

NESC REPORT NO. 20

**THE FUTURE OF PUBLIC
EXPENDITURES IN IRELAND**

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NATIONAL ECONOMIC AND SOCIAL COUNCIL

The Future of Public Expenditures in Ireland

No. 20

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- (ii) the attainment of the highest sustainable rate of economic growth,
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- (iv) reasonable price stability and long-term equilibrium in the balance of payments,
- (v) the balanced development of all regions in the country, and
- (vi) the social implications of economic growth, including the need to protect the environment.

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Ten persons nominated by the Irish Congress of Trade Unions,
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NATIONAL ECONOMIC AND SOCIAL COUNCIL

The Future of Public Expenditures in Ireland

by

Professor Jack Wiseman and Dr. Bernard Stafford

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PREFACE

In 1974, the Council decided that the growth in public expenditure and its economic implications merited deeper study. The Council, therefore, commissioned Professor Jack Wiseman, Director, Institute for Social and Economic Research, University of York, and Dr Bernard Stafford, also of the University of York, to prepare a background study to assist the Council in its deliberations. The Council's *Report on Public Expenditure*, which was prepared after the consultants' study had been examined in the Economic Policy Committee, is being published separately.

THE FUTURE OF PUBLIC EXPENDITURES IN IRELAND

by

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March 1976

Chapter 1

AN OUTLINE OF THE STUDY

I. Objectives and Procedure

1.1. The objective of this study was specified in general terms as follows:

"To analyse the development of public expenditures in Ireland over say the past ten years, and to use the results to assess and comment upon possible future developments, in a fashion that provides a context for the consideration of evolving public policy.

The work was planned primarily as a 'desk study', in that it would use currently available statistical, etc. sources. It would concentrate on expenditures, and would be concerned with the means used by government to exercise claims over resources (taxes, loans) only in so far as such concern is unavoidable for the achievement of the stated objective. In the case of the growth and characteristics of population, the exercise would make use of the results of other studies being undertaken by the Council."

1.2. We identified four measures of the importance of public expenditures in the economy as being of potential interest:

1. *The "total influence" of government.* This can be measured very roughly, by the ratio of aggregate public expenditures to gross domestic product.
2. *Public sector claims over real resources.* Measured by the proportion of available real resources absorbed by the public sector.
3. *Output generated by the public sector.* The share of public sector output in all output.

4. *Re-distribution through public sector.* The relation between the size of government transfer payments and the size of community incomes.

1.3. In the event, we have not pursued the third of these measures. Measurement of the share of public sector output in all output inevitably throws up special difficulties, concerned primarily with the identification and evaluation of non-marketed public output. We searched for sources of useful information about this for Ireland, but the results were disappointing. We do not consider this a great deficiency, since it is our view that the main contribution of output measurement exercises to public policy decisions lies at the detailed level (study of individual policies or proposals) rather than at the level of aggregate government output (though the latter is clearly not without interest from a broader philosophical point of view). Indeed, it is our suggestion that such detailed studies should be an important instrument for the interpretation of the results of the present exercise in detailed policy contexts.

1.4. We shall present information about the other three measures in a single integrated model. The model is concentrated on the development of the government's claims upon Ireland's real resources (Measure 2), as this is the core of the policy problem specified in the objective quoted at 1.1. Information about the "total influence" of government (Measure 1) is thrown up incidentally to this real resource exercise. This Measure is given less emphasis in the policy interpretation of our results, since the aggregate magnitudes do not distinguish between types of expenditure with different economic implications. Notably, they do not distinguish between the real resource claims of government (essentially, the reduction in the direct command of individuals over community resources which results from increased absorption of such resources by the government), and transfer payments (the use of governmental agencies to transfer claims over resources from one set of citizens (e.g. the taxed) to another set of persons (e.g. the subsidised). Consequently, we have concentrated rather upon the modification of the results of the real resource exercise by an attempt to throw light on the possible evolution of transfer payments (Measure 4) over the period. The two sets of results together are the basis for our "policy guidelines".

1.5. During the preparation of this study we have had assistance, advice and comments from many quarters. We should like to thank officials of the Central Bank of Ireland, the Central Statistics Office, the Department of Education, the Department of Finance and the Department of Agriculture. We should also like to acknowledge the receipt of useful comments from staff members of the Economic and Social Research Institute and from Lorcan Blake of the Irish Farmers' Association. Brendan McCabe gave us valuable assistance in the preparation of data. Tom Ferris of the National Economic and Social Council helped us at all stages of the study and we should like to thank him for his efficient support.

II. The Problems to be Solved: Methodology

1.6. If we could forecast the future "scientifically", the world would be a very different place. In socio-economic matters at least, the most we can hope to do is to identify the future outcomes that seem feasible. For general economic magnitudes, the range of possible outcomes may be fairly specific in the immediate future (say, a year ahead): it becomes wider and more uncertain the longer the time-period concerned. Our procedures must take account of this. Summarily, our method of doing so is first to project into the future past experience of expenditure, at constant prices and by individual programmes, over the period studied (i.e. to 1986). Real national income is also projected to the forward year on specific assumptions about such matters as employment and economic growth. The two sets of information together provide us with measures of the changing real share of community resources which will be taken by the government, in aggregate and by policy breakdowns, on the assumption that "constant policies" are pursued. This "constant policy" projection we treat as a "benchmark". It enables us to ask: "Are the projected 'real resources' shares 'reasonable', e.g. in the residual direct claims over consumption that they leave to individuals?" To help answer this question, we develop other, comparative measures, showing what would happen if instead of "constant policies" we projected (a) the base-year share of private consumption in national product (i.e., a "constant share" of private consumption in all output), or (b) the base-year ratio of private consumption and public resource use (i.e., a "constant trade-off" between private consumption and government absorption of real

resources). (In the event, only (b) is used in subsequent calculations, for reasons to be explained.) In this way, we can provide a statistical framework for the discussion of policy towards public expenditures. The "gap" between the resources available for direct private consumption if existing policies are continued, and the size of those resources if relative shares are kept constant, can be treated as the magnitude over which "policy discretion" can be exercised. By allocating the real resource "cuts" between expenditure programmes in proportion to the significance of each programme as a user of real resources, we arrive at the size of the real resource "cuts" to individual programmes that would be needed were "constant shares" considered to be a generally more relevant policy objective than the maintenance of existing policies.* We now have the material for a scrutiny of policy programme-by-programme. First, the material can be used to identify the programmes in which the relevant cuts are most significant. Second, policy-makers can scrutinise programmes to evaluate what such "cuts" would imply in terms of practical adjustments to policies.

1.7. The whole of this exercise is carried out in real terms. It provides valuable insight into the ways in which policy decisions impinge upon the developing relationship between the claims over resources exercised directly by citizens, and the claims exercised "on their behalf" by the government.

This is a very important question. But to stop at this point is liable to leave the reader less than completely satisfied, since the policy questions to which it directs attention concern only "real resource" spending by programmes. Such expenditures constitute only a part of total spending. Most programmes also incorporate transfer payments, and the relative importance of these differs considerably from one programme to another (for example, the Social Security and Welfare Programme consists almost exclusively of transfer payments, whereas Justice consists almost entirely of expenditure on real resources).

The major policy interest of transfer payments consists in the fact that the payments channel claims over resources through the govern-

*It will be appreciated that the term "cut" does not imply a fall in current (base year) expenditure levels, but a reduction in the extrapolated rate of growth of expenditures. Thus, such "cuts" will be found generally to imply simply a lower growth-rate in the relevant programme.

ment to private citizens, but in doing so must reduce the magnitude of the direct claims that individuals can make from their "own income".

Accordingly, we have supplemented the "real resource" calculations by a further set, which use an essentially similar procedure to that described at 1.6 to distribute the total current transfer expenditure "gap" proportionately to the importance of such expenditures by programme.

This exercise throws up new policy information to supplement that obtained from the "real resource" calculations. Only current transfer payments are considered, as, for reasons explained at paragraphs 1.14 *seq.* below, capital transfers are regarded as a source of finance for the investment needed for our projection of output at the forward year.

1.8. It is important to be clear about the way in which the data presented are intended to be interpreted. The writers, a Liverpool Irishman and a Lancastrian, would not presume to use the data to tell the Irish government or administration what it *should* do. Policy decisions must derive from the policy objectives and judgements of the policy-makers, and it is no business of the authors to say what these should be. The limit of our competence is to provide information for policy scrutiny by others, and to draw the attention of those concerned to programmes that seem to be of special importance for one reason or another.

In amplification, the allocation of "cuts" between programmes proportionately to size has no policy implication of itself. Its importance is that it provides a context for consideration of what such cuts would imply by way of policy changes programme-by-programme. This in turn provides the means for examining the policy "trade-offs" between programmes at the margin, and thus for a judgement as to whether the programme cuts as a whole are "too large" (implying that it would be preferable to accept a slower growth of real private direct consumption in the interests of preserving the relevant government policies), or whether proportionate reductions are less satisfactory than other (unequal) policy adaptations between programmes, or whether both are needed.

1.9. At the practical level, this implies a programme reappraisal by relevant Departments, guided by the relative significance of programmes as thrown up by our investigation. Such a reappraisal should make use of the detailed information in the possession of Departments or relatively easily acquired by them. The writers do not of course know the full extent of this information. But it is known that in recent years a good number of appraisal-type studies have been undertaken using such techniques as cost-benefit analysis and PPBS (planning, programming and budgeting systems). The results of such studies need cautious handling in a policy context, both because of their inherent difficulties and because the individual appraisals are likely to be non-comparable for one reason or another. Nevertheless, the present exercises provide an environment within which such material can be scrutinised in fashions that contribute to the policy judgements that are needed. (We shall return to this question in subsequent sections of this chapter.)

III. A Summary Description of the Procedure

1.10. The chapters immediately following explain our procedures in detail and present the resultant data. Our purpose in this introductory chapter is simply to describe the successive steps in sufficient detail to give the reader an overview of what is to follow.

1.11. The first step in our exercise is an attempt to re-classify the historical data of public expenditures by spending departments into "programme categories" more directly relevant to policy discussion: that is, we try to translate the usual "legal" classification of expenditures in the official statistics into a "public policy" taxonomy. In the event, the extent of the re-classification we have succeeded in making is limited. This is for two reasons. First, it is by no means easy to specify the objectives of public policy in a concrete fashion, for reasons that we shall discuss. Second, we were limited by the availability of data.

These problems underline the need to treat the results in the way we have already suggested: that is, as a guide for the more detailed scrutiny of present policies preliminary to new decisions.

1.12. The re-classified historical data, expressed in constant (1968) prices (since "real resource" questions are the centre of our interest),

are then used to attempt an answer to the question: "What would the public expenditure future look like if past policies were continued into the future?" This requires an empirical interpretation of the notion of "existing" or "known" policies. Our procedure is as follows: first, where the programme expenditure data exhibit a reasonably regular historical trend, this is accepted as reflecting ongoing policy *unless* there are already-known reasons why the single extrapolation of past trends must be misleading, or there are "breaks" in the statistical series suggesting major policy changes during the historical period used. Second, the historical trends are adjusted as appropriate in the light of the particular evidence about likely change (a good example is the need to adjust the projected expenditure on Education to take account of the effect of population changes on the size of the "client group"). Third, correction is made for "breaks" by identifying the specific causes and adapting the trend used for extrapolation accordingly. (Defence spending provides an outstanding example.)

1.13. Since our immediate (and central) interest is in the claims to be exercised over real resources by individuals and the government respectively, we now need to eliminate transfer payments from the aggregate expenditure data. We do this by applying the historic ratios of consumption and investment to total expenditure, programme-by-programme.

1.14. Having established the "constant policy" real resource claims at the forward year, we next calculate what the total of available domestic product might be at the forward year. At the same time, we must take account of the difficulty that private consumption and government resource-use do not constitute the only claims on real resources. Other claims come from private investment and from abroad (exports). Similarly, total available resources include imports.

We assume that private investment and the level of employment together determine the rate of growth of community resources (and hence output). Thus, private investment is treated as a sort of "prior claim" (the "claim" needed to generate full employment) on community resources at the forward date, its size being determined by what is needed to generate that volume of resources. The exercise also

requires that we specify policy objectives in respect of international trade (i.e. a zero balance of payments deficit) and employment (i.e. full employment), and postulate that these objectives will in fact be attained. (We comment further on these assumptions at V below.)

This exercise is unavoidably somewhat complex, and may give difficulty to the lay reader. Some further exposition is provided below in Chart I and its explanation. Detailed explanation of the methodology and calculations is given in Chapter 4 and in the Appendix.

1.15. We have now the information needed to establish the effect of the continuation of "present policies" upon resource claims in the forward year, and in particular to establish the magnitude of real private domestic consumption and the relation of this to total resources and to government resource-use.

This gives us a "limit" to future possibilities, in that it represents a very severe cutback in the share of private consumption in total available output (see IV below, and Chart 1.1). We can now establish another "limit" by asking the question: "What magnitude of real private consumption at the forward year would be needed to maintain the present (base-year) share of consumption in national output?" This calculation produces a severe reduction in the forward-year magnitude of government resource-use (implying an *actual aggregate reduction* in standards of provision below base-year levels).

Within these two "extreme cases", a more "realistic" outcome might be one which preserves the base-year balance between private consumption and public resource-use. In general terms, this calculation shows the results of projecting forward a "constant trade-off" between the provision of growing consumer satisfactions through private choice and markets on the one hand, and the provision of growing "consumption" through political choice and the public sector on the other.

1.16. Having established these magnitudes, we decided that the second measure (constant share of consumption in national output) indicated too extreme a fall in the rate of growth of standards to be realistic over the next decade (though we think it important to have

carried out the exercise to demonstrate the implications of a common citizen's attitude to the protection of his own consumption *vis-à-vis* public spending). Accordingly, the rest of the "real resource" exercise is carried out by comparing the different outcomes of the "constant policy" and the "constant trade-off" calculations. Effectively, the "gap" between the expenditure magnitudes at the forward year calculated in these two fashions is treated as the range of the government's practical policy discretion. At the one "extreme", the government "take" would be limited to what is available after private consumption had been assured at a level maintaining its base-year ratio to government claims. At the other, private consumption would be left with the available residual after the government had exercised the claims needed to maintain "constant policies". Thus, the "gap" between the two might be said to define the "area of political sensitivity and discretion" in respect of public expenditure decisions.

1.17. Finally, by allocating the "gap" at 1.16 between programmes, we can discover the significance of the (real resource) difference that the comparison implies for individual programmes. These magnitudes identify the programmes of major significance in this respect, and provide the starting point for the detailed policy scrutiny to which the exercise is intended to lead.

1.18. To supplement the "real resource" exercise, we reintroduce current transfer payments into the study (while retaining our assumption of constant prices), and carry out an essentially similar exercise which identifies a new set of "gaps" and some additional policy problems.

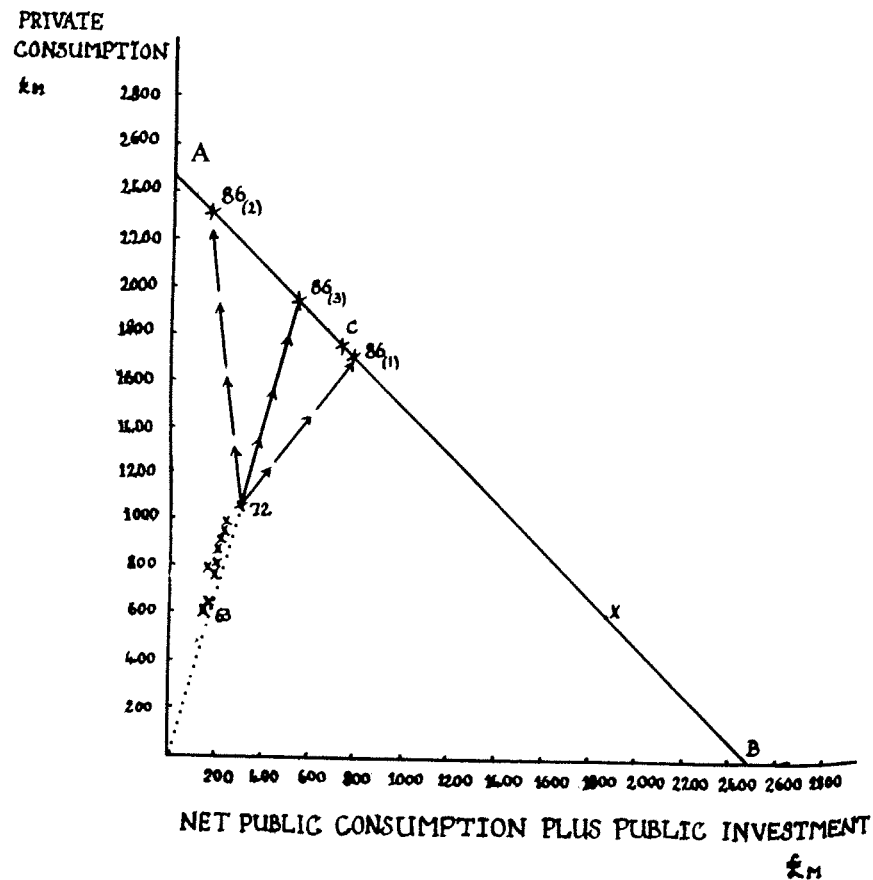
IV. A Diagrammatic Presentation of the General Results

1.19. Chart 1.1 presents the general results in visual form. It is explained in greater detail later, but some summary description here may help the reader to follow the earlier literary exposition of the present chapter.

1.20. The horizontal axis of the chart measures the volume of real government expenditures. That is, it includes expenditures on goods

CHART 1.1

Projected Claims on Resources, 1972/3 and 1986/7
(£M at 1968 market prices)



and services (net public consumption plus public investment), but excludes transfer payments. The vertical axis measures private consumption. The line AB thus shows the volume of community resources available for "division" between private consumption and public resource-use in 1986/87 after the "prior claims" on resources for private investment etc. have been met (see 1.14 above). Individual "points" on this line ("frontier") show particular "shares" of private consumption and government claims in total adjusted output. Not all such points are of equal practical (policy) interest. Consider A, B and X. A and B are outside limits of possibility. At A, no real resources are claimed by government. At B, none are available for private consumption. X, (e.g.) represents an increase in the real-resource activities of government which is hardly imaginable within a decade.

1.21. Other "points" on the chart are labelled to identify them with actual or projected situations in particular years. The lines joining points are simply expositional: the areas between them give a visual impression of the "gaps" we are interested in.

Point 72 shows the "base-year" position: that is, the actual balance between private consumption and public resource-use in Financial Year 1972/3.

Point 86(1) shows the result of the "existing policy" exercise for the balance between private consumption and public resource-use at the forward year. It shows a serious discrimination against real private consumption in terms of its relative rate of growth, whether in relation to historical experience or to the projected growth of community output. This suggests that future development along the lines of "existing policies" might create political difficulties.

Point 86(2) is intended to show a different "limiting case". It shows the size of private consumption that would be needed in 1986/7 if the relative share of this claim on *total* resources is to be maintained at the 1972/3 level of 69.9%. For this outcome, it would be necessary for there to be a marked slowing in the rate of improvement of public services implied by 86(1), and (on the assumptions we make as to the proportionate allocation of "cuts"—though these are not shown in the

Chart) an actual fall in the standard of provision of some programmes.* As explained at III above, we have treated this calculation as useful in establishing interesting magnitudes, but as too "extreme" (unlikely) to be used in the rest of the exercise.

Point 86₍₃₎ shows the result of the projection to 1986/7 of the base-year ratio of private consumption to public resource-use. For reasons explained at III above, we regard this point as the realistic "outside possibility" for the development of public spending over the next decade.

1.22. In sum, therefore, we treat the outcomes between maintenance of "constant policies" (86₍₁₎), and the maintenance of a "constant 'trade off'" between private and public consumption (86₍₃₎), as defining the area of "policy discretion", to be allocated between programmes for further scrutiny. Thus, the facts about Chart 1.1 which the reader needs to understand are the meaning of the line AB (available output or resources at the forward year), and points 72, 86₍₁₎ and 86₍₃₎.

V. Some Technical Issues

1.23. This paper is written for the National Economic and Social Council, and a prime requirement is that it should be comprehensible to the members, and acceptable to them as a method of illuminating the issues of public policy related to public expenditure questions. At the same time, this venture into the "black art" of prognostication involves the authors in unavoidable technical problems of more than trivial sophistication. We have tried to steer a course between the Scylla of comprehensibility and the Charybdis of technical sophistication: the results must be judged by the reader.

1.24. It will be helpful to begin this commentary on method by explaining what has and what has not been done. Our investigation concentrates on changes in real-resource claims, and for this reason is

*An assumption much less favourable to the growth of private consumption would be to allow it to grow to 1986/7 at its historic growth rate. However, this will allow only a negligible amelioration in the share of private consumption. The share in GNP rises only from 51.7% to 53.7%. (Point C on Chart 1.1), and we have accordingly made no further use of this calculation.

developed in terms of constant prices. There is some examination of transfer payments, but only as an ancillary exercise to the real resource calculations, and carried out within the same constant-price, etc., assumptions. We thus leave aside entirely the effects of inflation on the growth and structure of the public sector: we do not attempt to examine such phenomena as "fiscal drag", whose concern is with such matters as the change in tax yield (government "take") resulting from a rise in the general price level. The omission is deliberate. First, we understand that an independent investigation dealing with these matters is already under way. Second, there are formidable difficulties in attempting to integrate these further questions, and particularly those requiring a projection or projections of the rate of inflation, with the questions upon which we have concentrated. Such a comprehensive investigation would, in fact, require an integrated computerised model of the public sector, comprehensive enough to incorporate all the variables to which we have referred. This was impossible within the time and resources at our disposal: even if it is possible at all within the foreseeable future. The CSO records are themselves not yet computerised. It is also relevant that, given the major uncertainties implicit in this kind of look into the future, greater sophistication in the model would probably not contribute substantially to the value of the results. Thus, the method chosen is one which we regard as intellectually defensible while reasonably capable of interpretation by those who might wish to use it for policy purposes.

1.25. Another important matter concerns the assumptions we have made about the future of the Irish economy. As subsequent chapters will show, we relied upon the best available sources in deciding upon a growth rate of the economy, related full employment level of investment, size of full employment labour force, balance of payments situation, and so on. But, of course, no such view of the future is infallible, and others may take a different view from our own. For example, the recent recession which was only beginning when our model was first set up, has led people to question whether our projected level of investment would in fact be enough to assure full employment at the forward year.

A special case of this kind of scope for difference concerns our assumptions that government policy will aim at full employment and a zero balance of payments deficit, *and that government objectives will be achieved*. It can be objected that this optimism is not justified by

historical experience, and is unrealistic. The point is well taken. But how are we to set up a study of this kind which predicts the *failure* of government to reach its objectives?

We have gone back over our assumptions and projections with this kind of comment in mind, and have concluded that they remain as reasonable as any suggested alternatives. This does not, of course, preclude those whose judgements are different from writing an alternative scenario with their own assumptions, and using the data to obtain alternative results. It would, indeed, be interesting to compare the results of such an exercise with our own. Since it is likely that the alternative assumptions would be more pessimistic than our own, the "gap" between "existing policies" and "trade-off" projections would be even wider than our own, and the public expenditure policy question even more politically painful.

There is also, of course, no reason why this initial study, with all the defects of a first invention, should not be up-dated periodically. If it proves helpful to policy-making, subsequent "forward looks" could benefit from the problems which show up with this one, and the procedure made more sophisticated and useful in the light of experience.

VI. Summary Conclusions of the Study

1.26. In the final chapter we explore the impact of the resource and transfer cuts on public spending programmes in order to highlight the areas which will suffer the greatest retrenchments on projected "existing policies". These are the areas within which further detailed study can usefully be concentrated. As we have already argued, we believe that the central and fundamental questions of policy are those concerned with the use of the nation's real resources, and thus the bulk of our exploration is in this area.

1.27. Under our method of cutting into real resource inputs of public programmes (fully explained in Chapter 5), programmes intense in their use of current (rather than capital) inputs attract relatively heavy cuts. Thus the programmes which are genuine* "prime targets" for policy

*Because of certain arbitrary conventions of national income accounting certain programmes (e.g. Defence) appear as "prime targets" for resource cuts but realistically are not, whereas other programmes (e.g. Secondary and University and Higher Education) appear as "prime targets" for transfer cuts but are more realistically seen as "prime targets" for resource cuts. A full explanation is given in Chapter 7.

makers interested in reducing the claim of the public sector on real resources can be identified. These are programmes which would make a large contribution to the expenditure cuts (designated (L)) and those in which the "proportionate" allocation of cuts produces a relatively large reduction in the programme's growth rate (designated (G)). The programmes which appear to be of interest are: Health (L), Transport and Communication (LG), General Government Services (LG), Primary Education (LG), Justice (G), Forestry (G), Secondary and University and Higher Education (G). These are the areas in which existing public policies will have to suffer most in the interests of an enhanced growth of real private consumption. The precise scope for, and deployment of, such cuts are highly important matters which we see as the proper subject of further detailed study.

1.28. For policy makers interested in reducing the rate of growth of the public financing of private consumption, the picture is simpler. Under our method the Social Security (LG), Agriculture (LG), and Public Service Pensions (G), programmes will carry the heaviest cuts, and thus stand out as the main areas for further detailed study.

1.29. The study also draws attention to the dangers of "inadvertent" policy-making, particularly in time of inflation. Sectors in which notional "standards of provision" can be maintained in appearance while falling in practice are especially vulnerable in time of stringency. Capital spending on education and health programmes provide important examples.

Chapter 2

THE HISTORICAL DEVELOPMENT OF IRISH PUBLIC EXPENDITURES 1963/4-1972/3

I. Introduction

2.1. This chapter presents the base material on which our projections and speculations about the future of Irish public expenditures are founded. We use historical data to make projections into the future, as we have already explained, not because we, in fact, expect the future to mirror the past, but because describing how the world would look if this in fact happened is a useful way of coming to grips with the problems that public expenditure policy is likely to have to face.

2.2. Clearly, the most satisfactory classification of public expenditures from our point of view would be one which divided aggregate expenditures by policy objective, so that we could identify all expenditures by purpose. In an ideal world, we would then use this historical material, so classified, to examine future possibilities, using known plans for changes in public policies to modify the information provided by simple extrapolation of the past.

The real world is less simple. We investigated the possibility of identifying explicit proposals for changed public policies with expenditure implications. The results were not very helpful. Generally, politicians have little incentive to make explicit statements about future plans of a kind that could be quantified (and even if they could, there is, of course, no guarantee that, in a democracy with periodic elections and changes of government, they will have the power to implement their plans). Thus, even a search of the statements accompanying the Annual Budgets does not provide much in the way of "hard" information. We can learn something about the possibilities where there is an identifiable "client

group" whose number can itself be predicted (health, primary education). But even here difficulties arise, e.g. in reaching firm conclusions about plans for changes in standards (quality of service). Politicians are in the business of "trading policies for votes": they may have no incentive to enter into empirically verifiable commitments, and must be assumed, indeed, frequently to have an incentive to avoid them. In public, they cannot normally be expected to be "against" improvements in the "quality" of all public services, and even when expenditure cuts are made they are often defended on the ground that quality need not fall if those concerned reorganise themselves competently. In the event, therefore, this chapter simply classifies the historical data by policy categories, and examination of the historical series is used in subsequent chapters to decide whether the evidence suggests that straight extrapolation from the data would be misleading because of identifiable "policy breaks".

2.3. Also, spending is undertaken by government departments, and these departments are commonly concerned not with the implementation of a single, or simple set, of public policies, but with the oversight/administration of a wide range of activities of varying degrees of policy coherence. In reclassifying the departmental expenditure data, therefore, we have had to compromise between a desire to classify in a policy-related fashion, and the need to use such disaggregated data as were in fact available.

II. The Expenditure Classification

2.4. Following standard national income accounting conventions, the public sector is defined as covering the current and capital expenditure of central and local government on goods and services and transfers, plus the deficits on operating account of state trading bodies met by transfers from central and local government. The disaggregated estimates are displayed within a structure of nineteen programmes. The aim of this classification is to present an exhaustive assignment of public expenditures within a mutually exclusive set of distinctive policy activities, and thus to display the main channels through which policy concerning the composition of public spending can be exercised. The programmes are:

1. Defence
2. Justice
3. Other General Government Services
4. Primary Education
5. Secondary Education
6. University and Higher Education
7. Other Education
8. Health
9. Social Security and Welfare
 - a. Old Age Pensions
 - b. Unemployment Relief
 - c. Other
10. Public Service Pensions
11. Housing
12. Other Community and Social Services
13. Agriculture
14. Forestry
15. Fishing
16. Mining, Manufacturing and Construction
17. Transport and Communications
18. Other Economic Services
19. Public Debt

2.5. The classification derives from that given in the National Income *Green Book*, but embodies certain modifications necessitated by non-availability of relevant data (we had to go to original source material for many of the figures), re-classification problems, etc. (see also Appendix). The re-classifications are of three kinds. First, where the *Green Book* expenditure categories embrace more than one policy

"head", and the determinants of policy under the different heads seem likely to be different, we have attempted an appropriate disaggregation. Education provides an example. Second, where possible we have hived off specific activities (Justice) from the "rag bag" categories ("Other Services"). Third, we have brought together items from different *Green Book* categories to constitute a new, policy-related one (Public Service Pensions). In the event, the re-classification goes less far than we would have liked, but for our particular purposes is a clear improvement on the *Green Book* one.

2.6. It is also necessary for our purposes that the re-classified data be presented in a form relevant to our policy interest. Since the focus of the study is on the claims upon community resources made by citizens and government respectively, the estimates of total public expenditure on each programme need to be divided between the familiar economic categories of current consumption, fixed investment, and current and capital transfer payments, so that we can distinguish those expenditures which represent a direct claim on real resources and those which do not. (As subsequent chapters point out, there are certain difficult definitional problems involved in carrying out this exercise. Some of the *Green Book* classifications, while in line with established conventions, have a considerable influence on the outcome of our exercise which needs to be borne in mind when looking at the data in a policy context.) Also, while the core of our interest is in claims over real resources, the "real resource" exercise is in fact amplified by a (limited) examination of the potential role and problems of transfer payments.

For similar reasons, we need to measure expenditures at constant prices. "Value" changes which reflect merely price changes do not affect real resource-use, and we need to get rid of them (by use of a price index) to reveal the real-resource trends.

III. Historical Data

2.7. We have derived estimates of public expenditure by economic category and "policy" programme at constant 1968 market prices by deflating the current price data by a set of price indexes. Full details of the current and constant price estimates and of the price indexes are given in the Appendix. Table 2.1 below shows total real public ex-

TABLE 2.1
Public Expenditure by Programme 1963/4-1972/3 (£000, 1968 Market Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Defence	12,032	13,548	14,065	12,893	13,614	13,642	14,304	15,888	17,373	20,448
Justice	12,635	12,073	12,330	12,824	13,012	13,023	13,862	15,015	16,557	19,740
Other General Government Services	12,768	12,584	13,574	13,848	15,139	14,675	16,692	19,168	21,340	26,766
Primary Education	31,326	29,243	31,930	30,933	33,600	34,961	36,956	39,189	40,135	42,756
Secondary Education	6,321	6,342	7,065	7,793	11,563	15,545	16,197	17,507	17,558	21,457
University and Higher Education	3,316	3,338	3,667	4,350	5,668	7,568	8,636	8,657	10,562	11,302
Other Education	583	581	623	625	634	1,114	2,381	1,843	1,545	2,129
Health	30,963	33,934	36,746	40,751	43,039	45,485	51,817	57,275	63,838	72,315
Social Security and Welfare	58,463	62,018	67,419	73,581	74,959	83,800	93,479	104,749	112,628	120,240
Public Pensions	11,628	10,742	11,445	11,793	12,350	12,167	12,148	12,555	12,792	14,855
Housing	21,905	24,579	30,325	31,390	36,137	39,753	43,349	35,813	39,029	42,292
Other Community Services	8,721	9,024	10,032	9,237	9,892	11,493	13,689	14,171	14,219	13,632
Agriculture	40,196	45,092	49,410	48,649	62,222	66,361	71,261	67,331	68,611	64,815
Forestry	4,483	4,635	4,498	4,275	4,683	4,603	5,046	5,593	5,486	5,463
Fishing	877	801	999	1,046	1,527	1,369	1,503	1,749	1,869	2,661
Mining, Manufacturing and Construction	12,474	14,511	17,496	16,030	13,627	21,272	24,065	27,266	37,386	23,638
Transport	36,377	42,071	40,579	39,143	38,280	39,344	59,638	50,558	51,333	55,452
Other Economic Services	8,411	8,820	10,186	10,102	11,654	12,921	15,652	16,065	17,099	17,551
Debt	50,706	57,760	47,561	49,578	62,267	78,627	67,189	80,575	70,875	82,606
TOTAL	364,185	391,696	409,960	418,841	463,867	517,723	567,864	590,947	620,235	680,108

penditure on goods and services and transfers by programme from 1963/4 to 1972/3. Table 2.2 shows the annual average growth rates implied by Table 2.1.

TABLE 2.2

Annual Average Growth Rates of Real Public Expenditure 1963/4-1972/3

Defence	%	6.04
Justice		5.08
Other General Government Services		8.57
Primary Education		4.47
Secondary Education		14.55
University and Higher Education		14.59
Other Education		15.48
Health		9.88
Social Security and Welfare		8.34
Public Pensions		2.76
Housing		7.59
Other Community Services		5.09
Agriculture		5.45
Forestry		2.22
Fishing		13.08
Mining, Manufacturing and Construction		7.36
Transport		4.79
Other Economic Services		8.52
Debt		5.57
Total Public Expenditure on Goods and Services and Transfers		6.88

2.8. The broad historical picture within the public sector is one in which real expenditures on Education and Health have increased at a much faster rate than expenditures on Defence, Justice, Public Pensions, Community Services, Agricultural Support and Transport and Communications. The Housing, Industrial, Social Security and General Service programmes have been in an intermediate position. Certain programmes accelerated quickly in the late 1960s. Three sectors of Education (Secondary, University and Higher and Other) expanded rapidly after the reforms in the period 1967-69. The Defence pro-

gramme accelerated quickly in the period after 1968 as a result of the Northern Ireland emergency. The Health programme also accelerated in this period.

2.9. Real public expenditure on goods, services and transfers over the period grew at a rate substantially above that of real GNP (6.88% annual average as against 4.00% annual average). As a result, the share of total real public expenditure in GNP grew from 34.39% in 1963/4 to 43.94% in 1972/3. Real public expenditure on goods and services (current expenditure on goods and services plus gross fixed capital formation) grew at a rate slower than total expenditure (5.72% annual average) but the growth was sufficient to increase the share of national real resources pre-empted by the public sector from 14.21% in 1963/4 to 20.38% in 1972/3.

Chapter 3

PUBLIC EXPENDITURES IN 1986/7 ON THE BASIS OF "EXISTING POLICIES"

Our assessment of future public policy in later chapters is carried out in terms of the impact on standards of public service of alternative adjustments to the size and composition of public expenditures implied by a continuation of "existing policies". In other words we explore the question how, and with what effect, will existing policies for public spending need to be modified if certain other policy objectives are to be met? A projection of expenditures on existing policies is thus a central benchmark for our assessment. This chapter develops such a projection.

I. The Meaning of "Continuation of Existing Policies"

3.1. In the present context and in very general terms we can view "policy" as that of which observable public expenditures are the product. But in the present state of knowledge about the determinants of public expenditure, "policy", or "policies" are terms of art which can not be specified in any very precise fashion. In very broad and rather formal terms we can envisage expenditures on public services as being determined by (explicit or implicit) decisions on (i) the number of service "outputs" produced and (ii) the quality of "output" units—i.e. standards of service. This logic is perhaps clearest in relation to those expenditure programmes which service clearly-identifiable client-groups—for example, Health, Education, Social Security and Welfare, and Public Service Pensions. Thus expenditures on Old Age Pensions can be seen as being determined by (i) decisions on rates of benefit (in itself a very crude and unsatisfactory measure of quality of services) and (ii) numbers of recipients (an equally crude measure of output). It is important to note that in this instance (and others) the magnitude of service output is only partly at the discretion of policy makers: it will, in the event, be determined jointly by policy decisions about eligibility and

by external circumstances such as the age-structure of the population and the rate of take-up by those eligible. This logic is certainly harder to discern in those programmes such as Defence, Justice, and Community Services whose benefits are generally diffused over the whole community or large sections of it. In anticipation of our later discussion of policy questions, it is also pointful to draw attention here to the fact that situations of "joint responsibility" of the kind just described are, viewed from another angle, situations of "open-ended" expenditure commitment by governments. It is characteristic of such commitments that when governments underestimate the rate at which the implied expenditures will grow (as they commonly do), they are faced with the need *either* to accept a rate of growth of public spending higher than they had planned, *or* to escape the commitment by allowing "inadvertent" departures from the designated policy standards. (In recent years, a popular form of "inadvertent" policy adjustment has been to fail fully to compensate for inflation, so that "money" standards are maintained but real ones (the true objective of the policy commitment) are allowed to fall.) While this kind of "implicit policy-making" has an obvious appeal to politicians anxious not to associate themselves with unpopular cuts in standards (or in the rate of growth of standards), it is equally clear that it is a poor procedure for efficient decision-making overall, not simply because it is a form of evasion of responsibility but because its incidence is different between different kinds of policies and programmes. Thus, much of the value of a "forward look" of the present kind is the opportunity it provides to identify *in advance* problems which if not anticipated are likely to be "solved" by "inadvertent" policy-making.

3.2. With our formulation, then, the growth of real expenditures on any public service over some historical period must be seen as the outcome of an interaction between (i) some rate of change of standards of service and (ii) some rate of change of output (either of which may have been zero or negative). Our basic notion of a continuation of existing "policies" is that the average growth rate of real expenditures produced by the interaction of (i) and (ii) over the historical period will be maintained over the future period. Thus in principle we can allow the possibility of unprecedented increases in output (or standards of services), but only at the cost of slower increases in standards of service

(or output). But as we cannot establish satisfactory empirical distinctions between physical outputs and standards of service, we are confined to the assumption that both will behave in the future as they have done in the past. Certain specific assumptions are implicit within this general notion of continuity. They are:

- (1) that the technology of provision of public services will not change at an unprecedented rate (in respect of both productivity growth and the balance in each programme between transfer and resource-using activities),
- (2) that historic policy objectives have been fulfilled—and thus that there is no "catching-up" to be done in the future,
- (3) that all discretionary policy changes in the past will in fact be maintained,
- (4) that the external circumstances upon which certain expenditures have depended will not change in the future.

We have ignored factors (1) and (2) as there is no satisfactory way of estimating them, but we have made an attempt to accommodate (3) and (4). Details are given in the next section.

II. The Projection Method

3.3. Following the argument above, our first inclination was to extrapolate each expenditure programme at its annual average growth rate over the historic period (given in Chapter 2, Table 2.2). However, this procedure is vulnerable not only to unprecedented future changes in policies and circumstances but also to any significant irregularities in the history of the programme estimates which would undermine the status of average growth rates as summary measures. There are thus two central problems: first, is history sufficiently well-ordered to allow us plausibly to use historic average growth rates to project a continuation of existing policies regardless of whether it is reasonable to expect those policies to be maintained? And secondly, given this, in what areas is it reasonable to suppose that the discretionary choices and circumstances of the past will not endure? Our first step was thus to examine the historic year-by-year growth rates of the programmes with these questions in mind. The rates are shown in Table 3.1.

TABLE 3.1
The Year-By-Year Growth Rates of Programmes of Real Public Expenditure, 1963/4 to 1972/3

	1963/4- 1964/5	1964/5- 1965/6	1965/6- 1966/7	1966/7- 1967/8	1967/8- 1968/9	1968/9- 1969/70	1969/70- 1970/1	1970/1- 1971/2	1971/2- 1972/3
Defence	12.60	3.82	-8.33	5.59	0.21	4.85	11.07	9.35	17.70
Justice	-4.45	2.13	4.01	1.47	0.08	6.44	8.32	10.27	19.22
Other General Government Services	-1.44	7.87	2.02	9.32	-3.06	13.74	14.83	11.33	26.43
Primary Education	-6.65	9.19	-3.12	8.62	4.06	5.71	5.99	2.47	6.63
Secondary Education	-0.33	11.40	10.30	48.38	34.44	4.19	8.09	0.29	22.21
University and Higher Education	0.66	9.86	18.63	30.30	33.52	14.11	0.24	22.01	7.01
Other Education	-0.34	7.23	0.32	1.44	75.71	113.73	-22.60	-16.17	37.80
Health	9.60	8.26	10.90	5.61	5.68	13.92	10.63	11.46	13.28
Social Security and Welfare	6.08	8.71	9.14	1.87	11.79	11.55	12.06	7.52	6.76
Public Service Pensions	-7.62	6.54	3.04	4.72	-1.48	-0.16	3.35	1.89	16.13
Housing	12.21	23.38	3.51	15.12	10.01	9.05	-17.38	8.98	8.36
Other Community and Social Services	3.47	11.17	-7.92	6.06	16.18	19.11	3.52	0.34	-4.13
Agriculture	12.18	9.58	-1.54	27.90	6.65	7.38	-5.51	1.90	-5.63
Forestry	3.39	-2.96	-4.96	9.54	-1.71	9.62	10.84	-1.91	-0.42
Fishing	-8.67	24.72	4.70	45.98	-10.35	9.79	16.37	6.86	41.84
Mining, Manufacturing and Construction	16.33	20.57	-8.38	-14.99	56.10	13.13	13.30	37.12	-36.77
Transport and Communications	15.65	-3.55	-3.54	-1.30	2.78	51.58	-15.23	1.53	8.02
Other Economic Services	4.86	15.49	-0.82	15.36	10.87	21.14	2.64	6.44	2.64
Public Debt	13.91	-17.66	4.24	25.59	26.27	-14.56	19.92	-12.04	16.55

3.4. In terms of the smoothness and regularity of their histories the programmes fall into three groups. Health and Social Security and Welfare are the only programmes which show a relatively smooth growth-path. There is a large group of programmes whose growth has been irregular, but cyclical (at least in parts): Other General Government Services, Primary Education, Secondary Education, University and Higher Education, Other Education, Other Community and Social Services, Agriculture, Forestry, Fishing, Mining, Manufacturing and Construction, Transport and Communications, Other Economic Services and Public Debt. The pattern here is one of alternative years of very high and very low (or negative) growth. The third group contains programmes which have experienced single periods of rapid growth or contraction: Defence (growth after 1969), Justice (growth after 1968), Public Housing (contraction in 1969/70), Pensions (growth after 1971). In fact the Pensions and Other General Government Services programmes show characteristics of both the second and third groups.

3.5. We can see no reason to anticipate unprecedented policy changes in the Health and Social Security and Welfare programmes (with the exception, in the case of the latter, of the consequences of EEC membership, discussed below). Thus, and in view of the regularity of their histories, expenditures on these programmes were projected to 1986/7 at average growth rates for the historic period.

3.6. All programmes in the "cyclical" group—with the exception of the Education programmes—were also projected at their historic average growth rates on the assumption that they will be "on trend" in 1986/7. In the case of Agriculture this treatment raises the whole question of the impact of membership of the EEC on the Irish public sector. The 1973 Budget (the first since accession) estimates public expenditure on agricultural support at £87,017 thousand in 1973/4 compared with estimates of £112,804 thousand for 1972/3 and of £120,017 thousand for 1973/4 without EEC support.* The difference in the figures for 1973/4 represents primarily relief from support (transfer) payments now borne by the Community's Agricultural fund. But for our exercise, it would be misleading to make a general downward

*"The Budget of 1973", Stationery Office, Dublin, pp. 11, 81 and 82.

adjustment to the projection of expenditure on agricultural support to take account of EEC membership.* The specific assumption we have made is that EEC policies will exactly displace existing Irish policies and leave undisturbed the path that expenditures would have taken under a continuation of such policies.† This may seem a conservative stance in the light of the provisions of the Common Agricultural Policy, but it appears less so when viewed against the growing pressure for reform of EEC agricultural policy. We have assumed a contribution from the Irish Exchequer to the EEC in 1986/7 of £10 million at 1968 prices, and added it to the projection of expenditure on Other General Government Services. This is in line with the trend of past contributions and of future contributions anticipated in the White Paper on Ireland's accession.

3.7. In the mid- and late-1960s, expenditures in the Secondary, University and Higher and Other Education programmes increased rapidly from very small absolute levels as a result of substantial policy reforms. These programmes thus display very large percentage growth rates in certain years; it seems to us implausible to assume that the future pace of reform will be such as justify the use for projection of an average based on these very large values. Instead, we have assumed that real expenditure per student in each programme will grow at its historic rate. For consistency this method was also applied to the Primary Education programme, even though it does not exhibit large percentage increases over the historic period. The Department of Education provided us with estimates of student numbers from 1968/9 to 1980/81 which we extrapolated to 1986/7. These estimates are shown in Table 3.2.

*The decline in expenditure on agricultural support in 1973/4 does not measure a fall in the claim on available real resources exercised by the Irish farm sector out of transfer income (and thus a release of resources for other uses—e.g. for private consumption out of earned income), but rather indicates that a portion of such claims was no longer financed by the Irish Exchequer. Thus, the "saving" of £33 thousand in 1973/4 is of financial, accounting, significance, but for our study not of economic significance.

†We have applied the same assumption to two other areas of policy within which EEC provisions may in fact figure in the period to 1986/7—regional policy (aid to peripheral regions from the European Development Fund) and social welfare policy (harmonisation of social security systems and subventions from the European Social Fund).

TABLE 3.2

Numbers of Full-time Students, 1968/9–1972/3, and projected numbers in 1986/7*

	1968/9	1969/70	1970/1	1971/2	1972/3	1986/7
Primary Education	483,661	490,039	495,843	501,817	506,646	522,917
Secondary Education	138,703	148,243	154,513	161,649	169,135	230,873
University and Higher Education	19,868	21,146	22,830	23,858	25,267	47,590
Other Education	52,302	55,156	61,270	66,311	71,711	108,523

*The figures supplied to us by the Department of Education were within a classification different from that of this table. They have been re-classified with the help and advice of the Department.

Table 3.3 shows the historic growth rates of real expenditure per student.

TABLE 3.3

Annual Average Growth Rates of Real Expenditure per Student 1968/9–1972/3

	%
Primary Education	3.95
Secondary Education	3.15
University and Higher Education	4.10
Other Education	8.65

3.8. With the exception of the Defence programme, we have ignored the discontinuities in the programmes of the third group and projected their expenditures at average historic growth rates. Between 1963/4 and 1968/9 real expenditure on Defence was increasing at an annual average rate of 2.93% but the developing situation in Northern Ireland then produced a very rapid increase in spending which pushed the growth-rate for the whole period up to 6.04%. It seems plausible to us to

assume a more peaceful situation will have emerged by 1986/7, and we have therefore extrapolated at a lower growth-rate. We are thus assuming that by 1986/7 defence spending will have returned to the path it would have followed on existing policies, without the disturbance of the Northern conflict. (After we had completed the whole exercise, we decided that it would have been sensible to treat Justice as a special case similar to Defence. However, given that to do so would have required the re-working of our entire data, and that the Justice programme is too small for the adjustment to make any significant difference to the general outcome, we decided to let the matter rest.)

III. The Projections

3.9. Table 3.4 shows total public expenditure by programme in the base year of 1972/3 and projected to 1986/7 by the method outlined above. The shares of programmes in the totals are also shown.

The figures for 1986/7 show that while a continuation of existing policies would generate a very large increase in public expenditures overall, there would be a marked shift in the "share" of public expenditures devoted to particular purposes. It would very much favour spending on Health and Social Security and Welfare, while the relative shares of the General Services, University and Higher Education, Other Education, Housing, Fishing, Mining, Manufacturing and Construction and Other Economic Services programmes would increase by small amounts, and the shares (though of course not absolute spending) of all other programmes would fall.

3.10. The figures may be taken as some indication of the likely origin of "future claims on the taxpayer". Such claims are the counterpart of two quite distinct policy activities of government. One portion of the total claim on the taxpayer represents the government's use of the community's real resources for the direct provision of public services; the other portion (transfer payments) represents a redistribution of purchasing power between different individuals and groups within the private sector through the agency of the government. Thus a maintenance of existing policies will carry "cost" implications in terms of changes in the total burden of taxation. Our model does not provide the information needed for a comprehensive assessment of the policy significance of

TABLE 3.4
Public Expenditure on Goods and Services and Transfers by Programme in 1972/3 and in 1986/7

	£000 (1968 Market Prices)			
	1972/3	% of total public expenditure	1986/7	% of total public expenditure
Defence	20,448	3.09	30,615	1.5
Justice	19,740	2.98	39,516	2.28
Other General Government				
Services	26,766	4.04	84,668	4.88
Primary Education	42,756	6.46	75,891	4.37
Secondary Education	21,457	3.24	45,201	2.60
University and Higher Education				
Other Education	11,302	1.71	37,361	2.15
Health	2,129	0.32	10,293	0.59
Social Security and Welfare	72,315	10.92	270,552	15.58
Public Service Pensions	120,240	18.16	414,624	23.88
Housing	14,855	2.24	21,745	1.25
Other Community and Social Services	42,292	6.39	117,694	6.78
Agriculture				
Forestry	13,632	2.06	27,306	1.57
Fishing	64,815	9.79	136,261	7.85
Mining, Manufacturing and Construction	5,463	0.83	7,430	0.43
Transport and Communications	2,651	0.40	14,816	0.85
Other Economic Services				
Public Debt	23,638	3.57	63,901	3.68
Total Public Expenditure	660,108	100.00	1,736,291	100.00

this; estimates would be required of public expenditures on goods and services and on transfers at current prices, of the elasticity of tax revenues under existing rates with respect to changes in money income, and of the effect of changes in effective tax rates on labour supply (see also Chapter 1 (IV)). However, there are important aspects of these

kinds of policy "costs" which we can and do assess. A distinctive "cost" of public resource use lies in the competition between it and all other demands on the available supply of real community resources and thus, also, in possible imbalances between the total supply and demand of these resources. A particular "cost" of a more extensive redistribution policy is the greater limitation thus placed upon the ability of private individuals to spend their own income as they wish: the total of private consumption will not fall (and may even increase if the recipients of transfers have higher propensities to consume than taxpayers on average) but *a greater proportion of it will now be financed out of public transfers rather than out of earned income*. Thus, the control of private individuals over their own consumption patterns will be curtailed. In effect, we can distinguish two questions, one concerned with the distribution of direct claims over real resources (between private citizens and others), the other with the general effect of transfer payments on the exercise of resource claims. In our judgement, these separate areas of policy concern are not equally important; for us the real resource question is the more prominent in that it addresses a wider range of policy objectives (concerning employment, inflation, the balance of payments and the extent of public provision of goods and services). Thus, in the next two chapters we examine the implications of continuing present policies on public spending for policy concerning the balance and total of national resource use. In Chapter 6 we then examine the additional implications which such a continuation will have for the extent of the private finance of private consumption, this being treated as a general measure of the control of individuals of their "own" consumption.

Chapter 4

THE ECONOMY IN 1986/7: VOLUME AND USE OF NATIONAL RESOURCES

In the context of policy on the use of national resources the desirability of maintaining present public spending policies depends essentially upon judgements about the impact of such a strategy on the several objectives of macroeconomic policy. In order to gauge these impacts we need to insert the projection of the previous chapter into a suitable policy model. In view of the uncertainties involved in long-term projections we use a policy model derived from a very simple Keynesian system which nevertheless does capture the major concerns of macroeconomic policy.

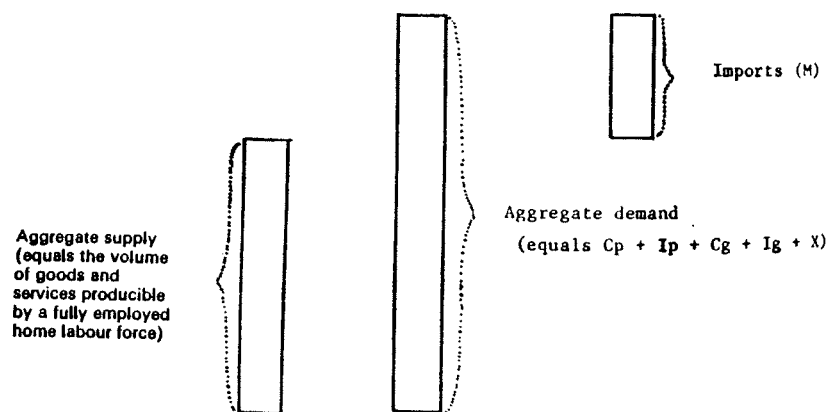
I. The Macro-Policy Model

4.1. In a macroeconomic context an assessment of the viability of continuing existing expenditure policies must start from estimates of (i) the volume of the supply of resources available to the Irish economy in 1986/7 from production both at home and abroad and (ii) the volume of the demands upon these resources which will compete with the investment and consumption demands of the public sector—that is the claims exercised by private Irish citizens (through the consumption of goods and services), private Irish firms (through investment) and foreigners (through exports of goods and services). If the total of all demands (public, private and foreign) on goods and services produced at home *and* abroad exceeds the volume of output producible by a fully employed home labour force by just the volume of goods and services imported from abroad, the home labour force will be kept fully employed and there will be no tendency for the home price level to increase as a result of excess total demand. This configuration will thus be a central requirement of a macroeconomic policy aimed at full employment and

price stability. Diagram 4.1 illustrates the balance between aggregate supply and demand. The columns represent the physical volumes of goods and services in a future year (1986/7 in our exercise) and are thus measured in the constant prices of a base year (1968). The components of total demand are private consumption of goods and services (C_p), private investment (I_p), exports (X), public consumption of goods and services (C_g) and public investment (I_g). Public expenditures on transfers—e.g. old age pensions—simply redistribute existing claims on real resources within the private sector without changing (by and large) the total of resource claims within the system; they are thus not included as components of total final demand. Each component of total demand has an import component, the sum of which gives the total of imports of goods and services (M).

Diagram 4.1.

The balance between the volume of supply and demand



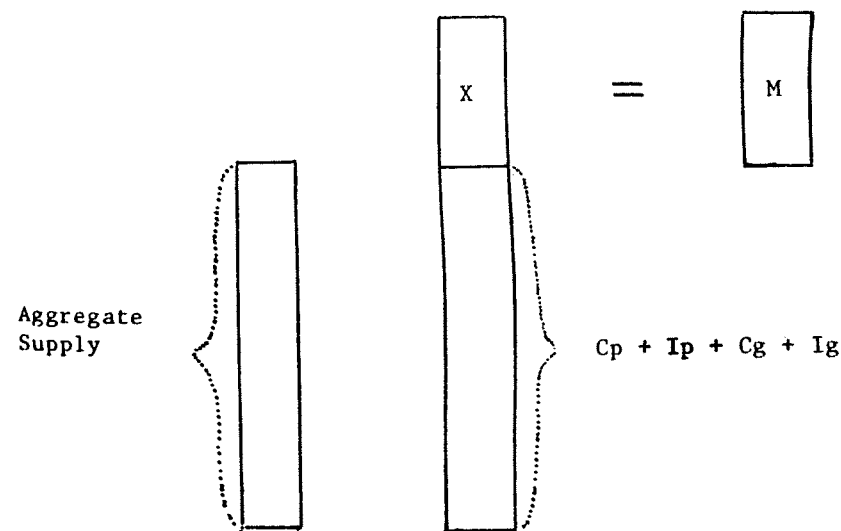
A volume of total demand greater than that shown in diagram 4.1 (with imports constant) will preserve full employment but tend to generate price inflation, whereas a lower volume of demand (with imports constant) will ease the pressure of demand on prices but result in unemployment.

4.2. Two conditions affecting the composition of demand can now be imposed. The first, in the interests of a viable balance of payments in

goods and services in the long run, is that the *value* of exports or goods and services should cover the *value* of imports drawn in by the fully employed economy by some specified amount (which may be zero). If we assume (1) a target balance of trade deficit of zero and (2) that the prices of imports and exports do not move differentially between the constant price base year and the future year (1968 and 1986/7), the requirement of equal values will imply an equality of volumes. This allowance is shown in diagram 4.2.

Diagram 4.2.

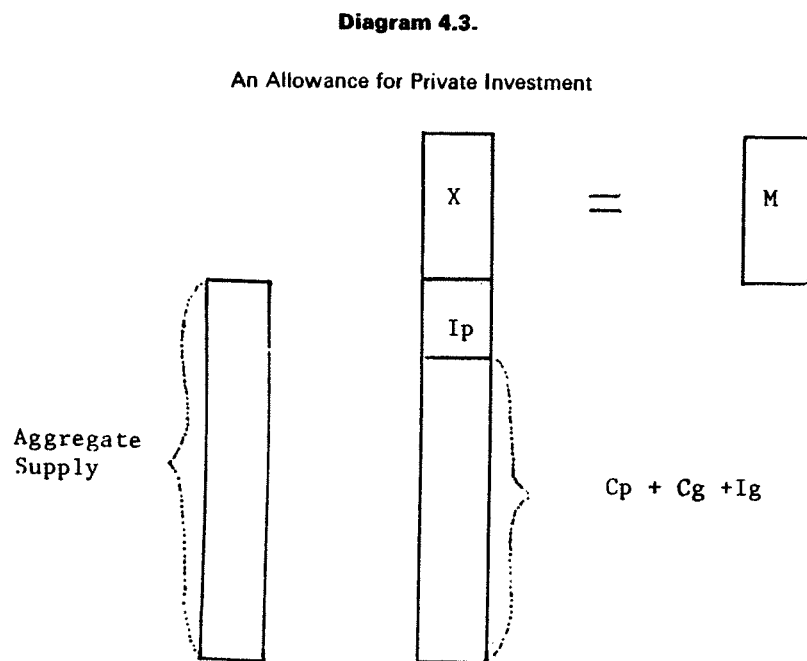
An Allowance for Exports



The achievement of employment, price and balance of trade targets for a given volume of aggregate supply thus implies a residual which the total of private and public expenditure on goods and services must not exceed.

4.3. The second constraint applies to private investment. So far we have emphasised the role of the labour force in the provision of aggregate supply, but a co-operation between labour and capital inputs will be required to produce national output. And as an increasing flow of output

will generally require a growing capital stock (i.e. positive investment), a level of private investment will be required in the future year sufficient to provide the fully employed labour force with an appropriate stock of capital. Once determined this level of private investment pre-empts a second slice of total allowable demand and a smaller residual remains for private consumption and public expenditure on goods and services. This is shown in diagram 4.3.

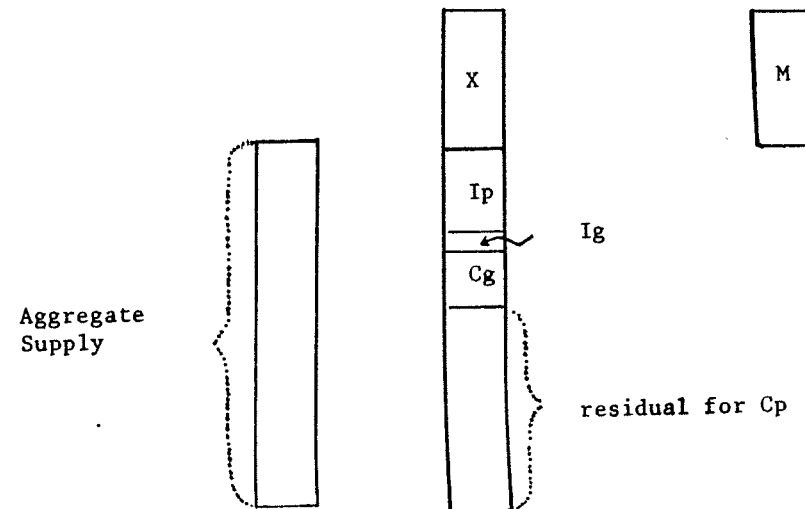


4.4. Next we can strike out the level of public consumption and investment implied by a continuation of existing policies on public spending. (Diagram 4.4). This leaves a final residual for private consumption.

4.5. We thus have an allocation of a given total of national output consistent with a set of policy objectives concerning the level of employment and prices, the balance of trade, and the provision of public

Diagram 4.4.

An Allowance for existing Policies on Public Spending.



services. We can now clarify the nature of the question about desirability of continuing existing public spending policies. If employment, price and balance of trade targets are taken as immutable, the question turns on an assessment of objectives served by private consumption as against those served by public spending. A continuation of existing public spending policies may be judged too ambitious in the light of the sacrifice involved in the growth of private consumption, or vice versa. If the main macroeconomic targets are not taken as fixed the issue becomes multidimensional. Thus, for example, existing spending policies could be pursued with a more favourable allowance for private consumption if the claim of exports on resources were reduced and the balance of trade target relaxed.

II. An Estimation of Magnitudes in 1986/7

4.6. The uncertainties involved in a projection to 1986 are such that we can only be interested in the probable configuration of broad magnitudes, and we have thus used very simple methods to estimate aggregate supply and the components of aggregate demand.

4.7. *Aggregate Supply:* Our estimate of the volume of output producible by a fully employed home economy was derived by multiplying a projection of the employed labour force in 1986/7 by a projection of real output (GNP) per head of the employed labour force in that year. We thus assume that the growth of output is exogenous and constrained by the growth of the labour supply. The projection of the employed labour force was taken from the study by Brendan Walsh. (See Appendix, p. 89). We, like him, assume a target unemployment rate of 4% for the non-farm labour force in 1986/7 which is substantially below the average level of unemployment for the period 1963 to 1972 (7.2%). The projected total of those employed in farm and non-farm occupations in 1986/7 is 1,276,950. The employed labour force fell slightly during the period 1963 to 1972 (1,072,000 in 1963 and 1,048,000 in 1972) and the growth of real GNP over that period was thus entirely attributable to a growth of real output per head of the employed labour force (which can be interpreted as a growth of labour productivity): the annual average growth of real output per head over the period was 4.29%. The absolute level of real output per head in 1972/3 (£1,436.1, 1968 market prices) was extrapolated to 1986/7 at this rate to give a figure of £2,584.6 (1968 market prices) in 1986/7—we thus assume that the historic productivity trend will be maintained. Simple multiplication gives an estimate of full-employment output of £3,300.4 million (1968 market prices).

4.8. *Aggregate Demand. (a) Private Investment:* The estimate of the volume of private investment required in 1986/7 was derived from an estimate of the historic real marginal capital-output ratio lagged by 1 year; i.e.

$$\frac{I_{p,t}}{GNP_{t+1} - GNP_t} \quad \begin{array}{l} \text{(1968 prices)} \\ \text{(1968 prices)} \end{array}$$

The average value of this ratio for the period 1963-72 was 4.24 (see Appendix) and we assume that this value will be maintained to 1986/7. The projected change in GNP between 1986/7 and 1987/8 was calculated and a private investment requirement for 1986/7 established

of £747.17 million (1968 market prices).* An estimate of stocks was made (£65.68 million) using the ratio between stocks and GNP in 1972/3.

(b) *Imports and Exports:* Over the historic period the real import propensity increased from .363 (1963) to .488 (1972). We assume that the propensity will be maintained at its 1972 value and thus derive an estimate of imports of goods and services in 1986/7 of £1,611.9 million (1968 market prices). Between 1968 (the base year of price indexes) and 1973 the terms of merchandise trade moved steadily in Ireland's favour indicating that smaller volumes of exports were required to finance a given volume of imports. However, the massive increase in the world price of oil then shifted the terms against Ireland and by the third quarter of 1974 the terms of merchandise trade were standing at 98.0 (see Appendix). It is not possible to make a detailed forecast of the terms of trade in 1986/7. We have assumed that they will return to 100.00 on the grounds that (i) the recent rapid escalation in world commodity prices is unlikely to continue, (ii) that in 1986/7 the Irish economy will be a net exporter of food.

Thus the volume of exports of goods and services required to ensure a zero balance of trade deficit in 1986/7 will be £1,611.9 million (1968 prices). An estimate of real net factor income from abroad was derived (£43.89 million 1968 prices) using the ratio between net factor income and GNP in 1972/3.

*This estimate is close to that implied by the calculations of Andrew Somerville on an assumption of a 5.6% annual growth rate of GDP between 1971 and 1986, in "Full Employment in 1986, The Implications for Savings, Investment and Capital Flows". Reading 8E of *The Economy of Ireland, Policy and Performance*, ed. J. W. O'Hagan, Irish Management Institute, Dublin 1975. It has been suggested to us that our implicit estimate of investment per worker in 1986/7 takes no account of the rapid increase in redundancies in Ireland after 1972/3, and, hence, of the possibility that a higher level of investment per worker may be required in 1986/7 in order to overcome a new technological obstacle to full employment. We can see no plausible method of projecting such a very recent phenomenon, and, in any case, our assumptions of a positive growth rate of labour productivity and of a fixed relationship between changes in income and the capital stock do generate a steadily increasing level of investment per worker over the projection period. Real private investment per employed worker in 1986/7 is £585.1 compared to a figure of £264.5 in 1972/3.

(c) *Public Consumption and Public Investment:* Table 3.4 in Chapter 3 shows total public expenditure in 1986/7 (on goods and services and transfers) by programme on the basis of existing policies. We now need to extract the consumption and fixed investment components from this total. This was done by applying the historic ratios of consumption and investment to total expenditure, programme by programme. The totals thus derived were £654.32 million (consumption) and £115.68 million (investment)—both at 1968 prices. In the national accounts public consumption is entered net of specific charges and levies (e.g. health prescription charges) which are counted as a part of private consumption and net of an allowance for depreciation. An adjustment was made for the effect of these factors on the total of gross consumption using historic ratios—giving a figure for net public consumption in 1986/7 of £621.6 million (1968 prices).

4.9. *Supply and Demand in 1986/7:* Table 4.1 shows the use of national resources in 1972/3 and in 1986/7 on the basis of an accom-

TABLE 4.1
The Use of National Resources in 1972/3 and in 1986/7
(£m 1968 Market Prices)

	(1) 1972/3 £m	(2) % of GNP	(1) 1986/7 £m	(2) % of GNP
Private Consumption	1,051.0	69.8	1,706.4	51.7
Private Investment & Stocks	307.2	20.4	812.8	24.6
Public Consumption (Net)	229.0	15.2	621.6	18.8
Public Investment	64.8	4.3	115.7	3.5
Exports of Goods and Services	+568.0	+37.7	+1,611.9	+48.8
Imports of Goods and Services	-735.0	-48.8	-1,611.9	-48.8
Net Factor Income from Abroad	20.0	1.3	43.9	1.3
Total GNP	1,505.0	100	3,300.4	100

modation of existing public spending policies within the policy assumptions and calculations set out above. In this table, the resources available for private consumption in 1986/7 emerge as a residual. The acceptability to the community of the size of this residual will be the determinant of whether the maintenance of existing policies at present levels (as these are defined in previous chapters) is politically desirable or even practicable. The following Chapter (5) examines this question statistically by drawing together the conclusions of Chapters 2-4.

Chapter 5

ALTERNATIVES TO MAINTAINING EXISTING "REAL RESOURCE" POLICIES

In this chapter we look at several strategic adjustments for a more favourable allowance for private consumption than that determined by a continuation of existing policies on public spending and show the impact of one of them on the growth of public expenditure programmes, under certain assumptions about the distribution of the adjustment across programmes. No great detail or commentary is given here, but later, in Chapter 7, we look in some detail at both the factors which determine the burdens shouldered by individual programmes and the important policy questions which emerge from the exercise carried out in this chapter.

I. The Implications for Private Consumption of Maintaining Existing Policies on Public Spending

5.1. The projection of the use of national resources in 1986/7 given in the previous chapter is based on a set of assumptions concerning both the technical and structural characteristics of the Irish economy, and the desirability of securing a particular configuration of employment, price, and balance of trade outcomes.* Once we accept these assumptions it follows that the impact of a continuation of existing public expenditure policies must fall entirely upon private consumption. The magnitude of this impact is such as to reduce the share of real private consumption in GNP from 69.8% in 1972/3 to 51.7% in 1986/7. It is

*It is important for an understanding of the projection exercise and of the discussion which follows, to keep in mind that in Financial Year 1972/3 (base point 72), the balance of payments in goods and services was in deficit (exports £568 millions, imports £735 millions, at 1968 market prices). Our projection for the forward year has the two in balance.

clear from Table 4.1. in Chapter 4 that the immediate cause of this deterioration is the large flow of resources into exports, which is needed to rectify the balance of trade. All other components of demand more or less hold their relative positions over the fifteen-year period.

5.2. If we narrow the focus and look at the balance of resource-use between private consumption and public spending on goods and services, it emerges that a strategy of maintaining existing public policies results in a substantial shift in favour of the public sector. Referring back to Chart 1.1, the point 72 shows the actual balance in 1972/3; the point 86₍₁₎ is the balance in 1986/7 resulting from a continuation of existing policies on public spending.

5.3. Broadly, these points can be interpreted as describing particular relationships between the use of private markets to make resource-allocation decisions (which is the general way demand for real private consumption is fulfilled), and the use of resources for the production of capital and current "output" which may be valued by individual consumers, but which is made available to them on terms different from those prevailing in the market economy.

Specifically, market transactions involve a direct cash nexus: individuals pay money to obtain goods and services. In the public sector, there is no such nexus: individuals pay taxes, but there is no direct relation between the taxes they pay and the "benefits" available to them from the fruits of public spending on the provision e.g. of health, education and defence services. From the policy-maker's point of view, citizens are always in favour of higher standards of provision in public programmes, but are also very sensitive to the implications of actually providing such standards for their own levels of private consumption.

The ratio of real private consumption to real public expenditure on goods and services at 86₍₁₎ is 2.31; during the period 1963/4 to 1972/3 the ratio was much higher—varying between 3.29 in 1964/5 and 4.16 in 1966/7 (the ratios for 1963/4 to 1971/2 are plotted on Chart 1.1, Chapter 1 in date order, which is also an ascending order from the point 63). Thus within the broad macroeconomic constraints we have assumed, a continuation of existing policies on public spending implies

an increased engagement of government in the Irish economy, substantial by the experience of the recent past.

5.4. It is important to emphasise that the argument here rests crucially upon the underlying set of technical and normative assumptions. Our estimate of the impact of present public policies on private consumption in 1986/7 would be quite different on different positive assumptions about the growth of the labour force, the relationships between output and imports, and the terms of trade; and on different normative assumptions regarding employment and balance of trade targets. However, if we retain these assumptions a more favourable allowance for private consumption in 1986/7 can only be secured at the expense of public expenditure and existing spending policies. The possibilities of various such allowances are explored in the next Section of this chapter.

II. Modifications to the "Continuation of Existing Policies" Assumption

5.5. The assumptions and targets of our model of macroeconomic policy provide for a level of use of real resources for private consumption and public expenditure on goods and services of £2,443.7 million in 1986/7. Arithmetically, this total can be allocated in any desired proportion between private and public uses without disturbing the macroeconomic targets. The line AB in Chart 1.1 is the locus of all such combinations, and thus shows the fullest range of possible adjustments from the point 86₍₁₎. Of course, the ranges of this locus close to both axes cover adjustments which are merely arithmetic rather than practical possibilities, in that movements to them, towards A, would imply massive, improbable changes in the organisation of a broad range of social and welfare facilities, and, towards B, improbable changes in the tax burden and in work incentives. The set of adjustments which can be more or less accommodated within the existing political and economic structure will lie in a more restricted range which, if it is to cover a more favourable allowance for the growth of private consumption than that determined by a continuation of existing policies on public spending (which produces a marked relative shift from private consumption towards the public sector), will lie upwards from the point 86₍₁₎.

5.6. *A Preservation of the Share of Private Consumption in National Output:* A strategy to preserve the share of real private consumption in gross national product in 1986/7 at the level attained in 1972/3 (69.8%) requires an adjustment from point 86₍₁₎ to point 86₍₃₎.^{*} The share of national resources devoted to private consumption could thus be maintained only at the cost of an *absolute* fall in the volume of resources available for public uses. Present policies on public spending would need to be completely abandoned, and the standards of many, if not all, public services would need to be reduced in absolute terms. For this reason our view is that an adjustment to point 86₍₂₎ would be impracticable politically. We must therefore look for a more modest allowance for private consumption.

5.7. *A Preservation of the Growth Rate of Private Consumption:* Between 1963/4 and 1972/3 real private consumption grew at an annual average rate of 3.80%. The result of allowing this rate to be maintained to 1986/7 is only slightly more favourable to private consumption than the outcome at 86₍₁₎ (a maintenance of existing policies on public spending allows an average growth of private consumption between 1972/3 and 1986/7 of 3.52% p.a.). As we are looking for "benchmarks", the difference between this measure and 86₍₁₎ is so small that we did not think it worthwhile to explore the alternative further.

5.8. *A Preservation of the Balance between Private Consumption and Public Resource Use:* A much more favourable allowance for private consumption results from a strategy of preserving the balance between private consumption and public resource-use attained in 1972/3 (which is broadly in line with that experienced during the whole of the historic period). This requires that £203.7 million of real resources be diverted from public use to private consumption, giving a total of private consumption in 1986/7 of £1,910.1 million (compared to an allowance of £1,706.4 million under a continuation of existing policies on public spending—see Table 4.1). This is the policy option we explore in some detail in the final section of this chapter.

^{*}The share of real private consumption in national output in 1972/3 was not abnormally high; between 1963/4 and 1971/2 it varied between 56.8% (in 1963/4) and 70.9% (in 1966/7).

The rationale of such an adjustment derives from the argument in Section I. A policy of constant balance represents an unchanging degree of public, government, involvement in the satisfaction of final consumer wants; or, in other words, an unchanging degree of discretion for individual private choice in markets. In very broad terms we can say that the importance of the role of the government as a provider of real goods and services becomes neither more nor less: the terms of the "trade-off" between private consumption and public resource use are "constant". This outcome is plotted at point 86₍₃₎ of Chart 1.1 (geometrically, at the intersection of AB with the ray from the origin through point (72)).

III. The Implications of a Move to 86₍₃₎ for Public Expenditure Programmes

5.9. An adjustment to maintain the balance between private consumption and public spending will certainly require a retrenchment on certain existing policies on public spending. In order to explore this impact in some detail we first need (i) to divide the required reduction in total public resource use into consumption and investment components and (ii) to allocate the reductions in consumption and investment across the nineteen expenditure programmes. For this purpose, the required reduction in public resource use of £203.7 million was split into net consumption and investment components according to the proportions of these components in the grand total of public resource use at 86₍₁₎ (84% and 16% respectively). An adjustment was then made to convert the consumption element from a net basis to a gross basis, giving a required reduction in gross consumption of £180.7 million and in investment of £32.0 million. These subtrahends were allocated to the expenditure programmes on a *pro rata* basis: each programme loses a "slice" of consumption and investment in proportion to its "constant policy" share in the grand totals of gross consumption and investment at 86₍₁₎.

5.10. Table 5.1 shows the annual average growth rates of real expenditures (on goods and services *and* transfers) by programme between 1972/3 and 1986₍₁₎ and 1986₍₃₎, the latter set being derived by the calculations described above.

TABLE 5.1
Growth Rates of Expenditure Programmes to 1986/7

	Annual average % growth rates from 1972/3 to 86 ₍₁₎	Annual average % growth rates from 1972/3 to 86 ₍₃₎
Defence	2.93	0.63
Justice	5.08	2.68
Other General Government Services	8.57	6.23
Primary Education	4.19	1.89
Secondary Education	5.47	5.17
University & Higher Education	8.92	8.92
Other Education	11.91	10.89
Health	9.88	7.75
Social Security and Welfare	9.25	9.13
Public Service Pensions	2.76	0.42
Housing	7.59	6.67
Other Community & Social Services	5.09	2.96
Agriculture	5.45	4.93
Forestry	2.22	-0.12
Fishing	13.08	12.54
Mining, Manufacturing & Construction	7.36	6.82
Transport and Communications	4.79	3.02
Other Economic Services	8.52	6.64
Public Debt	5.57	5.57

5.11. For the Health and Education programmes we can go a little beyond the figures in the table, by calculating the impact of a policy adjustment to 86₍₃₎ on the growth rates of real expenditure per member of the relevant client group. Table 5.2 shows the comparison for the Education programme (using the projections of student numbers detailed in Chapter 3). Table 5.3 shows the position in the Health programme (using the NESC projections of the Irish population referred to in Chapter 4).*

*Our estimate of the total population in 1986/7 is the average of the four estimates presented in the table on p. 64 of the NESC study (*op. cit.*).

TABLE 5.2

Growth Rates of Real Expenditure per Student

	Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎
Primary Education	3.95	1.66
Secondary Education	3.15	2.86
University and Higher Education	4.10	4.10
Other Education	8.65	8.47

TABLE 5.3

Growth Rates of Real Expenditure per Capita on Health

Annual average % growth rate 1972/3 to 86 ₍₁₎	Annual average % growth rate 1972/3 to 86 ₍₂₎
8.33	6.25

Chapter 6

THE QUESTION OF TRANSFER PAYMENTS*

I. The Public Finance of Private Consumption: Implications of Continuation of "Existing Transfer Policies"

6.1. In the previous chapter we have shown a possible set of implications for the growth of public expenditure programmes by allowing the relationship between real private consumption and public resource use in 1986/7 to be restored to its base-year level. However, as we have argued earlier, this exercise does not finish the policy debate. The "trimming exercise" in Chapter 5 leaves untouched the (current and capital) transfer components of all programmes and thus allows existing redistribution policies to be maintained. Citizens and politicians will certainly have a view on the broad costs and benefits of such a strategy: maintaining existing policies on current transfers will benefit "deserving" groups and individuals, and a similar policy on capital transfers will stimulate investment and growth. However, both require that a proportion of private spending on investment and consumption be financed by government transfer payments, with the corollary that the private sector must (through taxation) surrender some control over the direction of its spending. The point at issue is that politicians and citizens will be concerned, not only with the total volume of resources available for private spending but also with the degree to which claims over such resources can be exercised directly out of private earned income.

*While the distribution between real resource claims and transfer payments is clear enough in logic—transfers simply shift claims over resources between persons in the private sector—there are some practical difficulties of classification which we shall find relevant in the appraisal of our findings in Chapter 7. For example, the social accounts treat pensions as a claim on goods and services while other social security payments are treated as transfers. Different kinds of education are also classified differently.

6.2. Such is the general policy problem of transfer payments. However, in this chapter we shall take capital transfers (and thus private investment) completely out of the policy debate and concentrate upon the question of current transfers and private consumption. The reason for this is that our model of the macroeconomy treats private investment in 1986/7 as a "prior claim" on resources which must be met if the full employment target is itself to be met. Our historical estimates show a particular rate of public support for private investment, and we have assumed that this must be maintained if the required level of private investment is to be forthcoming in the future.

6.3. The adjustments in Chapter 5 allow a volume of real resources for private consumption in 1986/7 of £1,910.1 million. However, a continuation of existing policies on current transfers determines that 44% of this consumption (£840.7 million 1968 prices) will be publicly financed. This represents a very large increase upon the base-year (1972/3) figure of 29%, and in our judgement presents a significant problem for policy-makers.* In the remaining sections of this chapter we show the impact upon the growth of public expenditure programmes of a strategy to meet this problem.

II. A Modification to Existing Policy on Current Transfers

6.4. Our first inclination was to advance the policy discussion by following the method of Chapter 5: to propose a further reduction in public spending (on current transfers)—i.e. a reduction beyond that detailed in the previous chapter—sufficient to restore the base-year relationship between private consumption and current transfers (in fact a reduction in spending on current transfers from £840.7 million to £555.12 million), and then to examine the implications of a *pro rata* allocation of this further "cut" across all public programmes. However, we did not follow this method exactly, for the reason that it would force us to make highly implausible assumptions about the management of Public Debt. The 29% target requires a *pro rata* cut in expenditure

*It will be noted that, since we continue to disregard the effects of inflation, current transfers and private consumption are both measured in constant prices. There is, however, no ambiguity in the measures of the proportion of private consumption which is publicly financed in 1972/3 and 1986/7: for the price index for private consumption is the same as that of public current transfers (i.e. the proportions are the same at current prices).

on debt interest in 1986/7 of £76,849 thousand at 1968 prices (a reduction from the total of £176,488 thousand determined by existing policies to £99,639 thousand), which gives an annual average growth rate to 1986/7 of 1.35% compared to the historic average of 5.57%. This clearly implies extraordinary assumptions about future interest rates or about the balance between debt and tax finance which we cannot plausibly make. Instead, we have relaxed the target by adding on to the target value of current transfers an amount sufficient to allow spending on debt interest to follow the path of "existing policy", i.e. by adding £76,849 thousand on to £555.12 million. (This increases the ratio of current transfers to personal consumption in 1986/7 from 29% to 33%.) The difference between this sum and the total of current transfers determined by "existing policies" is the cut in spending which we have distributed *pro rata* across all public programmes except debt interest.* We have labelled the outcome of this exercise "86₍₄₎".†

III. The Implications of a Move to 86₍₄₎ for Public Spending Programmes

6.5. Table 6.1 shows the annual average growth rates of real expenditures (on goods and services and current and capital transfers) by programme between 1972/3 and 1986₍₁₎ and 1986₍₃₎ and 1986₍₄₎, the last set being derived by the calculations described above. Thus the figures in this set show the combined impact of both policy adjustments to existing spending policies in 1986/7, i.e. the impact of a cut in public spending on real resources in favour of real private consumption and the impact of a cut in public spending on current transfers in favour of the private finance of private consumption.

6.6. We can go a little beyond the figures in this table for the Health and Education programmes by calculating the impact of a policy adjustment to 86₍₄₎ on the growth rates of real expenditure per member

*An alternative method would be to preserve both the growth of spending of the debt interest programme and the 29% target by cutting a larger slice off all other programmes. However, this would generate implausible negative growth rates for several programmes and for this reason we did not use it.

†The designation 86₍₄₎ is used in consonance with the earlier system of labelling, which describes particular outcomes by date: e.g. 72, 86₍₁₎, etc. But since 86₍₄₎ is concerned with transfer payments, it does not appear in Chart 1.1 (Chapter 1), which is concerned exclusively with real-resource measures.

of the relevant client group. Table 6.2 shows the comparison for the Education programmes and Table 6.3 shows the position in the Health programme. The estimates of client numbers used are those referred to in Chapter 5.

6.7. In the concluding chapter which follows, we attempt to explore and interpret these figures, both in terms of their logical implications and in terms of the light they throw on the emerging questions of public expenditure policy. From this we then go on to identify specific areas of expenditure which appear as prime candidates for more extensive scrutiny, for example, by detailed cost-benefit or programme budgeting analysis.

TABLE 6.1
Growth Rates of Expenditure Programmes to 1986/7

	Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎	Annual average % growth rate from 1972/3 to 86 ₍₄₎
Defence	2.93	0.63	0.51
Justice	5.08	2.68	2.66
Other General Government Services	8.57	6.23	6.08
Primary Education	4.19	1.89	1.73
Secondary Education	5.47	5.17	1.86
University and Higher Education	8.92	8.92	7.11
Other Education	11.91	10.89	10.22
Health	9.88	7.75	7.50
Social Security and Welfare	9.25	9.13	6.79
Public Service Pensions	2.76	0.42	0.42
Housing	7.59	6.67	5.60
Other Community and Social Services	5.09	2.96	2.57
Agriculture	5.45	4.93	2.15
Forestry	2.22	-0.12	-0.18
Fishing	13.08	12.54	12.32
Mining, Manufacturing and Construction	7.36	6.82	6.31
Transport and Communications	4.79	3.02	2.17
Other Economic Services	8.52	6.64	6.60
Public Debt.	5.57	5.57	5.57

TABLE 6.2
Growth Rates of Real Expenditure per Student

	Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎	Annual average % growth rate from 1972/3 to 86 ₍₄₎
Primary Education	3.95	1.66	1.50
Secondary Education	3.15	2.86	-0.38
University and Higher Education	4.10	4.10	2.38
Other Education	8.65	8.47	7.82

TABLE 6.3
Growth Rates of Real Expenditure per Capita on Health

Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎	Annual average % growth rate from 1972/3 to 86 ₍₄₎
8.33	6.25	5.98

Chapter 7

A COMMENTARY ON THE RESULTS

I. Introduction

7.1. For reasons explained earlier, it cannot be the purpose of this concluding chapter to say what "ought" to be done to influence the rate of growth of public expenditures in Ireland between now and 1986/7. Our purpose is simply to set out the possibilities in a fashion helpful to those faced with the relevant policy decisions, in the light of the outcome of our exercise. As we have argued earlier, the size and character of government spending are the outcome of political value judgements and related political decisions, and these are matters about which reasonable people can differ. Thus, there is no reason of *principle* why policy-makers should not accept our projections of the results of "maintaining present policies", and yet see no particular problems or difficulties arising. This would be so if they were politically sympathetic to the large implied growth in the claims on community resources being made by government, if they found politically acceptable the implied discrimination (in terms of reduced rate of growth) against real private consumption (from 69.8% of GNP in 1972 to 51.7% in 1986/7—see Chapter 5), and if they found acceptable the implied discrimination in favour of the public financing of private consumption.

It seems likely, however, that there will be others who will see a policy problem arising, if only because, in the absence of deliberate decisions by government, they would expect political pressures to result in a reduction of real standards of provision of some services "by default" (see Chapter 3), and would regard this kind of "inadvertent" policy-making as incompetent. But, of course, such people may also differ

with one another about what needs to be done: they will each have their own priorities about programmes. No unanimity is to be expected as to which programme growth-rates it would be best to cut. Thus, our own procedure, of sharing the cuts *pro rata*, must be seen simply as a way of bringing out orders of magnitude. There is nothing sacrosanct about the maintenance of the share of private consumption in community resource use (in a growing economy like that of Ireland, some might even think that the share should rise?), nor about the maintenance of a particular degree of public support for private consumption. There is no God-given way in which the adjustments needed to reach such positions should be allocated across the programmes. Our own "equal share" exercises are simply an invitation to readers to "do their own crossword", now that we have explained to them the rules of the game.

7.2. Before we go on it is worth re-emphasising that there are certain limitations in the data (see Chapter 1 and Appendix) and certain practical problems of definition. Some of the *Green Book* classifications of expenditures have a bearing on the policy implications of our statistical findings. Also, there is room for debate about the underlying postulates and assumptions of our model. As we pointed out initially, our results would have been different if we had made different assumptions about population or productivity trends, about the target rate of unemployment or the balance of trade target, or about the efficiency of capital utilisation in 1986/7. But despite this, and despite the fact that this kind of policy analysis is unavoidably complicated, we believe the following sections demonstrate that it can also be illuminating.

II. Some Difficulties of Classification

7.3. We have carried out two trimming exercises: one on the real resource components of programmes and the second on the current transfer components of programmes. Clearly, the extent to which any individual programme will "suffer" at each stage in this exercise will be determined by the balance of its use of real resources and transfers as well as by its absolute size. Programmes intensive in the use of real resources will be prime targets at the first stage and those intensively using current transfers will be prime targets at the second stage.

7.4. The distinction between transfers and claims over resources is intellectually clear but operationally more difficult. There are "intermediate" categories which have to be classified one way or the other, but whose allocation may be a trap for the unwary concerned with policy evaluation. An obvious and general example concerns "tied" subsidies, paid for the specific provision of such services as education by the private sector. If these are classified as transfers, then a change in policy to direct provision by government would represent a much smaller shift in "real" government influence over resource use than appears from the statistics. There is no "right" solution to such problems: the classification adopted is inevitably arbitrary, and we must simply keep the question in mind when interpreting the data. Before—finally—looking at our own figures, we need to draw attention to the instances relevant to our exercise.

These concern the Education sector. Because of the way education is provided and financed in Ireland, the *Green Book* records only Primary Education spending as being primarily government resource use, with Secondary Education, University and Higher Education, and Other Education all having large transfer elements. Given the way the "trimming" exercise is carried out, these transfer elements escape the first-round "cuts" which are shared over resource-using expenditures only, but (in so far as they are current transfers) attract large cuts at the second round. Scrutiny of the tables below suggests that the magnitudes concerned are not so large that the calculations generally can be severely affected. But if we were concerned with education policy *per se*, the indicated first-round cut in primary education spending is likely to be considered "too large" relative to the cuts in the other education sectors, whereas the second-round cuts in these sectors are likely to be considered "too large".

7.5. A final interpretative point concerns the distinction between capital and current spending. Once again, the distinction involves some arbitrary decisions: defence spending, e.g. is almost all classified as current expenditure. These decisions are of importance to us because our allocation procedure imputes 84% of the total real resource cut to current spending and 16% to capital expenditure: the result is that programmes intensive in their use of current inputs are relatively heavily cut. The two instances to which we should draw attention are defence,

whose classification is a matter of taste, and public service pensions, which are shown as bearing a heavy share because they are treated entirely as current expenditures on goods and services. More generally, it is an implicit assumption of the exercise that the historical average capital-output ratio of programmes is the same as the "incremental" ratio for our projection period: essentially, that the "conditions of production" of public services remain unchanged as the scope of the activity grows. This assumption would be upset if, e.g., the health services shifted heavily from institutional towards domiciliary care. We do not think that this assumption is likely to be seriously misleading over the review period.

III. Policy Commentary

7.6. The essential information is brought together in Table 7.1. Since the table refers to "cuts", and we have used terms like "trimming", we should perhaps remind the reader of the precise meaning of the figures. The projection we have labelled 86₍₁₎ estimates the growth in public expenditures, by programmes, at 1986/7, on the assumption that future policies follow historic trends. If a set of macroeconomic targets are to be met this implies a considerable slowing-down (not an absolute decline) in the rate of growth of private real consumption, again as compared with historic trends. We have therefore asked what would be implied by allowing real private consumption and government claims over real resources to retain their base-year relationship *while preserving the macroeconomic targets for employment and the balance of payments*. This is the "constant trade-off" situation 86₍₃₎. For us, the most important policy concerns lie in this area, and we envisage that the issues here raised are those that will lay first claim to the attention of policy-makers. However, we have argued that, having settled these issues, policy-makers will also be concerned about another implication of continuing existing policies, namely, the implied increasing dependence of private consumption on public finance. We have therefore asked what would be the implications of allowing *both* a real resource adjustment *and* an adjustment to reduce the dependence of private consumption on public finance. This outcome we have labelled 86₍₄₎.

7.7. From 86₍₁₎ (constant policies) to 86₍₃₎ (constant trade-off): The programmes in Table 7.1 have been ranked in order of their relative

importance in aggregate public expenditure in 1986/7 assuming a continuation of existing policies (col. 2). This aggregate includes transfer payments. Since the size of the reduction to be made at this stage, on our assumption of *pro rata* sharing, depends solely on the real-resource content of the programme, the share of individual programmes in the cutback (col. 4) may be very different from their share in total spending.

7.8. The following programmes are relatively intense in their use of *transfers* and are thus largely (or completely) exempt from any cut in the adjustment from 86₍₁₎ to 86₍₃₎.

(i) Debt	}	100% transfers
(ii) University education		
(iii) Social Security		95% transfers
(iv) Secondary Education		86% transfers
(v) Agriculture		76% transfers
(vi) Fishing		77% transfers
(vii) Mining, Manufacturing and Construction		75% transfers
(viii) Other Education		66% transfers
(ix) Housing		59% transfers

We have already pointed out the arbitrariness of the education classifications, and shall return to this below.

On the other hand, the programmes listed below are relatively intense in their use of current real inputs, and therefore attract relatively heavy cuts:

(i) Public Service pensions	100% current expenditures
(ii) Defence	98% current expenditures
(iii) Justice	96% current expenditures
(iv) Primary Education	85% current expenditures
(v) Health	84% current expenditures
(vi) Other Economic Services	78% current expenditures
(vii) Other General Govt. Services	68% current expenditures
(viii) Forestry	56% current expenditures

With this general background in mind, we can appraise the significance of the information in columns 2, 3 and 4 of Table 7.1 as implied by the

ancillary data in columns 1 and 2 of Tables 7.2, 7.3 and 7.4 (Tables 7.2, 7.3 and 7.4 are reproductions of data appearing in earlier chapters). We begin by considering the programmes which bulk large in total public spending—that is, by reading down our tables. The striking characteristic of the first programme, Social Security, is the contrast between its absolute size and its small share in the real-resource cutback. This results, of course, from the preponderance of transfer payments in social services policy. It means that, within this one programme area, something like one-fifth of all public expenditures is “not available” for policy reconsideration concerned with reducing the rate of growth of government claims on real resources. As a corollary, this will be a sector of prime importance when our interest shifts to the question of transfers and the finance of private consumption.

7.9. In marked contrast, *Health*, the next largest programme (in terms of projected total public expenditures at 1986/7), would absorb over 30% of the reduction in the growth of government real-resource claims if our postulated policy adjustment was carried out. This is clearly a matter of potential political interest. The change does not imply a decline in standards of health provision, but does represent a marked reduction in the rate of improvement of standards. This is, of course, one of the services in which we have been able to specify a “clientele” (population numbers) in projecting expenditures. The annual average growth rate of real expenditure *per capita* from 1972/3 to 1986/7 would be 8.33% on the “existing policy” (86₍₁₎) basis, and 6.25% on the “constant trade-off” (86₍₃₎) basis (see Table 7.4). These are not trivial growth rates, but they are significantly different. Briefly, the maintenance of historic trends would raise spending on health from £24 *per capita* in 1972/3 to £73.5 in 1986/7; maintaining the 1972 relationship between private and government resource use would cut the latter figure to £56. Given the relative magnitudes involved, policy-makers who consider the “constant trade-off” as the politically desirable outcome, will either have to accept this reduction in the rate at which standards of health-care rise, or embark on the difficult task of finding even larger public resource use economies elsewhere.

7.10. Other programmes are less individually significant, both in their share of total expenditures and in their contribution to the cuts. Our

TABLE 7.1

Shares of Programmes in the Expenditure Cuts from 86₍₁₎ to 86₍₂₎ and 86₍₄₎

Programme	Share of Programme in Total Public Expenditure at 86 ₍₁₎ %	Absolute cut in Programme from 86 ₍₁₎ to 86 ₍₂₎ (£000, 1968 prices)	Absolute cut in Programme from 86 ₍₁₎ to 86 ₍₂₎ as % of Total Cut	Absolute cut in Programme from 86 ₍₁₎ to 86 ₍₄₎ (£000, 1968 prices)	Absolute cut in Programme from 86 ₍₁₎ to 86 ₍₄₎ as % of Total Cut
(1)	(2)	(3)	(4)	(5)	(6)
Social Security	23.88	5,730	2.69	112,682	26.74
Health	15.58	65,010	30.56	71,397	16.94
Public Debt	10.17	0	0	0	0
Agriculture	7.85	9,040	4.25	48,948	11.62
Housing	6.78	13,320	6.28	26,950	6.40
Transport and Communications	6.15	22,720	10.68	31,883	7.57
Other General Government Services	4.87	22,220	10.45	23,493	5.57
Primary Education	4.37	20,340	9.56	21,551	5.11
Mining, Manufacturing and Construction	3.68	4,410	2.07	8,251	1.96
Other Economic Services	3.17	11,930	5.60	12,139	2.88
Justice	2.28	10,920	5.13	10,983	2.61
Secondary Education	2.60	1,760	0.83	17,435	4.14
University and Higher Education	2.15	0	0	7,765	1.84
Defence	1.76	8,280	3.89	8,656	2.05
Other Community Services	1.57	6,790	3.19	7,875	1.87
Public Pensions	1.25	6,000	2.82	6,000	1.42
Fishing	0.85	950	0.45	1,326	0.31
Other Education	0.59	1,250	0.59	1,981	0.47
Forestry	0.43	2,040	0.96	2,103	0.50
	100.00	212,710	100.00	421,418	100.00

TABLE 7.2

Growth Rates of Expenditure Programmes to 1986/7

	Annual average % growth rate 1972/3 to 86 ₍₁₎ (1)	Annual average % growth rate 1972/3 to 86 ₍₂₎ (2)	Annual average % growth rate 1972/3 to 86 ₍₄₎ (3)
Social Security	9.25	9.13	6.79
Health	9.88	7.75	7.50
Public Debt	5.57	5.57	5.57
Agriculture	5.45	4.93	2.15
Housing	7.59	6.67	5.60
Transport and Communications	4.79	3.02	2.17
Other General Government Services	8.57	6.23	6.08
Primary Education	4.19	1.89	1.73
Mining, Manufacturing and Construction	7.36	6.82	6.31
Other Economic Services	8.52	6.64	6.60
Justice	5.08	2.68	2.66
Secondary Education	5.47	5.17	1.86
University and Higher Education	8.92	8.92	7.11
Defence	2.93	0.63	0.51
Other Community Services	5.09	2.96	2.57
Public Service Pensions	2.76	0.42	0.42
Fishing	13.08	12.54	12.32
Other Education	11.91	10.89	10.22
Forestry	2.22	-0.12	-0.18

TABLE 7.3

Growth Rates of Real Expenditure per Student

	Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎	Annual average % growth rate from 1972/3 to 86 ₍₄₎
Primary Education	3.95	1.66	1.50
Secondary Education	3.15	2.86	-0.38
University and Higher Education	4.10	4.10	2.38
Other Education	8.65	8.47	7.82

TABLE 7.4

Growth Rates of Real Expenditure per Capita on Health

Annual average % growth rate from 1972/3 to 86 ₍₁₎	Annual average % growth rate from 1972/3 to 86 ₍₂₎	Annual average % growth rate from 1972/3 to 86 ₍₄₎
8.33	6.25	5.98

own general observations are intended simply to stimulate the reader's own speculations. *Housing*, as we have seen, is characterised by a relatively large transfer element: policy in this area clearly involves serious questions of principle relating to the respective value of state housing provision (which ranks as government real resource use) and government subsidy of private housing provision (which does not). Thus, this is another ("tied subsidy") instance in which there is need to look behind the numbers: all our table does is to suggest that it would be worthwhile to look. The *Transport and Communications* programme contains relatively few transfer payments: its share, though not trivial, is kept down by our convention for the weighting of capital and current spending. Despite its small share in total government spending, this is clearly a programme requiring careful scrutiny from the point of view of its potential absorption of real resources. *Other General Government Services* is not easy to appraise from a policy point of view, since, as its name implies, it is a catch-all rather than an identifiable policy category. But its importance as a real-resource claimant—on our assumptions, it would absorb over 10% of the "cut"—suggests that this category merits careful scrutiny—if only to confirm or deny the suspicion that the "indirect" functions of government tend to increase their claims on real resources at least *pari passu* with the rate of increase of the claims made by other programmes. *Justice* also requires a mention, simply because of the contrast between its share in total expenditures and its relatively larger share in the cut. We have already printed out that this results from the intense use of current real inputs in the Justice programme. Whether there is in fact scope to reduce the rate of growth of spending on law and order below historic rates is clearly a matter calling for more direct and detailed enquiry. The *Defence, Other Community Services, Forestry and Public Service Pensions* programmes all bear shares in the resource cuts which, although smaller in absolute size, are much larger than their shares in total expenditure. However, this treatment of Defence and Pensions results from the arbitrary accounting conventions we referred to earlier.

7.11. We turn, finally, to our other client-oriented programmes: those concerned with education. On the basis of estimates of student numbers we can derive the growth rates given in Table 7.3.

The contrast between *Primary Education* and the other sectors shown in Table 7.1 and in Table 7.3 is striking, and calls for explanation since, as mentioned earlier, it results from social accounting conventions rather than from "real" differences. The "projection" from cuts of the other three programmes in the education sector results from the designation of their institutions as non-profit making bodies in the personal sector in receipt of government grants. If they were placed within the public sector, government grant payments to them would disappear on consolidation and the amount of public current expenditure on goods and services attributable to them would increase dramatically.

From a policy point of view, this suggests that the education sector as a whole may be a more promising target for a reduction in the rate of growth of the "true" claims of government on real resources than is suggested by our calculations, though the primary education sector must be somewhat less so.

7.12. From 86₍₃₎ (constant policies) to 86₍₄₎ (incorporation of transfer payments): When we impose the cuts in current transfers upon the outcome described above the general picture changes in several ways. The relevant information is given in Columns 5 and 6 of Table 7.1 and Column 3 in Tables 7.2, 7.3 and 7.4. The growth rates of all programmes (except Debt and Public Pensions) are further reduced, implying a further retrenchment on existing policies. But many of the anomalies thrown up in the real resource exercise now disappear as programmes protected from resource cuts by their use of transfers now become exposed. Columns 1 and 6 of Table 7.1 show that, with a few exceptions, the shares of programmes in the total cut in resources and current transfers are very close to their shares in the total of public expenditure projected on existing policies. And Column 3 of Tables 7.2, 7.3 and 7.4 shows a smaller dispersion of growth rates across programmes than does Column 2.

7.13. There are several interesting details in this overall picture. *Social Security* is the prime target for cuts in current transfers: in fact, it bears 51% of the total cut in transfers. *Agriculture* makes the only other large contribution to the cuts (19%). In the client-oriented programmes the outcomes in *Secondary* and *University* and *Higher Education* are

quite striking, but they are "unreal" in that they result from the use of the accounting convention referred to earlier (by which over 70% of total expenditure in both programmes is scored as spending on current transfers).

IV. Areas for Further Investigation and Study

7.14. Clearly, any major adjustment to public spending policies, such as we have presented in the previous three chapters, could not be implemented without a detailed study of the precise scope for, and deployment of, such cuts within each spending programme. Thus further detailed study of individual policies within programme areas, using appraisals of a cost-benefit or programme budgeting kind where available and appropriate, is required in all nineteen programmes. However, we can bring our study to a slightly more pointed conclusion than this by picking out what seem to us the most important areas for further work. In drawing up this list we looked for programmes that either make the largest absolute contributions to the resource and transfer cuts, and/or that suffer the largest reductions in growth rates at each round of the cuts. Such "prime targets" are characterised by their size, and by their intense use of current real inputs or current transfers.

7.15. First, we must clear the decks a little by sorting out those programmes which appear as "prime targets" merely because of arbitrary conventions of national income accounting. As we have pointed out, the *Defence* and *Public Pensions* programmes suffer large cuts in the real resource exercise because virtually all spending on them is counted as current expenditure on goods and services. It would conform more to economic reality, in our present context, to classify spending on pensions as expenditure on current transfers (thus making the programme a "prime target" for transfer cuts) and to allocate defence spending on resources between current and capital inputs. The *Secondary* and *University* and *Higher Education* programmes present a rather different problem. They are intense in the use of current transfers tied to the provision of specific services, which are more realistically treated as current expenditure on goods and services. Realistically, they should thus appear as "prime targets" for resource cuts, rather than as transfer cuts.

7.16. Thus, the genuine major areas for further *real resource-use studies* emerge as *Health* (which at the forward date will make a large absolute contribution to the total resource cut without suffering a large cut in its growth rate); *Transport and Communications, General Government Services*, and *Primary Education* (which make large absolute contributions and suffer large cuts in growth rates); and *Justice and Forestry* (which do not make large absolute contributions but do suffer large cuts in growth rates). More realistic conventions of national income accounting would put the *Secondary and University and Higher Education* programmes into this third category.

The areas which clearly require further study in the context of *distribution policy* are *Social Security, Agriculture and Public Service Pensions*.

APPENDIX

SOURCES AND METHODS

This Appendix explains in greater detail the sources used in the study, statistical procedures, and important deficiencies. To facilitate integration with the main text, the material is organised under the headings of the principal chapter in which the data concerned are utilised.

Chapter 2. *The Public Expenditure Statistics*

(1) *The Programme Categories.*

The programmes 1–19 listed in Chapter 2 are those of the official National Income *Green Book* with the following amendments:

- (a) the *Green Book* programme "Other General Government Services" is divided between "Justice" (2) and "Other General Government Services" (3).
- (b) the *Green Book* programme "Education" is split into "Primary Education" (4), "Secondary Education" (5), "University and Higher Education" (6) and "Other Education" (7).
- (c) the transfers component of the *Green Book* programme "Social Security and Welfare" is subdivided into "Old Age Pensions", "Unemployment Relief" and "Other".
- (d) Pension payments to Civil Servants, the Army, the Guards, Teachers and Local Authority personnel have been extracted from the relevant *Green Book* programmes (Defence, Other General Government Services and Education) to form the Public Service Pension Programme (10).
- (e) the *Green Book* programme "Agriculture, Fishing and Forestry"

is split into its component parts ((13), (14) and (15)). These modifications were made on the basis of information provided by the Central Statistics Office.

(2) *The Programme Data at Current Prices.*

The Central Statistics Office provided us with current price estimates of public expenditure by economic category for 1963/4 to 1972/3 for all programmes except Other General Government Services (3), Other Community and Social Services (12) Mining, Manufacturing and Construction (16) and Other Economic Services (18). Estimates for these programmes for 1965/6 to 1970/1 were taken from Table A.24 of the 1972 *Green Book*. However, we were without a direct source for these programmes for 1963/4, 1964/5, 1971/2 and 1972/3.

Earlier *Green Books* give no estimates for the years before 1965/6 and the 1973 *Green Book*—the most recent—gives estimates only for the years 1968/9 to 1970/1. Accordingly, we have made our own indirect estimates. For programmes from 1963/4 and 1964/5 we subtracted the total of public expenditure on all other programmes from total public expenditure and then allocated the residual across the economic categories of programmes 3, 12, 16, and 18 by the proportions observed in 1965/6. For 1971/2 and 1972/3 estimates were derived from Table A.22 of the 1972 *Green Book* which shows central government expenditure by programme for 1971/2 and 1972/3. For example, the central government component of Other Economic Services (excluding grants to local authorities) was multiplied by the 1970 ratio of total public expenditure on Other Economic Services to central expenditure on this service. The estimates derived from these sources and methods are shown in Table A.2.1.

(3) *Price Indexes for Public Expenditures.*

Five price indexes were used to deflate the programmes in Table A.2.1 to constant (1968) market prices.

- (a) current expenditures on goods and services were deflated by an index for net expenditure by public authorities on current goods and services derived from rows 51 to 60 of Tables A.5 and A.6 of the 1972 *Green Book* and rows 53 and 60 of Tables B.5 and B.6 of the 1971 *Green Book*.

- (b) for expenditures on gross fixed capital formation (except those in the Housing Programme), price indexes for domestic investment in dwellings, roads and other buildings and construction (derived from Tables A.13 and A.14 of the 1972 *Green Book* and Tables B.12 and B.13 of the 1970 *Green Book*) were weighted by the year-by-year proportions of these categories of investment in total public investment (derived from Table A.2 of the 1972 *Green Book* and Table A.20 of the 1968 *Green Book*).

- (c) expenditures on gross fixed capital formation in the Housing programme were deflated by an index derived from the estimates for "dwellings" in Tables A.13 and A.14 of the 1972 *Green Book* and Tables B.12 and B.13 of the 1971 *Green Book*.

- (d) expenditures on current transfers were deflated by an index of personal expenditure on consumers' goods and services derived from rows 50 and 59 in Tables A.5 and A.6 of the 1972 *Green Book*, and rows 51 and 59 in Tables B.5 and B.6 of the 1971 *Green Book*.

- (e) expenditures on capital transfers were deflated by an index of gross domestic fixed capital formation derived from Tables A.13 and A.14 of the 1972 *Green Book* and Tables B.12 and B.13 of the 1971 *Green Book*.

These indexes are shown in Table A.2.2.

(4) *The Programme Data at Constant Prices.*

Table A.2.3 shows the result of the deflation of the data in Table A.2.1. By the indexes at A.2.2 it should be noted that the calendar year indexes in Table A.2.2 were applied to the financial year data in Table A.2.1 without any adjustment.

TABLE A.2.1
Public Expenditure by Programme 1963/4-1972/3

Defence

(£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	8,408	11,008	12,057	11,518	12,433	13,411	15,205	19,222	23,145	30,798
Current Transfers	309	391	253	218	225	231	324	327	342	548
TOTAL	8,717	11,399	12,310	11,736	12,658	13,642	15,529	19,549	23,487	31,346

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Justice

(£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	8,730	9,672	10,226	11,241	11,548	12,743	14,661	17,962	21,694	28,705
Current Transfers	9	12	20	14	15	21	31	57	80	100
Capital Formation	426	481	559	422	549	259	357	464	640	1,500
TOTAL	9,165	10,165	10,805	11,677	12,112	13,023	15,049	18,483	22,414	30,305

TABLE A.2.1—continued
Public Expenditure by Programme 1963/4-1972/3
Other General Government Services
(£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Current Goods and Services	7,588	8,634	9,642	10,505	11,179	12,167	14,588	18,486	22,829	27,755
Current Transfers	773	850	1,013	1,100	1,751	1,392	1,106	1,311	1,592	1,880
Capital Formation	1,031	1,135	1,262	1,021	1,207	1,093	2,398	3,679	4,442	11,205
Capital Transfers	0	0	13	13	17	23	14	12	12	12
TOTAL	9,392	10,619	11,930	12,639	14,154	14,675	18,106	23,488	28,875	40,852

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Education

(£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Primary Education										
Current Expenditure on Goods and Services	18,591	19,914	22,652	23,433	25,009	28,589	34,046	41,005	47,494	57,429
Current Transfers	432	462	528	421	599	406	814	967	909	1,789
Capital Formation	3,735	4,007	4,549	3,998	5,336	5,775	6,202	5,752	5,589	5,311
Capital Transfers	296	317	363	388	504	191	117	124	372	85
TOTAL	23,054	24,700	28,092	28,240	31,448	34,961	41,179	47,858	54,364	64,614

TABLE A.2.1—continued
Public Expenditure by Programme 1963/4—1972/3
 Education—continued
 (£000, Current Prices)

Secondary Education	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	133	142	161	219	1,112	1,979	533	636	854	1,396
Current Transfers	4,854	5,206	5,907	6,389	7,593	10,374	13,392	16,284	18,196	23,118
Capital Formation	0	0	159	444	255	275	149	425	1,034	3,444
Capital Transfers	49	53	60	161	2,054	2,917	3,373	3,131	2,406	2,054
TOTAL	5,036	5,401	6,287	7,213	11,014	15,545	17,447	20,476	22,490	30,012
University and Higher Education										
Current Transfers	2,107	2,260	2,587	3,409	4,418	5,065	6,070	7,356	9,888	11,451
Capital Transfers	558	599	686	623	993	2,503	3,233	2,742	3,597	4,196
TOTAL	2,665	2,859	3,273	4,032	5,411	7,568	9,303	10,098	13,485	15,647
Other Education										
Current Expenditure on Goods and Services	49	53	59	62	69	96	111	135	192	253
Current Transfers	411	441	495	516	491	528	635	786	861	1,081
Capital Formation	0	0	0	0	43	490	1,810	1,261	917	1,174
Capital Transfers	0	0	0	0	0	0	18	26	144	581
TOTAL	460	494	554	578	603	1,114	2,574	2,208	2,114	3,089

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TABLE A.2.1—continued
Public Expenditure by Programme 1963/4—1972/3
 Health

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	21,811	27,457	30,937	34,420	37,052	41,621	50,534	61,985	72,570	93,800
Current Transfers	0	0	0	0	0	1,080	2,780	4,750	9,400	9,400
Capital Formation	603	743	850	1,717	2,057	1,784	1,941	2,450	2,502	3,500
Capital Transfers	0	371	400	1,000	1,000	1,000	1,000	1,000	1,300	3,000
TOTAL	22,414	28,571	32,187	37,137	40,109	45,485	56,225	70,185	85,772	109,700

Social Security and Welfare
 (£000, Current Prices)

Current Expenditure on Goods and Services	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
	2,553	2,903	3,326	3,811	3,848	4,362	5,011	5,654	6,879	8,120
Current Transfers										
(i) Old Age Pensions	15,513	16,990	19,218	21,379	22,595	25,336	29,121	34,193	38,900	42,800
(ii) Unemployment Relief	6,365	5,812	6,528	8,511	10,199	12,487	14,824	19,897	22,280	26,000
(iii) Other	22,994	27,084	30,839	34,352	34,848	41,607	51,711	62,774	75,446	89,887
Capital Formation	0	0	14	11	5	8	7	7	10	0
TOTAL	46,425	52,789	59,925	68,064	71,295	83,800	100,674	122,525	143,515	166,807

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TABLE A.2.1—continued
Public Expenditure by Programme 1963/4–1972/3
Public Service Pensions
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services										
Civil Service	1,655	1,672	1,949	2,054	2,186	2,341	2,557	2,876	3,758	5,150
Army	1,575	1,621	1,750	1,758	1,877	2,015	2,217	2,771	3,300	4,319
Garda	1,777	2,159	2,291	2,518	2,599	2,694	2,838	3,570	3,866	5,395
Teachers	1,557	1,698	1,883	2,067	2,206	2,318	2,649	3,444	3,824	4,654
Local Authorities	1,840	1,885	2,140	2,334	2,609	2,799	2,928	2,800	2,562	3,300
TOTAL	8,404	9,035	10,013	10,731	11,477	12,167	13,189	15,461	17,310	22,818

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Housing
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	433	523	689	545	464	509	601	684	1,030	1,300
Current Transfers	5,491	6,627	8,858	8,984	10,042	11,127	13,511	13,702	16,990	20,100
Capital Formation	6,444	7,777	10,402	11,335	15,125	17,168	19,638	16,085	21,600	25,400
Capital Transfers	4,954	5,979	8,001	8,282	9,214	10,949	13,343	11,417	13,270	16,400
TOTAL	17,322	20,906	27,950	29,146	34,845	39,753	47,093	41,888	52,890	63,200

TABLE A.2.1—continued
Public Expenditure by Programme 1963/4–1972/3
Other Community and Social Services
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	3,373	3,913	4,557	4,985	5,738	6,636	7,792	9,328	10,792	11,360
Current Transfers	330	384	392	404	483	699	948	866	1,240	1,600
Capital Formation	2,646	3,069	3,604	2,860	2,937	4,021	5,599	6,842	6,795	7,560
Capital Transfers	266	307	348	223	156	137	495	440	300	200
TOTAL	6,615	7,673	8,901	8,472	9,314	11,493	14,834	17,296	19,127	20,710

Agricultural Support
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	7,029	8,583	9,813	10,292	11,090	12,237	13,876	16,080	18,983	21,827
Current Transfers										
(1) Subsidies	17,463	21,322	24,349	27,980	38,460	44,005	51,901	54,648	58,968	58,528
(2) Other	126	154	141	149	180	202	215	258	284	300
Capital Formation	1,418	1,732	2,002	1,509	1,743	2,134	2,622	2,058	1,959	1,654
Capital Transfers	5,485	6,696	7,638	5,058	7,633	7,783	8,244	6,443	8,457	9,432
TOTAL	31,521	38,487	43,943	44,988	59,106	66,361	76,858	79,487	88,651	91,741

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TABLE A.2.1—continued
Public Expenditure by Programme 1963/4-1972/3

	Forestry (£000, Current Prices)										
	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	
Current Expenditure on Goods and Services	2,297	2,701	2,796	2,242	2,421	2,702	2,974	3,761	4,371	4,671	
Current Transfers	0	0	0	0	0	0	0	0	78	80	
Capital Formation	1,025	1,205	1,247	1,665	1,981	1,887	2,482	3,071	3,024	3,605	
Capital Transfers	16	20	17	15	21	14	15	18	15	14	
TOTAL	3,338	3,926	4,060	3,922	4,423	4,603	5,471	6,850	7,488	8,370	

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Fishing
(£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	215	216	279	305	342	472	500	542	658	856
Current Transfers	154	154	200	273	291	333	368	420	474	560
(a) Subsidies										
(b) Other	4	4	5	13	4	4	14	6	8	6
Capital Formation	13	13	17	10	5	0	5	3	21	65
Capital Transfers	300	300	389	365	815	560	737	1,100	1,280	2,330
TOTAL	686	687	890	966	1,457	1,369	1,624	2,071	2,441	3,817

TABLE A.2.1—continued
Public Expenditure by Programme 1963/4-1972/3
Mining, Manufacturing and Construction
(£000, Current Prices)

Current Expenditure on Goods and Services	1,106	1,383	1,778	1,864	2,188	2,988	3,452	4,247	5,141	6,324
Current Transfers	1,810	2,263	2,787	2,835	1,334	991	1,071	2,007	2,310	4,100
Capital Formation	0	0	0	460	641	928	1,317	1,218	1,850	3,000
Capital Transfers	7,141	8,925	11,149	9,723	8,887	16,365	20,145	24,588	39,370	20,700
TOTAL	10,057	12,571	15,714	14,882	13,060	21,272	25,985	32,060	48,671	34,124

Transport and Communications
(£000, Current Prices)

Current Expenditure on Goods and Services	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Transfers	10,553	13,531	13,613	14,335	15,007	17,086	19,347	24,226	28,410	32,000
Capital Formation	1,875	2,405	2,437	2,827	2,841	3,171	3,072	8,360	8,980	13,500
Capital Transfers	13,632	17,478	17,586	16,787	16,895	18,493	22,558	26,332	28,560	33,200
Capital Transfers	1,931	2,476	2,511	2,090	1,556	594	19,458	2,419	3,430	4,400
TOTAL	27,991	35,890	36,147	36,039	36,299	39,344	64,435	61,337	69,380	83,100

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TABLE A.2.1—continued
Public Expenditure by Programme 1963/4–1972/3
Other Economic Services
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	4,943	5,940	7,137	7,452	8,434	9,868	11,378	13,466	16,832	21,216
Current Transfers	0	0	0	44	67	171	1,587	1,334	310	300
Capital Formation	50	50	60	69	92	84	43	84	100	100
Capital Transfers	1,236	1,485	1,773	1,670	2,345	2,798	3,947	4,563	5,730	4,900
TOTAL	6,629	7,475	8,970	9,235	10,938	12,921	16,955	19,447	22,972	26,516

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Public Debt
 (£000, Current Prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
	40 500	49 200	42 314	45 906	59 302	78 627	72 325	94 020	90 058	113 314

TABLE A.2.2
Price Indexes for Public Expenditures

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Current Expenditure on Goods and Services	0.722	0.841	0.875	0.910	0.929	1.000	1.086	1.231	1.354	1.537
Gross Fixed Capital Formation	0.799	0.860	0.902	0.928	0.963	1.000	1.082	1.217	1.384	1.531
Dwellings	0.788	0.849	0.914	0.928	0.973	1.000	1.090	1.173	1.403	1.556
Current Transfers	0.799	0.852	0.890	0.926	0.952	1.000	1.076	1.167	1.268	1.371
Capital Transfers	0.823	0.874	0.905	0.933	0.966	1.000	1.078	1.166	1.294	1.421

TABLE A.2.3
Public Expenditure by Programme at Constant Prices
Defence
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	11,645	13,089	13,781	12,658	13,378	13,411	14,004	15,608	17,104	20,049
Current Transfers	387	459	284	235	236	231	300	280	269	399
TOTAL	12,032	13,648	14,065	12,893	13,614	13,642	14,304	15,888	17,373	20,448

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TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Justice
 (£000, 1968 market prices)

Current Expenditure on Goods and Services	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Transfers	12,091	11,500	11,688	12,354	12,426	12,743	13,503	14,585	16,032	18,687
Gross Capital Formation	11	14	22	15	16	21	29	49	63	73
TOTAL	12,635	12,073	12,330	12,824	13,012	13,023	13,862	15,015	16,557	19,740

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Other General Government Services
 (£000, 1968 market prices)

Current Expenditure on Goods and Services	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Transfers	10,509	10,266	11,021	11,545	12,029	12,167	13,436	15,011	16,871	18,069
Gross Capital Formation	968	998	1,139	1,188	1,839	1,392	1,027	1,123	1,253	1,371
Capital Transfers	1,291	1,320	1,400	1,101	1,253	1,093	2,216	3,024	3,207	7,317
TOTAL	0	0	14	14	18	23	13	10	9	8
TOTAL	12,768	12,584	13,574	13,848	15,139	14,675	16,692	19,168	21,340	26,766

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Education
 (£000, 1968 market prices)

Primary Education	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	25,749	23,678	25,891	26,753	26,910	28,689	31,366	33,296	35,098	37,386
Current Transfers	641	642	593	454	629	406	756	829	715	1,304
Gross Capital Formation	4,676	4,660	5,045	4,310	5,529	5,775	4,736	4,938	4,036	3,468
Capital Transfers	360	363	401	416	522	191	108	106	287	598
TOTAL	31,326	29,243	31,930	30,933	33,690	34,961	36,956	39,169	40,135	42,756
Secondary Education										
Current Expenditure on Goods and Services	184	169	184	241	1,197	1,979	491	516	631	909
Current Transfers	6,077	6,112	6,639	6,900	7,973	10,374	12,441	13,955	14,320	16,853
Gross Capital Formation	0	0	176	479	265	275	138	350	747	2,249
Capital Transfers	60	61	66	173	2128	2,917	3,127	2,686	1,860	1,446
TOTAL	6,321	6,342	7,065	7,793	11,563	15,545	16,197	17,507	17,668	21,457
University and Higher Education										
Current Transfers	2,638	2,653	2,908	3,682	4,639	5,065	5,639	6,304	7,782	8,348
Capital Transfers	678	685	759	668	1,029	2,503	2,997	2,353	2,780	2,954
TOTAL	3,316	3,338	3,667	4,350	5,668	7,568	8,636	8,657	10,562	11,302

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TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Education—continued
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Other Education										
Current Expenditure on Goods and Services	68	63	67	68	74	96	102	110	142	165
Current Transfers	515	518	556	557	515	528	590	674	678	788
Gross Capital Formation	0	0	0	0	45	490	1,672	1,037	622	767
Capital Transfers	0	0	0	0	0	0	17	22	103	409
TOTAL	583	581	623	625	634	1,114	2,381	1,843	1,545	2,129

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Health
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	30,208	32,546	35,361	37,828	39,868	41,621	46,542	50,332	53,629	61,064
Current Transfers	0	0	0	0	0	1,080	2,555	4,071	7,398	6,853
Gross Capital Formation	755	864	943	1,851	2,135	1,784	1,793	2,014	1,806	2,286
Capital Transfers	0	424	442	1,072	1,036	1,000	927	868	1,005	2,112
TOTAL	30,963	33,934	36,746	40,751	43,039	45,485	51,817	57,275	63,838	72,315

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Social Security and Welfare
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	3,536	3,452	3,802	4,188	4,140	4,362	4,615	4,591	5,097	5,286
Current Transfers										
(i) Old Age Pensions	19,422	19,946	21,601	23,089	23,725	25,336	27,053	29,303	30,614	31,201
(ii) Unemployment Relief	6,717	6,823	7,337	9,192	10,709	12,847	13,771	17,052	17,534	18,225
(iii) Other	28,788	31,797	34,663	37,100	36,380	41,607	48,040	53,797	59,376	65,528
Gross Capital Formation	0	0	16	12	5	8	7	6	7	0
TOTAL	58,463	62,018	67,419	73,581	74,959	84,160	93,486	104,749	112,628	120,240

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Public Service Pensions
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services										
(i) Civil Service	2,292	1,988	2,228	2,257	2,352	2,341	2,355	2,335	2,777	3,353
(ii) Army	2,181	1,927	2,000	1,932	2,020	2,015	2,042	2,250	2,439	2,812
(iii) Garda	2,451	2,567	2,619	2,767	2,797	2,694	2,614	2,899	2,857	3,512
(iv) Teachers	2,156	2,019	2,152	2,272	2,374	2,318	2,440	2,797	2,826	3,030
(v) Local Authority	2,548	2,241	2,446	2,565	2,807	2,799	2,697	2,274	1,893	2,148
TOTAL	11,628	10,742	11,445	11,793	12,350	12,167	12,148	12,555	12,792	14,855

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Housing

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	600	622	788	599	499	509	553	555	761	846
Current Transfers	6,875	7,780	9,956	9,703	10,544	11,127	12,552	11,743	13,371	14,853
Gross Capital Formation	8,158	9,146	11,068	12,185	15,594	17,168	18,008	13,753	15,422	16,281
Capital Transfers	6,272	7,031	8,513	8,903	9,500	10,949	12,236	9,762	9,475	10,512
TOTAL	21,905	24,579	30,325	31,390	36,137	39,753	43,349	35,813	38,029	42,292

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Other Community and Social Services
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	4,672	4,653	5,209	5,479	6,174	6,636	7,176	7,574	7,975	7,395
Current Transfers	413	451	441	436	507	699	881	759	976	1,166
Gross Capital Formation	3,313	3,569	3,997	3,083	3,049	4,021	5,173	5,460	6,036	4,930
Capital Transfers	323	351	385	239	162	137	459	378	232	141
TOTAL	8,721	9,024	10,032	9,237	9,892	11,493	13,689	14,171	14,219	13,632

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Agriculture

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	9,735	10,205	11,216	11,311	11,933	12,237	12,780	13,057	14,028	14,209
Current Transfers										
(i) Subsidies	21,864	25,032	27,368	30,218	40,383	44,005	48,216	46,833	46,408	42,687
(ii) Other	158	181	158	161	189	202	200	221	224	219
Gross Capital Formation	1,775	2,014	2,200	1,627	1,809	2,134	2,423	1,692	1,414	1,080
Capital Transfers	6,664	7,660	8,448	5,432	7,908	7,783	7,642	5,528	6,537	6,640
TOTAL	40,196	45,092	49,410	48,749	62,222	66,361	71,281	67,331	68,611	64,816

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Forestry
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	3,181	3,211	3,196	2,464	2,605	2,702	2,739	3,054	3,230	3,041
Current Transfers	0	0	0	0	0	0	0	0	61	58
Gross Capital Formation	1,283	1,401	1,383	1,795	2,056	1,887	2,293	2,524	2,183	2,354
Capital Transfers	19	23	19	16	22	14	14	15	12	10
TOTAL	4,483	4,635	4,598	4,275	4,683	4,603	5,046	5,593	5,488	5,463

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Fishing

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	298	257	319	335	368	472	460	440	486	557
Current Transfers										
(i) Subsidies	193	181	225	295	306	333	342	360	373	408
(ii) Other	5	5	6	14	4	4	13	5	6	4
Gross Capital Formation	16	15	19	11	5	0	5	2	15	42
Capital Transfers	365	343	430	391	844	560	683	942	989	1,040
TOTAL	877	801	999	1,046	1,527	1,389	1,503	1,749	1,869	2,651

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Mining, Manufacturing and Construction

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	1,532	1,644	2,032	2,049	2,354	2,988	3,179	3,449	3,799	4,117
Current Transfers	2,266	2,657	3,133	3,062	1,401	991	995	1,719	1,818	2,989
Gross Capital Formation	0	0	0	496	665	928	1,217	1,001	1,336	1,959
Capital Transfers	8,676	10,210	12,331	10,423	9,207	16,365	18,674	21,097	30,433	14,573
TOTAL	12,474	14,511	17,496	16,030	13,627	21,272	24,065	27,266	37,386	23,638

TABLE A.2.3—continued
Public Expenditure by Programme at Constant Prices
Transport and Communications

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	14,616	16,088	15,560	15,764	16,148	17,086	17,819	19,672	20,995	20,832
Current Transfers	2,348	2,823	2,739	3,053	2,983	3,171	2,854	7,165	7,067	9,842
Gross Capital Formation	17,067	20,327	19,503	18,096	17,537	18,493	20,844	21,645	20,620	21,680
Capital Transfers	2,346	2,833	2,777	2,240	1,612	594	18,121	2,076	2,651	3,098
TOTAL	36,377	42,071	40,579	39,143	38,280	39,344	59,638	50,568	51,333	55,452

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Other Economic Services
 (£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
Current Expenditure on Goods and Services	6,846	7,063	8,158	8,190	9,075	9,868	10,479	10,936	12,439	13,812
Current Transfers	0	0	0	48	70	171	1474	1,143	244	219
Gross Capital Formation	63	58	67	74	80	84	40	72	77	70
Capital Transfers	1,502	1,699	1,961	1,790	2,429	2,798	3,659	3,915	4,429	3,450
TOTAL	8,411	8,820	10,186	10,102	11,654	12,921	15,652	16,065	17,189	17,551

TABLE A.2.3—continued

Public Expenditure by Programme at Constant Prices

Public Debt

(£000, 1968 market prices)

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3
	50,706	57,760	47,561	49,578	62,267	78,627	67,189	80,575	70,875	82,806

Chapter 4. Use of National Resources, 1986/7

(1) *The Fully Employed Labour Force in 1986/7.*

Our estimates of the labour force in 1986/7 derive from "Population and Employment Projections 1971-86" (*National Economic and Social Council*, Dublin, The Stationery Office). The total labour force is an average of the alternative totals given in Table 3, i.e. of 1,303,600 and 1,345,000. An average of the total for the non-farm labour force in Table 4 (of 1,163,000 and 1,204,400) gives the total to which the 4% unemployment target is applied, giving an estimate of 1,135,350 in non-farm occupations in 1986/7. When added to the estimate of the farm labour force (140,600) this gives a total employed labour force in 1986/7 of 1,276,950.

(2) *The Terms of Trade.*

Table A.4.1 shows the movement in the terms of merchandise trade between 1968 and the third quarter of 1974.

TABLE A.4.1

Terms of Trade, 1968-1974

	(1) Index of Import Unit Value 1968 = 100	(2) Index of Export Unit Value 1968 = 100	(3) Terms of Trade (2) - (3) 1968 = 100
1968	100	100	100
1969	104.0	106.1	102.0
1970	111.1	113.1	101.8
1971	117.8	121.8	103.4
1972	123.2	138.2	112.0
1973	139.1	169.1	121.5
1974 1st quarter	187.9	192.5	103.6
2nd quarter	202.6	206.4	101.9
3rd quarter	216.3	212.1	98.0

Source: *Quarterly Economic Commentary*, Table 2, p. 35, June 1975. Economic and Social Research Institute, Dublin.

(3) *The Marginal Real Private Capital-Output Ratio:*

Table A.4.2 shows the value of the marginal real private output ratio, lagged by one year, for 1963–1971.

TABLE A.4.2

Marginal Real Private Capital-Output Ratio

	I_{pt}	(1968 prices)
	$GNP_{t+1} - GNP_t$	(1968 prices)
1963		3.648
1964		4.947
1965		16.764
1966		2.730
1967		1.786
1968		2.845
1969		7.205
1970		5.990
1971		4.722

The large value for 1965 in Table A.4.2 is the result of the relatively small increase in real output between 1965 and 1966. This was only £10.3 million at 1968 prices, compared to increases of £31.5 million between 1964 and 1965 and £39.2 million between 1963 and 1964. The 1965 value was excluded in the calculation of the average value of the ratio for the historic period.

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