, Erica Groshen, Steinar Holden, Julian Messina, Mark Schweitzer, Jarkko Turunen, and Melanie Ward. The interaction of labor markets and inflation: Analysis of micro-data from the international wage flexibility project. 2005. mimeo ECB.

[11] Gabriel Fagan and Vitor Gaspar. Adjusting to the euro area: Some issues inspired by the Portuguese experience. August 2005. mimeo, Banco de Portugal and ECB.

[12] Jeffrey Frankel and Andrew Rose. An estimate of common currencies on trade and income. *Quarterly Journal of Economics*, 117(2):437–466, May 2002.

[13] Pierre Olivier Gourinchas. Comments on "current account deficits in the Euro area: The end of the Feldstein-Horioka puzzle?". *Brookings Papers on Economic Activity*, 2, 2002.

[14] McKinsey Global Institute. *Portugal 2010. Increasing productivity growth in Portugal.* McKinsey Institute, November 2003. Lisbon.

[15] Sergio Rebelo and Carlos Vegh. Real effects of exchange-based stabilization; An analysis of competing theories. *NBER Macroeconomics Annual*, pages 125–174, 1995. Ben Bernanke and Julio Rotemberg (eds), MIT Press, Cambridge.

[16] Andrei Shleifer, Rafael La Porta, Florencio Lopez de Silanes, and Robert Vishny. Law and finance. *Journal of Political Economy*, 106:1113–1155, 1998.

[17] Task force of the Monetary Policy Committee of the European System of Central Banks. Competitiveness and the export performance of the euro area. June 2005. Occasional paper series, ECB.

[18] José Tavares. Institutions and economic growth in Portugal: A quantitative exploration. *Portuguese Economic Journal*, 3:49–79, 2004.

Date Due