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Some Economic implications of a Federal Ireland

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Economists are frequently accused of building elaborate structures out of the most unlikely set of hypotheses. One cannot help suspecting that this charge will be levelled against this paper which makes no attempt to assess the political probability of any agreement on a Federal relationship between Northern Ireland and the Republic. In defense it can be argued that the object of this paper is to examine some of the economic issues that would arise under a federal arrangement while recognising that economic factors are unlikely to be the sole, or dominant, influences in the future political position of Northern Ireland.

It would not, of course, be possible to explore every aspect of the economic consequences of a Federal Ireland even under the assumption that the structure of the economy of Northern Ireland and the Republic remains as it is today. Rather we shall have to be content to examine some of the major problems that would face any proposed federation. Thus, to some extent, the bias of this paper will be pessimistic since it will not concentrate on any credit side of the balance sheet. However it must be stated that most of the benefits, if they exist, flow from the assumed dynamic effects of federation; which effects seem to owe more to wishful thinking than an analysis of the present structure of both economies.

In this paper the economic implications of federation between Northern Ireland and the Republic are discussed in two parts.In the first two parts we deal with the immediate problem of U.K. transfers to Northern Ireland and the balance of payments position that would arise because of federation. As we shall see these two issues are very closely linked. In the third part we shall deal with questions of harmonization in the two parts of the federation. These could be viewed as longer-term issues which would have to be faced by the federation; although the principles on which harmonization would proceed would almost certainly have to be established at the same time as the federation came into being.

U.K. Transfers to Northern Ireland

It is an undisputable fact, in an area where facts are thinner on the ground than opinion, that the Northern Ireland Exchequer is a recipient of substantial net transfers from the U.K. Government. The recent Green Paper, for example, estimates the extent of such transfers at £313 million for 1973/74 or about 25% of Northern Ireland's Gross Domestic Product. The magnitude of such transfers has increased dramatically in recent years and is in part due to the level of civil disorder in the province - in 1968/69 for example UK subventions equalled only slightly more than 10% of Gross Domestic Product. However a considerable part of the growth is due to the improvements in UK social welfare benefits with a consequent increase in the amounts payable to Northern Ireland from the UK Exchequer. Thus UK payments for social services in Northern Ireland rose from £25 million in 1966/67 to £82 million in 1972/73.

Regardless of the cause of such transfers, or the direct uses to which they are put, we can, broadly speaking, examine their impact on the Northern Irish economy. The theory of international transfers is well developed in economics and it indicates that the effect of such transfers will be to stimulate the level of expenditure and domestic activity in the recipient country. Thus the residents of Northern Ireland, by virtue of the transfers received, are able to sustain a higher level of expenditures than would otherwise be the case. And these higher expenditures generate increased demand for output and employment within the province. Of course if the residents of Northern Ireland chose to use the transfers to acquire imports of goods and services and foreign (i.e. non-Northern Irish) financial assets then the level of domestic activity would not be affected by such transfers; the level of expenditure and asset acquisition in Northern Ireland would, however, be higher by the amount of the transfer. Professor Gibson [3] has suggested, that the domestic multiplier in Northern Ireland is about unity, hence a transfer of £300 million from the UK generates output in Northern Ireland of a similar amount.*

* In the Appendix we examine both output and expenditure multipliers in the context of Northern Ireland. Professor Gibson's estimates in his paper are within the range suggested in the Appendix although optimistic expectations about the magnitude of the marginal propensity to import would yield output multipliers less than unity.

It must be stressed that the impact on the Northern Ireland economy is independent of the possibility that the current level of transfers is overstated by the civil disorder at present experienced in the province or of the possible benefits to the UK from some of the expenditure e.g. agricultural subsidies. If, when peace is restored, the level of transfers falls then this will have an impact on the on the economy unless the present disorder has resulted in either (a) a higher than normal level of imports (b) a reduced demand for private investment and (c) an increase in net capital outflows from the province or some combination of all three. In other words imports of goods and services and exports of capital would have to fall and private autonomous expenditures (i.e. those not dependent on the level of income) would have to rise in the advent of peace in order to offset the assumed reduction in transfers. There is therefore no magic sleight-of-hand which can suddenly reduce the effect of UK Government transfers on the economy of the province.

As we shall see later, in our discussion of the balance of payments implications of federation, there is some indirect evidence that the level of net outflows from Northern Ireland has increased substantially since 1968. To what extent this is due to the civil unrest it is difficult to say. It might be argued that one of the main effects of the disorder has been to reduce foreign investment in the province and to encourage Northern Ireland investors to seek outlets for their funds elsewhere. But it is impossible to put any sort of a figure on these effects, if they exist. Certainly the rate of private fixed capital formation has fallen off since 1969 but at 16.5% of GDP in 1972 private investment was still well above the 12.2% for the United Kingdom as a whole.

Thus it seems best to proceed on the assumption that Northern Ireland receives transfers from the UK of slightly more than £300 million,* while recognising that in normal circumstances (i.e. peace in the province) the effective+ transfers may be considerably lower, say in the region of £200 million. As has been pointed out at this conference the burden of the loss of such transfers would, in the case of an independent Northern Ireland, be borne by the residents of the province. In the case of a federal political arrangement they would be borne by both partners in the federation. Indeed if we want to inject a note of realism into this discussion of federation it is unlikely that Northern Ireland would wish to alter the status quo and enter a federation with the Republic if this involved

* As Professor Gibson (op. cit.) has pointed out the true transfer may be larger since the formula adopted for returning expenditure taxes to Northern Ireland is biased in favour of the province.

\+ By effective we mean the level of transfers which exceed the sum required to offset capital outflows and reductions in private investment caused by the present conflict. Thus it could be argued that £100 million, say, of the £300 million or so transfers received from the UK merely offsets the consequences of continuing violence.

a substantial cost.* One must therefore assume that the entire burden would have to be borne by the Republic.

Since the substitution of subventions from the Republic for those currently received from the UK would not change the economic status quo the economy of the Republic could expect no offsetting benefits to flow directly from federation. Exports to Northern Ireland could not be expected to increase nor imports fall, especially since virtually all trade between the two areas is tariff-free. The real question then is whether the Republic could afford to make such a unilateral transfer to the North. On the assumption that the funds transferred would have to be raised via taxation we can see that this would, at 1973/74 levels, raise tax collections in the Republic by 43%. If this was spread evenly over all forms of tax revenue this would require an income tax lower rate of 37%, a standard rate of 50% and a first upper bracket rate of 72%. VAT rates would have to be increased to 8.9%, 28% and 56% compared to the present structure. One could multiply examples of tax increases none of which, I suspect, would be very palatable to tax-payers in the Republic. The fact of the matter is that the takeover by the Republic of current UK support for Northern Ireland would absorb 10% of GNP in the South which is slightly more than the average growth of the economy

* This does ignore the fact that maintenance of the status quo, in that it involved a continuation of the conflict, involves substantial, if unmeasurable, costs to the inhabitants of Northern Ireland.

for two years, based on the experience since 1958. Put like that the cost seems somewhat more bearable but unfortunately the problem is more complex. The withdrawal of £300 million out of the Southern economy would have exactly the opposite effect to its injection in the Northern Economy. Since the propensity to import in the Republic is lower than in Northern Ireland output might be expected to fall by up to £400 million. This would reduce Government revenues further - and would require even higher increases in taxes. Thus the likely cost to the economy is nearer to 15% of GNP when the induced effects of the transfer have taken place.

One does not have to be a political savant to suggest that the residents of the Republic would not be overjoyed by a fall in their incomes of this magnitude. Yet the only other alternative - a reduction in the existing level of state spending in the Republic by £300 million - would probably have an even more substantial effect on income levels. Such a policy would mean, for example, the abolition of the Exchequer contribution to the Public Capital Programme and a reduction of £90 million in current Government spending. Apart from the immediate effects, a reduction in Government investment would seriously impair the ability of the economy to achieve a growth rate similar to that in past years and exacerbate the problem of financing the transfers to Northern Ireland on an annual basis.

It is unlikely that a federation requiring this level of transfers would survive. Such a transfer policy would be in sharp distinction to federal policies in other economies where, as the Kilbrandon Report [4] points out, there is usually a movement of resources from the richer to the poorer regions. Gross domestic product (G.D.P.) per worker in Northern Ireland in 1972 was some 10% higher than G.D.P. per worker in the Republic. When adjusted for the greater weight of agriculture in the Republic the differences between the two economies are fairly small.* But no matter what adjustments are made it would be impossible to justify, on inter-regional equity grounds, the transfer of substantial sums from the Republic to Northern Ireland.

The effects of such a transfer would be to weaken seriously the growth potential of the Republic while maintaining the growth potential of Northern Ireland. In the long run the gap between the two economies would widen and the justification for such unilateral transfers would be called into question. Indeed one of the main advantages to the N.I. economy of the present U.K. transfers has been to sustain a high level of domestic investment. Although the grants are ear-marked for

* If we compare non-agricultural G.D.P. per non-agricultural worker in the two economies, the level in Northern Ireland is 4.4% greater than in the Republic. If we further adjusted for the greater weight in Northern Ireland of public administration and defense (9.1 per cent of GDP in Northern Ireland in 1972 compared to 6.5 per cent in the Republic) the gap falls to 2.2 per cent.

specific purposes such as social security benefits and agricultural supports they free other resources of the N.I. Exchequer for investment. In Table Al in the Appendix the ratio of fixed investment to GDP is set out for both economies since 1967. We have also set out the share of government capital spending in GDP for the two economies.* It will be seen that in every year since 1967 the higher ratio of investment in Northern Ireland is more than explained by the higher rate of government capital expenditure. Thus private sector investment in the Republic was relatively higher than in the North for every year since 1967. It will be noted that the overall gap in investment shares between the two economies narrowed during 1971 and 1972 although the gap between government capital expenditure shares did not.

From row 5 of Table Al it is clear that for every year, except 1967, the ratio of UK grants to GDP in Northern Ireland exceeded the difference in the government capital expenditure ratios between the two economies. In short the higher capital spending by the Northern public sector was made possible by UK transfers. Of course it could be argued that in the absence of such transfers capital expenditure by the public authorities would not fall. This would mean either an equivalent reduction

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* A wider definition of Government capital expenditure was used here in order to allow for the greater weight of capital grants to the private sector in the expenditure of the Republic. See O'Loughlen [5] on this point.

in current expenditures, which would have serious consequences for aggregate demand, or an increase in public authority borrowing. This latter possibility, raised recently by Simpson (6) begs the question of the impact of such borrowing on private investment. It is unlikely that borrowing from domestic sources would not seriously affect the flow of funds to the private sector - unless one assumes a very large outflow of savings due to the lack of suitable domestic investment opportunities. While further external borrowing would avoid any deleterious effects on private investment one could question whether the N.I. Exchequer would be able to raise £200 - £300 million annually on UK and foreign capital markets. And the burden of interest and debt repayments would soon require substantial increases in taxation or reductions in other expenditures.

Thus it seems fairly clear that the economy of the Republic of Ireland, at its present state of development, would be unable to bear the cost of the transfers received at present by the Northern Ireland Exchequer from the UK. Even if the effective level of transfers is only £200 million the burden on the Republic's economy would be enormous. If GDP per worker in the Republic grew at a rate of 1 percentage point above that of Northern Ireland it would be over 20 years before a transfer of 10% of GDP could be justified on inter-regional equity grounds. And a transfer of even 5% of GDP could only be justified after at least 15 years of faster growth in the Republic on the scale mentioned above.

2. Balance of Payments Implications

Another important problem which would arise in a proposed federation would be the impact of such a federation on the balance of payments situation of the country as a whole. The effects are, as we shall see, closely related to the problem of UK transfers discussed above. In so far as Northern Ireland runs a balance of payments deficit, federation would exacerbate the present problem of financing the deficit faced by the Republic. If, on the other hand, Northern Ireland tended to run a payments surplus then the overall payment position of the two economies would improve.*

Discussion of the balance of payments position of Northern Ireland is hampered by the absence of any published statistics on this aggregate. However, since we know that the balance of payments must balance (i.e. a deficit must be financed from somewhere and a surplus must be matched by the acquisition of external assets) we can infer the magnitude of certain net flows from information that is already available. In Appendix Table A2 we have set out in Col. 1 the balance of trade deficit for Northern Ireland for the past decade. It has been argued (Carter and Robson(1)) that the measurement of imports is overstated and that the true

* We can concentrate on the total balance of payments position of Northern Ireland since the payments position vis a vis the Republic nets out under summation. To show this let the total balance of payments position of the two economies be represented by

$$B_I = Z_I - X_I + M_I$$

$$B_N = Z_N - X_N + M_N$$

Where B is the overall deficit, Z the deficit with all other economies excluding N. Ireland and the Republic, X exports to N. Ireland (the Republic) and M imports from N. Ireland (the Republic) and subscripts N and I refer to N. Ireland and R. of Ireland respectively. Then the combined deficit with the rest of the world is $Z_I + Z_N = B_I + B_N$ since $X_N = M_I$ and $X_I = M_N$.

deficit is somewhat smaller. We shall however make no adjustment since a certain amount of doubt must attach to both import and export figures given that the bulk of the data is obtained from intra - UK trade. It will be seen that Northern Ireland has run a trade deficit in every year in the last decade. The deficit as a proportion of GDP has varied from 11.8% in 1963 to 1.9% in 1972. This later improvement is due substantially to the sharp increase in textile exports and the boom in agricultural prices. In Appendix Table A3 the ratio of the trade deficit to GDP is set out for both Northern Ireland and the Republic. It is clear that the Republic has a relatively greater trade imbalance than Northern Ireland.

However in Col. 2 of Table A2 we have set out the identified transfers from the U.K. Government and net borrowing by the N.I. Exchequer from the U.K. Government. These resources are available to meet the current trade deficit and to provide for the deficit on services less net capital inflows. In other words Col. 3 of Table A2, which is the difference between Cols 1 and 2 is equal to the net imbalance on other accounts. We can see that the value of this residual has risen sharply since 1963 reaching an astonishing £250 million by 1972. This represents almost 25% of GDP and 20% of personal income in that year.

Before we can associate the identified flows in Col. 2 of Table A2 with the overall balance of payments deficit in Northern Ireland we must discuss the possibility of offsetting capital movements. If, for example, the capital inflow in the Republic of Ireland exceeds the deficit on goods and services the excess will accrue in the form of external holdings - usually by the Central Bank but possibly by an increase in the net external assets of the banking system. It would not be appropriate to exclude these offsetting capital movements in the measure of the overall deficit since if the other capital inflows had not occurred the build up of foreign assets would not have taken place. On the other hand if private individuals offset their excess holdings of foreign resources by bypassing the banking system and investing abroad directly then the offsets would be included in a measure of the deficit - in this case as a private capital outflow.

It is possible, for example, that the observed inflow of £250 million from the U.K. via grants and loans in 1972 merely resulted in a buildup of foreign (i.e. outside Northern Ireland) assets by the banking system. To explore this we have set out in Appendix Table A4 the estimated change in net external assets of the Northern Ireland banks. Since the data do not distinguish between Northern Ireland and other U.K. depositors and leaders we have to assume that all UK resident deposits in Northern Ireland banks are made by Northern Ireland residents and that all UK resident advances are made to borrowers in Northern Ireland - this is not a particularly extreme assumption. It is fairly clear from Table A4 that there is no evidence of any accumulation of foreign assets by banks in Northern Ireland in 1972. Similar data for 1973 is presented since the timing of the flows may have meant a build-up in assets in 1973. Again the evidence indicates no external outflow via the banking system - indeed the 1973 experience suggests an inflow.

A further possibility is that there was an enormous increase in the net private non-bank capital outflow due to the disturbances in Northern Ireland and that, in the event of peace, such an outflow would not occur. Certainly it is likely that the gross capital inflow from foreign private investors was reduced due to the conflict and that domestic investors increasingly sought more secure investments abroad. But it is impossible to estimate the possible magnitude of such flows. The absence of offsetting movements in bank funds in response to the large observed inflow does indicate the probability of substantial net outflows in [1971 and] 1972.

It is very likely that Northern Ireland runs a very large deficit on invisibles. The decline in tourism has almost certainly worsened the net imbalance in recent years. The absence of a national airline means that air transportation expenditure goes mainly to foreign enterprises. Similarly a substantial amount of total freight costs would accrue to other UK shippers. The lack of a domestic assurance industry means that premium income is remitted outside the province - Corley (2) estimated the outflow on this account from

Northern Ireland during 1950/51 to 1959/60 at £95.6 million. Part of the cost of the central operations of the BBC and the Post Office may be borne by Northern Ireland residents.* The cost of servicing the rapidly increasing debt from the UK has also worsened the deficit on services and invisible items. It would not be difficult to reach a figure of a services deficit plus certain capital outflows of £150 million for 1972. Appendix Table A5 suggests some magnitudes. These are no more than crude guesses but they seem plausible in the light of Northern Ireland levels of income and trade patterns. If these figures seem plausible then it would appear that net capital outflows, other than those defined, amounted at least £100 million in 1972.

While it would be unrealistic, perhaps, to treat 1972 as a normal, peacetime, year it is clear that UK transfers play a dual role in the Northern Ireland economy. They help maintain output, employment and expenditure and sustain the substantial external deficit of the province. In the event of a federal Ireland the Republic, if it wished to maintain living standards in the North, would have to finance the loss of foreign (i.e. outside Ireland) transfers. Even if, from domestic resources, the Republic were able to replace UK transfers it is still likely that a balance of payments problem would arise.

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* Although on this score some part of the Post Office deficit, financed by the UK Government, might be attributed to Northern Ireland.

The reduction in income and expenditure in the Republic caused by the transfers to Northern Ireland would undoubtedly reduce imports and reduce the deficit in the Republic. But it is unlikely that the reduction in imports would be sufficient to finance the transfer without any balance of payments problems. Thus a devaluation of the currency of the federated area would seem necessary.

If the Republic financed the transfer to Northern Ireland by foreign borrowing the level of activity in both parts of the federation would be unaffected in the short run but the problem of servicing the external debt would soon require a movement towards surplus by the Republic - and this would require an even more substantial devaluation than would be required if domestic activity bore some of the immediate impact of financing the transfer. Of course foreign borrowing could be used to finance the difference between the transfer and the induced fall in the Republic's deficit. If, as the economies became more integrated and domestic federal institutions replaced UK ones, the service deficit in the North fell over time the devaluation required to service the external borrowing would be quite small. But one suspects that the short-run consequences for the balance of payments, regardless of the method of financing the transfers, are likely to be considerable.

3. Problems of Harmonization

Leaving aside the macro-economic questions raised by existing U.K. transfers to Northern Ireland it is clear that any proposed federation will have to tackle the problem of harmonizing the levels of taxes and transfers in the two federal regions. Of course such harmonization is not a necessary condition of federation since it is quite possible to envisage an arrangement where both partners had a wide degree of discretion in establishing tax rates and social benefits. Under such an arrangement individuals could choose, for example, between a high tax and social welfare combination or a low tax-welfare combination. Certain restraints would have to be put on the activities of the federal regions. The usual principle for subsidary spending units is that current expenditure must not exceed current revenue. Thus higher welfare payments etc. could not be financed out of debt creation. This prevents any tendency for the local exchequer to expand the money supply by credit creation and increase inflationary pressures or worsen the local and federal balance of payments situation. If higher benefits have to be paid from higher taxes there is less incentive for the tax base in each region to be eroded as individuals re-locate to areas with high benefits and low taxes. Thus, even on micro-economic grounds, the assumption of the present burden of U.K. transfers to Northern Ireland by the Republic could not be justified since it would cause taxpayers to move to Northern Ireland to escape higher taxes and enjoy higher benefits. The tax base in the Republic would be diminished and the relative burden of the transfers would increase.

Indeed it is increasingly recognized in the literature on fiscal federalism that factor mobility makes it likely that a region within a federation cannot undertake widely different tax and expenditure policies without seriously affecting other regions- even to the extent of passing most of the costs of such policies onto other members of the federation. Thus, for example, if the rate of corporate taxation was substantially lower in Northern Ireland than in the Republic there would be a tendency for new investment to locate in the North. This would increase the North's tax base and help offset the costs of the lower tax rate. But the Republic would lose new investment. Capital per worker would decline, and increasing unemployment would erode the tax base further. This might require even higher corporate taxes and thus exacerbate the outflow of new investment from the Republic.

It is, therefore, highly probable that there would have to be a gradual harmonization of social services expenditure and taxation in the federation if the externalities of independent policies were to be avoided. This raises a question which, in the opinion of this author, has received little public discussion in either Northern Ireland or the Republic. It is widely accepted that, however flexible the practice of parity, Northern Ireland has little say in the determination of either the level of benefits or taxation in force in the province. This lack of independence would seem to be compensated for by the substantial level of transfers made to maintain parity. But it may be asked whether it is appropriate for an economy like Northern Ireland, which has a GDP per head some 25-30% below that of the rest of the U.K., to have a level of benefits in line with the U.K. Few would, I feel, disagree with the argument that high unemployment benefitsrelative to earnings possibilities within the community could have a disincentive effect on the supply of work effort. While the overall level of benefits in the U.K. may be pitched so as to avoid serious disincentive effects this does not mean that in low income areas such as Northern Ireland the level of benefits may be very high compared to earnings in employment.

The same caveat applies to the Republic, where the accepted, if unspoken, aim of social welfare expenditures, has been to reach a level of benefits comparable with the U.K. Substantial improvements have occurred in recent years and a glance at Appendix Table A6 will show that for insurance benefits the gap is quite small - indeed under the more favourable pay-related scheme in the Republic unemployed workers who had been earning over £31 p.w. are better off than in the U.K. The main gap at present is in the level of assistance benefits where the U.K. level is substantially higher than the Republic, particularly for larger families.

We might assume that, political realities being what they are, the level of benefits in the Republic would be brought up to that of Northern Ireland in any proposed federation. This raises problems not only of the appropriateness of such a policy but also how a harmonization might occur. Appendix Table A7 shows transfer income from public authorities as a proportion of personal income for both Northern Ireland and the Republic. It is clear that the relative level of transfers is substantially higher in the North. If the Republic were to move towards this level of transfer expenditure it would necessitate a sharp increase in taxation - just as Northern Ireland could not finance its expenditure from domestic resources without sharply increased taxation. While a policy of gradually increasing the share of taxation in national income is possible, since this has taken place over the last decade in any event, it is questionable whether the economic consequences of such a policy would be desirable. A second possibility would be to hold the real level of benefits in Northern Ireland constant (i.e. adjusted only for inflation) while gradually moving the levels in the Republic upwards. This would mean a declining share of transfers in Northern Ireland income and a constant, or slightly rising, share in the Republic. A third possibility is that real Northern Ireland benefits are adjusted slightly less than in line with real growth while benefits in the Republic grow slightly in excess of the real growth in incomes. Thus the share of transfers would fall in Northern Ireland and rise in the Republic.*

It should be noted that these adjustment policies would involve a cost on the Republic additional to the cost of financing Northern Ireland transfers. The implied rise in the ratio of taxation to income is enormous since the Republic would have to finance not only higher real benefits for its residents but also part of the high benefits in Northern Ireland. This would conflict with the requirement that levels of taxation in member states be broadly in line. Thus there would be a substantial burden on the economy of the Republic in reaching the same real level of U.K. benefits for its own inhabitants without any contribution to Northern Ireland expenditure on benefits.

The problems of tax harmonization are no less difficult than those of social welfare harmonization. In the first place the Republic depends to a far greater extent on revenue from expenditure taxes than the U.K. or Northern Ireland. This is because of the difficulties of assessing incomes of the self-employed, notably farmers, and the consequent diminution of the tax base.+ This greater reliance on expenditure taxes, particularly in the

* The assumption common to the various alternatives proposed is that income in both parts of Ireland grow at comparable rates. Of course if income in the Republic grew considerably faster than in Northern Ireland it would be possible to finance higher real benefits without increasing the relative burden of taxation.

\+ Prior to the tax year 1974/1975 profits from agriculture were exempt from income taxation. Thus in 1972, for example, some 16·9 % of personal income (excluding transfers) was exempt from income tax. In 1974/75 farmers with ratable valuations in excess of £100 became liable to tax on their profits.

last decade, has probably contributed to the higher rate of inflation observed in the Republic. It has also meant, as a recent ICTU Bulletin pointed out, that personal income taxes on earned income between £1,000 - £5,000 per annum are lower in the Republic than Northern Ireland. When the lower cost of insurance contributions in the Republic is taken into account it is likely that the bulk of taxpayers experience a lower direct tax rate than in the U.K. - although high income earners pay substantially higher rates of tax in the Republic. A harmonization of taxes on the basis of the Republic's structure would mean a sharp increase in prices in Northern Ireland; harmonization on the basis of Northern Ireland's structure would mean higher tax payments for most of the Republic's taxpayers (and certain non-taxpayers such as farmers with valuations under £100) and lower prices. Without a lengthy and difficult analysis it is not easy to compare the two possibilities but it does seem, impressionistically at least, that harmonization of the Republic's tax structure on the basis of that in Northern Ireland would result in a substantial fall in revenue.

One area where tax harmonization is likely to be particularly troublesome is that of corporate taxation. The industrial development strategy of the Republic has used the tax structure to a considerable extent to encourage investment. Thus generous depreciation allowances are granted and profits from exports are tax-free. In contrast Northern Ireland has been unable to use the tax structure to encourage investment and depends more on direct grants, government factory construction and regional employment premiums.*

* Recently there has been criticism of the industrial strategy adopted in the Republic in that it tends to favour capital-investment industries. Thus some movement towards regional employment premiums or employment-oriented aids might occur in the Republic over the next few years.

It is hardly feasible, given the balance of payments position in the Republic and its level of development, to contemplate the abolition of these aids - although eventually they will have to be phased out under the Treaty of Rome provisions. If a federal Ireland were to avoid the possibility of a self-defeating escalation in inducements to investors the overall development strategy would have to be harmonized and this could mean the extension to Northern Ireland of tax-exemption on exports for at least as long as the EEC permits.

In my view one of the major sources of conflict within the proposed federation would be the determination of appropriate development and stabilization policies. Relations between the Federal and provincial governments are unlikely to come under much strain when both parts of the economy are enjoying boom conditions. But when counter-cyclical measures have to be adopted, say to protect foreign reserves, how will the burden of adjustment be distributed? When one realizes that external disturbances, which require remedial action, may vary in their effects on the provinces the problem is highlighted. Suppose there is a downturn in world agricultural prices which turns the terms of trade against the federated economy. Those in Northern Ireland, where agriculture is less than 10% of GDP, might feel aggrieved at bearing part of the burden of adjustment caused by poor trading conditions in the Republic. Similularly a decline in the fortunes of the textile industry would affect Northern Ireland more than the Republic but Federal stabilization policy would require the adjustment to be spread over the whole community. Since nominal control of the money supply and foreign reserves would have to be centralized and major taxes harmonized it seems clear that the major stabilization measures would have to be decided at federal level. But the apportionment of budget cuts or the allocation of capital expenditure increases would involve a considerable measure of political co-operation. It would be impossible to operate a federal system for Ireland without substantial political agreement by both parties that such a system was of advantage in the long-term.

One could continue to multiply areas where problems of harmonization would arise - health and educational services, agriculture (although decreasingly so as full EEC rules are adopted) transport etc. Such an item by item examination would fill several books rather than a short conference paper. What is surprising is that those whose aim, albeit very long-term, is a federal (united) Ireland, have not undertaken any study of the longer term economic consequences.

Conclusions

It will be clear from the tenor of this paper, if it was not already clear before, that it would be extremely difficult, if not impossible, for the Republic of Ireland to bear the present cost of U.K. transfers to Northern Ireland. Indeed even if the U.K. as part of a political settlement were prepared to continue the transfer payments at their existing level for an extended period, the economy of the Republic would have to bear the considerable burden of adjusting its tax and welfare benefits in line with Northern Ireland.

But, in concluding, I should perhaps give some, if not equal, time to those who support a federal solution. Clearly if the EEC makes considerable advances towards unification, including the harmonization of taxes and social security, (and if the U.K. remains part of the EEC) the problems outlined earlier would be much diminished. It is possible, even if on the outer bounds of probability, that living standards in Ireland will be maintained by EEC transfers which would be unaffected by the political arrangements between North and South.* The adoption of a federal negative income tax in place of social welfare and insurance benefits North and South might allow the harmonization of personal transfer payments in the island without obvious inter-regional transfers. A continuation of U.K. payments at their current levels for quite a while would be required if the living standards in the federal area were to be maintained. But a continuation of the faster rate of growth in Ireland relative to Great Britain could allow the eventual transfer of the costs of all social expenditure to the federal structure without any decrease in the existing real level - although this could mean that the guaranteed income payments in a Federal Ireland were lower, in real terms, than comparable benefits in Great Britain, since the latter might well increase substantially in real terms.

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* I think, however, that agreement is likely to be difficult enough to reach in three capitals, Dublin, Belfast and London without hypothesizing the involvement of a fourth, Brussels, in any solution.

Whether the federalists like it or not where will be costs involved. These may have to be borne immediately or by some phased agreement with the U.K. The difference might be between having one's car stolen or having it rust away; either way you lose the car. The problem for a federation is how to finance, in as equitable way as possible, given political realities, the replacement of that car. I have attempted, in this paper, to give some indications of the sort of costs involved in a federation and the economic problems that have to be faced. Hopefully this will contribute something to a discussion on the economic realities, as distinct from aspirations, of the Republic and Northern Ireland.

Appendix I

Output and Expenditure Multipliers

I. Basic Model

There is some confusion over the multiplier effects of fiscal policy on domestic product compared to domestic expenditure. In order to analyse the problem we make use of a fairly simple macro-economic model. First we know that G.D.P. at factor cost, as measured by observations on output data equals G.D.P. at market prices, as measured by expenditure data, less taxes on expenditure plus subsidies. If we ignore indirect taxes we can write

$$Y = C + I + G + X - M$$

where Y equals G.D.P. at factor cost and all expenditure variables are net of indirect taxes. C = private consumption, I = private investment, G = Government expenditure on current goods and services plus capital expenditure, X = exports and M = imports. We suppose the following behavioural relationships

(a) $C = a + bY^D$

where $Y^D = Y + T^R - T$

with T^R = Government transfers to persons

T = Government direct tax receipts.

Thus $C = a + b\,(Y - T')$ where $T' = T - T^R$

We also assume

(b) $M = m_o + mY$

where m is the marginal propensity to import.

Thus we can write the national income identity as

$$Y(1 - b + m) = a - bT' + I + G + X - m_o$$

So that

$$\frac{\partial Y}{\partial G} = \frac{1}{1 - b + m} \quad \text{and} \quad \frac{\partial Y}{\partial T'} = \frac{-b}{1 - b + m}$$

Some values for $\partial Y/\partial G$ and $\frac{\partial Y}{\partial T'}$ are given for different values of b and m on Table 1.

Table 1

Output Multiplier Effects for Various Paramter Values

	$\frac{1}{1-b+m}$	$\frac{b}{1-b+m}$	$\frac{1-b}{1-b+m}$
m = .85			
b = .75	.91	.68	.23
.80	.95	.76	.19
.85	1.0	.85	.15
.90	1.05	.95	.10
m = .90			
b = .75	.87	.65	.22
.80	.91	.73	.18
.85	.95	.81	.14
.90	1.0	.90	.10
m = .95			
b = .75	.83	.63	.20
.80	.87	.70	.17
.85	.91	.77	.14
.90	.95	.86	.09

Suppose however, that we must ensure that the budget surplus increases by £300 million and that this can be done by tax and transfer changes, $\Delta T'$, or by expenditure cuts, ΔG, or some combination of both.

Thus $\qquad \Delta G - \Delta T' = -300$

or $\qquad \Delta G + 300 = \Delta T'$

Then ΔY

$$= \frac{1}{1-b+m} \Delta G - \frac{b}{1-b+m} (\Delta G + 300)$$

$$= \frac{1-b}{1-b+m} \Delta G - \frac{b}{1-b+m} (300)$$

It is fairly clear that any reduction in G, as a part of the movement towards surplus, will increase the depressing effect on Y. This is due to the familiar balanced budget theorem.

II. Changing the Model Specification

Suppose we believe that the propensity to consume out of transfers is different from the propensity to consume out of other income. Let us assume it equals 1.

Then $C = b(Y - T) + T^R$

Further suppose that imports vary with C, G, X and I separately.

Then

$$M = m_o + m_1 C + m_2 I + m_3 G + m_4 X$$

and we get

$$Y(1 - b(1 - m_1)) = - b(1 - m_1)T + (1-m_1)T^R + (1-m_2)I + (1-m_3)G + (1-m_4)X$$

whence

$$\frac{\partial Y}{\partial G} = \frac{1 - m_3}{1 - b(1-m_1)}; \quad \frac{\partial Y}{\partial T} = \frac{-b(1 - m_1)}{1 - b(1 - m_1)}; \quad \frac{\partial Y}{\partial T^R} = \frac{1 - m_1}{1 - b(1-m_1)}$$

The multipliers, for certain values of m_1, m_3 and b are given in Table 2. We should note that the values in (a) are more compatible with observed behaviour in N. Ireland although the coefficients m_1 and m_3 would seem high.[1]

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[1] The ratio of imports to total final expenditure is M/C + I + G + X which equals M/GDP + M. Since M/GDP is about .90 this implies that the ratio of imports to total final expenditure is about 0.47. Thus if $m_1 = 0.6$ and $m_3 = 0.5$ then m_2 and m_4 must be below 0.47. The experience of the Republic of Ireland suggests that m_2 and m_4 lie above m_1 and m_3; this indicates that the assumed values in (a) of Table 2 are high although the marginal propensities may be above the average.

Table 2

Output Multiplier effects under different assumptions about

Parameter Values

	m_1	m_3	b	$\partial Y/\partial G$	$\partial Y/\partial T^R$	$\partial Y/\partial T$
(a)	0.6	0.5	0.9	0.78	0.63	-0.57
(b)	0.7	0.6	0.9	0.55	0.41	-0.37
(c)	0.8	0.7	0.9	0.37	0.24	-0.22

We should note that the multipliers exclude the possible endogenity of fiscal policy. Thus for $\partial Y/\partial G$ it is assumed that $\Delta T^R = \Delta T = 0$. Similarly, for $\partial Y/\partial T^R$ the assumption is that $\Delta G = \Delta T = 0$. This means that the multipliers are overstated vis a vis conventional multipliers which make taxes endogenous. But since expenditure on transfers may also be endogenous the multipliers in Table 2 could be understated. However, the multipliers do give the impact of a fall of £300 million in the Government deficit (rise in Government surplus) required to finance a drop in transfer receipts. This differs from a fall of £300 million in Government expenditure when taxes are endogenous since revenues will also fall and the deficit will fall by less than £300 million.

Comparison of Income and Expenditure Effects

We can see from the equations for the multipliers above that it is possible, given high import propensities, to derive values which imply no change in GDP. But if we look at total final expenditure (TFE) we can see that it is not possible to get zero effects.

We know, by definition, that

$$TFE = GDP + M$$

So that using first differences and assuming $\Delta I = \Delta X = 0$ we obtain

$$\Delta C + \Delta G = \Delta Y + \Delta M$$

(1) Changes in Government Expenditure

$$\frac{\partial C}{\partial G} = \frac{\partial C}{\partial Y}\frac{\partial Y}{\partial G} = b. \frac{(1 - m_3)}{1-b\ (1-m_1)} \Rightarrow \Delta C = \frac{b\ (1-m_3)}{1-b\ (1-m_1)} \Delta G$$

Thus

$$\Delta Y + \Delta M = 1 + \frac{b(1 - m_3)}{1-b(1-m_1)} \Delta G$$

Which cannot fall below 1 for any positive value of b, m_3 and m_1. Thus Total Final Expenditure will fall by at least as much as the fall in G and may fall more. The increment in the fall is equal to b times the induced fall in GDP.

(b) Changes in Taxes

$$\frac{\partial C}{\partial T} = \frac{\partial C}{\partial Y}\frac{\partial Y}{\partial T} - b = b\left(\frac{\partial Y}{\partial T} - 1\right) = b\left(\frac{-b(1-m_1)}{1-b(1+m_1)} -1\right)$$

$$= \frac{-b}{1-b\ (1-m_1)}$$

which for positive values of b, $m_1 \leq 1$ can only approach -b.

Thus $\Delta C + \Delta G = \Delta Y + \Delta M$ implies for $\Delta G = O$.

$$\Delta Y + \Delta M = \frac{-b}{1-b(1-m_1)} \Delta T$$

In this case it is possible that domestic income would not fall - if $m_1 = 1$ - and that imports would fall by less than the increase in taxes. This is due to the fact that savings bear part of the brunt of the fall in after-tax income as long as $b < 1$. We should note that if the TFE multiplier is <1 and domestic taxes replace transfers received from abroad there will be balance of payments implications (since $\Delta m <$ fall in international transfers) which we do not explore here.

(c) Changes in Transfers

$$\frac{\partial C}{\partial T^R} = \frac{\partial C}{\partial Y}\ \frac{\partial Y}{\partial T^R} + 1 = b\ \frac{\partial Y}{\partial T^R} + 1 = \frac{b(1-m_1)}{1-b(1-m_1)} + 1$$

$$= \frac{1}{1-b\ (1-m_1)} \quad \text{Hence} \quad \Delta Y + \Delta M = \frac{1}{1-b(1-m_1)} \Delta T^R$$

Clearly here, for any plausible assumption about m_1 and b, the multiplier cannot fall below unity. In the limiting case where $m_1 = 1$ all transfer receipts are used to purchase consumer imports so that

TFE and M fall by the same amount.

The multiplier effects on TFE for certain values of m_1, m_3 and b are set out in Table 3. It will be noted that in all cases the implied fall in imports will be less than the fall in transfers - since the coefficients in Table 3 minus those in Table 2 are less than one. Thus the equilibrium reached can only be considered a quasi-equilibrium since the consequences of an external deficit are not dealt with here.

Conclusions

It would seem that the multiplier effects on domestic output of a reduction in transfers to N. Ireland of £300 million could range from about 0.50 to 0.80 depending on the manner in which the reduction was effected

Table 3

Final Expenditure Multipliers under different assumptions about Parameter Values

	m_1	m_3	b	$\Delta Y + \Delta M/\Delta G$	$\Delta Y + \Delta M/\Delta T^R$	$\Delta Y + \Delta M/\Delta T$
(a)	0.6	0.5	0.9	1.70	1.41	1.56
(b)	0.7	0.6	0.9	1.49	1.23	1.37
(c)	0.8	0.7	0.9	1.33	1.10	1.22

This range seems to be the most optimistic since the assumptions concerning marginal import coefficients are on the high side. The impact on total expenditure is likely to be in the range 1.50 to 1.80 so that total consumption and investment could be expected to fall by between £450 to £540 million. Indeed since we have assumed private investment autonomous the multiplier effects are probably biased downwards.

It might also be noted that the range of GDP multipliers derived here are similar to those of Gibson (3) who used rather lower marginal propensities to import in his specification. However, since he made taxes and transfers endogenous his multipliers will tend to be lower. But by the same token the increase in taxes or reduction in Government spending required to effect a budgetary saving of £300 million would be greater than £300 million when the fiscal variables are made endogenous.

Table AI

Fixed Investment, Government Capital Expenditure and U.K. Transfers as a percentage of GDP, Northern Ireland and Republic of Ireland 1967 - 1972

per cent

	1967	1968	1969	1970	1971	1972
Ratio of GDFCF to GDP						
1. Northern Ireland	29.8	32.1	32.8	33.4	31.7	30.8
2. Republic of Ireland	22.8	23.7	26.7	25.9	27.2	25.9
Difference (1-2)	7.0	8.4	6.1	7.5	4.5	4.9
Ratio of Govt. Cap. Exp. to GDP						
3. Northern Ireland	19.0	18.2	18.5	19.1	19.2	17.6
4. Republic of Ireland	8.6	9.2	11.3	9.3	10.1	9.3
Difference (3-4)	10.4	9.0	7.2	9.8	9.1	8.3
Ratio of UK Grants to GDP						
5. Northern Ireland	9.9	10.6	9.8	10.4	13.4	16.6

Definitions: GDFCF = Gross Domestic Fixed Capital Formation. Government Capital Expenditure is defined as total capital expenditure by public authorities less loan repayments and international capital transfers.

Source: Northern Ireland: Digest of Statistics and HMSO
Northern Ireland: Finance and the Economy
Republic of Ireland: National Income and Expenditure

Table A2

Balance of Payments Position of Northern Ireland 1963 - 1972

£ million

	Balance of Trade Deficit	UK Transfers and Loans[1]	Residual[2]
	(1)	(2)	(3) = (2) - (1)
1963	52.2	53.2	1.0
1964	46.9	52.9	6.0
1965	55.8	63.7	7.9
1966	46.5	73.7	27.2
1967	44.7	88.6	43.9
1968	63.5	96.5	33.0
1969	59.3	108.4	49.1
1970	83.6	145.2	61.6
1971	49.0	190.0	141.0
1972	20.4	269.7	249.3

1. Transfers from UK Govt. (including agricultural subsidies) plus borrowing by Northern Ireland Exchequer from National Loans fund less repayments in respect of such borrowing.

2. Equals deficit on invisible account plus net private capital outflows.

Source: Northern Ireland Digest of Statistics and Northern Ireland Finance and the Economy (HMSO, 1974).

Table A3

Ratio of Balance of Trade Deficit to GDP in Northern Ireland and Republic of Ireland 1965 - 1972

per cent

	1965	1966	1967	1968	1969	1970	1971	1972
Northern Ireland	10.1	7.9	7.0	9.1	7.9	9.9	5.2	1.9
Republic of Ireland	17.4	14.1	10.3	14.1	16.9	15.3	13.7	10.2

Source: Northern Ireland *Digest of Statistics*, C.S.O. (Dublin) *National Income and Expenditure*

Table A4

Net Outflows through Northern Ireland Clearing Banks, 1972 and 1973[1]

£ million

Change in	1972	1973
1. Net Liabilities to UK Banks	-26	-15
2. Net Liabilities to non-UK residents	-7	-63
3. Short term Asset holdings [2]	4	28
4. Certificates of Deposits	28	9
Net Outflows [3] (Inflow = -)	-1.0	-41.0

Notes:

1. An increase in net liabilities is entered as a negative item and an increase in net assets as a positive item.
2. Cash and balances with Bank of England plus money at Call and Short notice.
3. Excludes changes in holdings of U.K. Government stocks which fell by £7 million in 1972 and by £12 million in 1973. If this reduction was due entirely to sale of G.B. securities the net inflow would be increased in 1972 and 1973 by the amount of the sale.

Source: Bank of England *Quarterly Bulletin*

Table A5

Possible Magnitudes of Northern Ireland Invisibles Deficit 1972

	£million
Tourism, Transport, Shipping	45
Life Assurance, Contractual Payments, Small Savings[1]	40
Dividends and Interest[2]	30
Other Services	35
	150

1. Strictly speaking an outflow due to small savings in U.K. financial institutions is not an invisible item and should be included in the capital account.

2. Includes interest on U.K. loans to Northern Ireland Exchequer estimated at about £25 million for 1972. Thus net private interest payments are assumed small.

Table A6

Comparative Social Security Benefits, Northern Ireland and Republic of Ireland 1974.

£'s per week

		N. Ireland	R. of Ireland
Unemployment Insurance:	Married Man (flat rate)	13.90	12.80
	Married Man + 2 children	18.40	17.20
	Married Man (pay related) [1]	22.31	23.84
	Married Man + 2 children [1]	26.81	28.24
Contributory Retirement Pension:	Single	10.0	8.50
	Married	16.0	14.0
Non Contributory Old Age Pension:	Single	8.40 [2]	7.30
	Married	13.65 [2]	10.95
Unemployment Assistance:	Married Man + 2 children	18.95 [3]	14.85 [4]
Childrens Allowances:	2 children	0.90 [5]	1.29
	4 children	2.90	3.16

Notes:

1. Assumed earnings of £40 p.w.
2. Rent payments are also made
3. Assumed 1 child under 5 and 1 between 5 and 10. Rent payments are also made.
4. Urban rate
5. Only 2nd child is eligible in U.K. and Northern Ireland.

Table A7

Share of Public Authorities' Transfers in Personal Income, 1965 - 1972

per cent

	Republic of Ireland	Northern Ireland
1965	7.4	13.2
1966	7.9	13.4
1967	7.9	14.1
1968	8.3	14.8
1969	9.0	14.9
1970	9.8	14.1
1971	10.4	14.6
1972	10.2	16.1

Source: Northern Ireland: Digest of Statistics and HMSO
Northern Ireland: Finance and the Economy
Republic of Ireland: National Income and Expenditure

Note: Transfers to private non-profit making institutions such as schools, universities etc. were excluded from the measure of public authorities' transfers for the Republic of Ireland.

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