

**NATIONAL ECONOMIC AND SOCIAL COUNCIL
CONSTITUTION AND TERMS OF REFERENCE**

1. The main task of the National Economic and Social Council shall be to provide a forum for discussion of the principles relating to the efficient development of the national economy and the achievement of social justice, and to advise the Government, through the Taoiseach on their application. The Council shall have regard, *inter alia*, to:

- (i) the realisation of the highest possible levels of employment at adequate reward.
- (ii) the attainment of the highest sustainable rate of economic growth.
- (iii) the fair and equitable distribution of the income and wealth of the nation,
- (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.

2. The Council may consider such matters either on its own initiative or at the request of the Government.

3. Members of the Government shall be entitled to attend the Council's meetings. The Council may at any time present its views to the Government, on matters within its terms of reference. Any reports which the Council may produce shall be submitted to the Government and, together with any comments which the Government may then make thereon, shall be laid before each House of the Oireachtas and published.

4. The membership of the Council shall comprise a Chairman appointed by the Government in consultation with the interests represented on the Council,
Ten persons nominated by agricultural organisations,
Ten persons nominated by the Confederation of Irish Industry and the Irish Employers' Confederation,
Ten persons nominated by the Irish Congress of Trade Unions,
Ten other persons appointed by the Government, and
Six persons representing Government Departments comprising one representative each from the Departments of Finance, Agriculture, Industry, Commerce and Tourism, Labour and Environment and one person representing the Departments of Health and Social Welfare.

Any other Government Department shall have the right of audience at Council meetings if warranted by the Council's agenda, subject to the right of the Chairman to regulate the numbers attending.

5. The term of office of members shall be for three years renewable. Casual vacancies shall be filled by the Government or by the nominating body as appropriate. Members filling casual vacancies may hold office until the expiry of the other members' current term of office and their membership shall then be renewable on the same basis as that of other members.

6. The Council shall have its own Secretariat subject to the approval of the Taoiseach in regard to numbers, remuneration and conditions of service.

7. The Council shall regulate its own procedure.

NATIONAL ECONOMIC AND SOCIAL COUNCIL

Industrial Policy and Development: A Survey of Literature from the Early 1960s to the Present

by

Eoin J O'Malley

DUBLIN:
PUBLISHED BY THE STATIONERY OFFICE

To be purchased from
GOVERNMENT PUBLICATIONS SALE OFFICE, G.P.O. ARCADE, DUBLIN 1
from the Council, or through any Bookseller.

Price: £1.50

(Pri. 9010)

NATIONAL ECONOMIC AND SOCIAL COUNCIL MEMBERS

Chairman: Dr. N. Whelan

Nominated by the Government:

Prof. D. Hannan	Mr. G. A. Meagher	Mr. J. O'Mahony
Dr. B. Hensey	Senator N. Mulcahy	Prof. W. J. L. Ryan
Mr. J. Holloway	Dr. C. H. Murray	Mr. J. Simpson
Mr. B. McDonald	Mr. T. Ó Cearbhaill	Senator T. K. Whitaker
	Mr. T. Ó Cofaigh	

Nominated by the Confederation of Irish Industry

Mr. F. A. Casey	Mr. J. McCabe	Mr. C. Power
Mr. L. Connellan	Mr. M. McStay	

Nominated by the Irish Congress of Trade Unions

Mr. P. Cardiff	Mr. R. Rice	Mr. H. O'Sullivan
Mr. J. Carroll	Mr. D. Murphy	Mr. G. Quigley
Mr. J. Hall	Mr. P. Murphy	Mr. R. Roberts
	Mr. D. Nevin	

Nominated by the Irish Co-operative Organisation Society

Mr. J. Buttimer	Mr. P. Kelly	Mr. J. McCarrick
-----------------	--------------	------------------

Nominated by the Irish Creamery Milk Suppliers' Association

Mr. P. Hourigan	Mr. C. Dolan	Mr. T. J. O'Callaghan
-----------------	--------------	-----------------------

Nominated by the Irish Employers' Confederation

Mr. J. Walmsley	Dr. E. McCarthy	Mr. J. J. O'Reilly
Mr. J. Jennings	Mr. P. Murphy	

Nominated by the Irish Farmers' Association

Mr. J. Murphy	Mr. P. Dunne
Mr. D. Cashman	Mr. J. Richards-Orpen

CONTENTS

PREFACE

vii

**Industrial Policy and Development:
A Survey of Literature from the Early 1960s to the Present**

by Eoin J O'Malley

	<i>Page</i>
Section I INTRODUCTION	1
Section II BACKGROUND—IRISH INDUSTRY BEFORE THE 1960s	3
Section III PRINCIPAL CHANGES IN INDUSTRIAL POLICY	6
III.1 Policy Measures for Industrial Development	6
The 1950s	6
Preparations for Free Trade	7
Financial Incentives and IDA Programmes	8
Tax Policies	12
Other Policies Relating to Industrial Development	13
Trends in Industrial Policy	14
III.2 The Reasons Behind Ireland's Industrial Strategy	15
Section IV INDUSTRIAL DEVELOPMENT IN THE 1960s AND 1970s	20
IV.1 The Scale of Industrial Growth	20
IV.2 Some Effects of Policy on Industry as a Whole	23
Overall Effects of Policy	23
Demand Management	25
Economic Planning	27
Industry Grants and Project Appraisal	29
Taxation Policies	33
IV.3 Foreign Direct Investment in Industry	34
The Importance of Foreign Industry	34
Factors Influencing New Foreign Investment	36
Trends in Closures and Job Losses	42
Expansion of Established Foreign Industries	44
The Secondary Impact of Foreign Industry on the Domestic Economy	44
Political Dependence and National Sovereignty	51

	<i>Page</i>
IV.4 Irish Domestic Industry	53
Irish Industry in the Late 1950s	53
The Move to Free Trade	54
Technology in Irish Industry	61
IV.5 A Dualistic Industrial Structure?	65
Section V PROSPECTS FOR INDUSTRIAL DEVELOPMENT	68
V.1 Labour Force Projections and Industrial Job Requirements	68
The Official Targets	68
Micro-electronic Technology	70
V.2 Sources of Industrial Expansion and Possible Constraints	72
Sources of Expansion	72
Possible Constraints on Industrial Development	75
Section VI CONCLUSIONS	83
APPENDIX	88
REFERENCES	92

PREFACE

The Council is undertaking a study of policies for industrial development. This study will give rise to a Council report which will evaluate and make recommendations on industrial policy. In this context a number of background studies on matters relating to industrial policy have been initiated by the Council. The first of these is a survey of the literature and of policy changes in Irish industrial policy since the early 1960s. It has been undertaken by Mr. Eoin J O'Malley of the Institute of Development Studies, University of Sussex. Mr. O'Malley's findings are published in this report.

SECTION I: INTRODUCTION

This paper was commissioned by the NESC as the first stage of a project which will evaluate industrial policy in Ireland and consider possible changes. The aim of this paper is to review briefly the principal changes in industrial policy which have occurred in the past two decades, and to review the literature and recommendations on those policies and on industrial development covering the period since the early 1960s. The first draft of this paper was written in October and November 1979, and some further additions and revisions were made in June and July 1980.

Since many areas of economic policy have some bearing on the development of manufacturing industry, the range of literature to be covered in this review is potentially very wide. Consequently, for the sake of brevity, it will be necessary to concentrate mainly on matters of central importance to the issue. For instance, the literature on demand management or wage bargaining — which arguably influence long term industrial development — will not be examined in detail, although some of the main points covered in that literature will be mentioned. One aspect of industrial policy which will receive little consideration here is the area of policies designed to ensure an adequate dispersal of manufacturing industry in the interests of balanced regional growth, for that aspect has already been, and continues to be, an area of particular study by the National Economic and Social Council.

The next Section deals very briefly with the development of Irish industry before the 1960s. This is followed by a Section on the principal changes in industrial policy since then including (a) an outline of the measures themselves, and (b) the official economic diagnosis which lay behind those measures as well as some differing views from other writers on the situation of the Irish economy around the late 1950s and the appropriate policy response. Section IV concerns the process of growth of industry in Ireland since the late 1950s; after a brief outline of the dimensions of this growth, differing views on the effects of policy measures on some aspects of the manufacturing sector as a whole are considered. Then the literature particularly concerning the growth of foreign direct investment and Irish domestic industry is treated in turn, followed by a review of the proposition that a dualistic industrial structure has developed. Section V covers literature on the recent performance and prospects of manufacturing industry, particularly with a view to employment

needs. The final Section attempts to identify the main areas of concern for the formulation of future policy which arise in the literature, to identify areas for further research and to point out suggestions which have been made for alterations of policy.

A number of people have helped in drawing my attention to and providing copies of some of the material surveyed, and in offering valuable comments on earlier drafts of this paper. I would like to acknowledge particularly the assistance of John Blackwell of the NESC Secretariat, as well as Joe Durkan, Anthony Foley, Kieran Kennedy, Brian O'Loughlin, Miceal Ross, John Teeling and several members of the National Economic and Social Council. The responsibility for any errors and for the views expressed remains my own. I am indebted to the Economic and Social Research Institute for the use of their library and other facilities.

SECTION II: BACKGROUND—IRISH INDUSTRY BEFORE THE 1960s

By the early nineteenth century Ireland had quite a substantial industrial sector by the standards of most countries at that time, apart from England. This was indicated by the fact that, according to the 1821 census, more than one third of the Irish counties, including six outside Ulster, had a larger number of workers in manufacture, trade or handicraft than in agriculture: and in the 1841 census, 700,000 people — almost one quarter of those gainfully occupied — reported that they were engaged in textile manufacture. But, with the exception of the North-east, the numbers employed in industry declined during the nineteenth century, starting with the contraction of textiles during and after the 1820s and followed by the contraction of many other sectors later in the century. By the 1920s the industrial labour force of the Irish Free State was little over 100,000 strong, or about 7% of those gainfully occupied.

A number of different explanations of this decline of industry during the era of free trade with Great Britain have been suggested. These explanations include some which stress inadequacies which were essentially internal to the Irish economy, such as Lee's (1973) emphasis on poor entrepreneurship. But some other explanations of the decline, particularly Cullen (1976), suggest that local conditions were not markedly unfavourable for industrial development; rather the main problem was caused by proximity to, and free trade with Britain, the leader of the Industrial Revolution at a time when the growing importance of economies of scale, external economies arising from industrial centralisation and proximity to large markets were giving increasing competitive advantages to the earlier established and larger industries of Great Britain.

These differing views on the causes of Irish industrial decline are of more than purely historical interest since they correspond to a major difference of emphasis in theoretical approaches to the problem of industrial underdevelopment in the modern world.

One type of theoretical approach, which could perhaps be identified as the orthodox mainstream, would consider that given favourable local economic and social conditions within an underdeveloped economy, the operation of the market with relatively little intervention can be expected to lead to industrial development. Others, however, would consider that the presence of existing advanced industrial economies, possessing the advantages that arise from

economies of scale, external economies, proprietary technology, established markets, political influence and other factors can be a serious constraint on indigenous industrial growth in late-developing economies. Some would argue, for example, that these advantages of established industrial economies give them a strong competitive edge in most industrial sectors over aspiring developing economies in a relationship of free trade, so that the development of private indigenous industries in most major sectors would be very limited. Depending on one's interpretation of the nineteenth century decline of Irish industry, it would be possible to regard that historical experience as consistent with either of the above approaches to the problem of indigenous industrial development in modern Ireland.

The emphasis of the first approach referred to above would lead to the policy conclusion that development efforts in modern Ireland could effectively concentrate mainly on encouraging market forces to operate efficiently by such means as training and encouraging private entrepreneurs, ironing out market distortions such as an inappropriate relation between the cost of capital and labour, or ensuring the provision of adequate infrastructural facilities. The second approach, on the other hand, leads towards the policy conclusion that, if the country is committed to free trade, then the development of native industry requires considerably more active and co-ordinated intervention by government and State enterprises in initiating and sustaining industrial growth; this intervention would concentrate perhaps on selected sectors where genuine competitive advantages might be developed in the long run.

Much of the literature surveyed in this paper has appeared to accept, sometimes explicitly but often only by implication, that market forces with appropriate adjustments and judicious subsidisation of industries initially can provide the basis for adequate industrial development. But some of the literature, particularly in recent years, has moved towards the view that much of native Irish private industry may take a very long time adjusting and developing before it will be capable of competing effectively in export markets to any great extent, increasing its rate of growth and expanding its employment. Consequently, some writers have suggested that one can recognise a persistent dualistic structure in industry in Ireland, with native industry performing relatively poorly.

A large part of the native Irish industry which has been in operation in the past twenty years had its origins in the protectionist phase which began in earnest in the early 1930s and began to end in the 1960s. The imposition of heavy tariffs and other trade barriers in this period was followed by quite rapid industrial growth, with employment in industry more than doubling between 1931 and 1953. The vast majority of these industries were producing very

largely for the domestic market, importing much of their inputs and generally engaging in low value-added operations. It was only during the 1950s that industrial exports began to grow significantly, although in absolute terms they remained small in that decade. In this situation, with agricultural exports, tourism and other sources of foreign exchange failing to expand rapidly enough while demand for imports of industrial inputs and consumer products continued to grow, balance of payments deficits caused increasing concern to the government in the early 1950s. The official reaction, which some have argued was an over-reaction (as we will see later), was a policy of severe deflation which resulted in slow growth, decline in industrial employment and the highest rates of emigration since the 1880s.

Recovery from the recession, followed by a sustained increase in the rate of economic growth compared with the preceding years, began in 1958. The growth of the industrial sector was particularly prominent in the new period of economic expansion. The next Section outlines the policy measures which were associated with this industrial growth (some of them dating back before 1958), and considers a number of views on the reasons for, and the appropriateness of, these measures.

SECTION III: PRINCIPAL CHANGES IN INDUSTRIAL POLICY

III.1. Policy Measures for Industrial Development

The 1950s

Many of the policy measures which are generally regarded as having contributed to the industrial growth of the 1960s and 1970s were taken before that time. (See Appendix for a chronology of policy changes since 1950). These measures included the establishment in 1949 (legally enacted in 1950) of the Industrial Development Authority (IDA) within the Department of Industry and Commerce. The IDA's main functions included the initiation of proposals for the creation of industries and the attraction of foreign industrialists to the country, but not the power to give grants. This was followed by the establishment, under the *Undeveloped Areas Act*, 1952, of a Grants Board (An Foras Tionscal) empowered to administer a scheme of non-repayable cash grants for the establishment and development of industries in Designated (undeveloped) Areas in the West. The *Industrial Grants Act*, 1956, extended the area where grants for new industries could be paid to the whole country; under this Act the IDA was empowered to give grants towards the cost of industrial buildings and land in the non-Designated Areas. Three years later the IDA's grant-giving function in these areas was transferred to An Foras Tionscal under the *Industrial Grants Act*, 1959, which also allowed major expansions of existing plants to qualify for grant assistance.

By 1959 grants were available for new industries or major expansions at the maximum rates of 50% of Plant and Machinery costs and 100% of Buildings and Land costs in the Designated (Undeveloped) Areas. Elsewhere, grants were available at the rate of one third of Plant and Machinery costs and two thirds of Buildings and Land costs, where the grant would be less than £250,000¹.

Other important industrial policy measures in the 1950s included the introduction of Export Profits Tax Relief (E.P.T.R.), which is also referred to as Export Sales Relief, and the easing of controls on foreign direct investment. The Finance Act of 1956 granted 50% tax remission on profits earned on increases in export sales over the 1956 (or 1955) level, and in 1958 the proportion of tax remission was raised to 100%. The Finance Act of 1960

¹Further details on the introduction of these and some later grants can be found in NESC Report No. 4, 1975, and in the *Survey of Grant-Aided Industry*, 1967.

extended the period of tax relief from 10 to 15 years and diminishing concessions for a further 5 years were also granted. Foreign industrialists were encouraged by the easing in 1958 of the restrictions imposed by the *Control of Manufactures Acts* which had been intended to keep control of industry in the hands of Irish nationals. These Acts were repealed completely by an Act of 1964 which provided that they would cease to operate in 1968, so that there has been no restriction on foreign ownership or control since that time, nor on the repatriation of profits.

The publication of *Economic Development* in 1958 and the introduction of the first *Programme for Economic Expansion* in the same year were the first steps in Irish economic planning which has often been regarded as an important factor in accounting for later economic growth. But the importance of planning and the nature of its influence have been subjects of some dispute, and this issue will be reviewed later. But whatever about the importance of planning as such, the first Programme, which was clearly influenced by *Economic Development*, did mark a distinct change in policies and official attitudes which will be discussed further in Section III.2.

Preparations for Free Trade

Many of the main features of the industrial policies of the 1960s and 1970s were already in place by 1959, but there have been significant changes, including the movement to free trade (already envisaged by the late 1950s) and the development of a more comprehensive range of incentives and assistance increasingly concentrated under the brief of the IDA. The movement to free trade was approached in the context of Ireland's intention to apply for EEC membership. But after the collapse of the EEC negotiations in 1963, two unilateral across-the-board tariff reductions of 10% each were implemented in 1963 and 1964. This was followed by the signing of the Anglo-Irish Free Trade Area Agreement (AIFTA) in 1965 which provided for the establishment of free trade between the two countries in nearly all manufactures by 1975, to be implemented by means of ten annual tariff reductions of 10% each. In 1973, Ireland acceded to full EEC membership which provided for the implementation of free trade with all EEC countries in nearly all manufactures by 1978. As a result of these steps, the level of protection of industry fell from an average *nominal* tariff of 25% and average *effective* tariff of 79% in 1966 (much higher rates than were at that time prevalent in the U.K. or EEC) to one fifth of its original level within 10 years (see McAleese, 1971 and 1978a).² With the completion of the transition to EEC membership few Irish industries are

²The "effective" tariff is a measure of the protection given by a nominal tariff on an article to that stage of the manufacturing process which actually occurs in Ireland. Since the value-added in an Irish manufacturing process would generally be somewhat less than the total value of the final product, a given nominal tariff on imports of that final product would in fact imply a higher rate of effective protection for the Irish manufacturers.

now protected against competition from other member countries, while much wider markets are now open to manufactures produced in Ireland.

The prospect of switching to free trade led to the appointment, by the Government, of the Committee on Industrial Organisation (CIO) in 1961. The membership of the CIO was drawn from employers, trade unions and the public service and its brief was to assess the state of Irish industry and to make a critical appraisal of the measures that might have to be taken to adapt Irish industry to conditions of more intense competition. The Committee concluded that many industries were at that time ill-prepared for free trade and that quite extensive adaptation was required. The problems noted on quite a wide scale included poor managerial techniques, shortages of skilled and managerial labour, old buildings and equipment, small scale, and short production runs due to small market size and a wide diversity of products leading to relatively high production costs (see CIO, 1965 and Brock 1963/64 and 1965). It was thought that, in the absence of adaptation measures, 21 out of 22 industries surveyed would experience some losses of production and employment in free trade conditions. The principal adaptation measures recommended included the formation of Adaptation Councils for each industry which should encourage co-operation rather than competition among firms in activities such as purchasing materials, marketing, selecting areas of specialisation and promoting the amalgamation of firms. As well as this, an adaptation grants scheme began in 1963 with the aim of helping to meet the costs of the necessary structural changes. The grants were payable at a rate of up to 25% of adaptation costs and about £15 million was paid in grants under this scheme between 1963 and 1968 before it was replaced by the re-equipment grants programme under the IDA in 1969.

Financial Incentives and IDA Programmes

A number of changes were also made in the structure of financial incentives for new industry during the 1960s and 1970s. Under the *Undeveloped Areas (Amendment) Act, 1963* and the *Industrial Grants (Amendment) Act, 1963*, the distinction between grants given for the categories of Buildings and Land and Plant and Machinery was abolished; the distinction between the Designated Areas and non-Designated Areas was also abolished for large grants in excess of £250,000, as well as for smaller grants in exceptional cases. Thus the maximum grant rates became (a) for the Designated Areas — two thirds of capital costs where the grant was less than £250,000, and 50% or £1,000 per job (whichever was less) for larger projects; (b) for non-Designated Areas — the same grant rate for large projects, and 50% where the grant was less than £250,000, or up to 66⅔% in exceptional cases. In 1966, the *Industrial Grants (Amendment) Act* of that year empowered An Foras Tionscal to establish and administer industrial estates complete with advance factories in a few selected development centres. In 1966, too, the IDA was formally given

responsibility for handling new industry proposals by Irish industrialists and for undertaking the associated promotional work. This resulted in the introduction, in 1967, of the Small Industries Programme.

The system of industrial promotion and grant incentives which had developed piecemeal over the previous two decades was rationalised by the *Industrial Development Act, 1969*. The major organisational change was the merger of An Foras Tionscal and the IDA in one body called the IDA, which then combined in one body, acting under the Minister for Industry and Commerce, all grant-giving and promotional functions for the whole country, except for the activities of SFADCO at Shannon and Gaeltarra Eireann in the Gaeltacht. Under the 1969 Act the legal maxima of grants were reduced from the 1963 provisions. The new grant rates were up to 40% of capital costs in the Designated areas and up to 25% elsewhere. In exceptional cases a further grant of 20% was available at the IDA's discretion in all areas, giving legal maxima of 60% and 45% in Designated and non-Designated Areas, respectively. The IDA's re-equipment grants, which replaced the old adaptation grants, were payable at rates of up to 35% in Designated Areas and 25% elsewhere. In addition, the Act provided an increased range of incentives including grants towards leased assets, subsidisation of interest rates, the guaranteeing of loans, and grants towards research and development of up to 50% or £15,000 per project (whichever was less). Although the legal maxima of the basic grants were reduced by the 1969 Act, it was argued that the new maximum rates remained higher than the average rates actually paid under the 1963 legislation. For this reason, combined with the new incentives, the 1969 legislation could be represented as a more attractive package than the previous system.

Although the legal limit on standard new industry grants has not been changed from the levels of 60% and 45% referred to above, the IDA has in the 1970s generally implemented an "administrative" limit of 50% and 35% in the Designated and non-Designated Areas, respectively. This reduction in the administrative limit came about by two steps in 1969 and 1970, according to Dunne in *Administration* (1972). In 1970 the administrative limits applied were 50% or £5,000 per job (whichever was less) in Designated Areas, 35% or £4,000 per job in non-Designated Areas other than County Dublin and 25% or £3,000 per job in County Dublin.

The maximum amounts per job have been increased on a number of occasions since then mainly to take account of inflation, but the percentage grant rates have remained the same except that Dublin has not been treated differently from other non-Designated Areas since 1977. These grant rates apply to new projects under the IDA's New Industry Programmes and also (subject to negotiation) to major expansions, except where investment exceeds £1

million, in which case grants are determined separately by negotiation. (New industry firms have provided most of the new employment growth generated by grant-aided industry, or indeed by the manufacturing sector as a whole, and according to McAleese (1977a), p.14, the grants they receive absorb roughly two thirds of the IDA's grant payments). As well as these grants and other incentives mentioned above, the IDA also offers New Industries grants towards the training of workers and managers, industrial housing for workers, advance factories at selected centres and after-care advisory service. The IDA is also empowered, at its own discretion, to contribute to the equity of new enterprises.

While the New Industries Programme has been the IDA's main job-creating effort, it has developed other programmes, which are listed in the Table below.

TABLE 1: IDA PROGRAMMES 1977-80

Groupings of Programmes	Programme Titles
Job Creation	New Industry Service Industry
Enterprise and Innovation	Small Industry Project Identification Joint Ventures Product and Process Development Enterprise Development
Job Maintenance	Re-equipment and Re-structuring Rescue

Source: IDA, 1978.

Note: (Despite the headings used for grouping these programmes, job creation is of course also the object of the Small Industry programme and other programmes listed).

The origins and development of *New Industry* and *Re-equipment and Re-structuring* have already been outlined. The *Service Industry* programme was introduced in 1973 to encourage non-manufacturing, or service, firms which either secure business outside Ireland while creating jobs here or else provide employment in services which were previously imported. The main target areas have been engineering, architectural consultancy and computer software.

The *Small Industry* programme, begun in 1967, is intended particularly (though by no means exclusively) to encourage Irish entrepreneurs; it applies to enterprises employing 50 people or less and it offers a range of incentives

similar to those available to New Industries although grants can be somewhat higher and the advisory service more intensive. Also according to the IDA (1979), a special scheme has been arranged whereby the commercial banks provide working capital loans of up to £25,000 for firms assisted under the Small Industry Programme. The *Project Identification* unit was established in 1975 to identify untapped opportunities for Irish industry — mainly those arising in the supply of materials and components to New Industry, in possibilities of import-substitution on a competitive basis and in the manufacture of inputs for industrial construction. The *Joint Venture* unit was set up in 1973 to encourage the growth of domestic firms through partnership arrangements with foreign companies. The *Product and Process Development* programme covers the IDA's aids to Research and Development. The Research and Development grants introduced in 1969 were increased in 1978 to a maximum of £50,000 per project, while the IDA has also developed a Research Park at Naas to encourage firms to locate R + D facilities in Ireland. The *Enterprise Development* Programme began in 1978 and it aims to encourage first-time entrepreneurs. In addition to the existing range of grants it can, under the the *Industrial Development Act, 1977*, provide interest subsidies and guarantees for working capital, while the level of grants available is up to an administrative maximum of 75% of total investment, or 65% in non-Designated areas, which includes grants relating to fixed assets and all other forms of assistance under the programme. The Act of 1977 also provided for interest subsidies and loan guarantees to promote sectoral restructuring, but this assistance has not so far been availed of by Irish industry, a fact which invites some investigation.

According to the IDA (1978), increased emphasis is currently being placed on the programmes grouped under the heading of Enterprise and Innovation. The IDA goes on to say that these "are medium term development programmes which should result in major job creation over time. At present they absorb substantially more IDA staff resources per manufacturing job provided than New Industry. This is because of the considerable individual attention given to projects which, on average, yield a small number of jobs in the short term. However, the grant cost per job is approximately half the cost under the New Industry Programme". A further noteworthy development in the promotion of new small industries was the change in the role of SFADCO, which ceased to be the agent of the IDA in the Mid-West region and instead, since May 1978, has undertaken the promotion of small indigenous industry in the Mid-West in an intensive manner, apparently with considerable early success.

The *Rescue* unit was established to supplement the work of Foir Teoranta, the State rescue agency, in assisting potentially viable existing firms with short-term difficulties.

It should be noted that, in assessing applications from New Industries for grants and other assistance, the IDA not only applies the criterion of commercial viability but also rates them on the following indicators of national economic benefit: (see IDA, 1974).

- High growth-rate of the product in international markets.
- Long-term stability in terms of small probability of technological obsolescence.
- High added value when the full impact of the project on the national income is considered.
- High content of skilled male labour in total employment.
- Good potential for exporting the product in terms of ease of transport, storage and tariff rates.
- Low capital-intensity, or if capital-intensity is high, good potential for linkage or spin-off benefits.

Tax Policies

Apart from the changes in financial incentives and other activities of the IDA, there have been a number of other developments in industrial policy since the early 1960s. Export Profits Tax Relief, which was originally intended to terminate in 1979/80, was extended by an Act of 1969 to the tax year 1989/90. Then, in 1978, the government decided to abolish EPTR as such and to replace it with a new low rate of corporation profit tax of 10% for *all* manufacturing in the years 1981-2000 (inclusive); however, full EPTR will continue to apply to firms which qualified for it before 1981, until 1990. The attractiveness of Irish tax relief to foreign investors was enhanced by double taxation agreements with many countries prohibiting or limiting taxes in their parent countries on profits of Irish branches of foreign companies. The list of such countries includes Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Italy, Japan, Luxembourg, Netherlands, Norway, Pakistan, Sweden, Switzerland, the UK, the USA and Zambia.

Another fiscal measure introduced to encourage industry was free depreciation on investments. Free depreciation first applied to Plant and Machinery in the Designated Areas in 1967, compared with 50% (raised to 60% in 1968) initial allowances in the non-Designated Areas; in addition an initial allowance of 20% applied to Buildings and Land in all areas. In 1971, free depreciation of Plant and Machinery became available in all areas with an additional investment allowance of 20 percentage points in the Designated Areas. The initial allowance applying to Buildings and Land in all areas was increased to 50% in 1975.

The overall attractiveness of the package of industrial incentives is indicated by the Economic Commission for Europe's judgement in the early 1970s that

the Irish measures go "further than those of any other country in Europe in encouraging export industries and in attracting private capital for this purpose" (quoted in Schaffer, 1979). McCarvill (1971) also concluded that Ireland's industrial incentives yield higher net benefit to the investor than those in Britain and other European countries. Furthermore, Hufbauer (1975) concluded that the effects of Irish tax measures on the cost of capital for exporting industries were the most favourable of the OECD countries (with the Dublin area being slightly less favourable than other parts of Ireland). More recently, De Meirleir (1976), in a comparative study of incentives to foreign investors in EEC countries in 1976, found that the Republic of Ireland's incentive package was the most attractive of all countries for small labour-intensive plants, a close third (after Northern Ireland and Italy) for large labour-intensive plants, second (after Northern Ireland) for small capital intensive plants, and about average for large capital-intensive plants. In addition, a number of studies have suggested that Ireland (meaning the IDA in particular) ranks first or second among countries competing for foreign industry in the efficiency of dissemination of fast and accurate information on investment opportunities to foreign businessmen (see Teeling, 1975, Ch. 3). Thus one gains the overall impression that the package of incentives for investment in industry, and in exports in particular, and the scale and efficiency of the effort to attract foreign investment now amount to an industrial promotion effort which is one of the most highly intensive and organised of its type among competing countries.

Other Policies Relating to Industrial Development

As well as the developments listed above, other matters which have been widely discussed since the early 1960s and which may be considered to be of some relevance to industrial development include the continuation of a form of indicative economic planning, the growing concern with the scale of income increases, and concern with the need to develop entrepreneurial spirit and talent.

The first economic programme of 1958 was followed by the *Second Programme for Economic Expansion* which was to cover 1964-1970, but was abandoned in 1967. The *Third Programme for Economic and Social Expansion* covered 1969-72, and this was followed by a gap of some years without an economic plan. *Economic and Social Development 1976-1980* (1976) was a Green Paper concerning broad lines of policy in the absence of a more detailed plan. Then the present government formed the Department of Economic Planning and Development (recently abolished) which produced the White paper *National Development 1977-1980* (1978), the green paper *Development for Full Employment* (1978), the White paper *Programme for National Development 1978-1981* (1979) and the White Paper *Investment and National Development 1979-1983* (1980). The literature on the influence of economic

planning will be discussed later, so it is sufficient to note here that Irish planning has remained a rather mild form of indicative planning. To quote T. K. Whitaker (1976), "A plan indicates objectives, it specifies an agenda, but it does not guarantee fulfilment . . . Detailed prescriptions for constituent sectors of the economy are, therefore, not appropriate; rather must attention be focused on creating an environment and an institutional framework in which the myriad individual decisions will tend to accord in their general direction and effect". Such a general philosophy of planning has been adopted with little change by successive governments in the period under review.

Calls for restraint in the growth of incomes, and wages in particular, have been a feature of the planning documents listed above as well as of numerous unofficial commentaries on economic policy. Apart from exhortations to restraint, perhaps the principal policy development in this regard has been the encouragement of the system of centralised national wage bargaining since 1970. This system was originally considered to have the principal advantage of minimising stoppages caused by pay disputes, but there has been a noticeable tendency for the Government to aim to influence the bargaining process in the desired direction through promises or threats of specified budgetary action. The "National Understanding" of 1979, whereby the Government made certain guarantees, particularly on underwriting job creation, represents perhaps the furthest development of this trend.

The aim of developing more active entrepreneurial spirit and talent has also been the subject of much exhortation in official and unofficial documents. The many financial incentives for industrial investment are directly relevant here, as are a number of the programmes of the IDA. It has been argued, too, (by e.g. Fitzgerald, 1968 and Donaldson, 1965) that economic planning has served the function of promoting business confidence and awareness.

Trends in Industrial Policy

In reviewing the overall trend in industrial policies since the early 1960s, the most striking feature is the degree of continuity with the general direction of policy which was already established before that time. This is not to say that no significant developments or elaborations have occurred. But once the intention was formed to join the wider free trade area expected to emerge in Europe, and the principle of priority for export-oriented industry had been accepted together with a willingness to encourage foreign investment to this end, most of the policies of the past two decades followed from these decisions. Efforts to prepare Irish industry for free trade were initiated and continued, and the effort to attract foreign industries was stepped up and more effectively co-ordinated. Part of this effort was the continuation of the scheme of investment grants with a number of changes of detail, together

with the widening of the range of incentives offered to firms. The continuation of EPTR, the introduction of the new low 10% tax rate for all manufacturers, the introduction of new tax allowances and the enhancement of these measures through the conclusion of double taxation agreements, were part of the same general policy thrust and apparently of particular importance in encouraging foreign industries.

One feature of the industrial policies of the 1970s, however, reflects a new concern. This is the apparent trend towards a growing emphasis on the more direct assistance of, and even initiation of, new Irish domestic industry which is evident in the IDA's increasing stress on its Enterprise and Innovation programmes. Part of this trend is the mandate given to the IDA by the government to encourage and assist further job-creating investment from the State companies, and the Taoiseach's recent (July 1980) directive to the chairmen and chief executives of the semi-State bodies to provide the Government with a blueprint for their expansion.

A further related recent development is the IDA's intention, outlined in its plan for 1978-82 (IDA, 1979) to develop specific policies to encourage industries based on processing of Ireland's own primary resources. This recent apparent trend towards a more intensive form of intervention by agencies of the State in initiating and assisting new domestic Irish industrial projects has been on a relatively small scale and its practical significance remains to be evaluated. This apparent trend does not seem to reflect a basic change of strategy or political philosophy but appears to be a pragmatic response, on a limited scale, both to the disappointing performance of older Irish industries in adapting themselves to an export-orientation under free trade (this disappointing performance is discussed in McAleese (1978a) and in Section IV.4 of this paper) and to the rather slow rate of emergence of new Irish industries in what has been widely regarded as a favourable environment of growth. Such a concern with the performance of domestic Irish industry need not arise for purely nationalistic reasons, but may simply result from the insufficiency of investment from other sources, or may occur on efficiency grounds.

III.2 The Reasons Behind Ireland's Industrial Strategy

Since the general direction of industrial policy in the 1960s and 1970s was largely a continuation of the strategy formulated in the late 1950s, it is necessary to go back to that time to find the analysis and conclusions which lay behind the adoption of that strategy. The views contained in the First Programme (1958) may be taken as representative of the official position then, and since *Economic Development* (1958) had a strong influence in gaining official acceptance of that position, the analysis contained in it provides a further insight on the thinking behind that strategy. *Economic Development*

set the tone for a new departure in stating that policies hitherto had not resulted in a viable economy, as evidenced by stagnation, loss of employment and massive emigration in the 1950s. Although it gained official acceptance of the view that the balance of payments constraint could be interpreted somewhat more liberally than had been the case in the past, *Economic Development* placed considerable emphasis on the need to expand exports, including industrial exports. The argument for the expansion of exports, referred both to the need to earn foreign exchange (*Economic Development*, p. 4), and to the loss of efficiency resulting from production of a wide range of goods for a small highly protected domestic market (*Economic Development*, pp. 13, 14). It was argued that if Ireland wished to keep pace materially with Europe, competitive efficiency would have to be raised to levels obtaining elsewhere and that this aim could be furthered by accepting freer trade conditions. Thus the solution to stagnation was said to require both the expansion of markets through export growth and the benefits of greater efficiency aided by the greater competitive pressures of free trade.

Similar arguments for the new strategy were put forward in the first *Programme for Economic Expansion* (1958). The Programme stated, in a passage quoted with approval by Whitaker (1973), "Assuming that a Free Trade Area is set up in Western Europe and that Ireland joins the Area, the Government will, of course, still be prepared, in suitable cases, to grant protection to worth-while new industries up to the limits permissible under the rules of the Free Trade Area, but it must be expected that in future the criterion to be applied in determining what is 'worth while' will be very much stricter than hitherto. Bearing in mind that the only scope for substantial expansion lies in the production of goods for sale on export markets, it is clear that there can be no place for weak or inefficient industries. Even where only the home market is involved, it must be accepted that such industries place a burden on the economy generally and render other industries less able to meet foreign competition . . . it will be the policy in future in the case of new industries to confine the grant of tariff protection to cases in which it is clear that the industry will, after a short initial period, be able to survive without protection. The rules of the Free Trade Area will require a gradual and systematic reduction in existing tariffs".

As regards the emphasis on expanding industrial exports, *Economic Development* and the first Programme were not breaking entirely new ground since some of the foundations for such a policy had been laid in previous years. Examples of this were seen in the brief given to the IDA in 1950, the formation of Coras Trachtala in 1952 and the introduction of EPTR in 1956. However, *Economic Development* and the First Programme gave a strong boost to export promotion, particularly in declaring a willingness to encourage export-oriented foreign direct investment. An early result was seen in the

Industrial Development (Encouragement of External Investment) Act of 1958 which eased existing restrictions on foreign participation. Also, the general intention implied in the First Programme, to improve access to foreign markets through participation in European free trade arrangements, with its corollary of a very substantial reduction of protectionist measures, did serve notice of a probable significant new departure, which was not universally accepted at first and only came to be implemented during the 1960s and 1970s. The reduction of protection was regarded not merely as the price which had to be paid for access to wider markets, but as something potentially beneficial in itself through the pressure it would generate to improve efficiency. It was apparently expected that most of the existing industry would be able to survive in freer trade conditions and in many cases, with the help of some initial adaptation measures, would be able to re-orient itself towards more efficient production for export and thereby benefit considerably.

Of course, this general view of the gains in efficiency and growth to be obtained from the reduction of protection and the expansion of exports has not been peculiar to Irish official circles. As Farley (1973), among others writing on Irish industry, points out, similar arguments against "inward-looking" policies and in favour of "outward-looking" policies have grown increasingly common in the international literature on industrial development since the late 1950s. According to Farley, "the case against inward-looking policies has been partly that inefficiencies in resource allocation occur for nations that shield their economic activity from the competition of international markets. The limits to industrialization processes relying solely for their stimuli on the possibilities of an expanding domestic market have also been more clearly understood, and it is suggested that a larger participation by nation-states in the world economy will give them a more efficient allocation of resources and improved prospects for increasing productivity and sustaining economic growth over time". Farley (1973) says, in fact, that the Irish experience after the late 1950s illustrates the virtue of these arguments, but this is a question we will return to later.

Before any serious steps had actually been taken to introduce freer trade, Nevin (1961) challenged the views then prevalent on the benefits in efficiency and growth to be gained by Ireland from the reduction of protection. He argued that the recommendations for freer trade were based on some crucial assumptions which did not apply to Ireland. Since the conditions did not exist to guarantee full employment — conditions such as the downward flexibility of wages, full mobility of labour and flexibility of the foreign exchange rate — he said that, as was easily observed, the effect of creating unemployment in a particular industry (as would happen under freer trade) was not in reality the transfer of labour to another more efficient industry but unemployment or emigration or both. Since he argued that the alternative to employing labour in

a protected industry was generally unemployment or emigration — meaning the loss of that productive resource of labour — he concluded that protection could probably be justified on grounds of efficiency from the point of view of the economy as a whole. In a later paper, Nevin (1970) predicted that, for similar reasons, the 1970s would see a gradual running down of Irish industry and a decline of new investment, as a result of the Anglo-Irish Free Trade Agreement. As we will see later, Nevin's views have not been proved far wrong as regards the older, formerly protected industries, but his failure to take much account of the possibility of an increase in new foreign direct investment in Ireland was a significant omission.

Kennedy and Dowling (1975) suggest an interpretation of the causes of slow growth in the 1950s which differs somewhat from the official view. They suggest (p. 246) that the chief cause was the failure to secure a satisfactory rate of expansion in aggregate demand. Consequently, "the major difference in the period since 1958 compared with the preceding years has been high and steady growth of aggregate demand" (Kennedy and Dowling, 1975, p. 248). They recognise that the government's position before 1958 was that faster growth of domestic demand was impossible without taking undue risks with the balance of payments and external reserves. But, they argue, it *was* quite possible to take a more liberal view of the reserves constraint, as the 1960s has shown, and in retrospect, they say, it can be seen that a fair measure of improvement in expanding exports was already occurring in the 1950s; manufacturing exports had begun to expand, the decline in tourism was arrested and there had been progress in expanding the potential for cattle exports. Pursuing a similar argument, Kennedy (1977) suggests that the situation in the 1950s did not necessarily demand a move to free trade since Ireland already had free access to the large U.K. market for most industrial products and since continued protection could have contributed to the success of a satisfactory domestic demand management policy, which was what was most needed.

Ruane (1976, Section 2.3) agrees with Kennedy and Dowling that the government in the 1950s could have been more "Keynesian" in their approach to demand management, i.e., less conservative in their views on the budget balance and the balance of payments. But she implies that the protectionist policy was partly responsible for inadequate export development because it encouraged inefficiency and consequently the termination of that policy was desirable. Whitaker (1976a), however, argues that the balance of payments constraint in the 1950s was indeed quite significant, more so than Kennedy and Dowling or Ruane would suggest. Whitaker points particularly to the relatively small external reserves held by the Central Bank, as distinct from the commercial banks, and to the limited scope for foreign borrowing before the appearance of the Eurodollar as a result of US trade deficits in the 1960s.

Stanton (1976) explains the change in industrial strategy as something more than an economic policy decision to solve a technical economic problem. The "turning towards the outside" of 1958, he says, involved two distinct decisions, the first being the decision to integrate with the European market which "was fundamental, the authentic choice of Ireland's dominant, agricultural exporting class".³ The second decision complementary to the first, was to start "industrialisation-by-invitation". Ireland's employment needs, which gained urgency during the 1950s which were marked by a resurgence of IRA activity, would be jeopardised further by the effects of freer trade with Europe on uncompetitive traditional firms. Therefore, the problem would be tackled by attracting new industry to produce for export; this function would be performed so far as necessary (though local capital was never excluded) by private foreign capital.

Wickham (1980), who, like Stanton, adopts a "political economy" approach to explaining the change of strategy, does not share Stanton's views, arguing that the relative autonomy of politics from the interests of dominant classes has to be taken more seriously. According to Wickham, the change must be seen above all in the context of international developments, especially the growth of the (largely U.S. based) multinational corporations, which presented the *possibility* of aiming to attract significant amounts of export-oriented overseas direct investment to Ireland. This relatively new opportunity, combined with widespread disillusion with what was perceived to be the failure of the national economy in the 1950s and continuing heavy dependence on the U.K., were the preconditions for a major change of strategy. Wickham says that opening up the economy in a manner which would lessen dependence on Britain, while increasing dependence on the USA, was quite acceptable to the prevailing political outlook in Ireland, given the identification of Britain as the historic enemy and the USA as a historic ally.

Some of the issues raised by these varying views on the appropriateness of the new strategy and the reasons behind its adoption recur in the literature on industrial growth in the 1960s and 1970s. They relate to questions on the impact of foreign industry, the experience of domestic Irish industry under free trade and the success or failure of the new strategy in generating a pattern of self-sustaining growth. The next section reviews the literature on such questions, starting with a brief outline of some data on the dimensions of industrial growth.

³Stanton makes it clear that he considers that the dominance of the large farmers has been in relative decline for some time since.

SECTION IV: INDUSTRIAL DEVELOPMENT IN THE 1960s AND 1970s

IV.1 The Scale of Industrial Growth

Before going on to review the literature on the nature of Irish industrial development and the effects of policies in the past two decades, it will be useful to outline the dimensions of the growth of industry first, to put the following discussion in context:

TABLE 2
Average Annual Percentage Growth Rates in the Manufacturing Sector, Various Sub-Periods, 1953-78

Period	Volume of Output	Employment
1953-1959	2.28	0.18
1959-1966	6.29	2.75
1966-1973	6.76	2.18
1973-1977	3.61	-1.63
1977-1978	8.1	2.6

Sources: Katsiaouni (1979) Table 4.4 and C.1; ESRI Quarterly Economic Commentary, June 1979, Statistical Appendix.

Table 2 illustrates the increase in the rate of growth in manufacturing in the 1960s and early 1970s compared with the 1950s; it also shows the decline in the growth rate during the recession which began in 1974, followed by recovery.

Another feature of industrial growth which has been noted is the slowing down in the rate of growth of manufacturing employment relative to the growth of output. The relationship between the rate of growth of output and employment in Irish manufacturing has been examined most recently by Kennedy and Foley (1978) and Katsiaouni (1979), as well as by Kennedy (1968/69 and 1971). While the details of their analysis differ, these studies have found it possible to compute statistically satisfactory regression estimates, relating output and employment growth, of the form:

$$L^* = a + bQ^*$$

where L^* is the rate of growth of labour input and Q^* is the rate of growth of output. Both Katsiaouni (1979) and Kennedy and Foley (1978) found that the regression coefficient, b , is quite stable at a level about .55 to .62 over various sub-periods in the period 1953-73, but the intercept, a , has tended to decline markedly over time (or since the intercept was negative to start with, its absolute value has risen over time). Consequently, according to Kennedy and Foley's results, an unchanged level of employment (for unchanged weekly hours) in 1953-63 would be associated with an annual rise in output of only 1.3%, whereas in 1963-73 the figure had risen to 3.6%. Thus, the attainment of a given target rate of employment growth would have required an increasing rate of output growth during this period.

The rate of growth of industry since the end of the 1950s has been higher than that of GDP so that industry has grown in importance in the national economy (see Table 3).

TABLE 3
Sectoral Distribution of Gross Domestic Product and Employment Selected Years, 1960-79

	1960	1970	1973	1975	1977	1979 (estimate)
GDP: per cent (a)						
Agriculture (b)	22.2	16.4	15.6	17.9	16.3	14.5
Industry	28.	35.6	36.9	34.4	36.5	38.0
Services	48.9	48.	47.5	47.6	47.2	47.5
	100	100	100	100	100	100
Employment: per cent						
Agriculture (b)	35	25	23	22	21	19
Industry	22	28	29	28	27	29
(of which manufacturing)	(15)	(19)	(19)	(18)	(18)	(19)
Other	37	41	42	42	43	44
Out of work	6	6	6	8	9	8
	100	100	100	100	100	100

(a) At current factor cost.

(b) Includes forestry, fishing.

Sources: National Income and Expenditure, 1977; Trend of Employment and Unemployment.

An important feature of industrial growth since 1960 has been the particularly rapid growth of exports. Manufactured exports were already growing rapidly in the 1950s, but since the base figure in 1950 was very small this trend had little impact on the national economy in that decade (see Kennedy and Dowling, 1975, Ch. 6). In the 1960s manufactured exports (S.I.T.C. 5-8) grew at an average annual rate of 16% in volume. Their share of total exports rose from 19% in 1960 to 44% in 1973 and 53% in 1979. In addition, processed food exports also increased rapidly. The increasing export-orientation of industry is shown by the rise in the ratio of exports to Gross Output of manufacturing industries (including food, drink and tobacco) from 19.3% in 1960 to 34.5% in 1973, (see McAleese, 1978a). However, as McAleese points out, manufactured exports have a higher import content than other exports; if allowance is made for this, the contribution of manufacturing to net export growth is less, although still substantial. Thus, he estimates that, whereas gross manufactured exports accounted for 53% of the total increase in exports in 1961-73, in terms of net exports (i.e., net import content) that share falls to 41%.

Direct foreign investment has played an important role in industrial growth, particularly in the expansion of exports. Thus foreign firms accounted for 70% of projects and 74% of the investment of IDA New Industry by 1970 (McAleese, 1971/72). Foreign firms also accounted for 74% of jobs generated by New Industry in 1958-71, excluding any spread or multiplier effects (Long, 1976). The importance of New Industry, in turn, is indicated by the fact that between 1966 and 1974 its share of industrial gross output rose from 11% to over 26%, its share of industrial employment from 9% to over 24%, and its share of industrial exports from 42% to over 62%. New Industry has been particularly important for industrial employment since jobs in other industry have actually declined (see McAleese 1977a, P.24). The export-orientation of foreign New Industry is very high, with 87.6% of gross output exported in 1973, compared with 54.4% in Irish New Industry and only 18.6% in manufacturing firms other than New Industry.

It is worth noting that despite the increase in the rate of growth of industry and GDP since the end of the 1950s, employment has not at any stage increased sufficiently to meet employment needs in the face of a continuing shift of workers out of agriculture and a continuing natural increase of population. Unemployment rates did not decline since 1960 (see Table 3), and in fact they remained consistently high by contemporary western European standards. In addition, emigration rates, although reduced from the levels of the 1950s, remained high at over 10,000 net per annum in the 1960s; the decline in net emigration in the 1970s was associated with higher registered unemployment.

To sum up, since the end of the 1950s the rate of growth of industry has

increased considerably and exports have made a particularly large contribution to this increase. New foreign industry has been very prominent in the improvement, especially in the export sector. Firms receiving IDA New Industry grants have been to a great extent responsible for the increased rate of growth, with employment in the rest of industry actually declining. And, finally, despite the improved performance of the 1960s and 1970s conditions approaching full employment have never been attained.

IV.2 Some Effects of Policy on Industry as a Whole

In the literature on industrial policy and its effects, some aspects have been generally treated in terms of effects on the industrial sector as a whole; these aspects will be considered now. Later in this section issues specifically relating to foreign industry and to domestic Irish industry will be considered in turn, followed by a review of the concept of a dualistic industrial structure.

Overall Effects of Policy

A number of articles have attempted to arrive at a broad conclusion on the overall effects of industrial policy in the past two decades. Moore, Rhodes and Tarling (1978) made a favourable judgement with little qualification, although this owes something to the highly aggregated level of their analysis. Their approach is to distinguish between a "passive" policy period before 1958 and an "active" policy period after that. They then say that, since the U.K. and Ireland are influenced by similar economic factors, in the absence of an active policy one would expect employment in industry in the Republic of Ireland (and in Northern Ireland) to expand or contract at about the same rate as in U.K. industry, after making allowance for the main differences in industrial structure. (This is done by comparing the percentage employment changes in each sector in the U.K. to the same sector in the Republic of Ireland and the North.) Comparing industrial employment changes in the U.K. with the Republic of Ireland, they find that both had a similar experience in the "passive" policy period, but that after 1960 Irish manufacturing employment grew faster so that by 1974 the cumulative relative gain approached 65-75,000 jobs. Moore, Rhodes and Tarling conclude that this gain accrued *largely* from the strengthening of industrial and regional policy from 1960 onwards.

They argue that the improvement in Ireland was not due to other factors such as greater labour availability or lower wages relative to the U.K. since, if anything, such advantages were greater in the 1950s nor was it due to any possible benefits of free trade since it only began to be implemented gradually after 1965. They also rule out increased mobility of multinational corporations as the main cause of the Irish relative improvement since a highly disproportionate amount of foreign investment in Britain and Ireland went to Ireland, despite the fact that Irish wages were rising faster than in Britain. It

seems possible, however, to question the validity of their analysis on the grounds of the very different history and structure of industry in the U.K. and the Republic of Ireland, which goes beyond the different weights of certain sectors; this makes questionable the use of the U.K. performance as an appropriate standard. It is also possible that increasing mobility of foreign investment world-wide in the 1960s, if it was quite responsive to relative wage differentials, could have accounted for much of the better performance of Ireland where wages remained lower than in the U.K., even though they were rising faster. However, these points do not suggest that Irish industrial policy was unimportant, but rather that Moore, Rhodes and Tarling's analysis is not conclusive.

Farley (1973) also makes a favourable judgement on the overall effects of policy, based mainly on the evidence of expansion and diversification of industrial output and exports between 1958 and 1966. He concludes, "the pervading thread of this evidence is that outward-looking policies laid the basis for substantial economic growth within the framework of a developing role for the Irish economy in the international division of labour. The growth rate increased fourfold after 1958, the industrial drive took on depth, and a variety of industries developed their size and importance in the economy. In particular, the manufacturing proper sector began to grow at a faster rate than primary and limited processing manufacturing output as the industrial push showed its effects on output in glass, clay, cement, metals, engineering products and chemicals." Farley argues that his case study of Ireland supports the case for similar "outward-looking" policies in other small less-developed countries. But this argument, and his judgement on Ireland's own experience, is weakened somewhat by the fact that his study terminates quite early- in 1966 — even before the implementation of free trade began to have any real effect.

McAleese (1978a), reviewing a longer period (up to 1974), notes that in view of the Republic of Ireland's political stability and developed infrastructure compared with most less-developed countries "if outward looking policies were to succeed anywhere, they should have succeeded in the Republic". He concludes that because the improved economic performance since the end of the 1950s cannot be attributed to especially favourable external circumstances, responsibility may be attributed to changes in domestic policy which were broadly in the right direction. But he also emphasises particularly what he refers to as the surprising and even disappointing lack of response of older, formerly protected, firms to the new export-promoting policies; the relatively low proportion of their output exported scarcely changed between 1960 and 1973. In addition, he emphasises another aspect of continuity, rather than change, which was the fact that two-thirds of the total absolute increase in export revenue in 1961-74 was earned through primary and invisible exports,

and only one-third from the more publicised expansion of manufactured exports. Thus he says that the evidence indicates that the process of transition of industry from a home market orientation to an export market orientation takes a long time to accomplish. It might, however, be remarked that in the case of older firms there seems to be little evidence of any such general transition, even in the long term.

In another article McAleese (1978b) puts forward a similar view on the poor development of older protected firms from import-substitution to export activities. He also says that the limited powers of independent economic policy formation in the small economy of the Republic of Ireland have not in fact proved to be of very great significance in resolving such problems as unemployment and emigration. "Thus we conclude . . . that the paramount reason for demanding or rejecting independence must always be political, not economic. The economic gains from devolution or separation, to the extent that they exist, are of second-order importance in most instances".

A number of commentators on Irish industrial policies since 1958 have made serious criticisms which appear to imply outright rejection of those policies, even if this is not always made explicit. These include Jacobsen (1978) and Stanton (1979), some of whose arguments on particular aspects will be considered later. Long (1976) offers the overall judgement that, "the free-rein foreign investment philosophy in Ireland poses important constraints to long-term socio-economic and political development in the country, despite some obvious advantages which have accrued to the country as a result of its adoption". The reasons given for this conclusion include some inadequacies of foreign firms, such as low linkages with the Irish economy and inadequate employment growth, as well as some positive disadvantages of foreign firms, such as competition with local firms for factors of production and loss of political control; these points will be considered later in the section on foreign industry. Long suggests that there is a need for the Government to concentrate more on encouraging more active involvement of Irish economic resources in its development effort. Crotty (1969) has also been critical of Irish industrial strategy, arguing that little fundamental change has been brought about which would allow the country to anticipate sustained growth at a rate sufficient to provide full employment without emigration. Industrial policies, he says, have depended too heavily on grants and tax concessions which must lead to an unsustainable growth of public debt. Crotty (1966) argued the case for a substantial tax on agricultural land, which would have the merits both of stimulating an increase in agricultural production and food processing and of making available revenue for promoting the development of other sectors.

Demand Management

It has been widely agreed that the more rapid expansion of domestic aggregate demand since the end of the 1950s has played an important role in

facilitating the growth of industry, although this demand expansion could not be regarded as specifically the effect of an industrial policy. The beneficial effects of long-term demand expansion have been perhaps most emphasised by Kennedy and Dowling (1975), as was mentioned in Section III.2. But the same effect has been noted by Kennedy (1974), Farley (1973), and McAleese (1978a). Farley found that the growth of the domestic market was, in absolute terms though not in terms of growth rate, a more important outlet for additional Irish manufacturing output in 1958-66 than either the growth of exports or further developments of import-substitution. Matthews (1980) also finds that in 1965-73, the growth of home demand was a considerably more important source of expansion in manufacturing than the growth of exports. Indeed in the situation where new, mostly foreign, firms were very largely responsible for the increase in the proportion of industrial output exported, while the older, protected firms seemed mostly unable or unwilling to increase their export-orientation, the expansion of domestic demand appears to have been essential for the growth of the output of older industries.

The expansion of domestic aggregate demand, in so far as it resulted from policy action, seems to have been not so much deliberately intended as a policy to stimulate the demand for industrial products, but rather occurred as a side-effect of the expansion of both social and productive investment in the context of a steeply rising Public Capital Programme, as well as the expansion of current social expenditure. The adoption of these more expansionary policies by the Government depended in part as Kennedy and Dowling point out, on the acceptance by the Government of a less rigid attitude towards budgetary balance and the growth of public borrowing. It also depended on a less restrictive view of the balance of payments constraint, although, as McAleese (1978a) and Norton (1975a) say, even with this more liberal approach the government could scarcely have adhered to such policies for long in the absence of a strong upward trend in export receipts. Thus in the long term domestic demand expansion and the growth of foreign exchange earnings cannot be regarded as independent, except to the degree that increasing foreign borrowing is possible and acceptable.

While the long-term trend in domestic aggregate demand was expansionary and consequently beneficial for industrial output, short-term management of demand which is part of stabilisation policy, has on a number of occasions been unhelpful to growth. Kennedy and Dowling (whose study is mainly concerned with the period before 1968) acknowledge that government expenditure behaved pro-cyclically on one occasion in the mid-1960s, and Ryan (1972) concludes that the principle of a balanced current budget was adhered to sufficiently to result in pro-cyclical rather than anti-cyclical action at times. Dowling (1978) mentions several other occasions since 1968 when the direction and strength of the fiscal policy stimulus to demand was

inappropriate. That there is *some* scope for short-term demand management even in such a small and open economy as Ireland, particularly if it is applied to selected sectors with relatively low import contents, is argued by among others, Kennedy and Foley (1978), O'Connor, O'Malley and Foley (1979) and McCarthy (1979). For instance, O'Connor, O'Malley and Foley's review of stabilisation policies in the small open economy of Sweden refers to governmental control of the timing of public works and house construction, measures to influence timing of stockpiling, and the Investment Reserve scheme which gives tax relief on profits reinvested in approved periods; consideration of the Swedish Investment Reserve scheme was also recommended by the National Industrial Economic Council's Report No. 23, although the high import content of expenditure in Ireland on most capital goods apart from building and construction means that such a scheme in this country would need to be quite selective. Irvine (1974) examined certain aspects of the effectiveness of fiscal policy in the Irish economy and concluded similarly that, due to the openness of the economy, the overall impact of government expenditure on demand tends to be rather limited, but that due to different effects between sectors it is important where expenditures are initiated.

McCarthy (1979) discusses the rather limited scope for effective short-term demand management in the small open Irish economy and puts the relevance of the issue to longer term industrial development in perspective in saying that a successful demand management policy *facilitates* growth, (and consequently an unsuccessful policy can impede growth). Rather more important policy instruments which are available for positively promoting growth, he says, include such as public investment, industrial development incentives and the activities of public agencies.

Economic Planning

The literature discussing Irish economic planning mostly relates to the First, Second and Third Programmes rather than to the more recent documents of the Department of Economic Planning and Development, but some of the same issues apply to these recent documents. Discussion of the effectiveness of planning does not, of course, relate to the industrial sector alone, but clearly it should be of some relevance to the performance of industry.

Judgements of planning made in the 1960s tended to be quite favourable, but a more critical tone has become commonplace in the 1970s. Whitaker (1967) said "Planning has had an undeniable measure of success", and "perhaps the best indication of what it can achieve is the performance of the economy between 1958 and 1963, when we had a steady growth rate, a fairly stable price-level, rising employment and a reasonable balance in our external payments. Critics will say that these developments might have taken place

without planning. But objective students of our past philosophy and performance will find it difficult to accept this". Donaldson (1965, p. 54) also concluded favourably that Ireland's lightly structured planning technique "has been remarkably successful to date in disturbing the forces of inertia which have inactivated the Irish economy for ages, and has created conditions conducive to industrial growth over the past six years". Fitzgerald (1968) was a little more cautious in his approval due to administrative weakness and the fact that planning remained in some degree peripheral to the policy-making process; but he nevertheless felt that planning had proved an important psychological tonic for businessmen, had started a process of necessary public service reform and had initiated moves towards incomes policy, manpower policy and adaptation of industry to free trade.

The abandoning of the Second Programme and the perceived irrelevance of the Third (see Dowling, 1978) were followed by the emergence of more critical views. Indeed even before this, the National Industrial Economic Council's Report No. 8 (1965) had called for a more active rather than purely indicative form of planning with much wider involvement of management and workers in fixing targets. Criticisms of the Programmes have mainly concerned the methods of setting targets and the poor specification of policies to attain the targets. Katsiaouni (1977/78) and McGilvray (1968) questioned particularly the validity of the practice of allowing some key targets, such as the growth of the industrial sector, employment or exports, to be determined as mere residual elements after an expected overall growth rate was designated and desirable targets for other elements were chosen. Katsiaouni also comments on the planners' failure to discuss adequately the interdependence between productivity and employment targets, as though these could be chosen independently of each other.

The poor development of policies to attain plan targets was criticised by Norton (1975b): "Setting up a list of objectives without indicating how they are to be attained does not constitute a policy or plan: it is, rather, a statement of mere aspirations". Similarly, Katsiaouni remarks that the policy programme was not made explicit, because in reality it never existed, while Bristow (1979) also criticises the failure to make explicit and put into operation an appropriate policy mechanism. Finally O'Riordan (1978) also argues for a stronger, more active and more specific form of planning, but with democratic participation by the workers in formulating and implementing the plans, in accordance with the policy of the Irish Congress of Trade Unions. Such participation, he says, would be an essential condition for effective planning, particularly in forming an incomes policy.

The first Programme was clearly a particularly important document since it served notice of some fundamental changes in policy, especially on foreign

investment and freer trade. But the other Programmes appear, in retrospect, to have served the function more of discussion documents (although not discussed in the Dáil) on the general trend of policy rather than that of the principle instrument for guiding and co-ordinating the many instruments of government economic action towards nationally agreed goals. The major instruments of government policy lay in the budget, the IDA, the Central Bank, the activities of government departments etc., and the degree to which these were co-ordinated systematically under an overall plan was not very great.

Industry Grants and Project Appraisal

During the 1970s the policy of paying large grants to industry which appear to subsidise capital, in the context of concern to increase employment, has become a subject of some controversy. A number of writers have suggested or positively advocated that a policy of subsidising labour directly would be more appropriate, either because capital grants may tend to encourage the use of unduly capital-intensive techniques in individual firms, or because they may encourage those industries which tend to be particularly capital-intensive, or both. Labour subsidies, on the other hand, may encourage greater labour-intensity and consequently would increase the demand for labour required to produce any given level of output. Often, as, for example, in Ruane (1980), such suggestions on labour subsidies have been made not so much to correct for distortions occasioned by existing (or alleged) capital subsidies, but rather to correct for endemically excessive market wages said to arise from factors such as government pay policies, trade union activities, or the availability of the option of emigration to higher wage countries.

That this issue required consideration was suggested on a number of occasions by Kennedy (see, for example, Kennedy 1974, 1975 and 1976). One early limited empirical investigation was done by McAleese (1971/1972) who compared the experience of the Designated Areas with the non-Designated Areas in the period 1952-1970. Since the average grant approved was 53.5% on fixed assets in the Designated Areas compared with 40.2% elsewhere, it might be expected that the degree of capital intensity would be greater in the Designated Areas, or at least unless it was somewhat less than elsewhere then the grant cost per job would be greater there. In fact, however, the grant cost per job was slightly less in the Designated Areas, indicating a higher degree of labour-intensity there than elsewhere. This finding is by no means conclusive proof that the grants do not encourage a tendency to capital intensity, as McAleese recognises, for it is conceivable that firms locating in the Designated Areas would have been still more labour-intensive if the grant structure was different.

Geary, Walsh and Copeland (1975) used a variety of techniques to measure the cost of capital to industry in Ireland and found that by any of their measures the cost of capital rose less rapidly than the cost of labour in the period 1953-1969. This occurred even without taking into account the grants provided by the IDA, the effect of which they say, is clearly to lower yet further the cost of capital to those investing in Ireland. They say, without much investigation, that the undoubted effect of the IDA grants is to distort the market for factors of production and to increase the tendency towards capital-intensity over and above that which would exist in a free market: consequently they would prefer a wage subsidy. Geary and McDonnell (1979) have revised and updated the earlier capital cost estimates to 1975, finding similar results except that the ratio of labour to capital costs showed a decline in 1973-1975. Geary and McDonnell's estimates took account of the effect of IDA grants, treating them as a subsidy to capital which therefore reduced further the ratio of the cost of capital to that of labour. Such a procedure, however, is not necessarily adequate, as the discussion below suggests.

The IDA response to this issue is first that they assist industries over a wide range of factor intensities since job needs are such that all sources of employment must be welcomed and we cannot afford to be selective to the extent of turning away any viable industries (see Killeen, 1975). Second, the IDA argues that while the grants paid are expressed in terms of a percentage of capital assets, they are not in fact capital-specific; they might equally well be expressed in terms of labour but this is administratively less convenient. Thus the grant rate approved is influenced by the location of the factory, the type of product, the amount of employment and the other criteria listed in Section III.1. Consequently, the grants cannot be regarded purely as subsidies to capital, since to the extent that these criteria are applied, they also subsidise employment, peripheral areas, etc. According to Ruane (1976, Ch 4), the IDA appears to favour, and believes that it implements by this method, a grant which is neutral in its effects on factor proportions (i.e., the proportions of capital, labour and other factors of production).

It adopts this policy since it believes that it is unwise to encourage firms to depart from the factor proportions they judge to be suitable, and because many firms appear to have quite fixed factor proportions anyway.

Ruane, who has done the most thorough investigation of the grant system and factor ratios, accepts that the grants are not in fact simply capital subsidies. Ruane (1976, Ch. 4) finds that the IDA's claim that it gives a larger capital grant rate (i.e., the grant expressed as a proportion of capital) to firms which have a high labour-capital ratio is justified; she also argues that the grant system appears to actually exercise a negative effect on the capital-labour ratio. However, Ruane (1978, Ch. 5) using a different set of data, finds

that the grants rate, expressed in terms of grant per worker rather than the grant as a proportion of capital, increases as the capital-labour ratio of the firm increases. This result would not necessarily be inconsistent with the same grant, expressed as a capital grant rate, being inversely related to the capital-labour ratio, but it leads her to conclude that the grant may, at least in part, act as a capital subsidy. She concludes (Ch. 6) by recommending reform of the grant scheme because, among other reasons, "the uncertainty created by the grant procedure (is the grant a capital, labour or production subsidy) is undesirable because it may encourage firms to choose inappropriate capital-labour ratios. Even if the IDA *administers* the grant as a labour subsidy, this does not ensure that it actually operates as such; for example, if entrepreneurs perceive it as a capital subsidy, which seems quite likely under the present arrangements, there is no guarantee that firms will be encouraged to use labour-intensive techniques, nor that projects which are naturally labour-intensive will be encouraged to locate in Ireland".

The main reforms that Ruane (1978 and 1979) suggests in this matter are that the grant be paid clearly as an employment subsidy, which would be paid in a lump sum if firms' preference for that certainty so requires, and that industrial projects should be evaluated from the perspective of *social profitability* incorporating the Little and Mirrlees method of calculating shadow prices. (Such a method of project appraisal would differ somewhat from the IDA's current practice, as we will see below.) Also, in a later paper, Ruane (1980) makes an estimate of the optimal labour subsidies for industrial projects and concludes that the actual average subsidies approved in practice (if one were to assume that IDA grants operate as labour subsidies) are generally less than the optimal grant.

The IDA's method of project appraisal, which was challenged by Ruane (1979), has recently been outlined in a paper by McKeon (1980) of the IDA, who describes the method as an extension of the *economic efficiency* approach, rather than that of *social efficiency*. Social efficiency approaches, says McKeon, appear to be overly elaborate for evaluating the many new individual projects in Ireland due to the demands on staff time and because it seems unnecessary to assess the impact of projects on, for example, saving, consumption or income distribution because other policies exist which are directed at these issues.

Briefly, the IDA's method first requires that projects be judged "commercially viable". According to McKeon, this does not mean that Ruane (1979) is correct in saying that "the IDA seems to attach particular importance to the firms being privately profitable, independently of the financial aid received . . ." Rather, the IDA is prepared to aid projects, particularly Irish ones, which would not adequately remunerate the total investment but which

would remunerate the total investment less grants. In the case of overseas firms the grants are mainly intended to influence the location decisions of independently profitable projects, to induce them to set up in Ireland. Secondly, then, the grant levels negotiated must be within the legal limits. Third, the IDA calculates the cash flow implications of the project for the Exchequer and applies the criterion that discounted State aids to the project should be less than the discounted benefits to the Exchequer of taxes received and welfare benefits saved. Over 95% of new grant-aided projects approved meet this criterion and no further evaluation of them is carried out. Finally, for large projects, and for those approaching or failing the fiscal criterion, a more complete economic evaluation is carried out, using the net domestic value added based on shadow pricing resources as the estimate of the economic benefit of the project. In these cases grants are maintained below the level necessary to ensure that, overall, the ratio of Domestic Value Added/State Cost is greater than 4:1.

In attempting to evaluate the merits and shortcomings of both the IDA's practice of expressing grants as capital grants rather than (possibly lump-sum) employment subsidies, and their current project appraisal method rather than a social cost-benefit analysis for each project, there are a number of considerations to be taken into account. But perhaps the main factor to be considered is to balance the savings on administrative convenience and costs gained by the present practices against the likely gains from implementing more elaborate practices which would, of course, be preferable in principle. It is difficult to make such a judgement without being thoroughly familiar with the day-to-day work of the IDA, but it is worth noting that it is not very clear that the changes suggested would prove to be of great significance compared with, for example, greater success in generating more projects. This is because such changes would not appear to represent a major change from present practice; the existing grant system cannot be regarded as simply a system of capital subsidies, while social cost benefit analysis of projects would be essentially a refinement of what the IDA already does. Furthermore, on the issue of designing the grant system to further encourage greater labour-intensity, the fact that few viable projects seem to be refused indicates little scope for selectivity among projects, while the fact that factor ratios often seem to be fairly inflexible in individual projects casts doubt on the extent to which greater labour-intensity can be encouraged.

One study has been done, by O'Donnell and Walsh (1978), of an employment subsidy scheme used in Ireland; this was the Premium Employment Programme which was introduced in June 1975 and was replaced in January 1977 by a similar but broader Employment Incentive Scheme. The Premium Employment Programme, however, was limited in scope and consequently could not be regarded as a very valuable indication of the effects of a broad

employment subsidy scheme. The programme applied only to increments in employment in a firm (and was therefore of little use to stagnant or declining firms) and it was limited in such a way that it was probably applicable to less than half the registered unemployed. O'Donnell and Walsh found that about half the firms surveyed who participated in the Programme said that it had little or no effect on their hiring plans, while those who said it had encouraged them to raise their level of employment accounted for about 1,300 additional jobs, or 17% of those subsidised. In addition, some firms hired earlier than they would have done otherwise, while others were encouraged to hire specifically from the eligible workers. They conclude "the sum total of its effect . . . was not trivial, especially if viewed in relation to the small net cost to the Exchequer".

NESC Report No. 44 (1978) said that the take up under the Employment Incentive Scheme, which replaced the Premium Employment Programme seemed to be disappointing. It was pointed out again that in view of savings on unemployment benefits such schemes are not a major burden on the Exchequer. The Council suggested that consideration should be given to linking the scheme with training schemes as an additional incentive, and to extending its scope beyond those currently on the Live Register. It has been argued by others, however, that continuing employment subsidies are likely to become simply general operating subsidies, which could have undesirable side-effects such as protecting inefficiency and slowing down necessary structural change.

Taxation Policies

Some aspects of the taxation allowances designed to encourage industry have come in for criticism, including Export Profit Tax Relief (EPTR) which, as was mentioned in Section III.1, will no longer apply to new projects starting after 1981 and will be replaced by a new low rate of 10% on all manufacturing profits. This change meets much of the criticism put forward, which was based on the fact that while EPTR is clearly a valuable incentive, it discriminates in favour of exporting firms versus those producing for the home market. Kennedy and Dowling (1975), Kennedy and Foley (1978) and McAleese and McDonald (1978) suggested that although there was a need to favour exports particularly when EPTR was introduced, this need now seems less convincing since many of the older formerly protected firms are in trouble. McAleese (1978a) pointed out that the policy changes introduced in the late 1950s and subsequently were beneficial to exporting industries but fell particularly heavily on inward-oriented protected firms; he suggested that the reduction in their rate of return caused by the removal of protection made it difficult for them to invest in restructuring for free trade and export markets, while EPTR remained of little use to them in such circumstances. In addition Kennedy and Foley (1978), among others, suggested that EPTR could tend to

reduce linkages with the domestic market since tax relief as calculated relates to export sales rather than profits, encouraging manufacturers at each stage of the production process to export directly rather than sell at home.

O'Doherty (1975) found that an export outlook, and an incentive to export, were important in encouraging technological innovation in Irish firms due to the limitations of the home market. But he also noted criticisms that the EPTR scheme as it stood did not encourage Research and Development in Ireland by export-oriented foreign companies locating here (although a similar criticism could be made of other industrial incentives), and he referred to suggestions that tax relief on exports should be conditional on factors such as value-added in Ireland, R and D performed here and regional location.

Ruane (1978, Ch. 4 and 5) has investigated the implications of Irish tax allowances for the price ratio of capital and labour. She notes that firms availing of free depreciation can instantly depreciate total investment expenditure, even though they may only have paid for 50% of it, with the IDA grant paying for the rest: the additional allowances in the Designated Areas allow over 100% of investment to be offset against tax, even though only 50% might be paid for by the firm. But firms exporting all their output and therefore having no tax liability cannot *directly* avail of depreciation allowances. She concludes that the cost of capital to industry is rendered lower than the market cost except in the case where firms are exporting and receive no grant, in which case it is equal to the market cost. However, Ruane points out that in recent years, the practice has developed whereby firms which are mainly exporters lease much of their capital equipment from the banks who can avail of the depreciation allowances whereas the exporting firm could not; the leasing rate agreed between them shares out the tax-saving benefit so that the firm can gain from it. Exporting firms availing of such a leasing arrangement can then face a lower capital/labour cost ratio than would be possible otherwise. One of two proposals suggested by Ruane (1978, Ch. 6) to cope with these factor price distortions is the abolition of tax on *all* manufacturing profits. This would cause firms to face the market (supply) price for capital, less any capital grant which they may receive (in so far as the grants act as capital grants), if it was also made impossible for the benefit of depreciation allowances to be transferred (via leasing arrangements) from the banks to industry. The new tax rate of 10% on all manufacturing profits will move in the direction of this proposal, but will not meet it fully.

IV.3 Foreign Direct Investment in Industry

The Importance of Foreign Industry

Some indication of the importance of foreign-based companies in the

acceleration of growth of the manufacturing sector in Ireland since the late 1950s was given in Section IV. 1. This was shown by the importance of foreign firms in new grant-aided industry which was the main source of more rapid growth of output and which increased its employment while other manufacturing employment declined. However, foreign (mainly British) firms were also heavily involved in the Irish economy before the early 1960s and the rapid development of new grant-aided industry. Brock (1963/64) noted this finding of the Committee on Industrial Organisation's survey relating to 1960/61, pointing out that 5 out of 22 industries surveyed were mostly under foreign control. Sweeney (1973) found that, by the end of 1972, over 50% of fixed assets of Irish-registered industrial and service companies were owned by foreign companies, and of these foreign-owned assets only just over 45% were accounted for by IDA grant-aided firms. He also found that, in 1973, two-thirds of Britain's 100 largest industrial companies had Irish subsidiaries, of which only 25 out of 310 had received New Industry grants while 70 had received adaptation or re-equipment grants; Sweeney's findings suggest considerable outside involvement in older protected industry which has often been termed "home industry". However, unlike new grant-aided firms most of these older foreign firms were similar to much of Irish industry in being oriented to the domestic market and probably owing their existence in Ireland originally largely to protective barriers.

Most published information makes it difficult to distinguish systematically between foreign-based and Irish-based firms, and indeed, since Sweeney's study we have little indication of the overall extent of foreign ownership. Since this difficulty applies more to older foreign companies, while there has been more widespread interest in the newer ones, most of the literature on foreign industry in Ireland is concerned with the latter group. The basic sources of information on this sector have been the studies of IDA New Industry contained in the *Survey of Grant-Aided Industry (1967)* and McAleese (1977a). Both of these studies were based on unpublished IDA files and a survey of firms. A similar study has been done relating to 1976, some results of which are available in O'Loughlin and O'Farrell (1980) and O'Farrell and O'Loughlin (forthcoming), and the IDA will soon be publishing a further paper from this survey, by O'Farrell and O'Loughlin. Further basic information and analysis is contained in a number of studies, including O'Farrell (1975), Ó hUiginn (1972), Buckley (1974 and 1975) and Teeling (1975). In using IDA New Industry data as a source of information on new foreign industry, however, it should be remembered that some foreign firms have qualified for grant assistance under other, smaller IDA programmes, while a small number of others have not received grants at all. (*The Survey of Grant-Aided Industry* and McAleese (1971/72) have suggested that about 10% of new foreign manufacturing projects received no grant, but that these tended to be well below average in size and were primarily producing for the domestic market.) Also, it should be

noted that IDA publications on New Industry tend to use potentially confusing terminology in classifying second-stage investment by foreign subsidiaries as "domestic investment".

Factors Influencing New Foreign Investment

The growth of foreign manufacturing investment in Ireland since the 1950s has occurred in the context of a general international tendency to increasing foreign investment by firms based in industrialised economies. This tendency was noted by O'Rourke (1978) as important in the Irish experience. Jacobsen (1978) says that total U.S. investment overseas expanded at an average rate of 10% per annum from 1950 to 1969, while Kennedy and Dowling (1975, p. 147) point out that foreign investment by some other countries which have been important in Ireland (notably Germany) began to expand significantly somewhat later — during the 1960s. However, nobody would suggest that this general tendency alone explains the experience of Ireland where foreign direct investment has grown to a position of importance in the local economy which is considerably greater than in very many other countries.

Attempts to understand the factors leading to new foreign investment in Ireland have adopted two types of approach: first, the characteristics of industries setting up here have been examined in order to deduce the reasons for their establishment and, second, the firms themselves have been interviewed directly about their motives.

Characteristics of new foreign industrial establishments in Ireland which have been widely noted and which are relevant to this discussion include the following. They tend to be very highly export-oriented, as was mentioned in Section IV.1, and a high proportion of their exports are sold to affiliates of the same corporation; thus sales to affiliates in 1974 were 55% of exports of overseas new industry, and 68% of exports of those firms which sell to affiliates (McAleese, 1977a, p. 88).

New foreign industrial establishments in the Republic of Ireland also tend to be smaller than those in some other countries, with an average employment of 135 in 1974, compared with those in the U.K. with 477 employees on average, or Northern Ireland with an average of 600 employees (McAleese, 1977a, p. 20). It is notable, too, that the parent corporations of foreign industrial branch plants in Ireland tend to be relatively small by the standards of multinational corporations, with some exceptions. Most of the foreign-owned firms in this operations in 1973; these independent companies tended to be smaller than the average foreign plant in Ireland (O'Farrell, 1976). The branch plants tend to rely heavily on other parts of the corporation for many functions. Ó hUiginn (1972, p. 18), for instance, found that 78% of new grant-aided branch plants

(including a minority which were Irish) had R and D performed by the parent organisation, 62% had marketing done, 44% had materials and components purchased and 33% had them produced, while 40% had accounts and finances looked after by the parent.

The growth in Ireland of foreign-owned branch plants with these characteristics is consistent with the idea that technological and organisational development in industry and reductions in transport costs have reduced to some extent in some activities, the necessity for industrial plants to be located in or close to large industrial centres. Because the parent organisation, generally located in, or close to large centres of population in industrialised economies, can look after the supply of inputs, the disposal of the product and technological development, while many production processes have become increasingly de-skilled and standardised, it has become more possible for production units to be located in relatively isolated situations, with relatively little manufacturing tradition or skills, relatively few specialised services or suppliers and a small local market. Such developments have become increasingly possible with the growth of larger manufacturing corporations, the emergence of mature standardised technology in many sectors and reductions in transport costs.

That these developments have made possible most of the new foreign industrial growth in Ireland is indicated by the observations of a number of studies. The findings of Ó hUiginn (1972) were mentioned above; in addition, the *Survey of Grant-Aided Industry (1967)* noted the heavy reliance on parent organisations and said that many establishments were little more than production units. Northcott (1969/70) said that most of the new plants tended to be of kinds where dependence on the support facilities of a major industrial centre were less than the average. These were either "plants making relatively simple products, where all or most of the processes can be done conveniently in a single plant of only moderate size; and plants doing relatively straight-forward processes in the construction of a somewhat more complicated product, either assembling a final product the most difficult components for which have been made elsewhere, or making components for assembly into final products elsewhere. Both kinds of activity tend to depend mainly on semi-skilled labour, and accordingly do not normally pay very high wages". Thus it seems possible that the relatively small size of foreign plants in the Republic of Ireland compared with the North, or Britain, may be partly due to the fact that larger plants are more in need of the support facilities and industrial skills of established large industrial centres. Perhaps part of the explanation, too, is the fact that the larger plants include many large-scale consumer goods industries which prefer to locate within a major national economy due perhaps to the possible long-term uncertainty of international free trade arrangements.

Consideration of some of the above-mentioned characteristics of new foreign industrial plants in the Republic of Ireland — particularly their relatively small demand for highly-skilled and technical workers (a feature which may be becoming less pronounced in certain sectors in recent years), and their lack of dependence of the support facilities of major industrial centres (where labour costs tend to be relatively higher) — has led some writers to an emphasis on the attraction of relatively cheap labour in this country as an important influence on new foreign investment. The prevalence of intra-firm trade has also led to a recognition of the opportunities afforded by EPTR to maximise untaxed profits of the company as a whole by means of intra-firm pricing policies which maximise the reported profits of the Irish branch rather than in other branches of the firm located elsewhere⁴. This suggests that tax relief on profits is an important incentive to locate in this country, as noted by Kennedy and Foley (1978) among others.

The attractiveness of cheap labour costs and EPTR in Ireland is stressed particularly by Stanton (1979). He identifies 3-main types of new foreign enterprise (most of which require only semi-skills in production workers) in his study of Shannon and the surrounding region.

- Manufacture at high volumes without great capital-intensity where the benefit of Irish location lies in the combination of relatively low final-cost labour-power with EPTR; these include processing of light high-value electronic components, textiles and consumer electronics. In many recent cases where the main market is in Europe, transport and tariff considerations are also important.
- Lower-volume manufacture for a narrower market, on a small scale but again with relatively slight fixed assets. EPTR and labour costs are important here too.
- Large-scale manufacture using complex processes and extensive fixed assets. These industries such as pharmaceuticals, synthetic textiles, petrochemicals and automated electronics manufacture are now most keenly sought by the IDA. EPTR and capital grants are key benefits here, but though basic labour costs may be of marginal importance, control of labour to ensure continuity of production is very important in view of the heavy capital investment.

Stanton points out that the final cost of labour is not just the wage but also social security charges etc., the extra cost incurred if hiring and firing is not flexible enough to meet variations in labour demand, and the cost of supervision and control. He suggests that because Ireland has had not so much a politically conscious or militant working class as a "labour pool" (and

⁴While there is no direct evidence available in Ireland on this practice known as transfer pricing, it would be surprising if it does not occur quite commonly.

this would be true especially outside the major towns and in the western rural areas where a very high proportion of foreign plants are located — see O'Farrell, 1980), these extra costs can be less here than in many other countries. The industrial structure built on such conditions has long-term political implications which we will return to later.

Stanton supports his argument for the importance of cheap labour as a factor attracting new foreign investment by reference to the high profits of such establishments, commonly in the region of 20-25% per annum or more. (Jacobsen mentions that, according to the U.S. Department of Commerce, Ireland was the most profitable of a wide selection of countries for U.S. manufacturing investment in the mid-seventies with an average adjusted earning rate of return of 29.5%). Profits at this level would often in one or two years exceed the total IDA capital grant, so that grants could usually explain only a minor part of the returns of such enterprises. Similarly, while EPTR is clearly an important incentive it could not explain the high pre-tax profitability of foreign enterprises, except to the extent that transfer pricing is practiced. But, says Stanton, sums of much the same order as profit margins may have arisen from the saving on labour costs in Ireland, compared with such costs in a major industrialised country.

Teeling (1975, Ch. 1) noted that Vernon's Product Life Cycle Theory of International Trade and Investment predicts, and many studies have confirmed, that less-developed economies would be most likely to prove an attractive base for export-oriented foreign companies producing labour-intensive products which incorporate mature, standardised technology and the demand for which is highly responsive to price level; the move to avail of the opportunities offered by less-developed economies has been greatly encouraged by incentive packages offered by host countries. Teeling finds that the detailed sectoral distribution of new foreign industries in Ireland in 1954-71 bears a close resemblance to the labour-intensive export industries established in more conventionally recognised "developing economies". He says "this is in line with the expectation that cheap labour in Ireland was an attraction to offshore investors to undertake labour intensive mature standardised projects"⁵.

However, Teeling also notes Ireland's obvious and increasing wage cost disadvantage relative to major competitors for offshore investment such as Taiwan, Singapore and Hong Kong (but not Puerto Rico), even though wage costs in Ireland remained below those of industrialised economies. This leads him to consider other possible attractions of Ireland compared with such low-wage exporters. He rules out transport costs as a major factor in most cases as

⁵Farley (1972), analysing *all* Irish manufactured exports, also concludes that in the mid-1960s they were mature standardised commodities, in line with the Product Life Cycle Theory.

well as free trade advantages since, for example, Hong Kong and Singapore had virtual tariff free entry to the U.K. (Teeling's study deals with the period before EEC membership). He concludes (Teeling, 1975, Ch. 3) that information, uncertainty and risk are all important or, perhaps, vital variables in offshore investment decisions. Because of such factors as the longer history of promoting foreign investment in Ireland, the experience and efficiency of the IDA in particular, and cultural ties with the U.S., "on each of these variables Ireland was shown to have a comparative advantage over competing locations. This advantage was demonstrated by the fact that small corporations with limited international experience, i.e., with high perceptions of risk and uncertainty, were attracted to Ireland whereas the larger more experienced firms tended to seek lower wage locations". He adds that the improvement in Ireland's market access advantage since joining the EEC may prove to be of some importance too. A similar view on the likely importance of EEC membership in attracting foreign investment to Ireland was expressed by the Federation of Irish Industries (1968) and McAleese and Martin (1972). In retrospect, most observers would appear to accept this view, though little detailed analysis has been done on this matter.

O'Loughlin and O'Farrell (1980), however, note that, as Vernon (1971) has recognised, his (Vernon's) product life cycle theory may provide an explanation of how an enterprise becomes multinational as the technology of its production matures, but it does not explain the behaviour of longer established multinationals. As Helleiner (1973) argues, such large established multinationals with a global outlook could locate certain *stages* of the production process (e.g., assembly operations or production of some components) with high and unskilled labour inputs in less developed economies, irrespective of whether the technology incorporated in the production process as a whole is mature or not. O'Loughlin and O'Farrell's data, relating to 1976/77 confirm Teeling's view, relating to data up to 1972, that most foreign investors in Ireland are relatively small corporations by the standards of multinationals; this agrees, they say, with Teeling's argument that most foreign investors in Ireland are relatively new and inexperienced international operators developing in accordance with the product life cycle theory and with high information costs and high perceptions of risk and uncertainty. But this picture, they say, does not fit all foreign investors in Ireland which include some large experienced corporations which may be adopting a "global strategy", such as Helleiner suggests. O'Loughlin and O'Farrell conclude that, for the best results in seeking foreign investment, "Ireland should seek out products which are at an early stage in their product cycle when the manufacturer in question may be just beginning to assess the possibility of investing overseas".

Questionnaire surveys of new foreign industries seeking to establish the factors influencing their investment in Ireland have been reported in

Donaldson (1965) and the *Survey of Grant-Aided Industry* (1967). Both of these surveys concluded that no one factor was dominant as a determinant of foreign investment while a number of factors were of some importance, but the details differ somewhat. The *Survey* (1967) found that "availability of labour", named as the primary factor by firms employing 32% of the labour force employed by respondent firms and as the secondary factor by those employing 27%, was the most important single influence. "Market accessibility" (24%, primary influence) was next with "Grants" and "EPTR" recording 12% and 15% respectively as the primary influence. Firms employing 13% of the labour force of respondent firms named "availability of local raw materials" as the main factor; this refers mainly to food-processing and since it was of no significance as a secondary motivating factor it may be regarded as of supreme importance as a motive for investment in Ireland by the firms concerned, but of little interest to others. The survey team concluded (p. 105) that none of these influences appeared to be unimportant but that "the relative drawing-power of any one of these attractions is virtually impossible to assess accurately . . . no novel suggestions were forthcoming on how promotional tactics might be improved. Grant-aided firms, on the whole, appeared to regard existing grant procedures as being generally satisfactory".

Donaldson (1965), with a smaller sample of 34 firms, found that 20 considered EPTR a "very important" factor influencing new investment, compared with 14 for grants, 22 for "market, demand and access conditions", and 14 for labour. Again, none of these factors appeared to be unimportant, but one would be reluctant to draw more precise conclusions with any confidence.

To sum up, a number of factors in combination appear to have been important in attracting foreign investment to Ireland. Cheaper labour costs (in the broadest sense) than for comparable workers in industrialised economies have probably been of basic underlying importance but this factor could scarcely have drawn such an amount of investment without intensive promotion, free access to large markets — especially, it appears, our EEC membership — and tax and grant incentives. It is, perhaps, possible that some grants especially to larger firms, have been unnecessarily high, in view of Stanton's argument, the survey results (Donaldson's and the *Survey*, 1967) and the fact that the *Survey* (1967) found that firms which attached primary importance to the grant scheme tended to be particularly small⁶. It is also possible that a full unconditional 100% tax relief on export profits was unnecessary in some cases since a relatively low rate of tax should remain an incentive to relocate.

⁶But this may well be changing with the growth of more larger and more capital intensive firms.

Trends in Closures and Job Losses

Most new foreign firms investing in Ireland appear to have found their choice, on the whole, satisfactory for some time at least. The high profit rates prevalent among them is one indication of this. In addition the *Survey* (1967, p. 63) emphasised that "the majority of firms interviewed expressed themselves as being well pleased with their general experience in Ireland and the vast majority indicated that most of the problems encountered by them were characteristic of new industries establishing anywhere". More specifically the *Survey* (p. 109) also reported that some concern was expressed about increasing pressure on labour costs, but that industrial relations were generally satisfactory within the firms despite concern about disputes in the service sector affecting trade.

Further light on the general experience is cast by studies of failures of firms. Closure rates have on the whole been quite low by some comparisons with other countries until the early 1970s but there appears to be a rising trend more recently. The *Survey* (1967, p. 102) recorded a failure rate among grant-aided firms (including Irish grant-aided firms) of 10% of all start-ups since 1952 by 1967, but after reopenings this was only 5%. O'Farrell (1975 and 1976) reported a gross closure rate of grant-aided new industry which received grants between 1960 and 1973 of 16% of projects; but these firms accounted for only 6.9% of grant payments and 4.6% of employment. He says that the mean annual closure rate compared favourably with British studies of relocations. O'Farrell (1976) also found that in 1960-73 there was no distinct time trend in closure rates. However, closures were significantly higher among smaller firms and among non-Irish independent firms.

McAleese (1977a) found evidence of an increase in closure rates of grant-aided firms by the end of 1975, compared with O'Farrell's study. The gross closure rate had risen to 20% of projects, accounting for 12.6% of grants. Part of this increase was due to McAleese's inclusion unlike O'Farrell, of data on firms which received grants in 1953-60 and which had higher closure rates, but part of the increase was due to a genuinely higher rate of failure in 1973-75 among firms awarded grants after 1960. These findings, therefore show that older grant-aided firms had become more likely to close, while in 1973-75, the recession period, the average rate since 1960 also rose. It is also notable that particularly high closure rates, with a distinct increase since 1973, were recorded by McAleese in Textiles and Clothing and Footwear; these probably include a particularly high proportion of the older grant-aided firms which were more likely to have been dependent on cheap labour due to their labour-intensity. With the increase in labour costs in Ireland and the rise of countries such as Taiwan, Hong Kong and Singapore since the 1960s as sites for export-oriented investment, the increasing closures of older, labour-intensive foreign industries such as these would scarcely be surprising.

Some ten years ago, Crotty (1969b) had already foreseen growing problems of employment reductions and closures among the older grant-aided foreign firms as a result of his analysis of figures contained in the Buchanan Report. He noted that "foreign firms which were here before 1962 and which replied to the questionnaire indicated that they expected to *reduce* the numbers they employed by 22.4 per cent in the five years 1967-72. The seemingly clear-cut lesson to be deduced from this would appear to be that it is easier to attract outside firms to Ireland than to keep them here."

Teeling (1975), who expected to find increasing closures among grant-aided firms as Irish labour costs rose relative to new less-developed exporters, in fact found no such trend up to the early 1970s although he did find evidence of labour-saving investment in order to raise labour productivity. Hogan (1979) used more recent data to investigate the expectation, similar to Teeling's, that an increasing number of jobs would be lost through closures of foreign firms in labour-intensive sectors coming under increasing cost pressures from competition from lower-cost countries. His results over the period 1973-78 are consistent with this expectation, although the short period reviewed and the occurrence of the recession during that period mean that his findings might not yet be regarded as conclusive. He found a rising trend for new jobs from foreign sources in that period combined with a rising trend for job losses in grant-aided foreign firms due to closures; on balance there appeared to be a slightly decreasing trend in annual net job gains. While noting the limitations of his data, Hogan says that his results are consistent with the view that "the objective of full employment will become increasingly more difficult to achieve as job losses in overseas sponsored enterprises will continue to increase and occur in a wider range of industries in future". He argues that continued emphasis on the attraction of foreign "footloose" industries would not, therefore, seem appropriate for the objective of full employment.

McAleese and Counahan (1978) looked at employment in grant-aided foreign and domestic industry in 1973-77 to see whether foreign firms proved more likely to close or cut back employment in the recessionary period. There proved to be little difference in this regard between the two groups, particularly if allowance is made for sectoral composition. But this could be saying something about the weaknesses of both groups since employment fell by 7.2% and 9.3% in 1975 in grant-aided domestic and foreign industry respectively, compared with 3.9% for manufacturing employment in the EEC and 4.7% in the OECD in 1975, the year which marked the nadir of the recession. McAleese and Counahan also found that larger foreign plants, and those with a high degree of autonomy in marketing in the plant in Ireland, proved most resilient in terms of employment during the recession.

Expansion of Established Foreign Industries

A number of aspects of the impact of new foreign industry on the economy, after its initial establishment, have been investigated. First we consider Northcott's (1969/70) view that growth of foreign firms after the initial investment "tends to be relatively modest in Ireland and the main source of major expansion has to come from repeated injections of new enterprises from overseas". McAleese (1971/72) found that 20% of new grant-aided foreign firms had undertaken a significant expansion by 1968, and these expansions accounted for only 10% of all capital expenditure by grant-aided foreign firms up to that date, (with the remainder being accounted for by new projects). He concluded that "the view that the main source of growth has been the 'repeated injection' of new overseas firms is therefore vindicated. Whether this will continue to be the case in future is much less certain".

Later, McAleese (1977a, p.65) looked at employment in 1974 of all grant-aided firms covered by the Survey (1967) and found that the employment increase in these firms in 1966-74 was 47.8%, from 13,084 to 19,344. However, these figures included Irish grant-aided firms (representing about one quarter of the employment figures) in which employment grew faster than the average. McAleese and McDonald (1978) isolated employment growth in the foreign-owned firms existing in 1966, up to 1974, and found an increase from 10,100 to 14,400, or 43%. Allowing for the fact that some of the increase, of the order of something over 1,000 jobs, was accounted for by the build-up after 1966 to originally targeted employment levels, the increase due to originally unforeseen expansion was somewhat less. This employment growth in established foreign firms in 1966-74 compares with 21,600 jobs created in post-1966 new grant-aided foreign firms. Thus while growth in established firms was by no means insignificant, new injections by first-time investors continued to be considerably more important. To turn to the years following 1974, McAleese and Counahan (1978) show that employment in new foreign grant-aided firms established before 1972 declined from 29,311 to 25,965 between 1974 and 1976, but began to recover to 26,847 in 1977.

The Secondary Impact of Foreign Industry on the Domestic Economy

Another important issue is the question of linkages developed between foreign firms and the rest of the economy. To what extent is it true, as Long (1976) says, that because new foreign investment "creates limited inter-industry linkages in Ireland, it has not contributed fundamentally to long-term economic development"?

Or to put the question another way, is it true that new foreign industries have tended to import a particularly high proportion of their inputs, to export a particularly high proportion of their products and thus to operate as a distinct enclave within the economy having a minimal impact on the development of other sectors which might produce some of their inputs or process their outputs further in Ireland?

Cooper and Whelan (1973, p. 17) said that, with the exception of food-processing, "the linkage effects of the new industries have been limited. They have not created many opportunities for secondary investments . . . it is also likely that many of the foreign firms amongst the grant-aided enterprises have strategic and technological reasons for importing their intermediate materials from their parent companies", and "the data on imported materials suggest that export and gross production statistics give an exaggerated impression of the social benefits to Ireland from the grant-aided industries". The Survey (1967, p. 104) similarly remarked that "the *impact on existing manufacturing industries* of the grant-aided firms has been slight. It is roughly estimated that no more than 1 per cent of the domestic sales in 1966 of the transportable-goods industries, excluding the grant-aided industries, went to the latter firms".

More detailed investigations of the question have been done by Buckley (1974 and 1975), Stewart (1976b), McAleese (1977a) McAleese and McDonald (1978) and O'Loughlin and O'Farrell (1980). Buckley (1975, p. 442) concluded that "substantial linkage effects emanate from the food industries but the rest of the foreign sector approximates to enclave growth. Consequently, the secondary stimulus to the domestic sector from the foreign firms is small". Buckley (1974) compared the Irish and foreign-owned firms among new grant-aided industry in 1970, using O'hUiginn's data. He found that the foreign firms exported a significantly higher proportion of output, imported a significantly higher proportion of material inputs and that behaviour in purchasing of service inputs by foreign and Irish companies was not evidently different but might be if all intra-firm service transactions were priced realistically. These differences in behaviour of foreign and Irish grant-aided firms were partly accounted for by their sectoral distribution and differences in scale but most of the difference was not accounted for by these factors.

Using McAleese and McDonald's Table 4, and McAleese's (1977a) Table 5.4 we get the data in Table 4, below.

TABLE 4
Expenditure on goods and services of Irish origin by new grant-aided domestic and foreign-owned manufacturing enterprises, 1974

	Irish Content of Materials Expenditure %	Irish Content of Total Expenditure %
<i>Food:</i>		
Domestic:	95.5	94.9
Foreign-Owned:	96.3	92.9
<i>Non-Food:</i>		
Domestic:	22.2	51.9
Foreign-Owned:	11.2	41.9
<i>Total:</i>		
Domestic:	76.8	80.3
Foreign-Owned:	33.7	52.6

Notes: Materials expenditure equals expenditure on raw materials and components. Total Expenditure equals gross output. Irish content of total expenditure is defined as profits and labour costs plus Irish content of expenditure on materials, components and services.

While foreign and Irish new grant-aided firms in the food industry (gross output of Irish firms here exceeded that of foreign firms by 3 to 1) both had very high backward linkages with the Irish economy, in other sectors the import content of foreign firms was clearly higher than that of new Irish grant-aided firms; indeed one might question the attribution of profits of foreign firms to Irish content, a procedure which makes the difference smaller than may be appropriate. McAleese and McDonald also find that the proportion of purchases from Irish sources by new grant-aided firms has increased over time at a rate of about 2-3 percentage points per decade. Similarly, they find that the proportion of output exported by grant-aided firms declined over time at about the same rate, with a somewhat faster decline than average among pre-1966 foreign firms. Thus, both types of linkages appeared to be increasing over time, but at quite a slow pace. One could accept McAleese and McDonald's results without fully supporting their conclusion that their "evidence suggests that the picture of foreign enterprises as forming a distinct enclave, differentiated from domestic firms and remote from the rest of the economy, is seriously flawed". For linkages grew quite slowly and there is no certainty that this growth will continue⁷.

⁷Stewart's (1976b) survey of new foreign firms in the Mid-West region concluded "generally the interviews indicated that there was little possibility of further linkages developing".

O'Loughlin and O'Farrell (1980) also found that new overseas firms have a higher export propensity and lower backward linkages than domestic New Industry. Using regression analysis on cross-sectional data for 1976 — more recent than McAleese and McDonald's data — they found a lower export propensity for older foreign plants, which is consistent with increasing forward linkages over time but not conclusive since different firms at the same time, rather than the same firms over a period of time, are under consideration. Their regression analysis does not show higher backward linkages for older foreign firms, however, but again the limitations of this type of analysis do not allow one to rule out the slim possibility of linkages of individual firms continuing to grow over time.

O'Farrell and O'Loughlin (forthcoming) report a similar result indicating no *increase* in backward linkages for older foreign grant-aided firms. But they also comment that the IDA's Project Identification Unit has been successful in encouraging many reactions to supply opportunities arising for indigenous firms from new foreign projects and they recommend continuing conscious efforts to develop such linkages. Such efforts, they suggest, could include screening input requirements of intending foreign investors applying for grants, encouraging the granting of purchasing autonomy to Irish branch plants of new foreign investors, and concentrating on establishing a range of new industries with similar input requirements so as to encourage the development of Irish intermediate industries which could not operate at present due to the constraints of small scale in a small local market.

The IDA's current strategy, outlined in Killeen (1979) and Whitaker (1978), to develop a large electronics industry is, perhaps, an example of such an attempt to maximise the secondary impact of foreign investment. It is hoped that by attracting a sufficient number of individual large foreign projects in the most advanced areas of electronics manufacture, a fully integrated industry can eventually be developed embracing a spectrum of companies from suppliers of components to complete systems, including research, design and development as well as manufacture. The goals of this strategy are both to help anchor the large foreign projects to the Irish economy and to assist the more rapid development of indigenous industry, including software. Some success has already been reported with this strategy, but in view of the overall scale of spinoff benefits from the foreign projects to date, it is probably too early to conclude that unprecedented results will be achieved.

The impact of foreign industry on wages has also been an issue in the literature on foreign investment. Long (1976) suggested that foreign firms tend to pay higher wages than others, forcing local firms to pay more in order to compete for qualified labour especially, with damaging results for local firms and for inflation rates. Stewart (1976a), in a study of the Mid-West Region,

found that American firms and "all other" nationalities paid higher average wages than Irish firms which in turn paid more than British firms, in 1970. But this made no allowance for hours worked or skill differences. He reported, however, that Irish management often remarked on the difficulty of holding skilled workers who tended to move to new foreign firms. McAleese (1977a, Ch. 6), however, finds the average wage in new grant-aided industries was just slightly less than the national average in 1973 with some variation on this tendency in individual sectors. He also found that New Industries pay slightly more than the average for their sector in western regions where they tend to be disproportionately concentrated and where wages tend to be lower than elsewhere. Thus, it is possible that New Industries may tend to pay higher wages than their local competitors for labour in some regions, and this may be the case particularly among skilled workers. However, as McAleese concluded, there is little available evidence to show that New Industries do not generally tend to pay the going rate for the job. He also notes that by generating jobs, New Industries may help to raise the general level of wage claims, even if they are not themselves the wage leaders, but this would be the case with any effective job creation strategy.

Buckley (1975, Ch. VIII) however, argues that some older domestic firms have suffered from competition of a different nature from foreign industry. This is not because of competition from new foreign firms producing goods which are produced by domestic firms, a situation which he says rarely arises, and which would render the foreign company ineligible for IDA assistance. But rather, according to Buckley, "concentration on the encouragement of new projects, particularly export orientated ones, and the financing of the grants scheme have placed a considerable burden on the domestic sector . . . the grants and tax relief schemes involve a transfer of funds from existing manufacturing industry to new export orientated projects." Buckley also finds that in some cases domestic firms have suffered from competition for skilled labour from foreign firms. He concludes, however, that the overall loss of jobs in domestic industry due to competition from the foreign sector has been minor compared with the jobs gained in foreign firms, and suggests that it would be useful to identify and help domestic firms which suffered particularly.

The effect of new foreign industries on the skill structure of the labour force does not appear to be very marked, going by available evidence which is, however, inadequate in recent years particularly. "Industrial" workers in all New Industry in 1973 comprised 81.5% and "Clerical, Administrative and Managerial" workers 18.5% of their labour force — exactly the same proportion as the national average for all industry. Craftsmen and apprentices made up 17% of New Industry workers, and 84% of managerial and other salaried staff employed were of Irish nationality (McAleese, 1977a, Ch. 6).

Thus there is little published to suggest that new grant-aided firms offer proportionately less skilled or lower grade work to Irish people than other industry. On the other hand, as Long (1976) argues, until the early 1970s at least, they appear to have done little to develop further the technical skills of a labour force which for a long time has had comparatively little place for scientific graduates and technical workers.

But this feature of foreign industry, especially in certain sectors such as electronics, may be growing somewhat less pronounced in recent years. For instance, according to the National Board for Science and Technology (1980a, p. 41), "it is sometimes believed that the firms involved with the (new electronic) technology in this country are only involved in low-skill, assembly-type operations, but this is not true". Observations such as this, and the shortages of certain categories of skilled workers (discussed later in Section V.2), point to a need for some up to date assessment of the skill structure of the labour force in new industries.

It is worth mentioning, however, that according to Killeen (1979), in the case of the largely foreign-owned electronics sector, the IDA expects that over one third of the labour force will be in the professional and highly skilled categories by 1985.

Cooper and Whelan (1973) paid particular attention to the paradoxical feature whereby, while Ireland was allocating large proportions of its productive investments to foreign firms which were becoming increasingly technologically advanced, it continued to export a very large proportion of its scientists and technologists. This was essentially because the technology of foreign firms is largely imported and requires little development in Ireland; and, according to Cooper and Whelan (p. 31), "not only is there a very small demand for R and D, but also the kind of production processes that are involved do not make much call on scientific and technical skills in general". McAleese (1977a) provides some more recent evidence which supported this impression of R and D behaviour by foreign companies: "only one out of every eight overseas firms, however, named the Irish plant as prime source of new products. Most overseas firms leave product innovation to the parent company". And Buckley (1975) reached a similar conclusion to Cooper and Whelan on the effects of foreign firms on employment patterns: "the main gap in the job creation spectrum is in the highly trained scientific workers, technologists and research workers . . . This is of particular concern because of the brain drain from Ireland". He also found that "there appears to be little 'spinoff' or 'spillover' of technological advances from the foreign owned to the domestic sector . . . Most important (and profitable) knowledge is in the form of proprietary knowledge, owned and controlled by a particular corporation. The corporation thus keeps a close hold on this income-creating asset."

Cooper and Whelan argued that this pattern of exporting technologists and importing technology in foreign firms, which has little spillover effects due to its proprietary nature which is a source of quasi-monopolistic advantages to its owners, is of great significance. Among other reasons for this view, they point out that "a continuance of present trends would — logically speaking — end up in a situation where a relatively unskilled Irish population at low levels of technical capability and wages provided the labour input to operate the sophisticated technological industries developed in other countries". The possible objections to such a society, they say, are partly political — is this the kind of society Irish people would choose? However, it may be added that there are also purely economic problems concerning the relative level of wages implied in the long run, and — given that proprietary technology is a major source of competitive advantage — the ability of Irish domestic industry to compete and expand in free trade conditions in a situation where that seems to be required if job targets are to be approached.

Cooper and Whelan propose that there is a case for a strategy, oriented more to the long-term, of building up a more specialised industrial structure with the object of creating areas of genuine competitive advantage to face future competition. This would involve more emphasis on encouraging and restructuring domestic Irish industry with a considerably more selective approach. But it would also allow for a continuing role for foreign enterprise and technology, with a much more restrictive and qualitative approach to the attraction of foreign firms, and with more emphasis on new ways of importing foreign technology, as in licensing, particularly from smaller foreign firms with less significant stakes in international markets. Buckley (1975) also suggests a development of the role of licensing, particularly allied to government support and in State enterprises, and an increasing role for government in technological innovation in view of the substantial commitment of resources required over a long period and the weakness of domestic industry. Like Cooper and Whelan, he sees such a shift of emphasis as being necessarily complemented by foreign investment, for some time at least.

More recently, the Science Policy Research Centre UCD (1978) has suggested that events in the years since the publication of Cooper and Whelan's report have endorsed their view that the prevailing policies for attracting foreign direct investment would do little to encourage significantly more R and D in Ireland or spillover effects of advanced technology. Although there is now a greater acceptance of the importance of a scientific and technological capability for industrial development, the Centre says, Cooper and Whelan's strongest recommendation, that of transferring technology into priority areas through the licensing mechanism, was virtually ignored.

There appears to be little doubt that new foreign investment in Ireland, due to its very high export-orientation, has on balance helped to ease the balance of payments constraint which was seen to be a major problem in the 1950s. However, this broad conclusion needs to be qualified to some extent. First exports alone are not an indication of net foreign exchange earnings due mainly to imported inputs and repatriated profits; McAleese (1977a, Ch. 5) estimates that in 1974 net foreign exchange earnings of new overseas firms were something over £148 million compared with their exports of £384 million. In addition, McAleese points out that the full balance of payments effects would have to include consideration of home market sales which replace imports and the second-round effects of alternative patterns of output, demand and employment. Buckley (1975) says that varying propensities of foreign enterprises to import, to export and to repatriate profits means that not all projects have improved the balance of payments. He finds that foreign investment overall has had a positive effect, but the contribution could have been greater with a more careful project selection procedure.

Data on the repatriation versus reinvestment of profits of new foreign industries is inadequate to present the full picture, according to McAleese (1977a, Ch. 5); but in the case of U.S. companies alone his figures show that in 1973, 1974 and 1975 respectively, repatriation was \$2m. \$38m. and \$35m. compared with reinvestment of \$76m. \$66m. and \$107m. Not all the reinvestment necessarily occurred in Ireland, but there is little evidence to suggest that with foreign capital continuing to flow in, outflow of profits might be about to present the sort of major problems for the balance of payments associated with foreign investment in many Latin American countries, where most foreign direct investment is oriented to the domestic market. However, it would be valuable to have more information on this matter and to investigate trends in individual enterprises over time.

Political Dependence and National Sovereignty

A number of writers have expressed concern that the growth of foreign industry in Ireland makes the country increasingly subject to the decisions and political influence of external interests. McAleese (1971/72) suggested that the diverse national composition of foreign ownership in the case of Ireland had made resentment of foreign ownership on political grounds, such as is found in Latin American countries, an unimportant feature in this country. However, an increasing proportion of new foreign investment has been coming from one country, the USA. Among foreign New Industry operating in 1974, just over one third of projects and employment were U.S. controlled while the employment share of U.S. firms was twice as great as that of each of the next most important countries — the U.K., the Netherlands and Germany (McAleese, 1977a, Ch. 3). Subsequently, among new projects in 1975 and 1976, 49% and 68% respectively of new foreign grant-aided job approvals were in U.S. firms (IDA, 1978).

However, concern about the loss of political control does not necessarily focus on fears of dominance by one country. One of the main points made, by Buckley (1975, p. 450), Kennedy and Dowling (1975, p. 288), Long (1976) and Jacobsen (1978) concerns fears that major decisions affecting the Irish economy are taken outside the country by organisations with little reason to take much account of their effects in Ireland. Thus, for example, it could prove difficult to influence foreign firms' behaviour in order to meet plan targets. Buckley mentions that parent company policies may prevent branches in Ireland from servicing export markets which they are capable of reaching, and host country monetary policies can be avoided by transfers of funds within the enterprise and by transfer pricing of intermediate goods and services. Buckley notes too, the constraints imposed on economic policies by threats of closures (which have occurred) by certain foreign establishments whose comparatively footloose nature lends credibility to the threat.

In addition to such difficulties with control of firms, the possibility also arises that source country governments might interfere in economic policy through destabilising action by the subsidiaries. Long (1976) notes such an example in Chile. However, as Buckley points out, such an event would only become likely if there was a sharp radical change in Irish government policy.

Stanton (1979) is very largely concerned with the political implications of new foreign investment. Since his analysis, outlined above, points to the importance of relatively cheap basic labour costs and a relatively non-militant unorganised "labour-pool" for foreign investors, he argues that the State may be increasingly pressed by foreign enterprise to restrain wages and to control workers more overtly. In addition the State would be pressed to continue providing a range of benefits and services and to represent the interests of foreign firms in the EEC. Stanton suggests that it is likely that, with the present strategy, employment needs will not be readily met, so that the State will find it increasingly necessary to accommodate the demands of foreign enterprise; if this was to meet increasingly strong resistance from the "quasi-proletariat", he says, the State could be expected to make maximum use of nationalism as a diversion, and subsequently to resort to overt repression which has been very largely avoided so far.

IV.4 Irish Domestic Industry

Irish Industry in the Late 1950s

Much published information does not make it possible to distinguish adequately between Irish domestic and foreign industry, as was mentioned already. The bulk of the literature on industry in Ireland either treats the whole sector as a unit or else is concerned specifically with new grant-aided industry. However, the contrast between the rapid growth of new, mainly foreign, industry and the relatively poor performance of older, mainly Irish, firms, as well as the recent tendency of policy to pay more attention to encouraging Irish enterprise and the views of some writers that the Irish/foreign differences amount to a clear dualistic structure, make it desirable to attempt to focus specifically on Irish industry here.

Some Irish firms are included in new grant-aided industry: it was mentioned in Section IV.1 that one quarter of grant-aided New Industry jobs generated in 1958-1971 were not accounted for by foreign firms, and, according to McAleese (1977a), between 1966 and 1974 that proportion rose to one third. Some consideration of the nature of these Irish New Industry firms, which employed 24,000 people or 12% of the manufacturing labour force in 1974, will be given later. Employment in manufacturing apart from new grant-aided industry has declined since 1966; this is clear from McAleese (1977a) and IDA Reports. It is not clear what proportion of this sector, which is very largely made up of older formerly protected firms, is foreign-owned, although the Committee on Industrial Organisation's reports and Sweeney's (1973) findings referred to above suggest that foreign firms probably account for a substantial minority. However, there is little reason to believe that the characteristics of firms in this sector differ markedly between Irish and foreign firms, so that these characteristics and the experience of the sector as a whole can probably be reasonably taken as applying to older Irish industry. (One possible difference, however, is that the foreign subsidiaries, originally established to service protected Irish markets, may be discouraged by their parent companies from attempting to develop exports to any great extent).

Some attributes of industry in Ireland at the start of the 1960s were referred to already. The CIO reports found that firms' old buildings and equipment, their small scale, and their short production runs due to their orientation to the small protected domestic market and their wide range of products, all led to

relatively high production costs. It was thought that free trade would result in losses of output and employment in nearly all sectors if this structure was not changed quite radically in time. According to McAleese (1978a) only 19.3% of gross industrial output was exported in 1960, while McAleese (1978b) suggests that most firms were only marginal exporters (i.e. disposed of 10-20% of their sales abroad at marginal cost). This export performance did not suggest that Irish industry was well prepared to compete in unprotected markets at that time. A further indication of the limited ability of much of industry to compete under free trade was Farley's (1973) figures which show that, of manufactured exports, products involving "limited processing" of resources (mainly food) constituted over 60% compared with under 40% for "manufacturing proper" (such as textiles, clothing, furniture, chemicals, metals and engineering etc.) in 1958, although total output of "manufacturing proper" outweighed "limited processing" by 3 to 1. In addition, it has been noted that older Irish manufacturing enterprise, apart from food, has had a very high import content, often higher than that of foreign grant-aided industry, suggesting that it was mainly involved in the assembly and formulation of final products (Cooper and Whelan, 1973). All of these characteristics indicate that much of older Irish industry, as it was at the end of the 1950s, with the major exception of food processing, owed its existence, to a great extent, to protection rather than to any genuine competitive advantage and consequently was at that time ill-prepared for free trade.

The Move to Free Trade

Once the intention was formed in principle in the late 1950s to seek free trade with larger industrialised European Countries, a number of measures (referred to in Section III.1) were taken to prepare Irish industry for the change. The work of adaptation and restructuring was reviewed during the 1960s by the National Industrial Economic Council and in the early 1970s by the Committee on Industrial Progress, generally in terms which made it clear that progress was less than adequate.

After the breakdown of EEC negotiations, NIEC Report No. 6, referring to 1964, commented that "the increasing doubt of many firms on the imminence of freer trade gives rise to the danger that exports may be pursued with less energy in order to concentrate on the growing home market". NIEC Report No. 15 (1966) said "Few Adaptation Councils have done all that the CIO expected of them . . . Relatively few Adaptation Councils have succeeded in co-ordinating the plans and actions of the individual firms so as to promote the orderly adaptation of the industry as a whole. In relatively few industries is there an example of successful joint activity in marketing, exporting or purchasing". NIEC Report No. 23 (1968) pointed out that adaptation grants had been approved for firms covering at least 75% of manufacturing employment, but that progress remained unsatisfactory since investment was

going mainly to increase efficiency in existing manufacturing activities rather than supporting basic re-structuring needed for free trade conditions; "the structure of industry in general still conforms to the needs of a protected economy. Rationalisation, larger-scale operations, increased exports, and elimination of uncompetitive product lines, are not so widespread as to support the conclusion that the pace of change in the industrial sector is nearly fast enough to ensure that it will be fully prepared for free trade by the early 1970s". Even more bluntly, the same report said "it is clear that much of Irish industry is still not prepared for freer trade".

The Committee on Industrial Progress (1973) concluded that "the survey reports served merely to recount, once more, that Irish industry is handicapped by various weaknesses and attitudes to which the Committee on Industrial Organisation had already drawn attention . . ." However, this did not mean that no progress had been made, since the Committee also said that changes in structure over the previous decade meant that the incidence of these weaknesses was less widespread than in the early 1960s.

After the mid-1960s import-penetration and redundancies showed a rising trend (Table 5).

TABLE 5

Growth of Competing Imports and Rate of Redundancies 1965-1971

	1965	1966	1967	1968	1969	1970	1971
Share of Competing Imports on Home Market for Manufactures (%)	14.6	15.0	14.8	16.5	18.5	19.4	20.0 (estimate)
Redundancies in Existing Industry	(average of 700 p.a.)			950	1,000	1,800	5,000

Source: F Flynn in *Administration*, Spring 1972.

The rate of job losses in industry continued to rise during much of the 1970s but, as Kennedy and Foley (1978) point out, there is considerable uncertainty about the extent and permanency of these losses due to inadequate data. They recommend that a study be done of this matter, seeking to quantify the influences at work, since both the extent of employment losses and the role of free trade remain unclear. (A study of job losses in industry is currently getting under way as part of the National Economic and Social Council's review of industrial policy and performance). According to Kennedy and Foley, the IDA

estimates that permanent job losses in the four years 1973-1976 were about 50,000 (or about one quarter of manufacturing employment), which would include losses in grant-aided industry as well as the older formerly protected sector. McAleese and Martin (1973) estimated that net losses of potential employment attributable to trade liberalisation were about 2,000 or roughly 1% of manufacturing employment, in 1971. But they also said that general experience with the freeing of trade suggests that there is a considerable time lag before the full effects on jobs is felt. Considering these points, Kennedy and Foley said "given that only in 1977 did the final instalment of the EEC tariff reduction take effect, this would be ominous for the immediate future. On the other hand, it is possible that the depression hastened the demise of many activities that would otherwise have been spread over a number of years".

While redundancies in some sectors due to trade liberalisation were expected (though probably not on the scale that seems to have occurred), it was also apparently expected that many older Irish industries would increase their export orientation and benefit from free trade. McAleese (1978a) finds that this expectation was not fulfilled; the proportion of output exported by industries other than new grant-aided ones in 1973 was 18.6%, slightly less than the figure for all industry in 1960; a more up to date estimate for 1976, from data in the O'Farrell and O'Loughlin survey, suggests that the ratio of exports to gross output among the non grant-aided industries has declined further. However, there has been a tendency for some of the older Irish industries, probably including many relatively highly export-oriented ones, to join the ranks of grant-aided New Industry in the course of time, as a result of being awarded New Industry grants for major expansions. Consequently, the apparent decline in the export orientation of non-grant-aided industries may well be an effect of this tendency. Nevertheless, it is unlikely that there was any significant increase in the export-orientation of most of the older Irish industries, up to 1976. Absolute exports of non-grant-aided firms did, of course, increase since their gross output increased but they accounted for only 37% of the total post-1960 increase in industrial exports up to 1973. According to McAleese, the evidence "suggests that the policy failed in the vitally important task of converting protected, home market-oriented enterprises into export-oriented enterprises". In another article, McAleese (1978b) says "this inability to switch from an import-competing orientation to an export-orientation undermined Irish firms' capacity to generate self-sustaining growth. Although most protected firms proved to be viable under free trade conditions, their viability was sustained by drastic rationalisation and increased mechanisation". Thus the attainment of viability of many firms, though not all, and growth of output (representing a declining share of growing markets) was associated with a net decline in employment.

Why did Irish industry mostly fail to increase its export-orientation and

employment under the new outward-looking policies. As a start to answering this question it may be noted that the type of restructuring which was widely regarded as a necessary precondition for successful development in the new conditions did not in fact take place on a very wide scale. Documents such as the CIO Reports and the NIEC Reports referred to above had envisaged voluntary elimination of many uncompetitive product lines and concentration on larger scale production of more specialised products, which would gain export markets.

The Federation of Irish Industries (1968) concurred with this approach, saying "effective adaptation must involve a great deal more than simply brightening up the industrial structure developed under protection. It may well be that much of this structure can never be suitable for free trade conditions . . . we have the choice of either identifying now the parts of the structure which will not be viable and proceeding to their orderly demolition, or waiting until the harsh realities of free trade do the job for us." This FII Report, and a later one from the Confederation of Irish Industry (1971), were on balance optimistic about the prospects for Irish industry under free trade, if the right measures were taken. The earlier of these two reports, however, was perhaps more cautious about the prospects, stressing that much of the domestic market would be lost to imports from advanced large scale producers abroad, and that the position of many Irish subsidiaries of foreign companies and Irish companies producing under foreign licence for a protected home market would be undermined by the removal of protection.

In fact, as the COIP (1973) report already referred to concluded, the type of restructuring and specialisation which had been envisaged seems to have taken place on only a rather limited scale. McAleese (1978a) suggests an explanation of this apparent failure to invest in more specialised production for export which argues that the combined effects of tariff reductions on the formerly protected firms' products and imported inputs, and the introduction of EPTR, would typically have lowered the profitability of these firms, even those which were able to transfer all their production to exports. "This substantial threat to their rate of return most likely accounts for protected firms' reluctance to undertake the level of investment needed to revamp their activities and convert themselves into export-oriented enterprises". In contrast, he says, new foreign enterprises had the advantages of established export sales networks through their parent companies, access to New Industry grants which exceeded adaptation and re-equipment grants, and specialised product ranges already established in large markets. Thus, McAleese says, a process of circular and cumulative causation appeared whereby the features of new industry meant high profitability and viability leading to large benefits from EPTR and the level of grants awarded which in turn led to higher profits and the ability to reinvest for specialisation and

concentration on exports. On the other hand, the threat to the profitability of protected Irish industry had the opposite effect through a similar process operating in reverse.

McAleese's argument clearly has some force, although it could be said that greater recognition of the importance of the proprietary technology of many new foreign firms and its very low incidence combined with relatively low levels of R and D and innovation among Irish firms seems necessary too in explaining their different performances under free trade. The growing importance of control of advanced technology as a major factor in determining who controls key markets was, in fact, recognised by the FII (1968) in its assessment of the challenge posed by freer trade. This document of the FII recognised a need for much more technological development in Ireland to ensure profitable operation or even survival. Like a later publication of the CII (1971), the FII (1968) supported the adoption of R and D programmes for the main industrial sectors, encouraged by the State.

O'Malley (1980) mentions relative technological weakness as one of a number of important competitive disadvantages which generally impede relatively late-developing industries, such as most of Irish indigenous industry, when faced with competition from more advanced and longer established industrial economies. The other disadvantages of newcomers in competition with established industrial economies relate to beneficial external economies of established large industrial centres, as well as other factors mentioned by McAleese such as export sales networks, economies of scale and relatively small late-developing firms' own rather limited capital resources. Disadvantages such as these, O'Malley argues, are important in most of the major industrial sectors (but not all sectors), and consequently have the effect of restricting the scope for the growth of relatively late-developing industries, in a competitive environment, to a rather limited range of sectors where they are not particularly disadvantaged. This is not to disagree, of course, with the fundamental aims of a strategy which seeks to promote greater specialisation and larger scale production in sectors where Irish industry would be least disadvantaged, but O'Malley's argument suggests that the actual profitable opportunities for Irish private industry to follow this strategy may be quite limited.

It can be observed, according to O'Malley that, with few exceptions, unprotected Irish private industry does not engage, independently of major foreign participation, in the major high technology, capital-intensive, large-scale industries in sectors such as Metals, Vehicles, Heavy Engineering, Chemicals, Electronics or the Extractive industries. Rather, domestic private industries are largely confined to sectors such as those using simple or standardised mature technology, and having characteristics such as labour-

intensity, local craft-intensity, low value-added to local primary resources, a low value/bulk ratio (giving natural protection due to transport costs), and clear advantages arising from close regular contact with the local market. "There is no necessary reason", he says, "why the scope for industrialisation in sectors such as these should be sufficient for all available resources of either capital or labour to find employment within a late-industrialising economy under free trade".

It has been suggested, therefore, that with the exception of certain types of industry, considerable difficulties may constrain the entry of Irish indigenous industries -- as relative newcomers facing established competitors -- into many export fields. Since the primary role of the private entrepreneur is to seek out opportunities for profitable investment, it is therefore possible that entrepreneurs would tend to decide that the best opportunities do not lie in trying to overcome these difficulties, but rather in, for example, investment in property or services in Ireland or the acquisition of small foreign companies and other investments abroad.⁸ Straightforward "defensive" investment, to try to protect their existing enterprises, when faced with a move to free trade would not be surprising either.

The view of the FII (1968) that control of technology has become a major factor in determining competitive advantage in industry was referred to above. In the next section we will review some of the literature on the relatively low levels of technological innovation in Irish industry and on policies to develop Irish R and D. Much of this literature argues that a stronger science and innovation effort, related to the needs of industry and backed by strong Government policies, would be important as a means of widening the area of competitive advantage of native Irish industry.

Although the general picture can be seen, the effects of free trade and its associated policies on older Irish industry to date have not been investigated in great detail. Published studies do not therefore present very firm grounds for reaching conclusions about the effectiveness of restructuring or the long term viability of older Irish industries which now exist. One estimate, which has been referred to on a number of occasions, is that "80% of the re-equipment required to bring Irish industry up to free trade standards had been approved for IDA grants by 1977" (IDA, 1978, page 25). In 1977 the IDA commissioned consultants (A. D. Little and Stokes, Kennedy and Crowley) to evaluate the impact and future role of the re-equipment grants. This study, which has now been completed, presumably sheds some light on these questions, but it is unlikely to be published due to its confidential nature. The re-equipment grants scheme has come in for some critical comment, however, by NESCI

⁸In this regard, it might be valuable to investigate the extent of foreign investments and investments in Ireland other than in industry by Irish industrial companies.

Report No. 44 (1978) Katsiaonui (1979) and Kennedy and Foley (1978). Kennedy and Foley suggested its effects may be to promote the premature adoption of more capital intensive techniques in some industries and to give windfall gains to others which would have invested in restructuring anyway. They recognise that without the scheme more firms would probably have collapsed, but say that a more appropriate form of action might be to provide funds as re-payable loans, or by state agencies taking equity in the company. The NESC argued that re-equipment grants should not be a permanent feature, and should be phased out. The general strategy, they said, should be to work towards a more selective system, replacing modernisation grants by incentives applied through the status of technical training.

There has been very little systematic study of new Irish grant-aided industry, although a few basic facts emerge from McAleese (1977a) and the *Survey* (1967). The *Survey* (1967) mentions that nearly 30% of grant-aided new industry projects up to 1966 were major extensions of existing industries, and that a majority of these extensions were in Irish or joint Irish/foreign firms. In fact nearly half of all employment and investment in Irish grant-aided projects up to 1966 was in extensions to existing firms (Tables 5.1 and 5.2). From data in McAleese (1977a, Chapter 5), we can estimate that about two thirds of Irish New Industry output (but a considerably smaller proportion of employment) was in the Food sector in 1974. The dominance of that sector, along with some lesser resource-based industries, shows that much of these industries were of the "limited processing" type, to use Farley's term. Thus one gains the impression that until the mid-1970s at least, the bulk of Irish grant-aided New Industry, which has performed better than other Irish firms and has a higher export-orientation (54% of total sales in 1974), has been comprised of an expansion of the limited processing industries — especially food-processing — which were noted above as appearing to be rather exceptional in the late 1950s in having a genuine competitive advantage in export markets. Other new expanding Irish industries of the "manufacturing proper" type which have emerged during the past 20 years are likely to be covered by other IDA grant schemes, particularly the Small Industries Programme, which has been growing in importance in the 1970s, as well as the New Industries Programme. A study of the expanding Small Industries programme which is now under way in the Economic and Social Research Institute should prove interesting, although the scale of output and employment in these small industries is not yet of major significance in the national economy.

One interesting finding relating to small industry, which emerges from an exploratory study of innovation in these firms (see National Board for Science and Technology, 1980b), is that those with good records in innovation have had relatively high growth rates, whereas those with poor innovative records

have not had high growth rates. According to the NBST, "this is in accord with the findings of international studies which indicate that firms must innovate regularly to cope successfully with an environment of technical change."

Technology in Irish Industry

A number of studies have made it clear that most of Irish industry has relied quite heavily on imported technology while domestic innovation has been relatively weak. An extensive survey on this subject published in 1966, *Science and Irish Economic Development* (hereafter *SIED*, 1966) said "industrial research is relatively non-existent" and much of it was "plant and process adaptation development and barely merited the title research and development". Thus the *SIED* report showed that, by international comparisons, Irish industrial research — with the exception of some large industries — was very limited in the areas of Fundamental Research, Applied Research and even Technical Development (the application of existing industrial research knowledge through the development stage into production) apart from some adaptation development.

This report argued, in line with views which had become prevalent in many other countries, that greater indigenous R and D activities, from Fundamental Research through to Technical Development, were important even if the major aim for some time was to be the efficient application of technology which was largely developed abroad. Concerning Fundamental Research, the report of the OECD (1965) was quoted: "It might be urged that a small country would do well to concentrate on applied research and live on the exploitation of research produced by the larger countries of the world. Such a policy would be doomed to failure since the country in question would quickly lack a general scientific consciousness of world advancement sufficient to allow it to select for application those advances specifically significant to its economy. It would also lack trained research men for advanced applied research and development". *SIED* (1966) also stressed the importance of a close link between Applied Research and successful Technical Development, often preferably within the one organisation or firm: — "When, however, research organisations are separate from the users of research results, technical development may not be carried out and the research may be extended indefinitely without a clear applied purpose . . . (technical development) requires an understanding by the technical development staff of the initial research work and of the probable production process".

SIED (1966) concluded by recommending that a National Science Council should be established which would "have an organisational link with Government decision-making agencies and, in particular, with the principal

economic planning department". This National Science Council, it was recommended, would be responsible for the detailed institutional recommendations for the adoption, implementation and review of a National Research Programme as a basis for science policy and strategy related to the needs of economic development. A National Science Council was established subsequently, but according to the Science Policy Research Centre, UCD (1978), this was not the body recommended by *SIED*, being rather too small, too far removed from planning and having essentially an advisory function with relatively little influence in the designing of new policies.

A report by Cooper and Whelan (1973) similarly pointed out that, in the early 1970s, expenditure on research and development in Ireland was close to the lowest among OECD countries, whether as a percentage of GNP or in terms of expenditure per head.

Furthermore, compared with other OECD countries, the proportion of total R and D expenditure which occurred in the industrial sector was low and a particularly high proportion of that was concentrated in the food and drink industries which are certainly not science-intensive industries in other countries. Cooper and Whelan also noted that industrial R and D expenditure was highly concentrated in a small number of firms, so that most companies had little direct contact with R and D done in Ireland.

Similar conclusions on the level and the nature of Irish industrial R and D were reported by the OECD (1974a). The OECD again argued the case for the development of a greater indigenous R and D capacity, with a strong role being played by Government bodies at least initially, rather than hoping to rely so much on foreign technological development. Quoting a UNESCO report, they said: "the horizontal transfer of technology is effective if the receiving country has teams of research workers and engineers whose work places them in the forefront of the scientific or technical field concerned: obviously such teams will not reach that position or remain in it *unless* they themselves *take part* in the process of original technological innovation".

Concerning indigenous Irish industries the OECD (1974a) recommended particularly; first, that further loss of control of Irish firms to foreign groups should be restricted since this had generally led to loss of value added within the country; and second, that production branches with a local raw material base should be especially encouraged and singled out as priority areas for the development of an indigenous R and D capacity. Concerning this second recommendation, some proposals along similar lines by the Institute for Industrial Research and Standards and the National Science Council were supported by the OECD (1974a).

Successive studies of R and D in Ireland from the National Science Council and its successor, the National Board for Science and Technology, (Murphy, 1969; Murphy and O'Brolchain, 1971; Murphy, 1972; Murphy and Fitzgerald, 1973; Murphy and O'Luanaigh, 1975; Maguire and Murphy, 1977; Maguire, 1979) show little significant real expansion of intramural R and D expenditure by industry from 1971 up to 1977. In fact Murphy and O'Luanaigh found a decline in intramural R and D expenditures, in real terms, in the business enterprise sector in 1971-1974, and Maguire found a further slight decline in 1975-1977 after allowing for the inclusion of more companies in the 1977 survey. (These surveys, it should be mentioned, are not confined to Irish domestic firms). According to Maguire (1979), the R and D intensity of manufacturing industry in Ireland in 1975, as expressed by the percentage of gross domestic product of industry which is devoted to R and D, was about one quarter of the average for EEC countries and one sixth of that in the USA. He found too, however, that the proportion of the growing Government R and D expenditure going to the industrial area has been increasing, although such expenditure has made relatively little impact on intramural R and D in the business enterprise sector where the proportion of funding from firms' own sources only declined from 96.5% in 1967 to 89.8% in 1977.

Cooper and Whelan (page 29) suggested that the reasons why R and D and innovation were so limited among most Irish industries (with the partial exception of food and drink) were, first, because industries which set up under protection were mostly final phases of production (assembly and the like) requiring little technological input. They say (page 30) that National Science Council documents show that very many such firms have licensed technology from abroad, probably often involving brand-name and trade-mark transfers, and perhaps sometimes involving restrictions on exports. Also, they say, the structure of industry which has many very small firms means that R and D would often prove unprofitable, at least in the medium term, due to higher fixed costs and low sales volume.

O'Doherty's (1975) case studies of successful Irish innovations seem to support these suggestions since the firms concerned were relatively large, maintained an independent R and D function and were relatively export-oriented (the seven firms concerned included two large State enterprises). O'Doherty argues that the need for an improved national innovation capability is great if Irish industry is to develop satisfactorily in competitive conditions without depending heavily on low-wage operations. He says that greater recognition has been given to this problem with the founding of the National Science Council, now succeeded by the National Board for Science and Technology, and the expansion of the Institute for Industrial Research and Standards. However, he questioned particularly whether assistance to firms for intramural R and D was adequate, since the firms studied relied heavily on

their own resources. Recently, the IDA has increased the maximum level of R and D grants from £15,000 to £50,000 per project (still subject to a maximum of 50% of eligible costs), but the overall level of expenditure by firms on intramural R and D has remained quite small by OECD standards. It is possible, as the OECD (1978) report suggested, that the nature and small size of many Irish industrial companies (unlike the successful case study firms) renders them unable to take advantage, to any great extent, of such governmental efforts.

The proposals, already mentioned, by Cooper and Whelan, the OECD (1974a) and others, that Ireland should concentrate on building up a technological capability in a more specialised indigenous industrial structure, based on existing advantages and with the object of creating larger areas of genuine competitive advantage, appear to have been recognised to some degree though the evidence of this is very recent and developments to date do not represent a major change of strategy. Thus, only two years ago, the Science Policy Research Centre, UCD (1978) could say of Cooper and Whelan's paper "the main recommendations of the report which were intended to have an impact on technological change and development in the industrial sector in general through the stimulation of indigenous industrial innovation and the buying-in of appropriate technology have yet to be implemented". The SPRC mentioned, as major examples of failure to integrate a strong policy for science and technology with industrial strategy, the important sectors of food-processing and mechanical engineering.

But since then, the IDA (1979, page 5) has said that its central industrial strategy "will encourage our own small firms, building on our natural resources, such as beef and timber (heavy capital investment will be needed) while continuing to encourage overseas industry with the technologies and marketing power which we do not yet possess, e.g. world-wide-growth industries such as electronics". The IDA (1979, page 17) recognises that such a strategy means that "Irish industry needs more investment in research and development of new or improved products; not enough effort is put into quality, design and finish of many products . . . Considerable further restructuring is required within traditional industry in order to get on the growth path outlined". In view of past experience, with the relatively weak innovation capability and short-time horizons of most Irish firms, questions arise about the degree to which more intensive and direct participation by state agencies and enterprises and stronger Government policies, may be required by such a seeming shift of emphasis towards the long-term specialised development of native industries. An up to date assessment of these questions, and of the impact of the National Board for Science and Technology in strengthening policies on science and technology since 1977, might be useful now, as well as an assessment of the degree to which any real change of strategy has in fact been implemented.

IV. 5 A Dualistic Industrial Structure?

A number of writers have suggested that distinctions between certain groupings within the manufacturing sector in Ireland are such that the existence of a dualistic structure should be recognised for the purposes of conducting useful analysis of past experience and providing a basis for expectations of future development. Farley (1972) said "of greatest concern for future research into industrial and trade patterns is the existence of dualism in the Irish economy. It indicates the need for more emphasis on micro approaches to the understanding of Ireland's trade and industrial development". Farley was referring to dualism "caused by different market orientations and by different production methods and factor proportions" which he found to exist between new grant-aided and other firms, with the food, drink and tobacco sector presenting something of an exceptional case worth separate consideration.

Cooper and Whelan (1973, p. 14) also said, concurring with McAleese (1971), that the "policy of sustained protection coupled with export promotion through new firms has created a dualistic structure in most industrial sectors. In each sector the protected small firms which characterised the industrial economy in the 1950s co-exist with competitive export-oriented firms which are very frequently foreign-owned; and there are some new subsectors where foreign-owned export-oriented firms account for virtually all the production". The report of the OECD (1978, p. 95) similarly noted that industrial policies "helped to shape an economy consisting on the one hand of foreign firms which accounted for a large share of the country's output, and moved into the most modern, dynamic sectors, and on the other hand of Irish firms which remained very small and were active in the more traditional industries or in the primary sector"; for different reasons already referred to neither group has developed an adequate innovative capability in Ireland.

Buckley (1975) also concludes that a dualistic structure has emerged with new foreign firms showing a distinct pattern of behaviour in importing a higher proportion of inputs and exporting a higher proportion of products. This division, he says, is endemic because of small linkage effects between the foreign and domestic sectors which mean that there is relatively little secondary stimulus to the domestic sectors which might help to break down the dichotomy. Buckley (1974), referring to grant-aided industry only is somewhat more cautious on this point, concluding that the concept of dualism affords useful insights but cannot be applied uncritically in the Irish context. The foreign/domestic dichotomy within new grant-aided industry is a necessary part of the explanation of differences in exporting and input purchasing behaviour, he says, but scale factors and the sectoral distribution of firms are also of some importance here. In addition, "other influences on exporting are historical factors such as protectionism, the superior efficiency

of foreign firms and the inherent advantages of foreign firms in terms of access to home markets, high level functions and specialised high quality inputs". Thus Buckley (1974) does not seem to regard these "inherent advantages of foreign firms" as part of the concept of dualism, as some others would, but rather as factors distinct from that concept which help to explain differences in behaviour.

Stewart (1976a) concludes that industry in the Mid-West Region exhibits certain features of a dualistic nature on the basis of foreign versus native industry; "the dualistic features seem to be largely a result of differences in technology, both managerial and production". Stewart (1976b) says that the poor development of linkages within Ireland by foreign firms in the same region can also be said to have led to certain features of a dual economy in the manufacturing sector. Both in the case of technology and linkages he finds that British firms are much more similar to Irish industry than those of other nationalities largely because of the apparent different motives for their establishment here — in some cases to service the Irish market, and in others to secure supplies of Irish raw materials especially agricultural produce.

The concept of a dualistic industrial structure, as it has been put forward in the Irish literature, argues that there exist two separate groups within the manufacturing sector clearly distinguished by their pattern of input purchasing and market-orientation, and the source and nature of the technology used; a basic feature of the concept is the view that these distinctions persist over a considerable period of time. How useful is this concept, and what sort of implications does it have?

One type of implication concerns the approach to analysis of past experience and the economy at present. Farley (1972), for instance, concluded that an attempt to understand industrial trade patterns required recognition of a dualistic structure rather than dealing only with aggregate data. Like Cooper and Whelan, and the OECD (1978), he also suggested that recognition of this structure was important for understanding Irish R and D patterns and for determining appropriate science policies. Recognition of distinct groupings of the type suggested within manufacturing in Ireland, rather than approaching the sector as a unit, could also, for example, affect analysis of questions about the effect of changes in domestic demand on industrial output, or the effect of a real wage cut on industrial output and employment through its effects on both domestic demand and profits. If most of domestic Irish industry, for instance, is mainly concerned with production for the home market, and appears unable or unwilling to expand exports, would higher profits necessarily lead to reinvestment in, and expansion of that sector, independently of growth of the Irish market? Thus the concept of a dualistic industrial structure does have implications for the approach to economic

analysis of questions which are important for present policies.

It seems, however, that the concept of dualism requires a more careful and complete definition than it has received so far in the Irish context. Is the dichotomy between Irish and foreign firms, between new grant-aided and older formerly protected firms or between new foreign firms and the rest? And how are the older Irish food processing industries to be regarded? Perhaps it would be useful to attempt to distinguish between more than two broad sectors.

A second type of implication of the concept of dualism concerns expectations for future development in the long term. Is it to be expected that new foreign firms will continue to have relatively little secondary impact on the Irish economy, or will this feature diminish over time, as McAleese and McDonald argue? And perhaps more important, what are the prospects for increasing the exports of Irish domestic industry so as to generate a pattern of growth in that sector which would be less constrained by the rate of expansion of the domestic market which is in turn ultimately constrained by the ability of other sectors to earn foreign exchange? McAleese (1978a) concluded that "the evidence indicates that the process of transition from a home market orientation to an export market orientation takes a long time to accomplish". But pessimistic though this outlook is, it is legitimate to ask whether it is likely that the existing structure of Irish private industry would find it profitable to attempt to accomplish such a major transition at all. More up to date and more detailed research on the development of Irish domestic industry would be useful for attempting to answer this question.

As is argued in O'Malley (1980), the question of the extent of Irish domestic private industry's ability to expand in international markets is closely related to one of the major theoretical issues of economic development on which no consensus has emerged. This is the question of whether the industry of underdeveloped or peripheral economies can be expected to develop continually so that these economies gradually become developed industrial economies; or whether there exists a marked and persistent core/periphery structure in the world economy in which the competitive disadvantages of "late-coming" peripheral industries in free trade are such that the indigenous sectors of underdeveloped peripheral economies tend to remain weak and confined to a limited range of products, in the absence of strong State intervention. The experience of Irish domestic industry could be an important case study on this issue.

SECTION V: PROSPECTS FOR INDUSTRIAL DEVELOPMENT

V.1 Labour Force Projections and Industrial Job Requirements

The Official Targets

Since the publication of Walsh's NESC Report No. 5 (1975) a good deal of attention has been given to estimates of the employment growth required to eliminate unemployment and involuntary emigration while providing jobs for a growing non-agricultural labour force. The report suggested that an unprecedented rate of growth of non-agricultural employment between 1971 and 1986 of between 20,200 and 22,800 jobs per annum would be required to attain "full employment"⁹ by 1986. In a later reassessment, NESC Report No. 35, Walsh raised the annual average estimate for 1975-86 to between 23,000 and 28,000. Based on these estimates the Government, in 1978, set a target for net non-agricultural employment increases of 29,000 per annum in 1978-80 (*National Development 1977-1980*). The contribution of manufacturing industry was to be a net increase of 13,500 jobs per annum, a figure repeated in *Development For Full Employment* (1978), but reduced to 10,000 (in the light of the changing relationship between output and employment) for 1979-81 in the *Programme for National Development 1978-1981* (1979). The target of a net annual increase of 10,000 manufacturing jobs was repeated in the IDA (1979) plan, and the IDA plan targets were incorporated in the White Paper *Investment and National Development 1979-1983*. However, the remarks in the preface to that White Paper — that the international outlook and the domestic situation had worsened since the Paper was finalised and that the expectations outlined would therefore need to be reassessed — cast some doubt on the status of targets mentioned in the White Paper.

These targets may be compared with Kennedy and Foley's (1978) conclusions that a net annual increase of at least 10,000 jobs in manufacturing would probably be required for full employment by 1986; they point out that such a sustained rate of growth would not only be unprecedented in this country but would also be well above the highest rate attained by any of the OECD countries in 1963-1973. (Manufacturing employment in Ireland, they say, grew at an average rate of less than 1,500 per annum in 1953-76, and 3,000 per

⁹Defined as 4% unemployment, due to high frictional unemployment among a small, dispersed population.

annum in 1963-73, a period of comparatively steady expansion without a serious depression). Katsiaouni (1979) concluded that the rate of growth of manufacturing output consistent with employment growth of 10,000 or 13,500 per annum would be about 10.5% or 12.6% respectively. He pointed out that such sustained growth rates would be unprecedented in Ireland, but that the Government's employment targets and output targets appeared to be broadly consistent in the light of recent trends in the relationship between growth of output and employment. Keenan (1978), however, argues that, other things being equal, the attainment of the employment creation targets set out in *National Development 1977-1980* would result in net immigration (especially of former Irish emigrants to Britain) so that the targeted reduction in unemployment would probably not be achieved. But if the unemployment rate in Great Britain fell significantly over the coming years, he says, the objective of lowering unemployment in Ireland might well be achieved if the Government's employment targets were realised.

Manufacturing employment has in recent years been growing quite quickly by historical standards, but at less than the target rates mentioned above. The increase was 3,400 and 6,700 in the years ending with the fourth quarter of 1977 and 1978 respectively (*ESRI Quarterly Economic Commentaries, Statistical Appendices*), while according to the IDA a further improvement to 8,730 occurred in 1979; but the increase for 1980 is expected by the IDA to be 5,000 or less, in view of the developing recession.

The IDA has for some years been fairly confident that manufacturing employment increases of the order of 10,000 net jobs per annum are feasible (see Killeen, 1975 and IDA, 1979, Ch. 1). Their confidence has been based on calculations of the rate at which they can approve jobs in new grant-aided projects, the rate at which these job approvals actually come into existence and the rate at which jobs in existing industries are gained and lost. Killeen (1975), for instance, pointed out that a net average increase of 10,000 jobs per annum, combined with expected job losses of 7-9,000 jobs per annum, meant a *gross* increase of 17,000 to 19,000 per year — a figure similar to the gross increase already achieved in 1973 and 1974. "The crucial variable will be the rate of job loss in the coming years", he said, and it was in fact the underestimate of these losses which was mainly responsible for upsetting his calculation in the years after 1975.

The IDA (1979) estimated that the net increase of 10,000 jobs per annum targeted in the *Programme for National Development 1978-1981* could be achieved with 15,000 new grant-aided jobs per annum combined with gains and losses in existing firms; they further estimated that 30,000 new jobs per annum would have to be approved, since 15% of approved jobs are lost through projects not proceeding while a further 35% take over 4 years to

actually appear (most of these jobs do not actually appear at all). Thus the IDA made allowance for net job losses in existing industry of 5,000 per year, a figure regarded by some observers as optimistic. The importance of this estimate, particularly in view of underestimates in the past, underlines the need for better data and a thorough study of job losses and the forces causing them in the past decade or so. Gross job losses, in fact, are currently on the increase in 1980 according to the IDA.

Doubts about the feasibility of the Government's targets referred to above have been expressed by Durkan (1978), among others. Durkan took a much more pessimistic view of external factors affecting exports, new foreign investment and new investment by existing firms. In addition, he said that the deflationary budgets which were implied by the Government's targeted borrowing requirement would not be conducive to the high rates of growth required, while domestic costs would be likely to rise faster than projected if such high rates of growth were achieved. Teeling¹⁰ argued that many of the early grant-aided foreign investors who established labour-intensive low technology projects have increasingly been coming under extreme cost pressures. This suggests continuing high rates of job losses which could, he suggests, come to overhaul new job creations. Hogan, (1979) has argued a similar point of view.

Microelectronic Technology

A further, potentially very important element which must be taken into account in the consideration of future employment trends is the introduction of new microelectronic technology. Until recently, the effects of this technology on employment had received little consideration in Ireland compared with the discussion which has been going on in many other countries. A pamphlet on this subject published by the Association of Scientific Technical and Managerial Staffs in June 1979 was introduced to "initiate a debate within the Trades Union Movement", and a short article by Lattimore in *Business and Finance* in November 1979 was presented as "the first detailed examination of what the microprocessor revolution may mean to employment in Ireland". But in late 1979 the National Board for Science and Technology initiated a major project on this subject; the First Phase Report, which is a general review of the technology and its implications, was published in May 1980 and a report on the specific implications for Ireland is due by the end of 1980.

Microprocessors are being developed very rapidly to make available computers which function with very rapidly decreasing costs, with greatly increasing reliability, requiring greatly diminishing inputs of energy and

¹⁰In a discussion at the "Symposium on Increasing Employment in Ireland", *JSS/ST*, Vol. XXIII, Part III, 1975.

operating space. These improvements, which have occurred and continue to occur at a pace which is quite exceptional in the development of most technology, will open the option of further automation, especially to small and medium sized firms in many industrial sectors, whereas previously the expense and the long time period involved in introducing automation meant that it was mostly confined to large firms in a limited number of sectors. In addition, many products are altered by the substitution of microprocessors for a greater number of other components, which simplifies the production process. But it is in the Services area — such as office automation and communications — that the greatest labour-saving effects may be expected. The ASTMS pamphlet gives many examples of major industrial firms in other countries which expect to be enabled by microprocessors to reduce their labour force substantially while increasing their output. Lattimore quotes a survey by the Manpower Services Commission in Britain which found a similar outlook among most large British firms: "not one of the firms questioned", he says "had any plans for future labour force expansion".

What sort of effects may be expected on employment in Ireland? The ASTMS are quite definite that trade unionists cannot afford to resist the introduction of this technology if industry in Ireland is to remain at all competitive and to survive. Consequently, they are seeking to promote an orderly response by trade unions to the problem and to secure the right to consultation on its introduction so as to minimise ill effects. The Government, they say has a very heavy responsibility to take the initiative, to monitor developments and plan for the changes to come. They conclude that "many more jobs are going to be lost through the technology than are created by it", a conclusion shared by Lattimore and many reports from other countries which they refer to. It is argued that because such a major changeover of technology will occur so quickly, and because relatively few important new products (as opposed to changes in existing products) are envisaged it will not be possible for the market to adjust and avoid high unemployment, for a considerable period at least. Consequently both the ASTMS and Lattimore talk in terms of planning for leisure, the expansion of education etc., rather than hoping to attain full employment.

The NBST First Phase Report (1980a), however, stresses that although the effects of the technology will be profound and far-reaching, they will be felt more gradually than is commonly believed. Also, although the NBST has yet to conduct its detailed study of the specific implications for Ireland, it says that it is already clear that "the effects in Ireland will differ from those in other countries, and if properly planned and managed we can afford to be reasonably optimistic". Among the reasons put forward for this view on the effects in Ireland are: the fact that we still have a relatively high proportion of the workforce engaged in agriculture, mostly on relatively small farms; small

firms predominate in industry, many with relatively new plant; and the electronics sector itself is relatively important and has been growing quickly in Ireland, while this country appears to have considerable attractions as a site for future foreign investors engaged in this sector.

The NBST report, however, warns that although some say that this is the first time in history that it may be possible to plan and prepare for such far-reaching economic and social change, "there is no evidence to suggest that we are planning or preparing". Concerning the sort of planning which is required, the NBST says, "benefits from the technology can only be realised in the context of an imaginative and enlightened approach to education and training, entailing considerable public investment", and "we must also plan for increased educational and recreational facilities . . ." The second phase report of the NBST project, on the implications of microelectronics for Ireland and the requirements for national policies implied, should prove valuable.

V.2 Sources of Industrial Expansion and Possible Constraints

Sources of Expansion

The IDA's plan (IDA 1979) says that an increasing number of industrial job approvals, over 50% in 1978-82, should come from "domestic" sources. (The term "domestic" in IDA publications includes existing foreign industries in Ireland). But almost half the job approvals, they say, meaning 14,000 per annum, will have to come from new overseas industry because of the very high targets which leave no realistic alternative in the medium term. This will require a considerable increase in job approvals from this source since new overseas job approvals averaged 8,000 per annum in 1975-77 (IDA, 1979, p. 25). The IDA notes that 58% of these jobs came from North American firms in that period, and while they expect North America to continue to be the main source, it is intended to try to increase the proportion coming from Europe and the Far East. The IDA (1979) believes that this target for new overseas jobs can be met, despite increasing competition for foreign investment; over 100 countries now offer inducements for such investment (McElveen, 1976).

In view of the rapid increase in American investment in Ireland in the 1970s and the apparent potential for more Japanese investment, combined with the increased proportion of exports going to EEC countries other than the UK, it seems likely as has often been suggested, that our EEC membership has proved a very important additional attraction to investors from outside the Community aiming at EEC markets, but this question has not been very carefully investigated. Teeling (1975, Ch. 3) suggests that this advantage may be eroded by agreements offering low-tariff entry into the EEC to a selection of low-wage developing countries. (It might also be eroded by the accession of Greece, Portugal, and Spain to the EEC). On the other hand, Teeling says,

trends in technology and business organisation suggest that there will continue to be a fresh pool of potential, relatively inexperienced offshore investors who would find Ireland an attractive location from the point of view of minimising risk, uncertainty and information costs.

Despite the aim of increasing the absolute number of new overseas job approvals, the IDA says it has intensified its efforts to generate industrial growth from "domestic" sources. For 1978-82, its annual target for job approvals from these sources is 15,000, which compares with actual results of 11,300 in 1977 and 8,700 in 1976. (The remaining 1,000 jobs p.a. required to make up the 30,000 overall target are planned for Service industries). In particular, increasing hopes are being placed on small firms which were targeted to provide 6,000 of the 15,000 "domestic" job approvals, compared with 3,600 in 1977. It is not clear from the IDA plan (1979), however, what proportion of "domestic" job approvals are expected to come from indigenous firms, as opposed to established overseas firms; in 1976 and 1977, slightly over half in medium and larger firms came from indigenous firms, but a large majority of job approvals in small projects are in Irish-owned firms.

Apart from the Small Industries Programme, the other IDA programmes grouped under the heading of Enterprise and Innovation, which are receiving increasing emphasis with a view to medium term growth, as was mentioned in Section III.1, apparently remain quite minor contributors to employment growth at present. Thus the IDA (1978) fixed an annual target for 1977-80 of 500 job approvals for Project Identification; and while total industrial R and D has expanded, according to the IDA (1978), expenditure on R and D in industry was still relatively small, at 0.26 of GNP in 1975 compared with 1.57% in the USA. The small target for Project Identification where opportunities for Irish entrepreneurs are being actively sought by the IDA, is one indication of how few obvious industrial opportunities may exist which do not depend on fairly long term development of new products and processes often with the aid of substantial investments.

Another quite new aspect of IDA planning is the increasing attention given to industries based on natural resources such as agricultural produce, timber, gas and zinc. It is emphasised that such industries tend to be relatively capital-intensive with long lead times involved before maximum employment is attained, but the IDA (1978) says that the development of such industries is receiving high priority. The IDA plans give little further information on the potential of these industries, but a study of the beef packing and processing industries by Coopers and Lybrand Associates (1977) has been published by the IDA. This study indicated that these two industries together could have the potential to increase their employment by between 3,900 and 5,100 jobs over the following ten years. According to the report, the role of the IDA in

relation to this development would be, in part, to use the opportunities afforded by particular grant applications to raise issues of efficiency and make further suggestions. But the methods by which the IDA would aim to attract the interest of potential investors in the further development of beef processing cannot be spelt out, the report says, without prejudicing the IDA's future work in this area.

O'Rourke and McStay (1979) have recently completed a study of the food industry's potential which argues that growth, which should be concentrated in cattle and dairy products, will probably be limited by the slow growth of demand so long as the EEC's present Common Agricultural Policy continues. They say a general reduction of EEC real prices would increase the demand for Irish beef and dairy products, due both to higher overall demand and a greater market share for Ireland because of our comparative advantage. Such a growth of the market would be necessary to enable the processing industries to expand to their maximum potential.

Concerning timber-based industry, Convery in NESC Report No. 46 said that "the present cottage industry type of wood processing structure will need to be transformed to a fully integrated, horizontally and vertically export oriented complex. This change is required because substantial economies in both production and marketing can be achieved by doing so . . ." Convery argued that the present belated and ad hoc State involvement in these industries is inadequate. He recommended the establishment of a Forest Products Development Board with "responsibility to (a) conduct wood product research and development work, (b) identify and service product markets, (c) develop a long-range plan for wood utilisation, and (d) implement the plan, including, if necessary, investing, either alone or in partnership, in processing capacity".

The role of State enterprise in manufacturing has not been as great as in some other fields, but it has been widely recognised that government participation of some form is required, for various reasons. Leser (1967/68) argued that due to large capital requirements and the inadequacy of the private profit motive in modern conditions of competition with large established industrial economies, a positive role for Government is necessary. Kennedy and Dowling (1975) suggested that State enterprises should be encouraged more to initiate industrial development since they are large employers of engineers, professional workers and others whose talents should prove very useful for this purpose. Long (1976) and Buckley (1975) also recommended a more active involvement of Government, including more action through the State enterprises, in mobilising Irish resources.

The intervention of government to assist industrial development has, of course, been very significant through agencies such as the IDA, but state enterprise as such has not been accorded a very important place in development policies. At the time of writing, it seems that policy on this matter is undergoing some change. As the IDA (1979) expressed it, last year, "the IDA has been given a mandate to work with State companies in finding new development projects. This mandate is being actively pursued through direct contact with all the companies to encourage expansion and diversification"¹¹. Nevertheless, this seemed to represent a relatively minor aspect of the IDA's overall effort. The White Paper *Investment and National Development 1979-1983* (1980), indicated some intention to develop the role of State enterprises further, with a commitment to set up a National Enterprise Agency. The Agency would "establish organisational responsibility for the commercial exploitation of new development opportunities by the State, where such opportunities are not being exploited by the private sector", and it would "facilitate the effective application of commercially oriented research and development in the economy".

More recently, in July 1980, the Taoiseach directed the chairmen and chief executives of semi-state bodies to provide the Government with a blueprint for an expanded State sector which would create more wealth and employment (Irish Times, 16 July 1980). The Taoiseach also suggested that the commercial State enterprises would be allowed greater freedom from centralised control. This directive followed the publication of a study group's report in NESC Report No. 49 *Enterprise in the Public Sector*, which was critical of growing bureaucracy affecting these bodies and recommended that they be granted more independence in activating and funding research and development programmes and exploring new markets. The increasing emphasis on the need to develop indigenous Irish industry, combined with the small scale, short time horizons and poor innovative capability of much of Irish private industry, would appear to make the question of the role of state enterprise one which deserves serious consideration.

Possible Constraints on Industrial Development

A number of potential obstacles to the achievement of industrial employment targets have been discussed in the literature. Of these, the one which has received the most attention is the possible effects of large income increases. Numerous government publications have stressed the importance of wage costs in affecting prices which in turn are seen as fundamental in determining output and hence employment. To take a recent example, the *Programme for*

¹¹The NESC welcomed the enhanced role for State companies (NESC Report No. 44), and the Irish Congress of Trade Unions argued that it would be appropriate to set up a National Development Corporation.

National Development 1978-1981 (1979, Ch. 8) says "economic growth will not be sustained at a satisfactory level if Irish producers cannot continue to expand export markets and at the same time hold adequate shares of the home market. Price competitiveness is one of the main determinants of market performance and in recent years this country has benefited significantly in this connection from productivity gains and exchange rate movements. In future these factors alone cannot be expected to provide the same advantages and it is of fundamental importance that wage levels here do not move ahead too quickly. If they were to do so market shares would be lost because of excessive price increases and corrective action would then be too late to prevent job losses."

The argument above stresses that wages should not rise at such a rate as to reduce the ability of firms to compete either with imports or in export markets. A similar argument is repeated in NESC Report No. 26¹², which also goes further and suggests that the greater the restraint in growth of money incomes, the faster would be the growth of output and employment. The argument here is that greater pay restraint improves price competitiveness and hence market shares while profits also rise leading to higher rates of investment. The view that for one reason or another, there is an important inverse relationship between the growth of wages relative to competing countries and output and employment, has also been expressed by Kennedy (1975 and 1977), Durkan (1978) and numerous issues of the *Quarterly Bulletins* of the Central Bank and the *Quarterly Economic Commentaries* of The Economic and Social Research Institute, among others. Walsh (1978a) discusses a number of approaches to achieving accelerated employment growth, all of which, he says, involve a reduction in the rate of growth of real take-home pay among those in safe employment; "this reduction may come about in a variety of guises — through lower productivity due to a decline in the capital/labour ratio, through higher taxation to support larger grants to new employment, more generous pensions, an expanded education system, or additional public employment. Above all, there must be a willingness to negotiate moderate pay increases. A rate of increase in unit wage costs that outstrips the increases in the prices being received by employers for their product on export markets would soon undo any benefits that might have been gained from other policy options".

Clearly, if the government is determined to restrain public borrowing requirements, then plans such as to increase public employment, to subsidise private industry further or to encourage early retirement and longer education would be likely to be dependent on some form of real take-home pay restraint

¹²The representatives of the Irish Congress of Trade Unions on the NESC did not commit themselves to any view on this report in view of the tripartite discussions going on at the time.

for the employed except to the extent that other groups can be taxed. In addition, there seems to be little disagreement with the argument that a long-term rate of increase in unit wage costs exceeding the rate of price increase of industrial products selling in international markets (including import-competing products in the home-market) would threaten the viability, or at least part of the labour force of the firms concerned. However, the possibility arises that no realistic degree of pay restraint would be adequate to safeguard employment in some of the older formerly protected industries and the older more labour-intensive grant-aided industries. For an almost inevitable effect of a strategy for industrial growth which meets with any success, and indeed an effect which has been a goal of Irish policy, is to raise incomes closer to those obtaining in some of the developed industrial economies. But even if some industries cannot *ultimately* be saved by pay restraint, it might nevertheless be important to aim to keep them viable as long as possible, by one means or another.

The argument that the greater the degree of real pay restraint, the faster would be the growth of output and employment has not been quite so widely accepted. Jacobsen (1978), for instance, remarks that "no demonstrable relationship between profit levels and subsequent job-creating investment exists". There is in fact a noticeable absence of published studies which would show such a relationship, except in the limited sense that a fall in profits preceded a fall in investment and employment in 1973-75 (Vaughan, 1978). But according to Vaughan's tentative conclusion, there is little evidence of the opposite effect, a rise in profits leading to a rise in output and employment; "in the period under study, up until 1973, no simple relationship between profits, output and employment would have been immediately apparent".

Some consideration of the structure of industry in Ireland suggests that it is not self-evidently true that a higher share for profits as a result of pay restraint should generally lead to very significantly higher investment and growth of employment. Most of the older formerly protected industries appear to have been quite consistently oriented to the domestic markets so that, without an expansion of their range of products, their expansion may have been ultimately limited by the rate of growth of that market, which is in turn dependent to a great extent on the growth of incomes of employees. As regards the expansion of the new export-oriented foreign firms, this may be influenced largely by foreign demand and profitability of the enterprise as a whole, rather than mainly by higher profits for the Irish branch, although of course some minimally acceptable level of profits would be a precondition for its expansion. The Irish branch is often only one part of the chain of development, production and sales so that its cost-effectiveness need not be the major influence on final cost. However, these are only tentative suggestions to make the point that one cannot be sure, *a priori*, that greater

pay restraint (at least, of an order that could realistically be hoped for) necessarily leads to faster growth to any very significant extent. Further research on this matter might be useful, although the technical difficulties have proved to be considerable.

Connellan's paper in the CII (1980b) draws attention to the changed circumstances for consideration of the appropriate scale of income increases since Ireland joined the European Monetary System in March 1979. Previously, comparisons of Irish wage and productivity increases were generally made with reference to the UK. But now, says Connellan, "if both monetary and fiscal policies are aimed at exchange rate stability within the EMS, this must also apply to incomes policies . . . The major challenge for 1980 will be to maintain the exchange rate of the Irish currency against the average of EMS currencies, and to eliminate the gap between our rates of cost and price inflation and the average within the EMS".

The point has been made on a number of occasions that uncertainty about whether pay restraint will in fact lead to reinvestment and employment growth makes it difficult to secure agreement for pay restraint. A number of ESRI *Quarterly Economic Commentaries* have mentioned this problem; for example, Durkan and Keenan (December 1977) say "some firms may increase output and employment, attributable to this wage restraint, others may not, even though profitability has increased. This can give rise to tensions, which if National Wage Agreements are to continue to provide relative cost gains, must be eliminated. There is a need for a form of participation in decisions effecting capacity utilisation and investment where these are being financed by wage restraint and an institutional framework to ensure that wage restraint is reflected in increased output and employment". O'Riordan (1976) makes a similar argument somewhat more forcefully pointing to a resolution of the conference of the Irish Congress of Trade Unions which said "Conference holds that workers must be guaranteed that their wage-restraint will lead to productive and beneficial investment and not towards even further increases in the personal incomes of the privileged sections of society and that the only effective guarantee of this would be democratic control by workers over the utilisation and allocation of such investment funds." Kennedy (1977) also recognises that trade unions may be reluctant to agree to pay restraint which can simply result in higher incomes for capitalists, but suggests that if this is their fear then trade unions could engage in industrial investment themselves; he mentions the example of Israel where large industrial enterprises developed by the trade unions movement account for nearly 20% of value-added in industry.

Another possible constraint on industrial development is shortages of certain categories of skilled labour in some regions. The *Survey* (1967) found that

very few grant-aided firms at that time complained of shortages of trained workers, but a problem in this area has been found on a number of occasions since then. O hUiginn (1972) and McLoughlin, in *Administration* (1972) said there were quite widespread shortages of skilled labour in the early 1970s. More recently, the IDA (1978, p. 68) noted that these skilled labour bottlenecks which were emerging in the early 1970s prior to the recession could recur, and the IDA (1979, p. 23) also said that a serious mismatch could arise between job opportunities in industry and the skills of job seekers. In particular, the IDA (1979) said that there was need for more toolmakers, fitters, engineers and electronic technicians.

The NESc, in Report No. 44 (1978), expressed great concern about developing shortages of various skills. The Council strongly recommended "that the whole issue of ensuring adequate skills for national development and employment should be examined, as a matter of urgency, by the relevant authorities in close co-operation with employers and unions, and the necessary corrective measures taken". The Confederation of Irish Industry (1980a) reports the results of inquiries among its members in October 1979 which found continuing problems in recruiting executive and skilled staff in particular, and semi-skilled staff to a lesser extent, in certain regions especially. The occupations most affected were similar to those mentioned by the IDA (1979). And finally, Connellan, in the CII's report (1980b), mentions that the proportion of firms reporting difficulties in the recruiting of (mainly skilled) staff had risen from 2-3% in 1975-77 to about 8% in 1979, despite the existence of a large pool of unemployed people.

Some problems have been noted, too, with the physical infrastructure, particularly in telecommunications and internal road transport. The IDA (1979) notes that investment planned in telecommunications in the period 1977-82 will prove particularly beneficial for industry; it also says that the government's road development plan includes major improvements on sections identified by the IDA as adversely affecting industrial-growth.

The NESc's Report No. 44 (1978), however states that "deficiencies in infrastructure are a serious impediment to balanced economic development throughout the country". The Council suggests that the need to remedy deficiencies, particularly in telecommunications and sanitary services, could justify aiming to reduce the Exchequer borrowing requirement as a proportion of GNP over a somewhat longer period than envisaged by the government's plan.

The Confederation of Irish Industry (1980a) and Connellan in CII (1980b) also expressed particular concern about shortcomings in telecommunications and in road development. In the case of telecommunications, however, the

Confederation (1980a) was broadly satisfied with the standards defined by the Posts and Telegraphs Review Group and accepted by the Government, to be reached by 1984 at a cost of £600 million (1978 prices), although they stressed the need to avoid further delays in implementation. But the Confederation argued that the "Road Development Plan for the 1980s", published by the Government in May 1979, is not sufficiently ambitious. The plan's targets, they say, fall far short of the required standard.

The problem of pollution and the need to control it has been studied, on behalf of the IDA, by the Institute for Industrial Research and Standards (1978). This study found numerous cases of water pollution, as well as serious air pollution on occasion in central Dublin, (which seemed likely to worsen) but the manufacturing sector contained relatively few of the main sources. New foreign industries were said to be generally satisfactory. The report concluded "With the stringent controls being imposed on new industries setting up in Ireland for the first time or existing industries expanding their plants the IDA is satisfied that the industrial development process can progress satisfactorily without any threat of damage to the environment". At the time of writing, however, a problem has come to light concerning facilities for the disposal of toxic waste.

A report by the Confederation of Irish Industry/Small Firms Association (1978) argued that although policies were wholly neutral in intention and administration, due to the nature of small firms they had adverse effects on the development of this sector of Irish industry. The report referred to particular problems of smaller companies in raising finance, marketing, transport, taxation, R and D, and meeting the information requirements of State agencies. Many of these problems arose from the difficulty of firms with small turnovers facing relatively large overhead costs. This report recommended the appointment of a Minister of State with responsibility for Small Firms and the establishment of a Small Business Agency; the Agency would, for example, administer all grants for small firms and co-ordinate the activities of the many State agencies serving and regulating industry, in relation to the small firms sector.

Another possible constraint on Irish industrial growth which has been referred to on a number of occasions is the effect of growing competing imports, particularly of products of labour-intensive industries, from low-cost less-developed countries. This issue is the subject of a study currently being conducted for the NESAC, and of a recent report by Matthews (1980). Matthews concludes that growing import penetration has had a significant impact on job losses, but relatively slow expansion of home demand has contributed to the poor employment performance of some sectors such as footwear. Matthews points out, however, that the fear of being swamped by

low-cost suppliers in less-developed countries (LDCs) should be put in perspective. Only a relatively small proportion of total Irish imports comes from outside the EEC, and "if present trends continue, LDCs will remain very small suppliers of the Irish market even on the more extreme growth rate assumption. On the same assumptions, Irish exports to LDCs would remain sufficiently high to ensure a continuing surplus on manufacturing trade with these countries". The same outlook, he says, does not apply to Japanese trade, the deficit on which will probably emerge as the most sensitive Irish trade problem in the 1980s.

In view mainly of the inapplicability of protectionist measures, in the context of EEC membership, to our major trading partners which are the other EEC countries, and of the danger of provoking retaliatory protectionist measures which would harm exporters, Matthews counsels against a drift to protectionism. Rather, policies for adjustment of badly hit sectors and regions to competitive pressures, he says, should be the focus of debate.

A final possible constraint on industrial development which must be mentioned is the Government's concern about the growth of public borrowing, and their plans to reduce borrowing requirements as a percentage of GNP. A more restrictive approach to public expenditure could affect industrial growth through effects on domestic demand and eventually perhaps on direct and indirect subsidies to industry. Durkan (1978), for instance, thought it unlikely that the economy could grow as rapidly as targeted in 1979 and 1980 in the face of what would be deflationary budgets if the targeted borrowing requirement was to be realised. Jacobsen (1978) said that, "Given current trends, a fiscal crisis could generate out of a clash between the State's dependent status whereby it 'socialises' the risks of foreign (and native) capital through the incentive packages and the State's need to legitimate itself through welfare-oriented expenditure to more discerning citizens. In particular, a collision with the limits of borrowing is imminent since past prosperity was propped up by extensive debt creation".

Bruton (1978, Ch. 3) produces figures which show that by 1975 public assets appeared to exceed public debt by 35% due to the real erosion of deadweight debt because of inflation compared with nominal appreciation of the value of public assets which arise from public investments. (The value of public assets in Bruton's figures, is based on the cost at constant (1975) prices minus a realistic allowance for depreciation). While these figures could be taken, as has been suggested by some commentators on a similar situation is the United Kingdom, as suggesting that much of the concern about the growth of the public debt is unjustified, the situation in Ireland is not quite clear. As Bruton says, "showing that the past cost of assets exceeds debt does not indicate whether the true value of these assets is greater than the debt. Only

information on the true social returns from public investment could answer that question". But in Ireland little is known about the social returns from public investment. Also, from the point of view of the Government, which bears the responsibility for the debt, a relevant question is how do the financial returns accruing to the Exchequer compare with the debt. But unfortunately little information is disseminated on the returns to the State from the Public Capital Programme.

SECTION VI: CONCLUSIONS

The review of industrial policy since the early 1960s contained in this paper suggests that there was an essential continuity in the main features of policy throughout the period. Even with regard to the past few years it is difficult to disagree with the view of the NESC in commenting on the Green Paper, *Development for Full Employment* (1978). The Council was concerned that "although a radical break with past experience in regard to job creation in the industrial (and services) sector is sought in the Green Paper, there appears to be an implicit assumption that adjustments or extensions in existing policies will achieve the desired results. Apart from the intensification of some existing policies which can, of course, be considered as an important option, no major options regarding industrial policy appear to have been considered and presented . . ." (NESC Report No. 44, 1978, page 44). By way of qualification, however, it may be that the IDA's increasing emphasis in recent years on initiating and assisting Irish domestic industrial projects, the declared high priority for industries based on Irish primary resources (IDA, 1979), the mandate given to the IDA to work with State companies in finding new development projects and other recent indications of some intention to strengthen the role of State enterprises (see Section V.2), could represent the seeds of a new departure. But it remains to be established whether some of these declared new intentions have in fact been of any great practical significance as yet.

Perhaps the most important issues raised in this survey are those which concern the relatively poor performance of the older, formerly protected industries which still account for a very substantial share of manufacturing employment. The main question is whether this industrial base, which was mostly laid down during the protectionist period before the mid-1960s, can still be expected to adapt itself to free trade sufficiently to contribute significantly to the growth of output, exports and employment. Or should it be considered, on the other hand, that many of these industries have a relatively weak competitive advantage in this country so that the best to be hoped for is their survival, perhaps involving shrinking market shares and continuing labour-saving rationalisation with losses of employment? The first, and more optimistic, of these two views has probably been the most common assumption, but relatively little research has been done which would support it.

It was suggested in Section IV 4 that there may be serious disadvantages inherent in late industrial development — involving the superior capital resources, economies of scale, external economies, large established markets and perhaps especially the greater technological capabilities of established competitors (an area which has been the subject of a number of studies by Irish researchers and the OECD) — which limit the ability of relatively late-developing small private industrial firms to compete very effectively, under prevailing policies, in many important manufacturing sectors. There are a number of areas of research which could help to clarify how serious are these considerations in restricting the development of Irish private domestic industry. For instance, it would be useful to have a clearer picture of the pattern of closures and job losses among domestic industries and the influence of various factors, especially the introduction of free trade, in causing them. It would be useful, too, to examine the sectoral composition, sources of technology, marketing strategies and other characteristics of the more successful Irish industries, including new grant-aided industries. A third area of inquiry is the extent of investment in non-industrial activities and in acquisitions of foreign companies by the larger more successful Irish industrial companies, which could serve as an indication of the limitations, as perceived by those well qualified to judge, on industrial expansion from an Irish base when relatively short-term private profit is the motivation. Fourth, closer attention to the historical experience of Irish industry under free trade from the 1820s up to the 1930s could prove instructive. And, finally, we could probably learn from the experience and policies of the small number of other relatively late-developing countries which have had some greater success in expanding exports from domestically-based industry; Japan and South Korea are possible examples which come to mind, both of which adopted a more selective approach to foreign investment and a more active and co-ordinated strategy for long-term development of domestic industry.

One particular feature of most Irish domestic industries which recurs in the literature is the low incidence of proprietary technology and the low levels of expenditure on industrial research and development. A number of reports, such as *Science and Irish Economic Development* (1966), Cooper and Whelan (1973) and OECD (1974a), have suggested that a greater science and innovation effort related to the needs of industry and backed by strong Government policies, would be important as a means of widening the area of competitive advantage of native Irish industry. These reports recognised that imported technology must continue to play an important role. But they nevertheless argued that a stronger indigenous R and D effort, guided and stimulated by Government policies for some time at least, was required for the more effective use of foreign technology, as well as for the strengthening of Irish native industries using locally developed technology and perhaps particularly exploring the possibilities for further processing of native

resources. Some suggestion was made in these reports, as well as by others such as Kennedy and Dowling (1975) and Buckley (1975), that State enterprises might be in a position to make a particularly useful contribution in this regard.

Regarding foreign grant-aided industries, one major area of concern is the suggestion, by Teeling (1975) and Hogan (1979), that they have become subject to increasing rates of closure and loss of employment (although not necessarily at higher rates than in Irish firms). It seems to be a little too early, especially in view of the instability of much of the 1970s, to be sure that this is going to be an increasing and long-term trend. But events to date seem to be at least consistent with the view that employment losses in this sector are showing a rising long-term trend which could mean declining net job gains per annum in foreign industry, while the costs of attracting rising numbers of gross new jobs could continue to increase.

New foreign industries have been the most dynamic and successful part of industry in Ireland since the early 1960s, but a number of drawbacks of these industries have been pointed out in the literature. These include little diffusion of technology, relatively little demand for scientific and technical workers (as reported by Cooper and Whelan (1973) and Buckley (1975), but some recent developments especially in the electronics sector, may well be more promising and would merit a more up to date assessment), relatively low linkages with the domestic economy (which may or may not grow in the future), and fears for the loss of some degree of political and economic independence. Two other matters which seem inadequately researched concern the withdrawal of their profits from Ireland (which may not give any great cause for alarm, but information is scarce) and the degree to which they compete with Irish firms for resources, especially skilled manual labour.

In view of the relatively weak performance of much of Irish industry and the contribution which new foreign firms have made to employment and growth of output and exports, few writers have suggested that the policy of continuing to attract foreign industry should be dispensed with. But some have argued for a shift of emphasis, of varying degrees, to greater encouragement and assistance for the development of domestic enterprise — whether private or public, or both. The IDA's view is that industrial investment from all sources must be encouraged in view of our urgent employment requirements, but even if one broadly accepts that view, as most of the literature surveyed here has, there is still scope for differences of emphasis. The arguments for greater emphasis on the development of domestic industry are based in part on the relatively disappointing performance of many domestic industries and a belief that improvement should be possible aided by judicious policies. But they are based, too, on the apparently transient nature of some foreign investments and what is argued to be their limited secondary

impact on prospects for long-term development through, for example, linkages with the domestic economy, diffusion of technology and employment opportunities for scientific and technical workers. Thus the issue is not necessarily a clear cut one of promoting domestic as opposed to foreign industry per se, since as well as further promoting domestic industry it may be possible to aim to improve the secondary impact, and the ties to the domestic economy, of new foreign industries. In fact, the IDA appears to have been attempting to do this in its strategy for the development of a large integrated electronics sector, based initially on foreign investments (see Section IV.3).

A number of important issues affecting both Irish and foreign industry were raised in this survey, some of which would justify further research. The implications of micro-electronic technology seem likely to be particularly significant, and the findings of the current National Board for Science and Technology project on this subject will deserve close attention. The second issue concerns pay restraint which has been greatly emphasised as a necessary, and sometimes a sufficient condition for faster growth of industrial employment. The discussion in Section V.2 suggested that there was little disagreement with the view that long-term growth in unit wage costs at a rate exceeding that in competing countries would prove damaging. However, it was also noted that there has been (and probably continues to be) uncertainty about whether a degree of pay restraint sufficient to raise industrial profitability significantly would in fact lead to reinvestment and significant employment growth. Such uncertainty should not diminish the importance of at least seeking to ensure that wage increases are not so great as to damage growth and employment prospects. The argument of Durkan and Keenan (1977), (which may be partly met by the concept of a "National Understanding" on wage increases) that there is a need for an institutional framework to ensure that wage restraint sufficient to increase profitability would in fact be reflected in increased investment, output and employment as far as possible, was also mentioned as relevant to this discussion. Another issue requiring attention, and possibly further research, is the question of shortages of certain skills and adequate infrastructural facilities, both of which could be constraints on industrial growth. The possibility of paying industrial grants as employment subsidies, possibly in the form of a once-off lump sum rather than as a continuing subsidy, and of introducing a system of social cost-benefit analysis of new projects seeking grants, was discussed in Section IV.2. Finally, there are a number of other issues of general interest for industrial development which have been discussed very little in the literature reviewed here but which would justify some greater examination than they have received so far.

These questions include:—

- What has been the role of the banks in the process of industrial development?
- Are such factors as the legal system, planning legislation, professional practices and building contract procedures as conducive as they might be for development?
- Could workers' identification with the interests of industrial enterprises be enhanced by, for instance, greater worker participation or consultation in decision-making?
- In what direction, and how, should Ireland seek to influence EEC industrial policies?
- What are the implications for industry in Ireland arising from the coming accession of Spain, Portugal and Greece to the EEC?

APPENDIX*

Chronology of Principal Policy Measures Relating to Industrial Policy

- 1950 Industrial Development Authority (IDA) established.
- 1952 *Undeveloped Areas Act*, 1952. Introduced cash grants of up to 50% of the cost of machinery and equipment and up to 100% of the cost of land and buildings and for training of workers in the designated undeveloped areas. An Foras Tionscal was established to administer these grants.
- 1956 *Industrial Grants Act*, 1956. The IDA was empowered to give grants of up to two-thirds of the costs of industrial buildings and land outside the Designated Areas, for new industrial projects.
- 1956 *Finance Act*, 1956. Granted 50% tax remission on profits earned on increases in export sales over the previous year.
- 1958 The proportion of tax remission on export profits increased to 100%; accelerated depreciation allowances on industrial plant and equipment introduced.
- 1958 *Industrial Development (Encouragement of External Investment) Act*, 1958; the provisions of the *Control of Manufactures Acts* relaxed.
- 1958 "Economic Development" and the First Programme for Economic Expansion published.
- 1958 Profits arising from export business at Shannon Airport exempted from tax until 1983.
- 1958 Gaeltarra Eireann established to develop schemes of employment in Gaeltacht areas.

*This appendix draws, in part, on a chronology of regional policy measures drawn up by John Blackwell of the NESC Secretariat, and on NESC Report No. 4, and Moore, Rhodes and Tarling (1977).

- 1959 *Industrial Grants Act*, 1959. IDA grant-giving functions transferred to An Foras Tionscal. Grants now available for new projects and major expansions at maximum rates of 50% of Plant and Machinery costs and 100% of Buildings and Land costs in the Designated Areas; one-third of Plant and Machinery costs and two-thirds of Buildings and Land costs elsewhere, where the grant would be under £250,000.
- 1959 Shannon Free Airport Development Co. Ltd. established. SFADCO was empowered to make grants for industrial and commercial enterprises at the airport of up to 50% of the cost of machinery and equipment. The Company also provided training grants, and factories for renting at the industrial estate which was established in 1959 by the Company at the airport.
- 1960 *Finance Act* extended the period of Export Profits Tax Relief from 10 to 15 years with diminishing concessions for a further 5 years.
- 1961 Committee on Industrial Organisation set up.
- 1963 Adaptation grants scheme established; grants of up to 25% of industrial adaptation costs payable.
- 1963 Unilateral tariff cuts of 10%.
- 1963 *Undeveloped Areas (Amendment) Act*, 1963. *Industrial Grants (Amendment) Act*, 1963. Distinction between grants for Plant and Machinery, and Buildings and Land abolished. Maximum grant rates became: two-thirds of capital costs in the Designated Areas where the grant is less than £250,000 and 50% or £1,000 per job (whichever is less) for larger projects; outside the Designated Areas — the same grant for large projects, and 50% where the grant is less than £250,000, or up to two-thirds in exceptional cases. Labour training grants, hitherto available only in the Designated Areas, became available to all areas.
- 1964 Unilateral tariff cuts of 10%
- 1964 Control of Manufacturers Acts repealed.
- 1965 Anglo-Irish Free Trade Area Agreement. Free trade in nearly all manufactured products to be established by 1975 by means of ten annual cuts of existing tariffs of 10% each.
- 1965 Gaeltarra Eireann empowered to make grants to firms and to take up shares in companies.

- 1966 *Industrial Grants (Amendment) Act, 1966*. An Foras Tionscal empowered to establish and administer industrial estates with advance factories; estates established in Galway and Waterford.
- 1966 The IDA given responsibility for promoting and evaluating new industry projects from domestic sources. Grant-giving powers still with An Foras Tionscal.
- 1967 The IDA Small Industries Programme introduced, on a pilot basis, in three groups of counties.
- 1967 Free depreciation for Plant and Machinery in Designated Areas; 50% initial allowances elsewhere. 20% initial allowance on Buildings and Land in all areas.
- 1968 Initial allowance on Plant and Machinery in non-Designated Areas raised to 60%.
- 1968 SFADCO appointed as agent for the IDA charged with promotion of industrial development in the Mid-west region.
- 1969 *Industrial Development Act, 1969*. An Foras Tionscal and IDA merged in one body called the IDA. Grant rates revised; now up to 40% of capital costs in Designated Areas and 25% elsewhere, with a further grant of 20% in all areas in exceptional cases. Adaptation Grants replaced by Re-equipment Grants payable by the IDA at rates of up to 35% in Designated Areas and 25% elsewhere. New industrial incentives included grants towards leased assets, subsidisation of interest rates, guarantees for loans and research and development grants of up to 50% or £15,000 per project (whichever was less).
- 1969 Export Profits Tax Relief extended to 1989/90.
- 1969 IDA Small Industries Programme extended to the rest of the country excluding Dublin.
- 1970 The "administrative" limit on new industry grants reduced by 10% from levels provided in the *Industrial Development Act, 1969*. Standard grant rates now a total of 50% or £5,000 per job (whichever is less) in Designated Areas, 35% or £4,000 per job in other areas, except 25% or £3,000 per job in County Dublin.
- 1971 Free depreciation of Plant and Machinery allowed in all areas with an additional investment allowance of 20 percentage points in the Designated Areas.

- 1973 Ireland acceded to EEC membership; free trade in nearly all manufactures with member countries to be established over a five year period by cuts in existing tariffs of 20% each year.
- 1973 IDA Joint Venture Unit established.
- 1973 IDA Service Industry programme established.
- 1975 IDA Project Identification programme established.
- 1975 Dublin included in IDA Small Industries programme — for certain products.
- 1975 The initial allowance applying to investment in industrial Buildings and Land in all areas raised to 50%.
- 1977 IDA began to promote Dublin freely as an industrial location; Small Industries programme in Dublin extended to cover all products. Dublin grant rates brought into line with other non-Designated Areas.
- 1977 *Industrial Development Act, 1977*. This enabled the IDA to supplement its normal financial support with assistance towards the working capital needs of projects by first-time entrepreneurs. It also extended the IDA's equity taking powers.
- 1978 The Enterprise Development programme established, taking advantage of the provisions of the *Industrial Development Act, 1977*.
- 1978 Research and Development grants increased to a maximum of £50,000 per project.
- 1978 Decision announced to replace Export Profits Tax Relief with 10% corporation profit tax for all manufacturing in 1981-2000 inclusive.
- 1978 IDA initiated a special development programme for Dublin Inner City. Largest programme yet of advance factories announced.

REFERENCES

- Administration*, Vol. 20 No. 1, Spring 1972, Special Issue on the Industrial Development Authority.
- AnCO 1975, *An Investigation of Skill Shortages as Factors Influencing Industrial Development in Ireland* mimeo.
- Association of Scientific Technical and Managerial Staffs — Republic of Ireland Section. 1979. *Consultation or Chaos? Microelectronic Technology*. Dublin, ASTMS.
- Black, W. 1977. "Industrial Development and Regional Policy", in Gibson and Spencer (eds). *Economic Activity in Ireland: A Study of Two Open Economies*, Dublin, Gill and MacMillan.
- Bristow, J. A. 1968. "Public Enterprise" in J. A. Bristow and A. A. Tait (eds). Bristow, John. 1979. "Aspects of Economic Planning", *Administration*, Vol. 27 No. 2.
- Bristow, J. A. and A. A. Tait (eds.) 1968. *Economic Policy in Ireland*, Dublin, Institute of Public Administration.
- Brock, C. 1963/64. "The CIO Industrial Survey", *Journal of the Statistical and Social Inquiry Society of Ireland*, 21, Pt. 2.
- Brock, Catherine, 1965. *A Synthesis of Reports by Survey Teams on 22 Industries* — a report to the Committee on Industrial Organisation. Dublin, Stationery Office, Pr. 7883.
- Brock, C. 1968. "Public Policy and Private Industrial Development", in J. A. Bristow and A. A. Tait (eds.)
- Bruton, Richard, 1978. *Irish Public Debt*, Dublin, Economic and Social Research Institute paper No. 94.
- Buckley, Peter J. 1974. "Some Aspects of Foreign Private Investment in the Manufacturing Sector of the Economy of the Irish Republic". *The Economic and Social Review*, April, Vol. 5, No. 3.
- Buckley, Peter J. 1975. *The Effects of Foreign Direct Investment on the Economy of the Irish Republic*. Ph. D. Thesis, University of Lancaster.
- Chadwick, J. W., J. B. Houston and J. R. W. Mason 1972. *Ballina — A Local Study in Regional Economic Development*, Dublin. Institute of Public Administration.
- Chambers, Derek 1975. "A Symposium on Increasing Employment in Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIII, Pt. III.

- Chubb, Basil and Patrick Lynch, 1969. *Economic Development and Planning*, Dublin, Institute of Public Administration.
- Committee on Industrial Organisation, 1965. *Final Report*, Dublin, Stationery Office, Pr. 8082.
- Committee on Industrial Progress. 1973. *General Report*, Dublin, Stationery Office, (Pr. 2927).
- Confederation of Irish Industry, 1971. *Signpost — Industry in the Seventies*, Dublin, CII.
- Confederation of Irish Industry, 1977. *Newsletter*, Vol. 27, No. 9, 14 June. Industrial Policy Statements by the three main political parties.
- Confederation of Irish Industry, 1978a. *Economic Review — National Conference 1978*. Dublin CII.
- Confederation of Irish Industry/Small Firms Association, 1978b. *The Small Firm in Ireland*. Dublin CII.
- Confederation of Irish Industry, 1978c. *Economic Review — Response to the Green Paper*. Dublin CII.
- Confederation of Irish Industry, 1980a. *Industry 1980*, Business Series Paper No. 3, CII, Dublin.
- Confederation of Irish Industry. 1980b. *Industry Report 1980*, Business Series Paper No. 4, Dublin CII.
- Convery, Frank J. 1978. 'Some Environmental Policies — Review and Outlook' in B. R. Dowling and J. Durkan (eds.).
- Cooper, C. and Whelan, N. 1973. "Science, Technology and Industry in Ireland", *Report to the National Science Council*, Dublin, Stationery Office.
- Coopers and Lybrand Associates. 1977. *A Development Study of the Irish Beef Packing and Processing Industries*. Dublin, Industrial Development Authority. Publication Series Paper 4.
- Crotty, Raymond, 1966. *Irish Agricultural Production*. Cork University Press.
- Crotty, Raymond. 1969a. Review Article on "Planning in Ireland" by Garret Fitzgerald. *Studies*. Spring.
- Crotty, R. 1969b. "Regional Planning for Ireland: The Buchanan Report", *Studies*, Autumn.
- Cullen, L. M. 1976. *An Economic History of Ireland Since 1660*, London, Batsford.
- Development for Full Employment*, 1978. Dublin, Stationery Office, Pr. 7193.
- Donaldson, Loraine, 1965. *Development Planning in Ireland*, New York and London, Praeger.
- Dowling, B. R. 1978. "Planning Under Uncertainty" in J. W. O'Hagan (ed.) *The Economy of Ireland — Policy and Performance*, Dublin, Irish Management Institute.
- Dowling, Brendan R. 1978. "Budget Deficits and Fiscal Policy" in B. R. Dowling and J. Durkan (eds.).
- Dowling, B. R. and J. Durkan (editors). 1978. *Irish Economic Policy: a Review of Major Issues*. Dublin, Economic and Social Research Institute.

Durkan, J. 1978. "The Irish Economy: the Recent Experience and Prospective Future Performance" in B. R. Dowling and J. Durkan (eds.)

Durkan, J. and J. G. Keenan (1977). *Quarterly Economic Commentary*, ESRI, Dublin. December.

Economic Development, 1958. Dublin. Stationery Office. Prl. 4803.

Economic and Social Development, 1976-1980. 1976. Dublin, Stationery Office. Prl. 5758.

Farley, Noel J. J. 1971. "Capital Formation, Technical Change and Labour Productivity Improvement: an Analysis of a Cross-Section of Irish Manufacturing Industries 1953-1967". *Economic and Social Review*, Vol. 3, No. 1.

Farley, Noel J. 1972. "Explanatory Hypotheses for Irish Trade in Manufactured Goods in the Mid-Nineteen Sixties", *Economic and Social Review*, Vol. 4, No. 1.

Farley, Noel J. J. 1973. "Outward-looking Policies and Industrialisation in a Small Economy: Some Notes on the Irish Case". *Economic Development and Cultural Change*, Vol. 21, No. 4, Pt. 1, July.

Farley, Noel J. J. 1975. "Determinants of Establishment size in Irish Manufacturing Industries: Some Notes on the Irish Case 1931-1972". *Economic and Social Review*, Vol. 6, No. 2.

Farley, Noel J. J. 1978. "The Import Dependence of the Irish Economy During the Decade of the Sixties". *Economic and Social Review*, April, Vol. 9, No. 3.

Federation of Irish Industries. 1968. *Challenge—Industry and Free Trade*. Dublin, FII.

Fitzgerald, Garrett, 1968. *Planning in Ireland*, Dublin and London, Institute of Public Administration; Political and Economic Planning.

Foley, Anthony, 1977. *Productivity and Size of Plant in Irish Manufacturing*. M.A. Thesis, U.C.D.

Geary, Patrick T. and Edward McDonnell, 1979. "The Cost of Capital to Irish Industry: Revised Estimates", *Economic and Social Review*, Vol. 10, No. 4, July.

Geary, P. T., B. M. Walsh and J. Copeland. 1975. "The Cost of Capital in Irish Industry", *Economic and Social Review*, April, Vol. 6, No. 3.

Helleiner, G. K. 1973. "Manufactured Exports From Less-developed Countries". *Economic Journal*, 83, 21-47.

Hogan, Michael. 1979. *The Employment Implications of Export-Oriented Direct Foreign Investment in Manufacturing Industry*". MBA Thesis. U.C.D.

Hufbauer, G. C. 1975. "The Taxation of Export Profits", *National Tax Journal*, Vol. XXVIII, No. 1.

Industrial Development Authority, 1974. *Industrial Incentives*, Dublin, IDA.

Industrial Development Authority, 1978. *IDA Industrial Plan 1977-80*, Dublin, IDA.

Industrial Development Authority, 1979. *IDA Industrial Plan 1978-82*, Dublin, IDA.

Institute for Industrial Research and Standards. 1976. *A Survey of Pollution in Ireland — a report to the Industrial Development Authority*. Dublin, IDA, Publication Series Paper 2.

Investment and National Development 1979-1983. 1980. Dublin, Stationery Office. Prl. 8547.

Irvine, Ian J. 1974. "Fiscal Policy in the Irish Economy", *Economic and Social Review*. October. Vol. 6, No. 1.

Jacobsen, Kurt. 1978. "Changing Utterly? Irish Development and the Problem of Dependence". *Studies*, Winter.

Katsiaouni, Olympios. 1977/78. "Planning in a Small Economy: the Republic of Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIII, Part V.

Katsiaouni, Olympios. 1979. *Manufacturing Output, Productivity Trends and Employment Planning in Ireland*. Dublin, Institute of Public Administration.

Keenan, J. G. 1978. "Unemployment, Emigration and the Labour Force", in Dowling and Durkan (eds.) 1978.

Kennedy, K. A. 1968/69. "Growth of Labour Productivity in Irish Manufacturing 1953-67". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXII, Part I.

Kennedy, Kieran A. 1971. *Productivity and Industrial Growth — The Irish Experience*, Oxford, Clarendon Press.

Kennedy, Kieran A. 1974. "The Irish Economy: Challenges and Options", *Management*, May.

Kennedy, Kieran A. 1975. "A Symposium on Increasing Employment in Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIII, Pt. III.

Kennedy, Kieran A. 1976. "Planning and Employment", *Management*, May.

Kennedy, Kieran A. 1977. *Job Creation Since The Foundation of The State*, paper read at the Fifth Annual Summer Course of the Irish Congress of Trade Unions, July.

Kennedy, Kieran A. and Dowling, Brendan R. 1975. *Economic Growth in Ireland: the Experience Since 1947*. Dublin, Gill and MacMillan.

Kennedy, Kieran A. and Foley, Anthony. 1978. "Industrial Development", in Dowling and Durkan (eds.) 1978.

Killeen, Michael J. 1975. "A Symposium on Increasing Employment in Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIII, Pt. III.

Killeen, Michael J. 1976. *Industrial Development and Full Employment*, Dublin. Industrial Development Authority, Publication Series Paper 3. (first published as Killeen, 1975, J. SSISI).

Killeen, M. J. 1979. *The Electronics Revolution — Its Impact on Ireland*. Dublin. Industrial Development Authority.

Lattimore, John. 1979. "The Technology Trap". *Business and Finance*, 1st November.

Lee, Joseph. 1973. "The Modernisation of Irish Society, 1848-1918". Dublin, *Gill History of Ireland*, Vol. 10.

Leser, C.E.V. 1967/68. "Problems of Industrialisation in Developing Countries and their Implications for Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXI, Part VI.

Linehan, T. P. 1961/62. "The Structure of Irish Industry". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XX, Part V.

Long, Frank. 1976. "Foreign Direct Investment in an Underdeveloped European Economy — The Republic of Ireland". *World Development*, Vol. 4, No. 1, pp. 59-84.

McAleese, Dermot. 1971. *Effective Tariffs and the Structure of Industrial Protection in Ireland*. Dublin, Economic and Social Research Institute, General Research Series Paper No. 62.

McAleese, Dermot. 1971/1972. "Capital Inflow and Direct Foreign Investment in Ireland 1952 to 1970". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXII, Part IV.

McAleese, Dermot. 1975. "Ireland in the Enlarged EEC: Economic Consequences and Prospects", in John Vaizey (ed.) *Economic Sovereignty and Regional Policy*, Dublin, Gill and MacMillan.

McAleese, Dermot. 1976. "Industrial Specialisation and Trade: Northern Ireland and the Republic". *Economic and Social Review*, Vol. 7, No. 2.

McAleese, Dermot. 1977a. *A Profile of Grant-Aided Industry in Ireland*. Dublin, Industrial Development Authority, Publication Series Paper 5.

McAleese, Dermot. 1977b. "Do Tariffs Matter? Industrial Specialisation and Trade in a Small Economy". *Oxford Economic Papers*, March, Vol. 29, No. 1.

McAleese, Dermot. 1977c. "The Foreign Sector" in Gibson and Spencer (eds.) *Economic Activity in Ireland: a Study of Two Open Economies*. Dublin, Gill and MacMillan.

McAleese, Dermot. 1978a. "Outward-Looking Policies, Manufactured Exports and Economic Growth: the Irish Experience", in M. J. Artis and A. R. Nobay (eds.) *Proceedings of the 1977 AUTE Conference*, Oxford, Basil Blackwell.

McAleese, Dermot. 1978b. "Political Independence and Economic Performance — Ireland Outside the United Kingdom", in Edward Nevin (ed.) *The Economics of Devolution*, Cardiff, University of Wales Press.

McAleese, Dermot and Michael Counahan. 1978. "Stickers' or 'Snatchers'? Employment in Transnational Corporations During the Recession. Paper presented to the International Economics Study Group.

McAleese, Dermot and McDonald, Donagh. 1978. "Employment Growth and the Development of Linkages in Foreign-Owned and Domestic Manufacturing Enterprises", *Oxford Bulletin of Economics and Statistics*, November, Vol. 40, No. 4.

McAleese, Dermot and John Martin. 1972. "Ireland's Manufactured Exports to the EEC and the Common External Tariff". *Economic and Social Review*, July, Vol. 3, No. 4.

McAleese, Dermot and John Martin. 1973. *Irish Manufactured Imports From the UK in the Sixties: The Effects of AIFTA*, Dublin, Economic and Social Research Institute, General Research Series Paper No. 70.

McCarthy, Colm. 1979. "Economic Development and Economic Policy", *Administration*, Vol. 27, No. 2.

McCarvill, P. D. (1971). *The Promotion of Direct Foreign Manufacturing Investment: a Systems Approach*. M.B.A. thesis; Univeristy College, Dublin.

McElveen, Ivor. 1976. "Economic and Social Planning — Planning Irish Industrial Development", in *Economic and Social Planning*, papers of the ICTU Summer Course, June.

McGilvray, J. 1968. "Economic Planning", in J. A. Bristow and A. A. Tait (eds.)

McKeon, John. 1980. "Economic Appraisal of Industrial Projects in Ireland", Paper to the Statistical and Social Inquiry Society of Ireland. May.

Maguire, Conor and Diarmuid Murphy. 1977. *Research and Development in Ireland 1975*, Dublin, Stationery Office. National Science Council.

Maguire, Conor. 1979. *Research and Development in Ireland 1977*, Dublin, National Board for Science and Technology.

Matthews, Alan. (1980, forthcoming). *EEC External Trade Policy: Its Relevance to Ireland*. Irish Council of the European Movement.

Meenan, James. 1970. *The Irish Economy Since 1922*. Liverpool University Press.

de Meirleir, M. J. 1976. *A Comparative Analysis of the Incentives Offered to Industry in the Common Market Countries*. Plant Location International, Brussels.

Mooney, Peter J. 1978. "Incomes Policy" in Dowling and Durkan (eds.) 1978.

Moore, Barry and John Rhodes. 1977. *Industrial and Regional Policy in the Republic of Ireland*. Department of Applied Economics, University of Cambridge.

Moore, Barry and John Rhodes. 1978. "Economic and Financial Implications of Devolution", in Edward Nevin (ed.) *The Economics of Devolution*, Cardiff, University of Wales Press.

Moore, Barry, John Rhodes and Roger Tarling. 1977. *Industrial and Regional Policy in the Republic of Ireland*. (unpublished report to NESCI).

Moore, Barry, John Rhodes and Roger Tarling. 1978. "Industrial Policy and Economic Development: the Experience of Northern Ireland and the Republic of Ireland". *Cambridge Journal of Economics*, 2, 99-114.

Murphy, Diarmuid. 1969. *Research and Development in Ireland 1967*, Dublin, Stationery Office, National Science Council.

Murphy, Diarmuid. 1972. *Ireland — Background Report on Science and Technology*, Dublin, Stationery Office, National Science Council.

Murphy, Diarmuid and Michael Fitzgerald. 1973. *Research and Development in Ireland 1971*, Dublin, Stationery Office, National Science Council.

Murphy, Diarmuid and Donal O Brolchain. 1971. *Research and Development in Ireland 1969*, Dublin, Stationery Office, National Science Council.

Murphy, Diarmuid and Liam O'Luanaigh. 1975. *Research and Development in Ireland 1974*, Dublin, Stationery Office, National Science Council.

National Board for Science and Technology. 1980a. *Microelectronics — The Implications for Ireland, First Phase Report*. Dublin. NBST.

National Board for Science and Technology. 1980b. *Science Budget — State Investment in Science and Technology in 1980*. Dublin. NBST.

National Development 1977-1980. 1978. Dublin, Stationery Office. Prl. 6836.

National Economic and Social Council. 1975. *Regional Policy in Ireland: A Review*, Report No. 4, Dublin, Stationery Office (report drafted by J. G. Hughes). Prl. 4147.

National Economic and Social Council. 1975. *Population and Employment Projections: 1971-86*. Report No. 5, Dublin, Stationery Office. Prl. 4193. (prepared by Brendan M. Walsh).

National Economic and Social Council. 1975. *Comments on the OECD Report on Manpower Policy in Ireland*, NESC Report No. 6, Dublin, Stationery Office. (Report drafted by Catherine Keehan).

National Economic and Social Council. 1976. *Prelude to Planning*, NESC Report No. 26, Dublin, Stationery Office.

National Economic and Social Council. 1977. *Population and Employment Projections 1986: A Reassessment*. Report No. 35, Dublin, Stationery Office. Prl. 6340. (prepared by Brendan Walsh, Tom Ferris and Andrew Somerville).

National Economic and Social Council. 1978. *Comments on Development for Full Employment*. Report No. 44. Dublin, Stationery Office. Prl. 7462.

National Economic and Social Council. 1979. *Irish Forestry Policy*. Report No. 46. Dublin, Stationery Office. Prl. 7857. (prepared by Frank Convery).

National Economic and Social Council. 1980. *Enterprise in the Public Sector*. Report No. 49. Dublin. Stationery Office. Prl. 8499.

National Industrial Economic Council. 1964. *Report on Measures to Promote Exports of Manufactured Goods*. Report No. 4. Dublin, Stationery Office. Prl. 8005.

National Industrial Economic Council. 1965. *Report on Review of Industrial Progress, 1964*. Report No. 6. Dublin, Stationery Office. Prl. 8109.

National Industrial Economic Council. 1965. *Report on Economic Planning*, Report No. 8. Dublin, Stationery Office. Prl. 8365.

National Industrial Economic Council. 1966. *Report on Review of Industrial Progress, 1965*. Report No. 14. Dublin, Stationery Office. Prl. 8741.

National Industrial Economic Council. 1966. *Report on Arrangements for Planning at Industry Level*, Report No. 15. Dublin, Stationery Office, Prl. 8879.

National Industrial Economic Council. 1967. *Report on Review of Industrial Progress, 1966*. Report No. 19. Dublin, Stationery Office, Prl. 9359.

National Industrial Economic Council. 1968. *Report on Industrial Adaptation and Development*. Report No. 23. Dublin, Stationery Office. Prl. 116.

Nevin, Donal. 1975. "A Symposium on Increasing Employment in Ireland". *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIII, Pt. III.

Nevin, Edward. 1961. "Ireland and the Common Market: Some Basic Issues", *Studies*. Autumn.

Nevin, Edward. 1970. *Keys to Growth in the Seventies*, INPC, mimeo.

Nevin, Edward. 1962. *Public Debt and Economic Development*, Dublin, Economic Research Institute, Paper No. 11.

Northcott, Jim. 1969/70. "New Patterns of Development", contribution to a Symposium on the Buchanan Report. *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXII, Part II.

Norton, Desmond, 1975a. "Estimation of the Short-Run Effects of Fiscal Policy in Ireland, 1960-70. *Economic and Social Review*, Vol. 6, No. 3.

Norton, Desmond. 1975b. *Problems in Economic Planning and Policy Formation in Ireland, 1958-1974*. Dublin, Economic and Social Research Institute, Broadsheet No. 12.

O'Connor, Robert, Eoin O'Malley and Anthony Foley, 1978. *Aspects of the Swedish Economy and Their Relevance to Ireland*, Dublin, Economic and Social Research Institute, Broadsheet No. 16.

O'Doherty, Dermot P. 1975. *Innovation in Ireland — Case Studies*, Dublin, Stationery Office. National Science Council.

O'Donnell, Rory and Brendan Walsh. 1978. *Survey of the Premium Employment Programme*, Report to the Organisation for Economic Co-operation and Development.

O'Farrell, Patrick N. 1975. *Regional Industrial Development Trends in Ireland 1960-1973*, Dublin, Industrial Development Authority, Publication Series Paper 1.

O'Farrell, P. N. 1976. "An Analysis of Industrial Closures: Irish Experience 1960-73". *Regional Studies*, Vol. 10, No. 4.

O'Farrell, P. N. 1980. "Multinational Enterprises and Regional Development: Irish Evidence". *Regional Studies*, Vol. 14, No. 2.

O'Farrell, P. N. and Brian O'Loughlin. (forthcoming). "New Industry Input Linkages in Ireland: An Economic Analysis", *Environment and Planning*.

O'hUiginn, Pdraig. 1972. *Regional Development and Industrial Location in Ireland — Vol. 1: Locational Decisions and Experiences of New Industrial Establishments 1960-1970*. Dublin, An Foras Forbartha.

O'Loughlin, Brian and P. N. O'Farrell, 1980. "Foreign Direct Investment in the Irish Republic: Empirical Evidence and Theoretical Implications". *Economic and Social Review*. April. Vol. II, No. 3.

O'Malley, Eoin J. 1980 (forthcoming). "Dependency and the Experience of Industry in the Republic of Ireland", *IDS Bulletin*, forthcoming issue on the theme "Is Dependency Dead?" Institute of Development Studies, University of Sussex.

O'Malley, Patrick. 1971. *Irish Industry — Structure and Performance*. Dublin, Gill and MacMillan/New York, Barnes and Noble.

OECD. 1965. *Fundamental Research and the Policies of Government*, Report for the Second Ministerial Meeting of Science. Paris, OECD.

OECD. 1974a. *Reviews of National Science Policy — Ireland*. Paris, OECD.

OECD. 1974b. *Review of National Scientific and Technical Information Policy — Ireland*. Paris, OECD.

OECD. 1978. *Policies for the Stimulation of Industrial Innovation — Country Reports*, Vol. II — 2. Paris, OECD.

OECD. 1979. *Trends in Industrial R+D in Selected Member Countries 1967-1975*, Paris, OECD.

O'Riordan, Manus. 1976. "Economic and Social Planning — Two Approaches", in *Economic and Social Planning*, papers of the ICTU Summer Course, June.

O'Rourke, A. Desmond. 1978. "An Unofficial Reappraisal of the Irish Economic Dilemma". *Studies*, Autumn.

O'Rourke, A. D. and McStay, T. P. 1979. *Output and Employment in the Irish Food Industry to 1990*. Dublin, Economic and Social Research Institute, General Research Series Paper No. 95.

Programme for Economic Expansion (first), 1958, Dublin, Stationery Office. Prl. 4796.

Programme for Economic Expansion, Second, Part I, 1963, Dublin, Stationery Office. Prl. 7239.

Programme for Economic Expansion, Second, Part II, 1964, Dublin, Stationery Office. Prl. 7670.

Programme for Economic and Social Expansion, 1969-72, Third, 1969, Dublin Stationery Office. Prl. 431.

Programme for National Development 1978-1981. 1979. Dublin, Stationery Office. Prl. 7618.

Ruane, Frances P. 1976. *Trade, Fiscal Policy and Industrialisation in the Small Open Economy: the Irish Experience*, B Phil, Oxford.

Ruane, Frances P. 1978. *Government Policy and Resource Allocation in Semi-Developed Countries, With Special Reference to the Republic of Ireland*. Ph.D. Thesis, Nuffield College, Oxford.

Ruane, Frances. 1979. "Project Analysis and Industrial Employment in Ireland", special article in *Quarterly Economic Commentary*, June, Economic and Social Research Institute, Dublin.

Ruane, Frances. 1980. "Optimal Labour Subsidies and Industrial Development in Ireland", *Economic and Social Review*, January. Vol. II, No. 2.

Ryan, Loudon. 1972. "Fiscal Policy and Demand Management in Ireland, 1960-70", in A. A. Tait and J. A. Bristow (eds.) *Ireland — Some Problems of a Developing Economy*, Dublin and New York, Gill and MacMillan/Barnes and Noble.

Schaffer, Bernard. 1979. "Regional Development and Institutions of Favour: Aspects of the Irish Case", in Seers, Schaffer and Kiljunen (editors) 1979, *Underdeveloped Europe: Studies in Core-Periphery Relations*. Hassocks, Harvester Press.

Science and Irish Economic Development, Volume I and II, 1966, Report of the Research and Technology Survey Team to the Minister for Industry and Commerce, Dublin, Stationery Office. Prl. 8975.

Science Policy Research Centre, University College, Dublin, 1978. *Suggestions on Policies for Science to the National Board for Science and Technology*. Dublin. SPRC.

Sinn Fein the Workers Party. 1978. *The Irish Industrial Revolution*, Dublin. Repsol.

Stanton, Richard. 1979. "Foreign Investment and Host-Country Politics: the Irish Case", in Seers, Schaffer and Kiljunen (editors) 1979, *Underdeveloped Europe: Studies in Core-Periphery Relations*. Hassocks, Harvester Press.

Stewart, J. C. 1976a. "Foreign Direct Investment and Emergence of a Dual Economy". *Economic and Social Review*, Vol. 7, No. 2.

Stewart, J. C. 1976b. "Linkages and Foreign Direct Investment", *Regional Studies*, Vol. 10, No. 2.

Survey of Grant-Aided Industry, 1967, Survey Team's report to the Industrial Development Authority, Dublin, Stationery Office. Prl. 117.

Sweeney, John. 1973. "Foreign Companies in Ireland". *Studies*, Autumn/Winter.

Teeling, John. 1975. *The Evolution of Offshore Investment*. D.B.A. Thesis, Harvard University.

Vaughan, R. N. 1978. "Profits, Finance and Growth" in Dowling and Durkan (eds.) 1978.

Vernon, R. 1966. "International Investment and International Trade in the Product Cycle", *Quarterly Journal of Economics*, 80, 190-207.

Vernon, R. 1971. *Sovereignty at Bay*. Basic Books.

Walsh, B. M. 1978a. *The Unemployment Problem in Ireland: Background Analysis and Policy Options*. Dublin, Irish Council of the European Movement.

Walsh, Brendan. 1978b. "Labour Market Strategies", in Dowling and Durkan (eds.) 1978.

Whitaker, Ray. 1978. "How Small Firms Can Benefit from the Electronics Sector". *Technology Ireland*, October.

Whitaker, T. K. 1967. "Economic Planning in Ireland", *Administration*, Vol. 14. No. 4. (Reprinted in Basil Chubb and Patrick Lynch, eds., 1969).

Whitaker, T. K. 1973. "From Protection to Free Trade — The Irish Experience". *Administration*. Vol. 21, No. 4. Winter.

Whitaker, T. K. 1976a. "The Irish Economy Since the Treaty", *Central Bank of Ireland Annual Report*.

Whitaker, T. K. 1976b. "Economic and Social Planning — Planning Irish Development", in Economic and Social Planning, papers of the ICTU Summer Course, June.

Wickham, James. 1980. "The Politics of Dependent Capitalism: International Capital and the Nation State", in Austen Morgan and Bob Purdie (eds.) *Ireland: Divided Nation, Divided Class*, London, Ink Links.

NATIONAL ECONOMIC AND SOCIAL COUNCIL PUBLICATIONS

NOTE: The date on the front cover of the report refers to the date the report was submitted to the Government. The dates listed here are the dates of publication.

<i>Title</i>	<i>Date</i>	
1. Report on the Economy in 1973 and the Prospects for 1974	April	1974
2. Comments on Capital Taxation Proposals	July	1974
3. The Economy in 1974 and Outlook for 1975	Nov.	1974
4. Regional Policy in Ireland: A Review	Jan.	1975
5. Population and Employment Projections: 1971-86	Feb.	1975
6. Comments on the OECD Report on Manpower Policy in Ireland	July	1975
7. Jobs and Living Standards: Projections and Implications	June	1975
8. An Approach to Social Policy	June	1975
9. Report on Inflation	June	1975
10. Causes and Effects of Inflation in Ireland	Oct.	1975
11. Income Distribution: A Preliminary Report	Sept.	1975
12. Educational Expenditure in Ireland	Jan.	1976
13. Economy in 1975 and Prospects for 1976	Oct.	1976
14. Population Projections 1971-86: The Implications for Social Planning—Dwelling Needs	Feb.	1976
15. The Taxation of Farming Profits	Feb.	1976
16. Some Aspects of Finance for Owner-Occupied Housing	June	1976
17. Statistics for Social Policy	Sept.	1976
18. Population Projections 1971-86: The Implications for Education	July	1976
19. Rural Areas: Social Planning Problems	July	1976
20. The Future of Public Expenditures in Ireland	July	1976
21. Report on Public Expenditure	July	1976
22. Institutional Arrangements for Regional Economic Development	July	1976
23. Report on Housing Subsidies	Feb.	1977
24. A Comparative Study of Output, Value-Added and Growth in Irish and Dutch Agriculture	Dec.	1976
25. Towards a Social Report	Mar.	1977
26. Prelude to Planning	Oct.	1976
27. New Farm Operators, 1971 to 1975	April	1977
28. Service-type Employment and Regional Development	July	1977