Country adjustments within Euroland. Lessons after two years

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When the Euro started, many worried about how member countries would adjust to idiosyncratic national shocks. Without national monetary policy at their disposal, what would happen to countries which suffered from depressed demand? How would they recover? What would happen to countries which suffered from excessive demand? How would they slowdown? Would they be able to achieve a soft landing?

After two years, we can draw some lessons. Perhaps the main one is that the new rules of the macroeconomic policy game under the Euro are poorly understood by governments and observers alike. Our purpose in this section is to review the evidence and the policy debates, and draw a number of lessons for the future.

One might ask why this should be part of a report on monetary policy and the European central bank. For at least three reasons: Because Euro-wide monetary policy is only part of the general macroeconomic policy framework which has to emerge within Euroland. Because failure to use national fiscal policy and real exchange rate adjustments appropriately will lead to poor economic performance, and in turn to hostility towards the Euro. Because much of the confusion is about the role and the nature of national inflation differentials (vis a vis the Euro), a confusion that the ECB is in a unique position to clarify.

1 Relative growth and inflation performance

For the first two years of its existence, the ECB has been lucky. As shown in Figure 1, the main outliers, in terms of growth performance, have been on the upside. Seven of the eleven countries (We have left out Luxembourg, but added Greece, the newcomer, to the list) have had an average annual growth rate within 1% of the Euro average. The remaining four have all been on the upside, exceeding the Euro average by more than 1%. The most impressive performance has been that of Ireland, at 7.4% above the Euro average. The other four have been Finland at 1.7%, and Spain and the Netherlands, both at 1.1%.

This positive skewness has clearly been a political blessing for the ECB. Think of the outcry about monetary policy there would have been if the outliers had been on the down side (a la Argentina, for example). While economists point to the dangers of an overheating economy, their worries, in that context, are often seen as quaint, and do not resonate very much with either politicians or citizens. In contrast, recessions quickly lead to calls for identifying the culprits, for changes in policy, and for heads to fall.

True, the lessons from the upside are not likely to apply directly on the downside, precisely because political responses are likely to be different. But some lessons can be drawn nevertheless, in particular about the role of fiscal policy and the real exchange rate in the adjustment process.

Now to the lessons.

2 Differences in growth rates

Most of the differences in growth rates we have observed over the last two years represent sustainable differences, differences which can last for quite some time, without need for specific adjustment. In other words, Euroland can accomodate sustained differences in rates of growth among its members.

That this could be the case had been pointed out before the Euro started. In the United States, individual states have grown at very different average growth rates over long periods of time. Since 1950, average annual employment growth in Nevada, Arizona or Florida has exceeded 4%; employment growth in Rhode Island, Pennsylvania, or West Virginia has been less than 1%.

This has happened without upward pressure on inflation in states which grew faster or downward pressure in states which grew more slowly.¹ The

¹There does not exist state-specific GDP deflators or CPIs. But city-specific CPIs do



Average growth rate 99-00. Deviation from average

reason is that these different growth rates across states have reflected different growth rates of potential output.

The same is true of Euroland. To the extent that they have different rates of growth of potential output, Euro countries can grow at different rates. And different Euro members have indeed different sustainable growth rates at this point. This is for a number of reasons:

First, different rates of growth of population, mainly through immigration. This is the dominant explanation for differences across U.S. states. It is typically less important within Euroland. But immigration has been an important factor in the growth of Ireland over the last decade.

Second, changes in labor force participation. For example, the participation rate has increased in the Netherlands by 8 percentage points over the last decade.

Third, changes in the equilibrium unemployment rate. This has clearly been a major factor in Spain, where the unemployment rate has decreased by nearly ten percentage points from its peak, most of it due to a decrease in the equilibrium rate of unemployment.

Fourth, different rates of growth of productivity. Productivity growth in Spain is now running at an anemic 1-1.5%; in Ireland, it has exceeded 4% for some time.

Thus, the fact that Ireland (because of high productivity growth and immigration) or Spain (because of the large decrease in equilibrium unemployment) have had faster growth than the average has not been and is not a problem.

Adjustment problems come only when actual output exceeds equilibrium output. The signal of such an imbalance is an increase in inflation, reflecting the inconsistency between the real wages firms are willing to pay and the real wages workers are asking for in bargaining. Figure 2 plots, for each country,

exist and show no trend difference between fast and slow growing cities.

the change in the inflation rate from 1998 to 2000 (using harmonized indexes of consumer prices) as a deviation from the Euro average. On the negative side is Greece, which, in its quest for Euro membership, has decreased its inflation rate from 4.5% in 1998 to about 2.9% in 2000. On the upside, the two main countries are Ireland and Spain. In both cases, the increase has been modest, less than 1% relative to the Euroland average. But both countries now have the highest inflation rates in Euroland, 4.6% for Ireland, and 4% in Spain.

To get a better sense of the issues, we shall examine both Irish and Spanish evolutions in more detail. But before we do, we briefly discuss a related issue, known as the Balassa Samuelson effect.

3 Equilibrium inflation rates and the Balassa Samuelson effect

In a number of countries, especially those where inflation has started increasing faster than the Euro average, the argument has been made that this higher inflation is an equilibrium phenomenon, and thus nothing to worry about. Higher inflation, the argument goes, reflects a relative price effect naturally associated with growth, and known as the Balassa Samuelson effect.

There is little question that, where the argument has been made, it has been in part self serving, coming from a desire to "justify" what would otherwise be perceived as a sin, namely inflation higher than the Euro average. But, whatever the confused motivation, the argument is based on solid theoretical grounds:

Consider an economy with both tradable and non tradable goods. Suppose that productivity growth is faster in the the tradable than in the non tradable sector—which it typically is. Productivity growth, together with a given world price for tradables, implies a steady increase in the real wage Changes in inflation, 98-00. deviation from average



in terms of tradables. The increase in the real wage and lower productivity growth in non tradables combine to imply an increase in the relative price of non tradables. This is known as the Balassa Samuelson effect. The argument is particularly relevant for emerging countries, countries which are catching up fast. In these countries, the relative price of non tradables must increase, leading to a steady increase in the relative price level, or equivalently, to higher inflation.

How large is this effect likely to be for Euro countries? The study by De Gregorio and Wolff (1994) provides a good starting point. Using data from 14 OECD countries from 1970 to 1985, they regress real exchange rates for each country for each year on a country dummy, total factor productivity growth in tradables relative to non tradables, an index of terms of trade, and the ratio of government spending to output. They obtain the following regression results:

$$\log(eP^*/P) = .197(\log(a_T/a_N) + .485(\log(P_X/P_M) + 3.458(\log(G/Y))))$$

where e, P^*, P are the nominal exchange rate, the world price level, and the domestic price level respectively, a_T and a_N are total factor productivity growth rates in the tradable and non tradable sectors respectively, P_X and P_M are the price of exports and imports respectively, and G/Y is the ratio of government spending on goods and services to GDP.

The relevant term for us is the first, which gives the effects of relative productivity growth in the tradable and non tradable sectors on the relative price level. We can use it to get a sense of the likely magnitude of the Belassa-Samuelson effect.

Take Ireland for example. A Solow growth decomposition suggests that, from 1995 to 2000, annual total factor productivity growth for the economy as a whole was around 4.3%. To get an upper bound, assume (and this is surely excessive) that tfp growth has been 8% in the tradable sector, and 2% in the the non tradable sector. Assume, and this is again excessive, that, in the rest of Euroland, there was no difference between tfp growth in the tradable and the non tradaable sector. Then, this would translate into an increase of 8% times .197 or about 1.5% a year more inflation in Ireland than in Euroland. This generous upper bound is still quite small.²

And, if one takes Spain, where the Balassa Samuelson effect has indeed been invoked, it is hard to see how the effect can be quantitatively relevant. Recent output growth in Spain has come mostly from the decrease in unemployment, not from productivity growth, which has been very low, about 1%.³ This is far below the Euro average. This suggests that, if anything, the Balassa Samuelson effect is going the wrong way for Spain.

The data set constructed by Summers and Heston [1991] provides a longer time perspective. The evolutions of the relative price levels for Greece, Ireland, and Spain (relative to the United States), from 1950 to 1980 are shown in Figure 3. All three series show the dollar cycle of the 1980s, which makes harder to see the underlying trends. There is no visible trend in the

 $^{^{2}}$ A parallel computation is given by Sinn and Reuter [2001]. Using sectoral data for the period 1987-1995, they estimate Irish labor (not total factor) productivity growth to have been 6% in the tradable sector, versus 2% in the non-tradable sector. Because they assume a larger effect of the productivity differential on the real exchange rate than we do in the text, they conclude that this translates into an inflation differential of 2.3% for Ireland relative to the rest of Euroland.

³One may wonder whether this surprisingly low number is not in part the result of mismeasurement. A careful study by Estrada and Lopez Salida [2001] suggests that this is not the case. It finds a rate of total factor productivity growth equal to 1.8% for the period 1980-1995 for the Spanish economy as a whole, and to 1.9% for manufacturing. The study also shows clear evidence of a decrease in both rates of growth in the 1990s.

Price levels (Heston Summers) US=100



price level for Greece. But there is one, both for Spain and Ireland. For both countries, over the 40-year period, the trend evolution suggests an increase in the price level relative to the United States of about 1.3% per year.

4 Back to basics. How to adjust when adjustment is needed?

Suppose output in a Euro country starts exceeding its equilibrium value, and inflation starts increasing. The country has two ways of adjusting: Either by letting inflation increase above the Euro average, leading to an appreciation and a decrease in foreign demand. Or by using fiscal policy, to decrease domestic demand instead. Neither way is a priori good or bad. Which one is appropriate depends on external and internal conditions.

To pursue this point, let us use simple algebra and an associated diagram. Let the condition for equilibrium in the goods market (IS) be given by:

$$IS \quad y = a(y,g) + nx(\epsilon,y)$$

where y is output, a(.,.) is the sum of consumption, investment and government spending, and is assumed to be a function of output and some index of fiscal policy, g, with $a_y > 0$ and $a_g > 0$; nx(.,.) is net exports, assumed to be a function of the real exchange rate, ϵ , and output, with $nx_{\epsilon} > 0$ (an increase in ϵ is a real depreciation, and improves net exports), and $nx_y < 0$ (an increase in output increases imports, reducing net exports).

Internal balance requires $y = y^*$ where y^* is equilibrium output. External balance requires balanced trade, $nx(\epsilon, y) = 0$.

Finally, through a conventional Phillips curve, assume that internal imbalance leads to an increase in inflation and thus to real appreciation:

$$\Delta^2 \epsilon = -\Delta \pi = -f(y - y^*)$$

These relations are plotted in Figure 4, with the real exchange rate on





the vertical axis, and output on the horizontal axis. The IS relation is drawn for a given value of g, and is upward sloping: a depreciation leads to an increase in equilibrium output. The internal balance equation is vertical at $y = y^*$. To the right of y^* , the real exchange rate appreciates, and the economy moves down along the IS curve. To the left of y^* , the real exchange rate depreciates, and the economy moves up along the IS curve.

Now suppose that the economy is overheating, say at point A in the Figure. One option is to let the economy run its course unhindered, with inflation leading to appreciation, and a return of the economy to point A'. Another is to rely on fiscal contraction, to shift the IS curve to IS', leading the economy to rest at point A". In both cases, the economy eventually returns to the same level of equilibrium output, y*. What differs is the real exchange rate, and thus the composition of demand, internal versus external. The more use of fiscal contraction, the smaller the real appreciation, the more favorable the external balance.

What instrument should the government use? This obviously depends on the source of overheating: internal or external demand. Turn to Figure 5. In addition to the IS locus, draw the locus along which there is external balance, NX=0. The locus is upward sloping: An increase in output deteriorates the trade balance, requiring a depreciation, i.e. an increase in ϵ . It is flatter than the IS. (To see this, start from the point on the IS where there is external balance, and move up along the IS. As, by assumption, the domestic marginal propensity to spend is less than one, the difference must be made up by an improvement in the trade position. Thus, we move from balance to surplus. Put another way, an appreciation is needed to reestablish external balance: the NX=0 locus is below the IS.)

Assume that, initially, the economy is at point A, with both internal and external balance. Now assume that internal demand shifts up. The IS curve shifts to the right to IS', while the NX=0 locus remains unchanged. The economy is now at A', with higher output and a trade deficit. What



is required in this case is clearly the use of fiscal policy, a fiscal contraction which shifts the IS back to IS', and returns the economy to both internal and external balance.

The case where the source of the shock is external demand instead is represented in Figure 6. For a given value of y, the shift in external demand shifts the NX locus down from NX to NX': external balance requires an appreciation. And, for a given y, the shift in IS is the same as the shift in NX. The effect of the shift is to take the economy to A', with higher output and a trade surplus. In this case, the appropriate policy is clearly not to use fiscal policy, and let the economy adjust along the new IS curve back to A". At A", the economy achieves both external and internal balance. Put another way, the right response to the increase in external demand is to let the relative price of domestic goods increase so as to decrease demand and return output to normal. This increase in the relative price, and the associated increase in real income, is achieved by letting inflation exceed Euro inflation for some time.

The analysis is too simple in many ways. With Ireland and Spain in mind, let us mention a few:

External balance, i.e. trade or current account balance, may well not be the right target for an economy, in particular for an economy with a high underlying rate of growth, such as Ireland. To the extent that profit opportunities are present and lead to a high investment rate, it may well be best for the economy to run current account deficits now, in anticipation of current account surpluses in the future. In this case, inflation may well be the right instrument, even if it leads to a current account deficit at equilibrium output.

Whether to use fiscal policy, and choose the budget deficit must clearly depend on the initial fiscal position, both vis a vis the deficit and the level of debt. If debt is still high, or if spending is anticipated to be higher in the future, a more conservative fiscal policy is then appropriate, and with Adjusting to an increase in external demand through inflation and real appreciation.



it more of a focus on fiscal contraction than on inflation as the method of adjustment.

Finally, the use of each of the two tools has its own complex dynamics:

Adjusting through inflation may not be so easy. Given inflation inertia, there is clearly the risk of achieving too large a real appreciation, of reducing competitiveness by too much. Having inflation return to the Euroland level just when the real exchange rate is at the right level is at best a delicate exercise.

Using fiscal policy is not so easy either. Leaving aside automatic stabilisers, decision and implementation lags make it hard to get the timing right, and the lessons of history is that the fiscal policy response often comes too late.

But, leaving these complications aside, the analysis yields a simple but important implication. Domestic inflation, which is better thought of an increase in the relative price of domestic goods, may well be a desirable part of the adjustment process. The more external demand is the source of overheating, the more inflation is the natural instrument to return the economy to equilibrium output. In that context, it should be not denied or dismissed (by invoking the Balassa Samuelson effect), not put off the table from the start, but accepted and explained.

5 Overheating in Ireland

The relevant macro evidence for Ireland from 1998 to 2000, and forecasts for 2001, are given in Table 1. Let us focus on five facts:

Table 1. Macroevolutions, Ireland 1998 to 2001

Year	1998	1999	2000	2001
Growth rates				
1. GDP	8.6	9.8	11.0	7.9
2. GNP	7.8	7.8	9.0	6.2
3. u rate	7.6	5.6	4.2	3.6
Growth rates:				
4. internal demand	9.4	6.3	8.6	7.8
5. investment	15.5	13.0	11.3	9.5
6. consumption	7.8	7.7	8.7	8.0
7. exports	21.4	12.4	15.5	13.3
8. imports	25.8	8.7	14.9	14.1
9 c.a. surplus	0.9	0.7	0.9	0.3
10. government surplus	2.2	2.7	4.0	6.5

Source: OECD Economic Outlook, December 2000

- First, and obviously, Ireland has had extremely high GDP growth (line 1). Because of the increased repatriation of profits by foreign firms, GNP growth has been slightly lower (line 2). Ireland has achieved this growth through immigration, an increase in participation, a decrease in unemployment, and high productivity growth. Unemployment has come down from 7.6 to 4.2% (line 3), and this rate must now be close to the lowest equilibrium level Ireland can hope to achieve; this factor by itself implies a slowdown in equilibrium growth.
- On the demand side, this expansion has come in about equal proportions from an increase in internal and external demand.

For the last two years, the growth of domestic demand has been slightly below GDP growth (line 4). Growth of domestic demand has come from private demand, especially investment (line 5). Both exports and imports have grown faster than GDP (lines 7 and 8) (Ireland is an increasingly open economy. The ratio of exports to GDP is now close to 1. Also the direction of trade has changed drastically: Exports to the UK have gone from 75% in 1960 to 20% today, exports to the rest of the EU from 18% in 1972 to 45% today.)

- The result of this balanced expansion has been a small and roughly constant current account surplus as a proportion of GDP (line 9) (reflecting a large trade surplus, and a nearly equally large flow of profit income abroad)
- Strong growth has led to a steady improvement in the fiscal position (line 10). The budget position has moved from a surplus of 2.2% of GDP to 4.0% in 2000, with a forecast 6.5% in 2001. Gross financial liabilities, which had peaked at about 110% of GDP in the late 1980s now stand around 40%.
- As already discussed, most of the growth reflects growth of equilibrium output. In the recent past however, there have been signs of wage pressure, leading to an increase in inflation. Wage inflation is now running at an estimated rate of 7.5%, ahead of the 5.5% agreed to in the Program for Prosperity and Fairness (PPF) agreement (more on this below).

In short, Ireland can clearly sustain a high growth rate for the foreseable future. But not quite the current growth rate. The Irish economy is now above its equilibrium level of activity, and thus should slow down. Based on our earlier discussion, what form should the adjustment take? The first answer is that, given the balanced nature of the increase in demand, the adjustment should be equally balanced, i.e. include a mix of fiscal contraction and inflation/real appreciation.

A second pass may add that, at this stage, given the fast growth and strong investment demand, the appropriate current account position for Ireland may well be a deficit, a reliance on world saving to finance some of Irish investment. This in turn suggests either more emphasis on the reduction of external demand, and thus on inflation, and less on fiscal contraction, or at least to fiscal measures which are not investment friendly.

A third pass may finally add that, starting from a large surplus, fiscal contraction, i.e. a larger surplus, may not be of the essence. And, indeed, there is a strong case for higher public investment, to keep public infrastructure in line with the rapidly growing economy.

In short, while working out the details would require more work, inflation is likely to be part of the optimal policy package. Put in a more positive light, one of the ways the Irish economy should be slowed is by increasing the relative price of Irish goods, and, through this channel, increase the real income of Irish people.

This is not quite the form the debate has taken:

First, and as discussed earlier, inflation has been either denied (blamed on external factors, on the price of oil, or presented as a Balassa Samuelson effect), or else denounced as something the Irish economy should avoid, lest it "wants to lose competitiveness."

Words have been however stronger than deeds at this point. In announcing the budget for 2001, the government has just delivered on an earlier promise of income tax cuts. This has led to a revision by the Central Bank of its forecast of CPI inflation for 2001 from 4 to 5%, and a forecast of 9.75% for wage inflation.

These tax cuts have been part of an original combination, tax cuts in exchange for wage moderation in 2001, within the structure of the agreement between the government, employers, and unions, known as the PPF. This way, the government has argued, the economy will continue to grow, and grow without wage inflation.

Does this particular form of incomes policy make sense? From a distance, not much-not in the current economic situation faced by Ireland. The claim that the income tax cuts will increase labor supply and thus allow for a further decrease in equilibrium unemployment is implausible. At best, this tax cut plus wage moderation, will buy time. But, sooner or later, the economy will have to slowdown, and this will require a wage increase or/and fiscal contraction. There is no way to avoid both.

6 Spain

Year	1998	1999	2000	2001
1. Growth rate GDP	4.3	4.0	4.1	3.5
2. u rate	18.8	15.9	14.1	12.9
Growth rates:				
3. Internal demand	5.6	5.5	4.2	3.7
4. Investment	9.7	8.9	6.1	6.6
5. Consumption	3.1	4.5	4.7	4.1
6. Exports	8.3	6.6	11.0	9.4
7. Imports	13.4	11.9	11.0	9.8
8. C.a. surplus	-0.2	-2.1	-3.3	-3.7
9. Gvt surplus	-2.6	-1.1	-0.3	0.2

Table 2, Macroevolutions, Spain

The relevant macro evidence for Spain from 1998 to 2000, and forecasts for 2001, are given in Table 2.

Let us start again with a brief review of the relevant facts:

- GDP growth has been fast, but nothing compared to Ireland. Each point of growth has been associated however with a much larger decrease in unemployment than in Ireland. This is for a number of reasons, one of them directly relevant in thinking about the future, and the appropriate policy package: A dismal productivity performance, which, in this context, has one silver lining: Output growth has been more job intensive (to translate a French expression), i.e. associated with higher employment growth, than elsewhere.⁴
- Given a stable labor force, and poor productivity growth, high output growth can continue only if the equilibrium unemployment rate continues to decrease. While unemployment is still above 12%, a decrease in equilibrium unemployment will be much harder than it has been until now. The prime age male unemployment rate is now close to the EU average. Progress must come from the reduction of unemployment among other groups, especially the youth.
- The expansion has been driven both by internal and external demand (line 3). For the last three years, domestic demand has grown faster however than GDP, and this has been reflected in an increasing current account deficit, which now stands at 3.3% of GDP (line 8).

Note that, in contrast to Ireland, this current account deficit does not reflect either unusually strong productivity growth, or high investment

⁴For further discussion, see Blanchard and Jimeno [1999]. The purpose of that article was to characterize, as of 1998, the path required to decrease unemployment in Spain to 5% by 2005. So far, actual evolutions, in particular for output, unemployment, and the current account, have turned out surprisingly close to the path characterized in that paper.

demand. Investment growth, while higher than consumption growth, is only 2% above GDP growth (line 4). The ratio of investment to GDP is not unusually high by EU standards.

- Fiscal policy has been aimed at steadily reducing the budget deficit, so that it is now roughly in balance, with a small surplus forecast for 2001. Gross financial government liabilities have decreased as a percentage of GDP since the mid-1990s, but still stand around 65% of GDP, from a high of 72% (Net liabilities are around 45%, down from a high of 52%). There does not seem to be much desire on the part of the government to generate the surpluses which would lead to a large reduction in the debt to GDP ratio. (Indeed, income tax cuts implemented in 1999 point the other way).
- Much of the growth so far has been equilibrium growth, without much pressure on inflation. In the recent past, inflation has increased a bit, and now stands at about 1% above the Euro average.

In the light of our earlier analysis, these facts have two implications. First, it is not obvious that there is yet a need for a slowdown; This will depend in large part on progress in further decreasing equilibrium unemployment. At this point, this requires strong and specific labor market reforms, targetted at specific groups, the young and those close to retirement in particular. Second, relative to Ireland, the adjustment should be much more on internal than from external demand:

The current account deficit is already large, and getting larger. While there is no problem in financing it, it still implies an accumulation of foreign debt, and higher payments to the rest of the world in the future. And, in contrast to Ireland, the lackluster performance of investment, and the poor rate of productivity growth do not suggest a strong case for high current account deficits now. On the fiscal side, there is clearly room for a larger surplus and a further decrease in debt. How do these conclusions relate to the policy debate in Spain at this point?

As far as we can tell, there is not much of a policy debate... Again, there appears to be a tendency to dismiss inflation in excess of the Euro average as coming from the Balassa Samuelson effect, an argument which seems to have no ground in facts in Spain today.⁵ In short, maybe because there is no need for it yet, there does not appear to be much thinking about adjustment. Such thinking should start now.

7 Tentative conclusions

Should countries care about inflation differentials? Not necessarily. In a common currency area, having higher inflation than the average may be the proper way to adjust. Whether it is or not depends on whether the adjustment should come from internal or external demand.

It is important in this context not to demonize inflation. After convincing citizens that inflation was bad, governments and the ECB must now go to step 2, and explain that temporary inflation differentials can be desirable, leading to higher real income and the proper macroeconomic adjustment.

It is also important in this context to revisit the role of fiscal policy. Governments will need tools to affect domestic demand and its composition. Automatic stabilisers exist more by accident than by design. There is no reason that the amount of stabilization they deliver is either best, or targeted at the appropriate components of demand. Thinking about their design, and the use of fiscal policy, in general, is urgent.

So far, the outliers have been on the high side, so whatever mistakes have

 $^{^{5}}$ Another way of making the point that inflation reflects more than Balassa-Samuelson effects is to note that inflation in manufacturing (clearly a tradable sector) runs at 2.4%, compared to 0.9% for the Euro zone.

been made in the design of macroeconomic policy have been less visible, and surely less painful. But, as the case of Japan keeps reminding us, governments and the ECB better be ready and quick to respond when some of the outliers turn out on the low side—an event we shall, sooner or later, have to confront.

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