

Ireland's Economy in the 1980s: Stagnation and Recovery

A Preliminary Review of the Evidence

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Abstract: This paper reviews recent literature on Ireland's economic experiences in the 1980s. It was a decade of EMS membership, with stagnation and a rapidly mounting debt problem followed by a sharp recovery from 1987. Controversy has surrounded both the explanations of the growth and continuing high levels of unemployment and the extent to which the recovery, which coincided with fiscal retrenchment, provides an example of expansionary fiscal contraction. Many issues remain unresolved.

I INTRODUCTION

The recent literature on the performance of the Irish economy in the 1980s is the subject of this paper. A substantial part of it addresses the period of recovery from 1987 to 1990, but it is inappropriate to view this period in isolation from the grim, preceding years. A review usually implies some categorisation of the literature; this one chooses to distinguish foreign from domestic contributions. To a considerable extent, the Irish literature reacts to the foreign one; as yet there has been no real feedback in the opposite direction. Within the Irish literature there has been controversy.

An alternative categorisation would be on thematic grounds. One set of

*This is a revised version of a paper prepared for the Irish Economic Association's conference on *Ireland's Successful Stabilisation? — Achievements and Prospects*, Trinity College Dublin, September 19, 1991. The comments of Gerard Boyle, John Bradley, John Fitz Gerald, Dermot McAleese, Desmond McCarthy and anonymous referees are gratefully acknowledged. The usual disclaimer applies.

papers focuses on explanations of the rise in Irish unemployment to 1986 or 1987. Another concentrates on exchange rate and stabilisation policies; yet another on whether the experience of 1987-1990 provides an example of expansionary fiscal contraction. Each of these themes is represented in both the foreign and Irish literatures.

The approaches adopted vary; some papers explicitly rely on formal economic models, large and small; others are, in varying degrees, theoretically based but less formal; and others are polemical. As the review will emphasise, the conclusions vary, too.

The rest of the paper is organised as follows. Section II reviews the three papers which comprise the foreign literature. In Section III the more extensive Irish literature is dealt with. Section IV provides a general appraisal, paying particular attention to the differences in conclusions.

II AS OTHERS SEE IT

Foreign interest in the performance of the Irish economy is something of a novelty. The performance of the Irish economy in the 1980s, if for most of the decade of a peculiarly unhappy kind, was novel enough to attract the attention of foreign economists; novelty bred itself. In this section three of their contributions are reviewed, those by Dornbusch (1989), Newell and Symons (1990), and Giavazzi and Pagano (1990). Although they overlap, they are quite distinct as far as focus and approach are concerned; only Giavazzi and Pagano are directly concerned with the recovery of the economy from 1987. Some of their conclusions differ. What they share is a cohesion which allows the reader a clear view of exactly how each paper approaches the analysis of the Irish economy in the 1980s.

The Irish Economy to 1987

Dornbusch (1989)

Dornbusch viewed the Irish experience to 1987 in the context of the modern macroeconomic literature on credibility and the costs of disinflation. A central tenet of Dornbusch's study is that a credible commitment to EMS membership was critical to the achievement of low inflation in Ireland, but that Irish disinflation was achieved at a huge cost in unemployment and stagnation. Thus, Ireland's unemployment is seen largely as a consequence of a successful disinflationary exchange rate policy, combined with severe labour market rigidity. EMS membership is interpreted as a "major policy commitment", which in the context of the credibility literature, may be expected to carry a disinflation bonus. Its failure to do so in Ireland is regarded as evi-

dence against the position of credibility theorists.

The other theoretical perspective drawn on by Dornbusch is provided by Sargent and Wallace (1981). In their widely cited paper "Some Unpleasant Monetarist Arithmetic", Sargent and Wallace look at the consequences of bond financed deficits in an economy whose real growth rate is less than the real interest rate, a condition which held in Ireland for much of the 1980s and in other European economies, too. They show that the policy of bond financed deficits becomes unsustainable because of the exploding cost of debt service; monetisation of the debt and inflation become inevitable if fiscal retrenchment does not take place. Thus, either the deficits are eliminated or they are financed by the inflation tax. Dornbusch sees aspects of this process in the Irish experience of a soaring debt-GNP ratio in the 1980s.¹

Dornbusch's view of Ireland's experience in the period 1981-88 is worth summarising, given the critical rôle he accords to what he sees as a conscious commitment by all political parties to a hard currency policy. This perspective does not come naturally to the natives, as Honohan's (1989) comments make clear. In the early years of the EMS there were frequent realignments, but as it became "increasingly a zone of monetary stability, Ireland played the game with great success" (p. 181). By 1988 inflation had fallen to the German level. Experience seems to support the argument that EMS membership was an effective disinflation device "for countries such as Ireland which lacked a firm domestic anchor and had been experiencing high inflation rates" (p. 181). Dornbusch argues that in the Irish case bond yields fell as expected but only partially, so that real interest rates rose substantially and became a major problem. With big real exchange rate changes ruled out by EMS membership,² "this problem coupled with an inflexible labour market was bound to show up either as a fiscal problem or as an unemployment problem" (p. 181).

Central to the paper is Dornbusch's account of the 1982 adjustment. Late in 1981 the interest rate rose sharply; the yield on 15-year Irish bonds peaked in February 1982. The differential with German rates followed a similar pattern. Irish rates then fell as sharply from March 1982; by October the yield on long Irish bonds had fallen 5 points and the Irish-German differential followed suit. The fall was matched by a sharp decline in inflation. Dornbusch argues that the decisive fact in these developments was the consensus across the political spectrum which supported four specific policy measures. These are listed as:

1. Dornbusch notes that in a number of European countries monetary disinflation created "extraordinary" fiscal problems, with debt-GDP ratios above 100 per cent and rising.

2. Leddin (1990) documents the behaviour of the Irish real exchange rate in the EMS. Large movements did occur in the early years of membership, but subsequent changes were smaller.

- (1) a move to consistently positive and high real interest rates;³
- (2) maintaining a fixed exchange rate in the EMS, which provided a strong anchor;
- (3) a fiscal policy of consistently reducing the primary deficit which by 1984 had fallen to 1.9 per cent of GNP from 7.2 per cent in 1979-1981; Dornbusch describes the fiscal action as dramatic;
- (4) reducing the rate of increase in labour compensation, which slowed from 18.1 per cent in 1981 to 14.4 per cent in 1982.

These four policies had strongly reinforcing features. Tight money meant credit demand would be financed abroad since the cost (including expected exchange rate depreciation) seemed lower than the domestic cost. That meant increased capital inflows and hence support for the exchange rate, allowing the domestic nominal interest rate differential to fall. The decline in nominal rates thus can be seen as response to the policy package and to the fact of a major fall in inflation. Dornbusch states that "a special rôle must go to exchange rate policy — not devaluing in the 1982 realignment meant a shift from accommodating exchange rate policy to a determined effort to squeeze inflation. At this stage the EMS was clearly becoming an instrument of disinflation." (p. 185). The point is emphasised: "it is tempting to assign to EMS membership and specifically the policy of not seeking large realignments a central rôle in the shift of inflationary expectations" which was associated with the rapid fall in interest rates in 1982.⁴

In the years to 1988 a comparable fall in interest rates had taken place, though contrary to Dornbusch's description, the decline was far from steady. The inflation rate fell even more, declining to 2 per cent, the primary budget went into surplus and unemployment rose to 18 per cent. However, much of the budgetary progress was concentrated into the years 1983-84 when the primary deficit was brought down from nearly 8 per cent of GNP in 1982 to less than 3 per cent of GNP in 1984; by 1984 the inflation rate was at the European average if not at the German level.

An episode regarded as significant by Dornbusch (and by Giavazzi and Pagano, though for somewhat different reasons) occurred from late 1986 to early 1987. Sterling depreciated sharply against EMS currencies; this was perceived as causing a competitiveness loss in Ireland and, as Dornbusch sees it, raised questions about Ireland's ability to hold its EMS parity. The devaluation of August 1986 was "insufficient to allay fears that further devaluation might occur" (p. 185); these fears were accentuated by fiscal slippage. The

3. Was this a "policy"? This is discussed below.

4. Honohan (1989) points out that in 1982 the *effective* exchange rate had fallen, making the decision not to devalue in the 1982 realignment look less like a "hard currency play".

Irish-German interest rate differential rose from 3 per cent to 8 per cent. The Government tightened monetary policy, leading to a rise in short-term interest rates of 4.6 per cent. Pressure eased only when Sterling stopped falling.⁵ By 1988 further fiscal contraction, continuing high real interest rates and higher unemployment brought inflation to German levels and short- and long-term interest rates to below 10 per cent; the Irish pound was a harder currency.⁶

Dornbusch's conclusions about Ireland's experience, drawn in 1988, were gloomy. "Ireland has stopped inflation and the primary budget is in surplus. In the near term a major outbreak of inflation and depreciation is entirely implausible. Inflation stabilisation is thus a fact ... [But] the triumph of low inflation has come at the cost (perhaps inevitable) of extraordinarily high unemployment, massive emigration and a precarious debt overhang" (p. 194). Several factors are cited to explain this outcome. First, fiscal contraction reduced aggregate demand and thus output etc.; expenditure reducing policies were not accompanied by expenditure switching policies needed to maintain employment. On the contrary, "the real exchange rate was allowed to appreciate and real interest rates rose sharply. Thus, neither higher net exports nor investment made up the slack. A critical failure occurred in the labour market where a lack of gain in competitiveness stood in the way of crowding-in. Second, monetary policy also worked against crowding-in. Realised real interest rates were sharply higher in the 1980s compared to the 1970s; this was partly due to world rates but partly to Ireland's "hard currency play". The exceptionally high real interest rates affected the debt-GNP ratio as suggested by Sargent and Wallace. High real rates plus low real growth lead to rise in the debt-GNP ratio, *ceteris paribus*. Also, there was a large reduction in seigniorage revenues to the Irish Government, by 1.2 per cent of GNP per annum 1982-87 compared to 1970-81. Dornbusch observes that despite improvements evident by mid-1988, it remains the case that a period of high world real interest rates and low growth would make the debt unsustainable.

His policy prescriptions centre on raising the growth rate and lowering the debt. Lowering marginal tax rates, broadening the tax base and expenditure

5. See the comment by Honohan (1989); the Central Bank appeared at the time to be as much concerned with a stable sterling exchange rate as with the EMS.

6. Dornbusch (pp. 186-193) provides a set of international comparisons for the period. He notes that all OECD countries experienced inflation reduction and a fall in long-term interest rates in the 1980s; all had a sharp decline in interest rates in 1982-83. He finds that costs of disinflation ("sacrifice ratios") varied greatly across countries including EMS countries, leading him to conclude that EMS membership did not make disinflation cheaper; interest rate differentials between EMS members and Germany were neither smaller nor more stable than those between non-members and Germany.

cuts are recommended, though the latter are regarded as difficult to make. More contentious is his view that a gain in competitiveness is essential to higher growth; this requires a major fall in the Irish relative wage which means a devaluation accompanied by an incomes policy. Devaluation would not help the debt situation much because of foreign currency denominated debt. But for growth, a lower value of the Irish pound is deemed "essential". Another controversial option is debt restructuring. In Dornbusch's view, reiterated in his Geary Lecture at the ESRI in mid-1990, Ireland pays a "confidence tax" in that the yield differential between Ireland and Germany exceeds the inflation differential. This is very expensive; Dornbusch suggests either converting all domestic debt (50 per cent of the total) into DM, \$ and Yen debt or adopting the DM as the Irish currency and benefiting from the reduction in the currency risk premium on the debt.

Newell and Symons (1990)

The Newell-Symons study attempts to account for the rise in Irish unemployment in the period to 1986. Its analysis and empirical findings have proved controversial. Its structure is one used to analyse the unemployment experience of most OECD countries by Newell and Symons and others; see the references in Newell and Symons (1990). It focuses on the labour market; it takes no explicit account of monetary and exchange rate developments. Thus, the latter enter only through real interest rates, output prices and output shocks. Its main features are as follows:

- (1) *Labour demand equation*: labour demand is a function of real labour costs (the real product wage plus employment taxes) and perturbations in aggregate demand (represented by the real interest rate, UK output and other variables).
- (2) *Real wage equation*: the real product wage is a function of the tightness of the labour market, which is itself related to employment; and a set of supply-side shift factors, such as changes in the tax wedge and the unemployment benefit level. The realised real wage is assumed to be the outcome of a bargaining process.
- (3) *Participation equation*: the labour force participation rate is assumed to be a function of the "outside wage" and demographic factors; the former is a weighted average of the economy-wide bargained wage and unemployment benefit and it is shown that it can be represented by a combination of the unemployment rate and participation rate.

This three-equation model is estimated using data for the period 1961 to 1986; the final version, determined by their empirical results, is used to account for the rise in Irish unemployment.

Their conclusions about the period 1979-86 differ from those of most other studies. Despite many attempts to find one, they had very little success in isolating a rôle for the fiscal contraction of 1982 in accounting for the rise in unemployment. They experimented with a number of indicators of fiscal stance; the strongest results were obtained using the deficit-GDP ratio. However, it does not measure a shock, since it has a large systematic component; its inclusion is contrary to the spirit of their approach. For the record, they report that it accounted for one percentage point of the rise in unemployment; they interpret this as an upper bound. Real interest rates are found to have been a significant contributor. But Newell and Symons argue that high Irish real rates reflected high world rates rather than being domestic in origin; they show that there was no trend in the divergence of Irish and UK real rates.⁷ The effects of the terms of trade and competitiveness are investigated as demand shock variables in the labour demand function. The results are negative — no statistically significant effects are detected.

Thus they dispute the conclusions of many studies about the 1982 stabilisation. That fiscal policy had strong contractionary effects is common ground to most studies; that Irish real interest rates were especially high is argued by Dornbusch and the OECD (cited in Honohan (1992)); that a loss in competitiveness mattered is argued by Dornbusch, Bradley and Fitz Gerald (1988) and Bradley, Fitz Gerald and Kearney (1991); that the terms of trade mattered is argued by McAleese and McCarthy (1989). Their conclusion that bad luck was a significant contributor to Ireland's dismal economic performance in the 1980s has met with little support. There is enormous reluctance to concede that the policy choices of the late 1970s might not have been the prime culprits they are widely asserted to have been; the Newell and Symons study has yet to convince the critics. Interestingly, not even the perpetrators of these decisions have rallied to the more benign judgement of Newell and Symons.

Expansionary Fiscal Contraction 1987-1989?

Giavazzi and Pagano (1990)

Unlike the previous papers, this study deals with the initial years of economic recovery; in particular, it directly confronts the hypothesis of expansionary fiscal contraction, which is best known as "the German view of fiscal policy". That Germany might have provided an example of expansionary fiscal contraction in the early 1980s was argued by Fels and Froehlich (1987) and further examined by Hellwig and Neumann (1987); these papers are cited

7. Recall Honohan's comments on Dornbusch that Irish rates were high because UK rates were high.

by Giavazzi and Pagano but the German case is not considered in detail. Drazen (1990) suggests that Israel might have experienced an expansionary fiscal contraction in the mid-1980s. The essence of the hypothesis is that fiscal consolidation — cuts in expenditure or increases in taxes — can lead to higher output, consumption or investment. The idea is that the consolidation is interpreted as a signal to the private sector that government consumption will be permanently reduced and so therefore will be taxes; this leads to higher output.

A clear statement of the issues is given by Blanchard (1990); it is couched in terms of a tax increase rather than expenditure cut but obviously applies to the latter, too:

When a government consolidates its budget position through an increase in taxes, it affects expectations and thus consumption in two ways. First, the intertemporal redistribution of taxes from the future to the present is likely to increase the burden of current taxpayers and reduce their consumption. This effect is the conventional one, and its strength depends on how much the economy departs from the benchmark of Ricardian equivalence. But, second, by taking measures today, the government eliminates the need for larger, maybe much more disruptive adjustments in the future and this may in turn increase consumption (p. 111).

Expansionary fiscal contraction will be observed whenever the second effect dominates the first. This is more likely to occur the smaller the first effect and the larger the second. The first effect will be smaller the less myopic decision makers are. A broader interpretation allows the state of development of credit markets to have a bearing: as Blanchard observes, the less developed is the credit system and thus the less people's ability to borrow against future income, the more myopic (or less Ricardian) consumer responses are likely to be. The second effect will be larger the more dire the circumstances in which the economy finds itself. Direness in this context embraces the level of taxes and the scale of debt. If the economy is, as Blanchard puts it, "close to the brink", consumers may plausibly believe that if action is not taken now, eventual action will have extremely disruptive effects. Hence, consolidation now will preclude later disruption and may have a strong positive effect.⁸ The arguments about expansionary fiscal contraction

8. Blanchard presents a simple model which gives precise expression to the two effects of a consolidation. Among other things the model makes clear the rôle of Ricardian equivalence in the outcome. It shows that the argument that Ricardian equivalence is a necessary condition for expansionary fiscal contraction, suggested in the conclusion of Whelan (1991), is not correct. See also Giavazzi and Pagano (1990) and Drazen (1990).

are as applicable to investment decisions by firms as to consumption decisions. In the open economy framework, both exports and imports could be influenced, though the effect on net exports is not clear.

Giavazzi and Pagano examine the experiences in the 1980s of two open economies, Denmark and Ireland. Their study falls into two distinct parts. The first is a data description exercise. They use pooled data for 10 countries over the period 1973-89 to estimate ordinary least squares regression relationships between real private consumption and (a) "cyclically corrected" net taxes; (b) public consumption; and (c) real M2. All variables are measured relative to potential GDP. They find that government spending is *negatively* related to consumption, especially for Ireland, the UK and The Netherlands; net taxes, however, are negatively related to consumption, especially in Denmark and The Netherlands but there is only a very weak association in Ireland. The first result is seen as preliminary evidence for the existence of expansionary fiscal contraction.

They also graph the relationship between changes in private consumption plus investment and public spending, both relative to potential GDP, for the 1980s. The data are divided (arbitrarily) into two subperiods, the early and late 1980s. Ireland in the period 1987-89 is an outlier, suggesting expansionary fiscal contraction; the same is true for Denmark in 1983-84. Evidence of this type needs to be viewed with great caution, suggesting as it does that the experiences of the two subperiods can be regarded as independent events. Giavazzi and Pagano, however, are careful to treat the conclusions of these exercises as suggestive.

Irish Economic Policy in the 1980s

The rest of the paper focuses on Ireland and Denmark.⁹ It presents an interpretation of what happened in the two economies in the 1980s; its interpretation of Ireland's experience is as follows. The first, early 1980s stabilisation is seen as a conventional, textbook case: in no way does it even suggest expansionary fiscal contraction. The very sharp cut in the primary

9. They describe the similarities between the Danish and second Irish stabilisations as follows: monetary tightening was the first step in the stabilisation plan; the Central Bank moved first while politicians wrangled, not by cutting money supply growth but by "using the exchange rate vis-à-vis the German Mark as a nominal anchor". "The *sudden disinflation* (my emphasis) led to a deterioration of the financial position of the public sector, through the loss of seigniorage and the increase in the real cost of servicing fixed rate debt issued when nominal interest rates were high." This raised the sense of urgency about the need for fiscal correction; prompt fiscal action was also needed for the success of monetary stabilisation (along Dornbusch-Sargent-Wallace lines) since to maintain the DM peg the danger of future monetisation had to be ruled out. A sharp reduction of the deficit could contribute to the long-run credibility of the exchange rate, indicating the Government's intention to meet its obligations via tax revenue and/or spending cuts.

deficit, achieved mainly through tax increases, is emphasised, as it was in Dornbusch (1989). At the same time, "the monetary authorities embarked on a sharp disinflation plan, by pegging the value of the Irish punt within the EMS and thus relative to the German Mark". Although this led to a drop in nominal and real interest rates, house prices and share prices declined. The deflationary impact on domestic demand was "tremendous": real private consumption fell by 7.1 per cent in 1982 and remained almost flat in the next two years. Business investment decreased dramatically in the period 1982-1984 despite the fall in real interest rates. The recession was in no way connected with a slowdown in external demand: "... in the 1982-1984 period Irish exports fared exceptionally well on international markets".¹⁰

The discussion immediately moves to the conduct of policy in the years 1987-1989.¹¹ The large cut in the primary deficit is again emphasised but so is the fact that most of the cut came from lower government consumption and investment rather than higher taxes. Also, whatever increase in tax revenues did take place "was obtained by a widening of the tax base via fiscal reform accompanied by a once-and-for-all tax amnesty; ... marginal tax rates ... actually fell slightly. Another difference with the 1982 experiment stems from the accompanying exchange rate policy: the 1987 stabilisation was preceded by a sharp devaluation, while the earlier attempt had occurred at a trough of Irish competitiveness" (p. 92). This comment sits uneasily with the comment above about how well Irish exports fared in 1982-84. It sits equally uneasily with the behaviour of some competitiveness measures, notably relative unit wage costs measured in a common currency.¹²

However, it is argued that exchange rate policy eased the stabilisation through its indirect effect on interest rates and domestic demand rather than by any direct effect on external demand: export growth was much the same in 1982-84 and 1987-89. The devaluation is seen as stimulating domestic demand by enhancing the credibility of the new parity and thus producing a

10. Note the contrast with the conclusions of McAleese and McCarthy (1989).

11. Giavazzi and Pagano precede this with a strange paragraph: "In spite of this early failure, the new government elected in February 1987 decided to try again. Elections had brought back to office Charles Haughey, the same prime minister who had attempted the stabilisation in 1982, and had been voted out of office after its failure. In contrast with his earlier attempt, that had been carried out in the context of a weak and quarrelsome coalition government, this time Mr Haughey flatly refused to enter deals with anyone and launched his minority government on the toughest austerity program the country had witnessed (*The Financial Times*, September 24, 1987). Within two years the full-employment primary deficit was cut by an additional 7 per cent of GDP. Real growth resumed, and for the first time since the early 1970s the debt-income ratio started to decline." Part of that description is clearly at variance with actual events.

12. The behaviour of relative wages and relative unit wage costs in a common currency differ substantially. The latter are productivity adjusted, unlike the former. The relative wage data are also used by Barry (1991a, 1991b), without comment.

fall in interest rates: nominal and real rates dropped 5 and 3.4 percentage points respectively in the course of 1987. Giavazzi and Pagano stress the point that the effects of fiscal turnaround cannot be understood if they are not placed against the backdrop of the accompanying monetary and exchange rate policies. This point has implications for the discussion of Newell and Symons (1990) and Barry and Bradley (1990, 1991).

Testing the Expansionary Fiscal Contraction Hypothesis

Attention then switches to the central question of the paper: can the behaviour of consumption be accounted for by the direct effects of policy or is there a "consumption puzzle" which is resolved by the hypothesis of expansionary fiscal contraction? The framework of analysis is as follows:

- (a) the importance of the monetary and exchange rate policies accompanying fiscal stabilisation is highlighted;
- (b) the issue of how the behaviour of private consumption can be related to these policy shocks is then dealt with, in terms of two questions:
 - (i) Can the increase in consumption which occurred in Denmark from 1983 and in Ireland from 1987 be explained by the *direct effects* of policy shifts, via taxes, government spending, and asset prices?
 - (ii) Can the unexplained part of the consumption rise be attributed to changes in expectations about future fiscal policy?

As already observed, the stabilisations were accompanied by sharp falls in nominal and real interest rates. Thus, households were subjected to two simultaneous policy shocks: a cut in current disposable income due to the fiscal contraction and a wealth effect due to the unanticipated fall in nominal and real interest rates. If the wealth effect dominated the income effect, this would explain the "consumption boom" that accompanied the Danish and second Irish stabilisation; the fall in Irish consumption in the 1982 stabilisation could be due to absence of a wealth effect, as the fall in interest rates did not lead to an increase in asset prices. As Giavazzi and Pagano say, "if this interpretation were to be supported by the data, there would be no reason to resort to the German view of fiscal policy to account for our episodes of expansionary contraction. Consumption could be satisfactorily explained by the *direct effects* of the policy package; there would be no consumption puzzle to be solved by appealing to *expectations*, namely, to the rôle of current policy shifts as signals of future policies" (p. 93). This is a very clear statement of the empirical implications of expansionary fiscal contraction.

The direct effects of fiscal and monetary policies on consumption are

analysed as working through four channels: (i) the increase in current net taxes, (ii) the fall in expected inflation, (iii) the fall in real interest rates, (iv) the substitution of private consumption for services no longer supplied by the government. Channels (i) to (iii) are analysed using the model of Blanchard (1985).¹³ In this model, if households have finite horizons, a temporary increase in taxes lowers private consumption; a fall in expected inflation can have the opposite effect through a wealth effect;¹⁴ and a fall in real interest rates raises wealth and consumption, regardless of whether government bonds are regarded as net wealth.

To test the empirical relevance of these points, consumption functions for Ireland and Denmark are estimated. Consumption of non-durables and services is regressed on its own lagged value, lagged post-tax earnings, current and lagged wealth and (to allow for liquidity constrained consumers) current and lagged disposable income. Public debt is introduced as a separate regressor, with other forms of private wealth.¹⁵ Estimation is by nonlinear instrumental variables.

The results show that the models' restrictions are always accepted at conventional significance levels. For Ireland, in contrast to Denmark, net wealth is *only significant when disposable income is omitted from the list of regressors*. Anticipated changes in current disposable income appear to be the main determinant of consumption whereas in Denmark these variables are decoupled. The coefficient of public debt is very imprecisely estimated for both countries, raising questions about the effect of capital gains on the debt on consumption. For Ireland, however, data on *book value only* are published, so the regression result may not mean much.¹⁶ They also refer to the fact that in Ireland most debt is held in the portfolios of pension funds etc., not personal portfolios, and the former are harder to liquidate. This limits the wealth effect and may account for the absence of a significant public debt coefficient. It also suggests that the financial liberalisation of the late 1980s could help to reconcile the different outcomes in the two stabilisations.

13. Giavazzi and Pagano point out that this model contains both Ricardian and non-Ricardian worlds as special cases.

14. Footnote 9 p. 94 of Giavazzi and Pagano is important. It notes that this argument is contrary to the common view that when the maturity of public debt is long, rapid disinflation makes fiscal stabilisation harder by raising the real burden of debt service; hence the greater the required turnaround in the primary deficit. The latter argument overlooks the positive wealth effect, leading to higher tax revenue giving at least partial offset to higher real debt service.

15. For details, see Giavazzi and Pagano (1990), pp. 94-99.

16. But other evidence is cited in favour of the argument that in Ireland these capital gains may have no effect on consumption. Giavazzi and Pagano say that "we know that the average maturity of Irish public debt is long and that both stabilisations were accompanied by sharp falls in nominal and real interest rates; the market value of debt must have jumped in both stabilisations. But the two fiscal corrections had opposite effects on consumption" (p. 95).

In summary, there seem to have been no significant wealth effects in Ireland, so consumption bore the full burden of higher taxes in the first stabilisation while in the second it was helped by the rise in disposable income. In Denmark, the wealth effect dominated the effect of the fall in current disposable income. This is consistent with the different responses of consumption to fiscal consolidation in the two countries, which Giavazzi and Pagano suggest was due to the differences in the functioning of credit markets in the two countries. They present data which show that in Denmark lending to households plays a central rôle in financial intermediation, but in Ireland it is far less important. For example, consumer credit as a percentage of consumer spending in 1988 was 37 per cent in Denmark and only 11 per cent in Ireland; an even bigger gap existed with respect to housing mortgages. Up to recently, of course, access to consumer credit was more restricted in Ireland, e.g., the entry of banks to the mortgage market is relatively recent.

So far it has been assumed that public consumption yields no utility. If consumers value health, education etc. they will increase expenditure on them if government spending falls. To the extent that there is substitution of private for public consumption, an apparent increase in private consumption would reflect measurement error — if “true consumption” were measured instead of spending on private sector output, it would be found not to have increased (as much). In Denmark, there *was* substitution but the magnitude was not nearly enough to account for the observed rise in consumption. Unfortunately, no evidence is cited on this point for Ireland; national accounts data are not sufficiently disaggregated to provide it.

The question remains as to whether there is a consumption puzzle; i.e., does much of the change in consumption remain to be explained once changes in wealth, disposable income and other factors are accounted for? To check this, the estimated consumption functions are used to generate dynamic out of sample forecasts; if the result is underprediction of consumption, this supports the presence of a consumption puzzle. The Danish results indicate significant underprediction; for Ireland consumption is underpredicted by 2 per cent in 1988.¹⁷ Thus, they conclude that there *is* a consumption puzzle, of larger magnitude for Denmark than Ireland, and ask whether it can be solved by the expansionary fiscal contraction hypothesis (the German view of fiscal policy).

As explained earlier, for the German view to work, households must perceive spending cuts as permanent and any tax increases as temporary. Giavazzi and Pagano show that in Denmark and Ireland a proxy for per-

17. The forecast growth rate of per capita consumption in 1988 was 0.6 per cent but the actual rate was 2.65 per cent. They use the regression for total consumption to make the forecast, since non-durable consumption data were not available for 1988.

manent government consumption declined since the start of stabilisation. On the other hand, actual taxes as a proportion of GDP have fallen in Denmark from 1986 and Ireland from 1988; the 1988 figures in Ireland are significantly distorted by the tax amnesty of that year and taxes as a proportion of GDP were over two percentage points lower in 1989 than 1987.¹⁸

A more sophisticated test of the hypothesis is based on the fact that under rational expectations, the error term in the consumption function represents innovations in permanent disposable income. If announced spending cuts are viewed as evidence that the government is going to reduce taxes in future there should be a *negative correlation* between consumption innovations and innovations in permanent government consumption. Within the sample, OLS tests for Denmark produced a negative correlation which is significant at the 10 per cent level when lagged rather than current changes in government consumption are the regressor. This is not a very strong result; however, for Ireland no significant correlation was found.

As already noted, there is no *a priori* reason why the focus of tests of the expansionary fiscal contraction hypothesis should exclusively be on consumption. Investment, for example, could be subjected to the same treatment: is there an investment puzzle, too? Investment is briefly examined by Giavazzi and Pagano, using Danish data. They report that the investment boom of 1985-86 cannot wholly be accounted for by lower real interest rates but they do not resolve whether the residual was due to fiscal consolidation or the abolition of capital controls. The extension of the discussion to deal with net exports is not undertaken; this is unfortunate since the rôle of the external environment in Ireland's economic recovery is central to the present debate.

Conclusion

In reviewing the Irish evidence, Giavazzi and Pagano comment that, in the second stabilisation, government spending was cut relative to household disposable income and increased tax revenues were obtained while the marginal tax rate fell. Also, liberalisation of Irish credit markets in the late 1980s may have increased the ability of households to borrow in anticipation of higher future incomes. "It is tempting to relate the large forecast error of the Irish consumption function in 1988 with these two factors and to conclude that the 'German view' may have something to say ... for the second Irish stabilisation". This tentative conclusion contrasts with the conclusion for Denmark. It hardly constitutes a ringing endorsement of the relevance of expansionary fiscal contraction to recent Irish experience but it should be remembered that data for 1989 and 1990 were not available for the study.

18. Giavazzi and Pagano refer to "cyclically adjusted" taxes relative to "potential" GDP.

Giavazzi and Pagano conclude that Ireland's experience indicates the potential importance of liquidity constraints for the hypothesis of expansionary fiscal policy. They also emphasise the importance of monetary and exchange rate policy. EMS membership and liberalisation of capital controls are credited with producing a sharp fall in nominal interest rates; in the presence of "inflation inertia" this translated into a corresponding drop of real interest rates and a rise in aggregate demand. The expansionary effect, however, "crucially hinged on the credibility of the fixed parity chosen by the monetary authorities: *it is remarkable that in both our cases of 'expansionary contractions' the shift in fiscal and exchange rate policy was preceded by a sizeable devaluation*" (p. 106).

III THE VIEW FROM THE HOME FRONT

The main Irish contributions to the literature on Ireland's recent economic performance exhibit substantial diversity. One set of papers consists of those by McAleese and McCarthy (1989) and later papers by McAleese (1990a, 1990b). The McAleese-McCarthy paper is concerned with economic adjustment throughout the 1980s while the others focus on the years 1987-90 and the hypothesis of expansionary fiscal contraction.

A second set of papers is largely based on the ESRI's medium term macroeconomic model (HERMES; see Bradley, *et al.* (1989)), whose development has generated most of the empirical research on the Irish economy in the past decade. This set consists of Barry and Bradley (1990, 1991), Bradley, Fitz Gerald and McCoy (1991) and Barry (1991a). The Barry-Bradley papers were motivated primarily by the work of Newell and Symons (1990); they and Barry (1991a) are mainly concerned with the rise in Irish unemployment in the 1980s. Bradley, Fitz Gerald and McCoy (Ch. 2) review the performance of the economy from 1987 to 1990. Another paper by Barry (1991b) was particularly provoked by McAleese (1990a, b) and to a lesser extent by Giavazzi and Pagano (1990); it sets out to debunk the relevance of expansionary fiscal contraction to Ireland's recent experience. Finally, in a very different vein, a paper by Leddin (1990) concentrates on monetary and exchange rate developments in the 1980s but also relates them to the performance of the real economy.

McAleese and McCarthy (1989)

This was the first of the recent studies to focus on the adjustment of the Irish economy in the 1980s and on the period of recovery from 1987. It views the Irish economy as having been most affected in the early 1980s by *external* shocks — shocks to the terms of trade, world economic activity and inter-

national interest rates. Domestic policy responses, especially fiscal policy, are seen as having made the adjustment to these shocks much more costly in terms of lost output and unemployment.

The framework for estimating the effect of external shocks and policy responses is provided by the definition of a change in the current account of the balance of payments. To estimate external shocks, base period values of world market share, trend growth rates and the income elasticity of import demand are used as benchmarks; deviations from base period performance are decomposed into shocks and policy responses as appropriate. The base period for trend growth rates is 1963-1973 and for the other parameters 1976-1978. For example, the difference between exports computed with base period market share and exports which would result from the base year market share and the base year growth rate of exports is defined as the external (world) demand shock; the difference between actual exports and exports computed with base period share is described as a policy response.

The sources of terms of trade shocks were the rise in energy prices in the period 1979-81 and the fall in agriculture prices. These shocks gradually reversed with the declining weight of agricultural products in exports, rising prices of manufactured goods and the stabilisation, followed by a sharp decline, in energy prices. By 1986 the terms of trade had fallen back to their 1979 value. The recession in the world economy in the early 1980s, and especially the recession in the UK, provided the world demand shock. McAleese and McCarthy argue that the higher international interest rates in the early 1980s did not constitute a significant adverse shock for Ireland because foreign debt was still a minor part of the total and much of it was not dollar denominated. This argument rather begs the question of the relationship between Irish and world rates; the smaller rôle accorded to interest rate effects contrasts with the results of most other studies.

The combined estimated impact of these shocks is presented in McAleese and McCarthy (Table 3). It rises from 3.6 per cent of GNP (1979) to 9.3 per cent (1980) to 14.0 per cent (1981) and 14.2 per cent (1982); it then stabilises at around 12 per cent (1983-85). The terms of trade shock dominates in the early years and then declines appreciably; the world demand shock follows the reverse pattern and the interest rate shock grows through the period but remains relatively small.

McAleese and McCarthy then turn to domestic policies. The accounting method of measuring the effects of shocks, as indicated above, also gives measures of what are called policy responses. Foreign borrowing and monetary and fiscal policy are easily recognised as such. From 1979-81 external borrowing is identified as the principal policy used to offset the current account effects of external shocks; since 1982 the principal policy is identified

as domestic contraction, by deflationary fiscal, monetary and exchange rate policy. "Export promotion" and "import substitution" are treated by the authors as policy responses but it is difficult to identify them with specific policies. Significant effects are attributed to them in some years, which is not easy to interpret.

McAleese and McCarthy's evaluation of the period can be summarised thus: the negative external shocks of the early 1980s were followed by favourable developments from 1983 — the growth of world trade, the fall in oil prices up to 1986. But, despite this and domestic contraction the deficit remained high. The problem is seen to have been due to cutting investment and raising taxes instead of cutting current spending. It is argued that the Irish authorities had great difficulty in establishing a credible policy regime; the private sector was very slow to respond. Instead of expenditure switching to tradeables, expenditure fell; the balance of payments improvement was due to depressed imports. To an extent this mirrors Honohan's (1989, 1992) comments on the implications of the current budget target adopted by the government; the dynamics of the debt meant that growing debt interest payments made the target infeasible.

McAleese and McCarthy argue that Dornbusch (1989) underestimates the effects of the external shocks in 1979-82 and thus attributes to price stabilisation policies (EMS membership) unemployment and other costs which were due to external shocks. This argument finds echoes in Newell and Symons' conclusion about the importance of external factors, but the latter highlight real interest rates as one of them. McAleese and McCarthy summarise by emphasising the damage done to the Irish economy by inappropriate fiscal policies and by the loss of competitiveness relative to our main trading partners. The contrast with the conclusions of Newell and Symons has been noted.

The final part of the study deals with the period from 1987. They describe four key elements of the new government's policy. First, the restoration of fiscal balance by cuts in current and capital expenditure; second, tax reform, consisting of a commitment to reduce income tax rates, improved collection procedures and a broadening of the tax base; third, a commitment to social equity, through greater efficiency in social welfare schemes while protecting the least well off; fourth, "development-oriented policies", i.e., control of public utility prices, employment-focused industrial grants, etc. It is argued that a favourable background was provided by EC membership, political consensus, a continued ability of the Government to borrow abroad, lower interest rates and a positive external environment. No mention is made, however, of the devaluation of August 1986, which features so prominently in several other studies.

The initial results were well above expectations; Government borrowing fell from 13 per cent of GNP in 1986 to 5 per cent in 1989. The tax amnesty in 1988 brought in a revenue windfall of 3 per cent of GNP. "The feared deflationary effects of retrenchment" did not occur—higher exports, investment, personal consumption took up the slack. Thus, the possibility of expansionary fiscal contraction is mooted. They conclude that "Ireland's stabilisation programme now seems to be on a track towards success" but note that much depends on the external environment.

Barry and Bradley (1990, 1991)

There is substantial overlap among the two Barry-Bradley papers; the second is basically an updated resumé of the first so it makes sense to review them together. As already stated, they are essentially applications of the ESRI's medium term model, which is used to attempt to account for the rise in Irish unemployment in the period 1970-1987. They contrast their approach with that adopted by Newell and Symons (1990). In particular, they claim that large-scale models are inherently superior to the small models of the type used by Newell and Symons and others, because they allow disaggregation of important sectors of the economy and thus, in principle, can detect interactions obscured by aggregation. Most of the arguments about the merits of large versus small macroeconomic models are too well known to repeat here. It is usually the case, however, that the benefits of large size are bought dearly, the impression given by Barry and Bradley notwithstanding. Their advocacy of large-scale models reflects their tastes, tastes not universally shared.

The conclusions of any study are determined by, and are as valid as, the model which underlies them. It is not easy to summarise the features of a 469-equation model such as the ESRI's; even the exposition which appears in Barry and Bradley (1990) will leave the interested reader with questions which can only be answered in Bradley, *et al.* (1989). Despite this, a few points about the model are worth making here.

The ESRI Medium-term Model

The basic structure of the model is described as a modified "Scandinavian" one, with the following consequences for price and wage determination:

- (a) the domestic price of tradeable goods is a function of world prices and the exchange rate; it is determined externally and "long run" purchasing power parity (PPP) is assumed to prevail. The price of tradeables is measured as the price of industrial output. In fact, the reference to "long run" is a bit misleading; no deviations from PPP are allowed in

the model. Non-tradeable goods prices are determined as a mark-up on costs; the domestic inflation rate is a weighted average of tradeable and non-tradeable goods inflation.

- (b) Wage rates are determined primarily in the industrial sector, with rates elsewhere following; wage inflation is assumed to be the same in the two sectors. The wage bargaining process underlying the Scandinavian model is modified to include a tax wedge and a proxy for trade union bargaining power. Bargaining makes wage rates a function of prices(+), the tax wedge(+), changes in unemployment (-) and trend growth in productivity (+). The effect of a rise in unemployment is to lower wage rates, leading to some private sector crowding in; it also raises emigration and lowers labour supply with the opposite effect. The presence of the tax wedge implies that higher taxes raise wages and lower private sector employment. Thus, changes in government expenditure have little direct effect on wage bargaining, unlike taxes.

A major emphasis in the model is on industrial output (or output capacity) determination.¹⁹ Direct foreign investment is accorded a central rôle and it involves close integration of the supply-side of the economy into the world economy. Multinational firms are modelled as choosing, in the following sequence, how much to produce, where to produce it and how to produce it. Choice 1 is pre-empted by the assumption of given world demand. Choice 2 is determined by the competitiveness of different locations; the measure of competitiveness used is "profitability", itself measured as value added net of labour and energy costs.²⁰ Choice 3 determines the factor mix. Demands for factors are specified as functions of output and factor prices. In contrast, services sector output is determined by final demand.

On the demand side of the economy, consumption depends on disposable income. Exporters behave as price takers; thus (non-agricultural) exports are determined by the output decisions of domestic firms. The latter are represented by "export supply functions" with price given by the relative competitiveness of Irish production. In this framework, the effect of devaluation is to increase competitiveness to the extent that it lowers relative labour costs. The dynamics of the model are such that devaluation works through the domestic wage bargaining system and will eventually return competitiveness to its original level. The emphasis in Dornbusch (1989) and Giavazzi and Pagano (1990) on the rôle of monetary and exchange rate policy finds only a

19. A full account may be found in Bradley and Fitz Gerald (1988).

20. "It does not directly allow for the effects of certain other costs, such as cost of borrowed capital or the cost of transport to foreign markets. However, it is possible to take the effects of these factors on competitiveness into account by means of *adjustment to coefficients or fixing factors*" (my emphasis).

dim echo here; exchange rate effects can work only through restricted channels.

It is clear that the central link between the Irish and world economies operates through the determination of industrial output. In response to shocks to world output, Irish industrial output adjusts rather like the output of a competitive Marshallian industry. In the short run, a rise in world output results in a temporary rise in exports and a rise in capacity utilisation in the industrial sector above its long-run norm. If the rise in world output persists, the capacity of the Irish industrial sector rises over a period of years to increase the long-run output potential of the economy. The rise in capacity restores the level of capacity utilisation to its norm while permitting sustained increase in Irish output. Thus in the long run industrial output is a function of the level of world output and competitiveness; causation runs from world output to domestic supply to exports. In the short run, exports are influenced directly by variations in world output.

Domestic output shocks are treated in a markedly different way. A temporary increase in domestic activity leads only to a *short-term* increase in capacity utilisation and industrial output. Barry and Bradley state that "this effect is not sustained as there is no effect on the level of industrial capacity. Basically, the Irish market is deemed to be less important than the world market in influencing the production and investment decisions of Irish firms" (Barry and Bradley (1990), p. 37). The term "less important" represents an understatement. Increases in domestic demand do not affect long-run industrial output; instead they raise the output of market services. To the extent that increased consumption goes on services it raises output; if it goes on goods it raises imports or reduces exports.

The model includes the repatriation of profits earned by foreign firms in the Irish industrial sector; foreign firms accounted for more than 50 per cent of gross output in 1985. As far as the government sector is concerned, the domestic purchase of government debt is a function of domestic savings; foreign borrowing or debt repayments are residually determined. Hence the effects of higher foreign interest *payments* on GNP are endogenous, lowering the long-run multipliers of the model. On the financial side, nominal interest rates are assumed to be exogenous.

Model Simulations

The model is simulated to provide an account of the causes of Irish unemployment over the period 1970-1987. Three sources of shocks are considered: world growth, domestic fiscal policy and demographics. The approach is to use hypothetical post-1970 "scenarios" to replace the historical series and use the model to simulate the outcomes. The simulation is based on parameter

estimates obtained by estimating the model over the full period, replacing historical by hypothetical values for a chosen set of series and leaving all other variables in the model at their historical levels.

For example, to simulate effects of domestic policy, a concept of "policy neutrality" is defined. Barry and Bradley choose what they call "policy indexation". Three versions are simulated in Barry and Bradley (1991); (i) tax rates are indexed and expenditure in real terms set at 1970 levels; (ii) taxes are set at 1970 levels but expenditure is kept at historical levels; (iii) expenditure policies are indexed but taxes are kept at historical settings.

The simulation of the combined effects of the three sources of shocks is used to account for the rise in unemployment. For the Newell-Symons period, 1979-1986, the shocks account for about 85 per cent of the actual rise in unemployment. The main difference in the results is that Barry and Bradley attribute over 40 per cent of the rise in unemployment to domestic policy factors whereas Newell and Symons attribute less than 20 per cent of it to this source. Barry and Bradley accord only a small rôle to demographic factors (less than 6 per cent) in contrast to the 30 per cent contribution found by Newell and Symons. Both attribute a big rôle to external factors (Barry and Bradley 30 per cent and Newell and Symons over 40 per cent), although the factors are not the same — in Newell and Symons they are the UK GDP and real interest rates while in Barry and Bradley they include world output and profitability as well as UK employment and real interest rates. The relative importance of the three shocks for the period 1970-87 is different, with the rôles of domestic policy much lower (about 16 per cent) and demographics higher (about 30 per cent).

Barry and Bradley present detailed results of the simulations for the period 1970-1987, showing the effects of shocks not only on unemployment, which they do a reasonable job of accounting for, but also on other variables. Under the simulation of the combined effects of the three shocks, it turns out that they increased the labour force by 230,000, compared to the actual increase of over 190,000. In effect, the shocks account for about 120 per cent of the actual change in the labour force. Since they account for less than the full rise in unemployment, they account for more than the actual employment change, too. These outcomes are not a source of particular concern. However, some others are.

Perhaps the most extreme result concerns the debt-GNP ratio. The domestic policy simulation indicates that under policy indexation, as defined above, the debt-GNP ratio would have been about -30 per cent in 1987, 160 per cent below its actual level. Under the combined simulation the debt-GNP ratio would have been close to zero instead of more than 130 per cent. Barry and Bradley (1991) comment on these out-turns; they write that "it need

hardly be said that such an out-turn would have been politically implausible and the ability of a macromodel to analyse such a severe departure from the historical out-turn is, in any case, questionable" (p. 19).²¹ Comments are also made in Barry and Bradley (1990); they say that "these simulations should be regarded as merely illustrative of which might have happened if policy had been different" (p. 54).

Results such as these cast a shadow over the whole exercise. To say that they should be treated with caution (see Barry and Bradley (1991), footnote 17) is another example of understatement. The model is silent on expectations effects which, as noted, are central to arguments about credibility and expansionary fiscal policy. It cannot therefore (credibly) address such issues.²² This is recognised in the conclusion to Barry and Bradley (1991) but the point arises again in Bradley, Fitz Gerald and McCoy (1991).

Bradley, Fitz Gerald and McCoy (1991)

This document is mainly devoted to medium-term forecasts of the Irish economy generated by the ESRI model. However, Chapter 2 presents an analysis of the period 1987-1990. The discussion starts on an interesting note; it is pointed out that the model's consumption function underpredicts consumption for these years, which were years of economic recovery and, of course, fiscal consolidation. Disposable income is the main determinant of consumption, as in Giavazzi and Pagano (1990). In effect, this represents a strengthening of the latter's finding of underprediction for 1988 and thus of the possibility that Ireland may have a serious "consumption puzzle" to solve.

The authors' reaction to it is curious; they write that "since this is signalling a change of behaviour which we do not yet fully understand, an *ad hoc* adjustment was made to the model to force it to track recent consumption growth". End of puzzle! They claim that their simulation exercises for the recovery period show "that a conventional neo-Keynesian model can adequately account for many of the stylised facts of Ireland's economic recovery during the 1986-1990 period" (p. 21) and that, for a particular simulation involving world growth and domestic fiscal indexation, their results have "a remarkable resemblance to those characteristics of Ireland's recovery claimed by the advocates of 'expansionary fiscal contractions'" (p. 21). What these claims amount to is a demonstration that if the possibility of a consumption puzzle is ruled out by altering model coefficients, the model can track other

21. Barry and Bradley (1991) refer to the susceptibility of their (and Newell and Symons) simulations to the Lucas critique of policy evaluation (footnote 2, p. 1). They add that the results of their simulations should be treated with caution.

22. This is not the case with Newell and Symons, whose model is formulated in terms of expected magnitudes. They make no attempt to address such issues, however.

aspects of Irish economic performance in the period 1987-90. But the fact remains that the model underpredicts consumption, a finding of direct relevance to the question of the applicability of the German view to recent Irish experience. Why then go through simulation exercises which rule out the underprediction and thereby a consumption puzzle, and use the results to cast doubt on the expansionary fiscal contraction hypothesis? Bradley, *et al.*, acknowledge that the relevance to Ireland of this hypothesis is "an area requiring urgent further research". Recognition of the rôle of expectations in macroeconomic modelling is essential to that research; whether or not it indicates that the period 1987-90 provides an example of expansionary fiscal contraction, the hope must be that it will prove beneficial to the performance of the ESRI model.

McAleese (1990a, 1990b); Barry (1991a, b)

The first of the papers by McAleese identifies the main factors responsible for the recovery as favourable *external* (UK boom, exchange rate changes) and internal factors (the successful incomes policy; opting for expenditure control rather than tax rate increases). He is more forthright about the idea that the explanation of the Irish experience from 1987 to 1990 should also include expansionary fiscal contraction as a promising hypothesis. The second paper is concerned to drive the message home. Neither attempts a detailed formulation and test of the hypothesis; the description of the conjunction of fiscal consolidation and strong economic recovery is treated as *prima facie* evidence that the hypothesis applies to Ireland in this period. The point is made in McAleese (1990b) that the hypothesis does not have general applicability but is likely to apply only in particular episodes.

The first of Barry's papers is concerned with explanations of the rise in Irish unemployment. It refers to itself as providing a "partisan" review of recent research, including most of the papers surveyed here. It has two main concerns. The first is to argue that fiscal policy has conventional, "Keynesian" effects on unemployment in the short run, which are eroded by supply-side factors in the long term and, by implication, that expansionary fiscal contraction is not relevant to Irish experience. The second is to argue that the relationship between unemployment and Ireland's industrial structure should be taken much more seriously.²³ The second paper is a further attempt to demonstrate that the Irish recovery in the years 1987-90 cannot be attributable to expansionary fiscal contraction. Essentially it is a response in kind

23. The relationship between industrial structure and unemployment has not been much investigated, as Barry emphasises. His discussion of possible connections between them is interesting and a number of avenues of further empirical inquiry are suggested. How such investigation affects understanding of Irish unemployment remains to be seen.

to McAleese (1990a, 1990b).

The empirical relevance of expansionary fiscal contraction is, as Giavazzi and Pagano make abundantly clear, not a simple matter to establish; it requires careful formulation and testing. In these papers the approach is of a distinctly informal type. They serve to illustrate the differences of opinion generated by the hypothesis but do not advance much beyond that.

Leddin (1990)

Leddin's paper presents a lengthy examination of Ireland's decision to join the European Monetary System and experience since joining it. From the perspective of this survey, the most relevant sections are those that deal with the effects of real interest rates and exchange rates on the real economy, particularly unemployment. Leddin's emphasis on real exchange rate effects distinguishes his work from that of Barry and Bradley (1991), among others. He connects unemployment directly to real GNP growth, although as Newell and Symons (1990) observe, the dependence of employment on real wages breaks the direct connection between growth and unemployment. He identifies real growth rate — inflation combinations as intersections of aggregate supply and demand curves; for the period 1980-86, he argues that equilibrium occurred at less than full employment, leading to mounting unemployment on an output gap — Okun's law argument. He then looks at the behaviour of the main components of real GNP — consumption, investment, government spending, exports and imports — presenting their growth rates for period 1985-90. He observes that the behaviour of net exports seems to account for fluctuations in GNP growth in the period 1987-90 and then asks what caused the changes in the components of GNP.

Focusing on net exports, he sees the real exchange rate as the driving force; it appreciated by 21.5 per cent from the first quarter of 1979 to the second quarter of 1986 but depreciated by 11.3 per cent from then until the second quarter of 1989. He concludes that allowing for the growth in world trade, "the devaluation of the real exchange rate must be considered as an important factor underlying export performance between 1987 and 1990" (p. 25). The real interest rate is seen as the second major influence on the components of GNP. It increased from -8.3 per cent to 10 per cent over the period 1981-86, which "corresponds roughly to the recession years". The 5.4 per cent fall from late 1986 to the beginning of 1989 is associated with the rise in economic activity in that period.

He then asks why the real rate fell after 1986 and cites McAleese's (1990) claim that Ireland experienced an expansionary fiscal contraction. On this question, Leddin says that real interest rates started to fall before the deflationary budget of 1987, which was introduced by a government elected

on the promise to *expand* the economy; thus the fall in real rates must have had other origins. One possible cause was that the devaluation of August 1986 and the subsequent stabilisation of the real exchange rate against EMS currencies reduced exchange rate uncertainty, paving the way for lower real interest rates; this point was made by Giavazzi and Pagano (1990). Higher exports and lower interest rates increased GNP in 1987; he argues that "the increase in GNP, via the standard Keynesian consumption function, possibly explains the increase in consumer expenditure in 1988 and 1989." (p. 28). In summary, he concludes that the improvement in the late 1980s was due to "long hoped for PPP" between Ireland and Germany and the 1986 devaluation; while lower government borrowing may have lowered interest rates, the importance of expansionary fiscal contraction "may be over emphasised".²⁴

IV WHERE DO WE STAND?

The clear impression left by the review of the literature on Ireland's economic performance in the 1980s is one of issues unresolved. That this should be so about the recovery of recent years is not surprising; data considerations alone would suggest that a longer time must elapse before an agreed account of the period emerges. That excuse does not apply to the disagreement about the period to 1987. In this section the extent of the disagreement is examined. The dispute about the nature of the recovery is then briefly discussed.

The Irish Economy to 1987

No one contests the dismal nature of Ireland's economic performance to 1987. The lack of growth, the rise in unemployment, the rise in indebtedness, render this inevitable. Identifying its possible sources had not been a major cause of conflict in the literature; allocating the blame among them has. Four main sources have been analysed:

(1) *External Shocks*

There is substantial agreement that negative external shocks early in the 1980s contributed to the poor performance of the economy. McAleese and McCarthy (1989) accord them the leading rôle; Newell and Symons (1990) and Barry and Bradley (1990, 1991) find they were significant contributors. Dornbusch (1989), in contrast, more concerned with the economy after 1981,

24. His conclusion about expansionary fiscal policy, however, does not take account of the failure of the Keynesian consumption to predict the size of the consumption increase, reported in Bradley, *et al.* (1991).

takes limited account of them. Within the agreement about external shocks, however, there are disagreements. McAleese and McCarthy play down the rôle of real interest rates; Newell and Symons play it up. Dornbusch agrees that real interest rates mattered but argues that Irish rates were particularly high, which is disputed by Newell and Symons. The latter find no significant terms of trade effects; they are an important element of the external shocks in McAleese and McCarthy.

(2) *Exchange Rates and Competitiveness*

Monetary and exchange rate policy are central to the analyses of Dornbusch, Giavazzi and Pagano and Leddin. Dornbusch sees disinflation as the main policy objective in the 1980s and its pursuit through a hard currency policy in the EMS as the reason for economic stagnation and debt accumulation. Giavazzi and Pagano interpret EMS membership in a similar way. Changes in *real* exchange rates are viewed as important influences on the real economy. In contrast, the assumption of purchasing power parity means that they have no rôle in the performance of the Irish traded goods sector in Barry and Bradley and they are not considered directly by McAleese and McCarthy and Newell and Symons, either.

The related issues of competitiveness arises in all the contributions. This elusive concept is measured in a variety of ways, including a measure of profitability (Barry and Bradley), relative export prices measured in a common currency (Newell and Symons) and relative wage costs measured in a common currency (Dornbusch, Barry and others). For Dornbusch competitiveness matters a lot; for most of the others it merits consideration. Newell and Symons, however, detect no significant rôle for it.

(3) *Labour Market Factors*

These are considered directly by Newell and Symons and Barry and Bradley. The former find them to be an important cause of the rise in unemployment to 1986, given the slow adjustment of the labour market. The latter find them to be much less important in the period 1979-86 but they are very significant over the longer period 1970-87. Labour market inflexibility is regarded as crucial to the rise in unemployment by Dornbusch.

The rôle of the tax-wedge and replacement ratio is also a matter of some disagreement between Barry and Bradley and Newell and Symons. The latter's formulation includes *changes* in the tax-wedge rather than the level used by the former; they appeal to the logic of bargaining models and to the empirical observation that the tax-wedge has grown over the very long run whereas the unemployment rate has not, as well as to their own results from earlier studies. The contribution of domestic policy in Newell and Symons is

accounted for wholly by the wedge and replacement ratio.

(4) *Fiscal Policy*

The rôle of domestic policy, especially fiscal policy, has been examined in all studies. As far as fiscal policy is concerned, the line-up is Newell and Symons versus the rest. Despite experimentation with different measures of fiscal stance, they can find only a weak connection between the fiscal contraction post-1982 and the rise in unemployment; in their final accounting, this effect is included in their residual. Barry and Bradley, though, find fiscal policy to be a significant contributor. Their finding accords with the views expressed about the effects of the 1982 stabilisation in all the other papers reviewed here. Newell and Symons' paper is a true outlier on this issue. Attempts to detect the reason for the difference in empirical findings have been made by Barry and Bradley; for example, they raise questions about the data used by Newell and Symons, finding their results hard to replicate, and about the level of aggregation. To this writer the issue is not yet fully resolved; it matters that it should be.

The Irish Economy 1987-90

Discussion of the period 1987-90 has increasingly centred on whether the Irish economy provided an example of expansionary fiscal contraction. This is due especially to the advocacy of that hypothesis by McAleese (1990a, 1990b) and also to Giavazzi and Pagano (1990). The latter tested the hypothesis, with a data set which ended in 1988; there was some evidence in its favour but it was weak. McAleese did not undertake a formal test but interpreted the recovery in those terms. His robust espousal of expansionary fiscal contraction clearly touched a nerve, judging by the equally robust rejection in Barry (1991a, 1991b) and the response in Bradley, Fitz Gerald and McCoy (1991). Despite the heat generated, Giavazzi and Pagano remains the only formal test of the hypothesis to date.

This situation is likely to change. The ESRI medium-term model, however, which has provided the framework for so much of recent empirical work on the Irish economy, is ill-suited to the task of addressing a hypothesis so dependent on expectations. Giavazzi and Pagano use the framework provided by Blanchard's small model, a model also used to analyse fiscal policy by Buiters (1985) and suitable to the task. Whether or not it turns out to be the vehicle for future tests of expansionary fiscal contraction, what repays examination is the careful way in which Giavazzi and Pagano derive the empirical implications of the hypothesis. It must also be noted that they focus on consumption; investment and, in the Irish context, net exports, are equally worthy of attention.

Until such time as more testing is done assertions about its relevance or lack of it are no more than that. If the tests indicate that the hypothesis applied in the last few years, what are the implications? Not dramatic for Irish policy, I suspect; it is in the nature of the hypothesis that its relevance is greatest in extreme conditions, as the term "severe fiscal contractions" in the title of Giavazzi and Pagano's paper suggests. The implications for economic modelling have already been mentioned: greater attention to the rôle of expectations will be required. Since notions like credibility, which inform recent policy discussion, also require it, this should be worthwhile.

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