

A CONCEPT OF INDUSTRIAL DEVELOPMENT IN THE 1980s

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1. INTRODUCTION

I welcome the opportunity to speak under the auspices of such a distinguished forum as the Statistical & Social Inquiry Society of Ireland. My first introduction to the Society was through the well thumbed volumes of its annual proceedings stored in the recesses of the National Library in Kildare Street when studying for a University degree. The printed texts of the Society recall the great economic issues of years gone by and by virtue of the insights and research incorporated in the papers, they stand the test of time remarkably well. My sense of the Society's distinguished past induces in me a certain feeling of trepidation when invited in from "the field of play" to reflect on the dominant intellectual and executive preoccupation of my own career for the past twelve years.

This Society shows impeccable timing in arranging its debates on Industrial Policy. My predecessor, as Managing Director of the Industrial Development Authority, Michael J. Killeen addressed the Society on 20 November 1975 on the theme "Increasing Employment in Ireland" at a time of economic recession and a time in Ireland when there was considerable debate on the issue of State support for capital or labour intensive industry. Dr. Kieran Kennedy also addressed that 1975 gathering and happily he is with us as a speaker this evening also.

A symposium on Industrial Policy in Ireland at this time is most opportune. A major review of "Policies for Industrial Development" has been undertaken and recently published by the NESC which will be taken into account in deciding future directions in industrial policy. The severity of the current economic recession in Ireland coupled with the rise in population and unemployment has created a widespread desire for a new approach to creating more jobs. A new Government is expected to be formed shortly and will be confronted with the formulation of job creating policies.

2. THE DECADE 1970-1980

We meet at a time when the international economy is in crisis. The economy of the United States has been in recession since the first half of 1980. Industry in the US is operating at only 69 per cent of its capacity and unemployment there is now at 8.8 per cent, the highest for 40 years. The European Community's industrial output has been sliding since the second quarter of 1980 and unemployment is 9.8 per cent compared with 6.5 per cent two years ago.

Even today, there is no accepted forecast of the time of economic recovery in the major economies, and no apparent solution, even on an intellectual level, to reducing the 32 million unemployed in the OECD countries to more acceptable levels.

The prognostications for economic growth are generally poor to modest. The great institutions established after World War II to regulate international economic affairs are under severe pressure. The £ and \$ are today floating currencies. The very principle of "free trade" the lynch pin of the EEC and of much of the prosperity of the 1960's and early 1970's, is under threat as countries engage increasingly in covert and open forms of protectionism. The creeping protectionism evident today and the lack of any conclusive outcome to the recent GATT Conference, the first for 9 years, are matters of

great concern, particularly to an open economy such as Ireland's, so dependent on export access for its growth.

If Irish industrial policy is to be founded on a sound basis, we need great perception in identifying the critical trends of the 1980's in the external economies and sectors relevant to us, a great willingness to abandon old formulae whose time has gone and a great honesty in assessing the feasibility and economic returns from new strategies. We need above all to look beyond the shores of Ireland and relate our approach and decisions to those economic forces at work elsewhere.

The Experience of the Decade 1970-1980: It is in this spirit of openness to new approaches for the future that I turn now to look at our experience of industrial policy in the decade 1970-80 and the guidelines for future policy we can derive from that experience. Many of the key tools of industrial policy in the decade were laid down in the years from 1956. They included tax relief on Exports Profits which was first introduced in 1956; Dr. T. K. Whitaker's "Economic Development" which in 1958 set out the rationale for a predominantly export oriented industrial policy; and the 1959 Encouragement of External Investment Act which repealed restrictions on foreign ownership of industry. The 1969 Industrial Development Act, which took into account a study by A D Little & Co, Consultants of industrial policy and re-organisation, established the modern Industrial Development Authority (IDA) which came into operation in April 1970. It expanded the functions of the existing Industrial Development Authority and set up a single executive organisation to "act under the Minister for Industry and Commerce as a body having national responsibility for the furtherance of industrial development". It gave it the power to deploy the full range of incentives and facilities considered desirable to interface effectively with industrial firms. It set down specific criteria for the IDA to make judgments on its investment. It built in checks and balances, for example, by prescribing that proposed IDA grants above specified sums require the permission of the Government. In particular, the Act reflected the passionate debate on regional policy following the publication of the Buchanan Report in 1968 by including a specific mandate to the IDA to "foster the national objective of regional industrial development".

Implicit in the 1969 Industrial Development Act was the message: "Here are the tasks and the tools. Now get on with the job". The IDA in its Regional Industrial Plan 1973-1977 and the Industrial Plans 1978-82 set out publicly its policies and targets.

*Industrial Output and Exports*¹: The output or wealth generated by the manufacturing sector increased by 62 per cent in the 1970's, (Table 1). In constant 1981 prices, the extra wealth (the net output) generated by the sector increased by £1,100 m,² which contributed significantly to national economic growth and the general rise in incomes.

Table 1: *Volume of Manufacturing Output (1970 = 100)*

1970	100
1973	122
1975	121
1978	156
1980	162

Source: CSO

¹In the following sections, some data commence in 1973 when the IDA initiated an annual employment survey as a basis for policy evaluation.

²SOURCE: Derived from C.S.O. Data.

Exports provided the major stimuli to industrial output growing by 177 per cent in volume over the decade or by 10.6 per cent per annum. (Table 2). New firms were responsible for the bulk of the export growth and by the end of 1981 exports accounted for about 40 per cent output as against 22 per cent a decade earlier.

Thus in 1981, electronics and chemicals/pharmaceuticals alone generated £1,500 m exports or 43 per cent of the total manufactured exports; in 1970, exports from those sectors at £35 million or 13 per cent were negligible.

Table 2: *Volume of Industrial Exports*

1970	100
1973	144
1975	148
1978	230
1980	277

Source: CSO

Regional Development: The IDA implemented a detailed regional industrial policy involving a higher degree of dispersal of industry than was implicit in the Buchanan Report. It did not support the "growth centre" theory or the "poles of development" approach fashionable in the late 1960's and early 1970's. The prime focus of the IDA regional plans was to accelerate industrial job creation in the four less developed regions of the West and Midlands. The results are shown on Table 3 and demonstrate substantial and unprecedented progress. In those 4 less developed regions, net manufacturing employment had increased by 15,000 or 57 per cent by end 1980. The Dublin area which was widely expected to maintain employment through the process of self generating growth, had a lower priority in regional policy until 1976 by which time it had become apparent that the effects of free trade and recessionary conditions on established companies were much more severe than anticipated.

Table 3: *Net Change in Manufacturing Employment 1973-'81*

<i>Region</i>	<i>Change</i>	<i>% Change</i>
West	+ 5,848	+ 70.7
North West	+ 1,600	+ 49.2
Donegal	+ 1,548	+ 28.9
Midlands	+ 5,987	+ 65.2
Above four <i>less</i> Developed Regions	+ 14,983	+ 57.5
Dublin	- 18,658	- 20.4
Other Areas	+ 12,805	+ 11.7
State	+ 9,090	+ 4

SOURCE: IDA Employment Survey

Today, the IDA remains committed to its mandate to pursue a regional development objective. It undoubtedly costs more in terms of financial incentives and requires a sustained staff effort. Regional policy has, however, received little attention in the recent evaluation of national industrial policies, including the extra costs of that policy and the role of mobile foreign industry in achieving the regional location of industry. A

conscious rather than an accidental regional industrial policy will continue to be needed in the 1980's.

Employment Effects of Industrial Policy: While there were significant regional changes in manufacturing employment, net manufacturing employment over the entire period increased by 28,000 nationally (Table 4). This masks the cyclical nature of manufacturing employment and the unprecedented rate of change within industry; thus 92,000 industrial jobs existed in 1981 which were not in existence in 1973 and 81,000 jobs which existed in 1973 were no longer there eight years later (IDA Employment Survey). But the jobs created in the manufacturing enterprise itself are only part of the employment generated by rising output in industry. The expansion of industrial output by 62 per cent and agricultural output by 26 per cent over the decade generated wealth to support approximately 100,000 (IDA Estimate) additional jobs outside their own sectors over the period. Based on input/output data, the IDA estimates that about 75,000 of these jobs can be attributed to wealth generation deriving from manufacturing. The indirect income and employment effects of manufacturing activity are thus of outstanding significance.

Table 4: *Numbers Employed*

<i>Sector</i>	<i>Numbers Employed (000s)</i>		<i>Percentage of those at work</i>	
	1970	1980	1970	1980
Agriculture, Forestry, Fishery	283	220	27	19
Manufacturing	215	243	20	21
Other Industry	99	129	10	11
Services	458	571	43	49
	1,055	1,163	100	100

SOURCE: CSO

Indigenous V. Foreign Industry: An analysis (Table 5) of the components of manufacturing employment 1973-'81 (grant aided small industry (employing less than 50), established Irish industry and foreign industry (med/large)), shows a significant decline in jobs in established Irish companies. Employment in foreign industry has increased substantially as has the small business sector, particularly, the grant aided segment. An evaluation of foreign industry's role would also show that because it is potentially mobile it has been the main source of job expansion in the less developed regions. The foreign industry sector contributed, on conservative assumptions, a minimum net foreign exchange surplus of at least £600 million (IDA estimate) in 1980.

Table 5: *Employment in Manufacturing*

	<i>Grant Aided Small Industry (less than 50)</i>	<i>Foreign Industry</i>	<i>Irish Industry</i>
1973	14,500	58,000	155,550
1981	26,550	81,500	128,500
Change	+ 12,050	+ 23,500	-27,050

SOURCE: IDA Employment Survey.

Costs of Industrial Policy: IDA policy at all times has been directed at securing the best value for money. In a paper to the Statistical & Social Inquiry Society in May 1980 my colleague, Dr. John McKeon estimated the payback period on IDA grant payments per job at 2 to 3 years. The Telesis consultants confirmed this result in their analysis of the grant cost per job sustained in foreign industry and estimated that the total economy payback period was 1 year. For indigenous industry the grant paid per job sustained is £12,500 (compared with £7,400 for foreign firms) and the payback is correspondingly longer.

Evaluating Industrial Policy: Such simple analysis is insufficient, however, to adequately assess the contribution of industry to economic development. Industry generates more than jobs in the enterprise itself; the wealth and foreign exchange generated give rise in turn to income and employment in other sectors of the economy. It is also a dynamic tool for regional development.

Lessons of the 1970's: The major successes of industrial development in the 1970's were in regional development, net output growth, export growth and jobs created indirectly in services. A base of modern pharmaceutical, chemical and electronic industries has been established. Ireland has established itself as a premier European location for mobile international investment. The major disappointments were the high job loss in industry itself, accelerated by the 1974/75 and 1980/82 recessions. Established Irish industry contracted employment severely and has been particularly hard hit during the current recession and, given low profitability and substantial re-equipment, produced few job expansion proposals. The IDA also demonstrated, in the case of foreign industry and native small industry, that it was possible for a state development agency, by effective marketing, to deliberately stimulate a targeted level of extra industrial investment and employment over a period of years while using a given set of industrial incentives.

3. A CONCEPT OF INDUSTRIAL DEVELOPMENT IN THE 1980'S

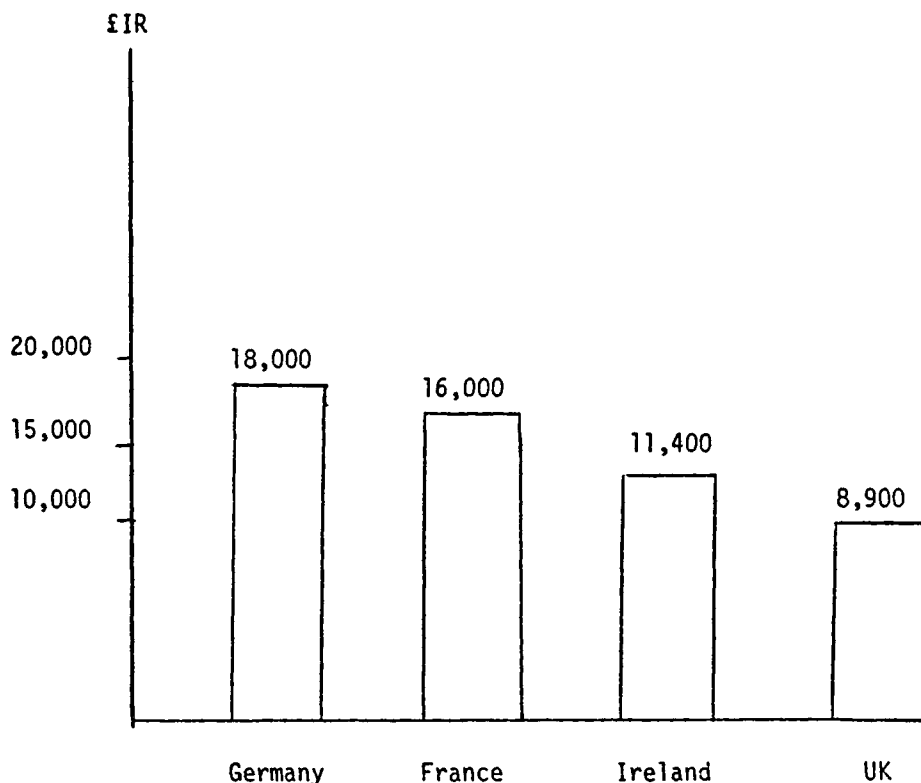
The Irish labour force is projected to grow 1.3 per cent p.a. as fast as in the 1970s when it reached the highest growth rate since pre-famine days — and unemployment at 165,000 (IDA estimate) is at its highest absolute level since the foundation of the State. European Gross Domestic Product is expected by the World Bank to grow by 3.0 per cent p.a. to 1990 or on a par with the modest growth of the 1970's.

The most fundamental trend in industry today is the movement towards higher and higher productivity in the manufacturing plant itself. This is being forced on companies in the developed world as they fight to reduce costs and hold markets in depressed trading conditions. It is facilitated by the application of automation technologies in manufacturing. It is accelerated by the increased competition facing European industry from the US, Japan and the newly industrialising countries such as Korea, Taiwan and Singapore. Ireland as a high income country in world terms cannot stand insulated from these international trends.

The IDA is therefore looking at a concept of industrial development which focuses on the output or income generating capacity of industry. In this concept the role of industry is to generate the maximum possible output and wealth in highly productive enterprises while the main employment benefits are generated and captured outside the manufacturing entities themselves. (Foreign exchange earning services would also be included in this concept.) A doubling of manufacturing output growth over the 1982-92 period, an ambitious but attainable target, would lead, through wealth generation, to many jobs in spin-off and service industries and would go a long way towards meeting the job creation challenge. Such output growth would, however,

require a highly competitive industrial sector. Given Ireland's relatively high income status, wage cost competitiveness would not, on its own, be sufficient. High productivity is the only long term key to success in the markets of the 1980's. We have substantial scope for productivity growth (Table 6). Net output per person in manufacturing industry in Ireland is on average 63 per cent of that in Germany.

TABLE 6 Net Output per man in Manufacturing Industry in 1980



Source: EEC

Such a concept of focussing on output-led growth, as distinct from job creation, would have radical implications for operational industrial policies. It would encourage the most efficient technologies, even if not the most labour intensive, and would put strong emphasis on maximising the expenditure by the firm within the economy as the real key to sound job creation. It would involve measuring and monitoring the income and employment effects of industrial development within the economy in an agreed systematic manner.

4. HOW TO DOUBLE OUTPUT IN A DECADE

The doubling of industrial output, if seen as the key to job creation in the decade ahead, would be a formidable task. It implies increased capital investment i.e. to the order of £1,500 million p.a. in industry. To achieve this target we would have to get the environment right; make it worthwhile for investors to risk investment in industry and establish a sound corporate industrial structure.

Business Environment in Ireland: Restoring a more favourable financial and industrial relations environment in Ireland is a pre-requisite for any development plan for the 1980's. Costs of production — labour, energy, services — in Ireland have increased seriously in recent years relative to competing countries, undermining the advantages of Ireland as a location for investment. Absenteeism in industry, in many cases influenced by social welfare and tax legislation, has effectively added to costs. The nurturing of the Business Environment by Government as a deliberate and coherent part of industrial policy is essential.

Private Sector Risk Investment in the Productive Sector: While the State must continue to fund a share of the total investment required, the private sector must play a more active role in financing investment in the productive sector. A recent study commissioned by IDA estimated that there is approximately £430 million in private investment capital available annually. The great bulk of these funds go into investments in gilts and property. The restoration of industry as a profitable and relatively attractive outlet for substantially more of these investment funds is essential to achieving the investment needed to support a high productivity industrial sector.

Another objective should be to restore the Dublin Stock Exchange to its former role as a channel for injecting private funds into industry, with particular reference to the facilities of the Unlisted Securities Market. Creating an environment in Ireland conducive to the financial institutions and individuals investing risk money or venture capital in industry, on the scale needed, requires an innovative review of the way in which corporate, personal and capital gains tax interact to make such investment more or less attractive.

Sources of Corporate Output Growth: The companies from which this rapid rate of growth in output must emerge, fall into the following main categories:

(i) *Small Industry:* New ways to substantially increase the number of small business "start-ups" by native entrepreneurs will be necessary. These include an active Venture Capital industry, improved links between small industries and the Universities, NIHE's and Colleges of Technology and an improved social and cultural attitude towards risk-taking. The State agencies in Ireland are effectively acting as "venture capitalists". The IDA risk investment in the normal "small industry" (less than 50 people) is 36 per cent of fixed and working capital. In the more high technology start-ups promoted by executives the IDA exposure is close to 60 per cent. As the range of venture capital companies develops in Ireland, the State would be able to reduce its financial exposure.

(ii) *Indigenous Industry:* The pressures of the business environment will encourage indigenous industry to become as efficient as possible in all key business functions including strategic planning, marketing, production, technology acquisition and finance. Indigenous industry must be managed in an entrepreneurial fashion to be alert to changes in its industry worldwide and to be ready to change direction in terms of markets serviced and product and process technologies at short notice. Natural resources, particularly in agriculture, represent a source of greatly increased output as indicated in the published IDA Strategy on Agri-industry.

(iii) *Foreign Industry*: Given the magnitude of the employment needs for the next decade, we cannot afford to ignore the potential for output growth in foreign industries. The recent debates on industry have revealed much ambiguity and questioning of the role of foreign industry. There has been considerable divergence between the IDA and commentators on the pace and extent that key business functions such as research, marketing and purchasing can be located in Ireland. There is also considerable divergence over the incentive cost which has to be paid to attract such investment. The environment for attracting foreign industry is more competitive now than ever with most European countries entering the arena in a highly professional manner. If Ireland is to maintain its hitherto strong position in the market for foreign investment, the equivocation over the role and desirability of foreign investment needs to be quickly brought to a close.

(iv) *Identification and Development of Special Niches*: In aiming to achieve high levels of output growth Ireland could identify and develop its own specialised opportunities for growth. Many attractive opportunities are beyond our aspirations in both financial and other terms. Ireland simply cannot afford the broad based technical approach of many developed countries. IDA possesses a unique combination of sectoral experience and commercial knowledge which will enable it to identify and develop suitable niches³ on behalf of industry: specialised computer software is an example.

(v) *Regional Policy*: A regional industrial policy needs articulation and incorporation in a national industrial policy for the 1980's.

The Formulation and Execution of Industrial Policy: Policy is formulated by Governments on behalf of the people. The IDA is an executive agency carrying out an industrial policy set out in the Industrial Development Acts. There has been, over the years, a high degree of consultation and information sharing between the Minister and his Department on the one hand and the IDA on the other.

The IDA itself has published two detailed Industrial Plans, both of which were endorsed by Government, setting out its targets and approaches. It has published detailed Annual Reports with all its disbursements and has put considerable resources into developing data (e.g. Annual Employment Surveys) as a basis for industrial policies and programmes. Major decisions by Government on industrial policies for the decade ahead are now opportune. Indeed, the more complex industrial area points to the need for a strong and consistent central Government role in influencing key aspects of the industrial environment beyond the capacity of an executive agency, e.g. maintaining a favourable business environment; government to government technology arrangements, for example with Japan; encouraging investment in education, relevant to the desired educational technologies; and creating a tax regime conducive to risk and capital venture investment.

5. CONCLUSION

It is now over a decade since the IDA, in its present form, was established and over half a decade since my predecessor, Michael Killeen, addressed the Society. The IDA will shortly be completing its proposed Strategic Plan for the next decade 1982-1992 as an input to Government policy and as a charter for the Authority itself. This Strategic Plan is built on the unique experience of the IDA in the area of international and Irish

³See also "Ireland's Employment Needs in the 1980's: The Nature of the Challenge and the Response" by Mr. P. A. White in the forthcoming "A Profit and Loss Account of Science in Ireland" to be published by the Royal Dublin Society.

business. The economy embarks on this decade in an atmosphere, of almost total pessimism and despair among commentators. I do not deny that problems exist and that they are grave. But, as we enter the next decade, we possess enormous strengths which, in the early 1970's, we only aspired to. These are:

- (i) A strong modern industrial base, aware of and equipping itself with the best "state of the art" technology.
- (ii) A young highly skilled management team.
- (iii) A forward looking educational infrastructure.
- (iv) Experience of a decade Free Trade conditions.

We have today short term problems and seek long term answers. I look forward with confidence to IDA and its staff contributing to the economic growth of Ireland in the 1980's as it did under my predecessor Michael Killeen in the 1970's.

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DISCUSSION

S. Cromien: I agree with many of the very interesting points raised by the three speakers. I find myself in particular agreement with Dr. Kennedy's view that, while in the longer term industrial development strategy should move in the broad direction outlined by Telesis, any alteration in the present system must be done cautiously and in an orderly way so that the many merits of the present arrangements are not lost. However, given the need to scrutinise every penny of public expenditure in these difficult times — and I include tax expenditures in this i.e. tax concessions which cost the taxpayer money — it is necessary to be sure, first, that this expenditure is necessary at all and, secondly, that it is used to the best effect. It is valuable, therefore, that a debate has started on our industrial policy and on its costs and benefits.

I note that Dr. Kennedy recommends the replacement of tax-based lending by a more purposeful scheme. In this connection, I may comment that the loss in tax revenue from the banks arising from tax lending devices at present is quite substantial, about £50 million per annum. It certainly looks inequitable when such major institutions are seen to pay an exceptionally low rate of tax relative to the normal corporation tax rate. An important criticism of these schemes is that they provide unintended and hidden Exchequer subsidies which (apart from IDA cases) cannot be related specifically to such factors as job creation and location of project. They involve the use of what are in effect tax avoidance devices which are available generally without check. In this connection Dr. Ruane draws attention in a footnote to the need to take account

of the true cost per job by including, inter alia, the fiscal costs arising from tax-based financing.

Dr. Ruane in another footnote — I must compliment her on her footnotes which, contrary to the usual practice, are among the most stimulating parts of the text — criticises the possibility of re-introducing re-equipment grants and says that the principle of giving such grants to supposedly viable firms is highly questionable. She remarks — and it is a useful phrase — that this encourages the development of a “dole mentality” among industrialists. This is a viewpoint to which, as an official of the Department of Finance, I find myself particularly susceptible. A central part of any economic strategy in this country and in consequence any industrial policy should be the strong discouragement of any such dole mentality.

Mr. Padraic White’s paper is particularly interesting for its proposal made on page 55 for a concept of industrial development which focuses on the output of income-generating capacity of industry. As an economist, I would be in sympathy with this approach. In practical political terms, however, I wonder whether the community would be willing to transfer very substantial funds to industry without specific commitment to employment creation.

I note a carefully worded paragraph on page 57 which describes Mr. White’s proposals for the creation of a suitable environment in Ireland for investing risk money or venture capital. What exactly does this mean? Yet more tax concessions? I would have thought that the tax incentives already available create an environment which is very attractive to industry and industrialists, to the point indeed where they generate mutterings among other taxpayers about the unequity of the system. As I have said at other meetings of the Society, in a democracy taxation is a political exercise as much as an economic or financial one. You must look on the effects of a proposal on other taxpayers. The contribution to corporation tax by manufacturing generally in 1981 was estimated at £55 million compared with £1,093 million from the PAYE taxpayers. The total receipt of corporation tax is not much greater, an average of £150 million a year (discounting for the effect of advancement of payment due). The yield from corporation tax has been declining since the 1970s as a proportion of total tax revenue and by international standards it is low. There will be a further relative decline in 1983 when the first full year cost of the 10 per cent rate scheme will arise: the 1983 amount could be below the £55 million mentioned for 1982.

I note Mr White refers to capital gains provisions in respect of venture capital. Perhaps I should put this in perspective. The total yield from personal capital gains tax this year will be only £8 million and the expected yield in 1983 will be £12 million. Capital gains tax on companies is collected as corporation tax and the corresponding yields are estimated at £4 million and £5 million respectively. There is full indexation of gains for tax purposes except in the case of development land and this is a very generous concession by any standards. It seems difficult even to find scope for further concessions unless one inclines to the extreme view that gains from productive investment should be outside the tax net completely.

I join with other speakers in complimenting the three lecturers on their excellent papers.

T. Higgins: I too enjoyed Francis Ruane’s footnotes. I might say her footnotes follow in the footsteps of an earlier and highly respected economist, Alfred Marshall. Marshall, as you know, kept most of his gems for his footnotes.

I have three points I’d like to make, selected from a list of many points which were stimulated by three very well researched and well presented papers. First, on the Telesis

Report, in contrast to countless reports on important topics produced and shelved in the past, this one provoked such strong reactions on both sides of the debate, that one can only feel that it must be a very good report. I do not agree with everything in it. I do not subscribe to the criticisms implicit or otherwise of the IDA in it. We now have a modern manufacturing industrial base. This is due in large measure to the remarkable effort and success of the IDA over the past 10 years. But I do share the concern of Telesis and others about the future development of certain sectors.

Dr. Ruane is much too pessimistic however in her assessment of the electronics sector. The potential is there. These are problems of course. Our skill composition is different from other countries. In fact its very variable between countries. I have data which show that in Ireland 5 per cent of employment in the sector is engaged in engineering compared with almost 9 per cent in Scotland. Padraic White may dispute these figures but I'd be pleased to go over them with him and Dr. Ruane later on. I do not see this as a criticism, rather as a prospect. This is the gap we have to close. And we can do it if we continue to get the right kind of companies to locate here, and also if we more aggressively to develop the indigenous sector, where technological capacity and innovation is weak.

My second point is that as an economist I instinctively like the focus on wealth generation and output stimulation as the basis for job creation. It may not be the complete answer to the employment problem, however, and we need to be careful about plumping for an output led strategy only. In this context long run unit cost competitiveness will be crucial. I would emphasise the importance of the non-labour elements in unit costs. In this regard two factors are critically important, marketing and technology.

I would be tempted to set somewhat tougher targets than doubling manufacturing output. I would prefer to see a focus on doubling domestic value added, which would get over questions of profit repatriation, import content of exports etc. and put the focus more squarely on the performance of the indigenous sector. In all of this I can't help thinking about the untapped potential of the food industry.

My third point is that the level of technology in indigenous companies, with a few exceptions, is appallingly low. It must be strengthened. Much of the technological strength resides in the State sector. At present 46 per cent of our research scientists and engineers are employed in the Government sector and 20 per cent in private industry. The proportions in most European countries are the reverse. We need to change this, but a period of transition will be required. While this is taking place we need better mechanisms — more carrots and sticks — to effectively deliver the existing state infrastructure in technology to the support of selected manufacturing industry, mainly the small companies with a capacity to use technology.

Finally, there has been much talk about the problem of picking winners, and the capacity of Government agencies to do this. I think we tend to overlook our strengths too often in this country. We have successes. We should build on these. That is the real way forward.

Declan Cunningham: In regard to the disappointing performance of indigenous Irish industry in relation to economic growth and job creation, one fundamental characteristic is that of the "critical mass" of business enterprises. "Critical mass" is the scale of activity, assets and profits such that the enterprise is capable of self-sustaining growth and development. The bulk of Irish industry is below this critical mass and found it extremely difficult to grow organically to break through this barrier, due to the excessive number of individual firms competing in most sectors and the scale of the domestic market for most products. Most small businesses tended to be very risk averse because,

unlike larger enterprises which could sustain the cost of an unsuccessful investment, the cost of failure for the small firm is very likely to be extinction.

I endorse the 'directive' approach proposed by Telesis, since it would only be by the coalescing of such small enterprises to achieve critical mass that they would contribute significantly to economic growth. The small scale of the Irish economy made it feasible to identify and bring together all the significant participants in any chosen sector of industry and the current difficult economic climate would ensure that they would be the more receptive to restructuring and rationalisation proposals from a national agency.

Roy Johnston: We need to develop procedures for realising the potential value of the third-level education system as a job-generating resource. The tradition whereby graduates expect to be offered jobs needs to be replaced by one whereby graduates create their own jobs.

The science/engineering/business linkages within the colleges need to be strengthened, with a view to encouraging the transformation of student into entrepreneur. The 'Deans' Conference' on 'Education for Innovation' on March 30, 1983 (sponsored by AIB AND NBST), was a welcome step in this direction.

Mr. L. Leonard: There is a difference between high value-added activities in the economy and high value-added activities in the manufacturing plant. An industrial strategy centering on high value-added activities in the manufacturing plant would depend on the redistribution of the large incomes of a relatively small proportion of the labour force engaged in the plants concerned to generate employment elsewhere in the economy. If the redistribution came about through consumption and investment expenditure (via savings) leakages could be high and the multiplier effects low. If the mechanism used were taxation, it would probably need to be so onerous to be effective as to strongly deter the establishment of the manufacturing plants of the type concerned in Ireland.

High value-added activities in the economy offer better prospects of generating employment. Value-added and associated jobs in the manufacturing plant could be around whatever was the industrial norm, but, through bought-in inputs of intermediate goods and services originating in Ireland, well-distributed employment and income effects would result in other domestic sectors of production. One can see something of this process at work in the growth of the services sector here and in other countries.

Industrial policy also needs to recognise that international competition is not so much among firms as among firms plus government in one country and firms plus government in others. Governments have an indispensable role in building up the infrastructural services and promoting the business and technological environment which constitute the springboard for successful industrial development and exports. The private sector on its own would be at a disadvantage. There should be close working relationships between government and the private sector. Whatever form a partnership of that kind took, it would have to be both constructive and critical.

Eoin O'Malley: I would like to comment on the issue of whether the State should become involved in "picking winners" for indigenous industry or to put it another way, should the State adopt a more selective and directive industrial development strategy. Dr. Ruane suggested that such an approach should not be adopted because there is no reason to believe that public sector personnel would be better than private firms at selecting "winners". But the argument for a selective and directive policy is not based on any belief that the State would have greater competence in selecting the best

industries for priority development. Rather it is based on the fact that the State has different aims, and can mobilise greater resources than private firms.

The aim of the State, presumably, should be to promote industrial development for national benefit, which in practice means promoting internationally traded industries as a priority. The aim of Irish private firms, on the other hand, is to make profits, which generally means that they are not greatly attracted to developing internationally traded industries because of the various barriers to entry discussed in Dr. Kennedy's paper.

Government policy might attempt to tackle this problem, without actually becoming involved in detailed selection of priority industries, by means of increasing the incentives to invest in traded industries in general and introducing new disincentives for investments of any other type and then leaving the actual selection of specific traded industries to private firms. Such a policy would seek to bring the aims of private firms more into line with those of the State and probably could induce greater investment in traded industries by some of the very largest Irish firms. But there would probably still be value in also using the "hands on" approach suggested by Telesis, through Company Development Plans drawn up in consultation with large firms, in order to give advice and to put further focussed pressure on them to move in the desired direction.

The main point, however, is that there are very few large indigenous manufacturing firms at present, whereas competitive success in most internationally traded industries would demand large investments, which may not pay off for some years, in building up scale, technology, marketing strength and other characteristics required for success. Because so few indigenous firms have the capability to mobilise the resources required for success in developing traded industries, the State will have to play an important initiating role in mobilising resources to develop new, large-scale, export industries, whether this is done through State enterprises or through assembling consortia of private interests in large new ventures. This process would inevitably involve the State in making selections of suitable industries for priority development. Furthermore, in some important industries, the attainment of competitive success would depend on a series of co-ordinated investments by more than one enterprise, due to the importance of external economies and/or the need to ensure a reliable supply of inputs of raw materials from the primary sector; in such cases, there would clearly be an important initiating and co-ordinating role for the State, which again means that the State must become involved in selecting development industries.

It is undoubtedly true, however, that the IDA and other public sector bodies are currently lacking in the necessary expertise to "pick winners" in internationally traded industry as part of a more selective directed policy, though perhaps no more lacking than most of indigenous private industry which also has rather little experience in this field. This does not mean that the issue can be avoided indefinitely, but rather points to the urgency of developing the necessary skills (in industrial economics and corporate strategy) in the public sector, backed initially by advice from experienced external sources.

Paul Turpin: I would like to address an aspect of the control of industrial policy. The word control is used in the steering sense rather than to denote negative constraints. It would appear relevant to raise this issue for a number of reasons: the previous comments from the floor on the problems associated with the use of output or value-added as the main objective of industrial promotion by the IDA; the call by Mr. White to evaluate industrial policy in a wider sense than has often happened in the past; Mr. White also stated in his opening remarks that the perceptions of analysts often varied from the reality as seen by those working directly 'in the field'; and, finally, it is clear

from Dr. Ruane's paper the difficulties she experienced in getting information on some of the issues she analysed in her paper. In fact, an implicit concern in all these points is the quality of information available for industrial policy evaluation.

In order to control industrial policy it is necessary to be clear on the objectives. The output suggestion of Mr. White is not unlike the approach taken by Telesis (NESC Report No. 64). The strategy in the Telesis report is based on developing the main elements of an industrial base which will support higher value added businesses. It is valuable in this context to consider the Telesis discussion which concluded that one of the difficulties of controlling industrial policy was the quality of the information available.

There is an immediate need for improved information on industry, to allow for its categorisation between foreign and indigenous, markets served, skills employed and to provide the basis for dividing between traded and non-traded businesses. A discussion of the type of information required for the evaluation of industrial policy is contained in the National Economic and Social Council's own conclusions to the review of industrial policies (NESC Report No. 66) so I won't repeat the points here.

Finally, with regard to the information presented by Telesis on the case per job, I believe Dr. Ruane is unduly harsh to describe the discussion as very weak and "should not be used for serious policy decisions." She quite rightly draws attention to the partial nature of measures such as grant cost per job. Telesis do recognise this in their discussion of the cost of industrial policy. They also give a total cost per job, i.e. £29,000. Data problems did not allow for the breaking down of this figure by sector. However, what is more significant, is that the main Telesis recommendations on policy and the recommendations of the NESC, are not particularly sensitive to refinements on the actual exchequer cost per job. The key recommendation is that priority should be given to the development of strong internationally trading indigenous companies. If one were to base a strategy on minimising the direct grant cost per job, and presumably this would also hold for total exchequer costs per job, the implication would be that a greater share of the exchequer resources allocated to industry should be directed to foreign firms, in other words, the opposite conclusion to the two Council reports.

T. McCabe: Having qualified as an electronics engineer from U.C.D. in 1977, I wish to concur with all three speakers that micro electronic technology has a vital contribution to make to the future development of the Irish economy. In particular, to increase our export sales Irish products must be competitively priced and this will be substantially achieved through introducing cost effective electronic technology into manufacturing processes, and administrative systems. Where as the development is, in my opinion, essential for the survival of Irish industry, it does have the unfortunate side effect of causing unemployment. The problem of unemployment is, I feel, generally assigned to the Government as a problem that they must tackle and solve. Unemployment, as I see it, is a social evil and should be treated as such. Thus a collective sense of responsibility for the problem must be borne by the community at large and especially by those intimately associated with it e.g. employers, unions industrialists, electronic engineers, economists, bankers etc. Unless we can tackle this problem together, I am afraid that the consequences will be grave. I am interested in hearing the views of the three speakers on this topic.

E. McCarthy: I have a general concern with the negative thrust of Dr. Ruane's paper. This is precisely what our competitors would wish to see. Information of this character is avidly used by other countries which are seeking to attract scarce, mobile international investment. There would appear to be insufficient concern on the part of those

not in the front line of industrial promotion for the sensitivity that this subject requires when debated in public. It's a subject which the touch-line theorists and the sea-side seminarians might usefully leave aside for the moment.

The Telesis recommendation that the level of grants for overseas industry be reduced by approximately one-third is naive in the extreme. Real-world considerations determine that the level of incentive offered must reflect market conditions. All experience suggests that competing countries are prepared to match — and, indeed, often exceed — the IDA's maximum offer. Judicious flexibility should be the key words. The examination of the electronics industry in Ireland carried out by Telesis was very superficial and it would be unwise to base any judgements on the conclusions of that exercise.

There is indeed public confusion over the interpretation of job approvals contained in IDA announcements. It is important to stress that IDA grant payments are not, I understand, paid towards projected employment in stages of projects which have not proceeded.

P. J. Drudy: The provision of jobs of the right kind for our growing population must be one of the top priorities of any government. The Telesis Report offers some useful pointers for planning in industrial policy during the years ahead. However, it seems to me that we must now make a serious attempt to provide employment within the context of a comprehensive regional and urban strategy. It will not be enough to simply provide jobs — the distribution of these jobs throughout the country will be crucial, both for the sake of economic efficiency and social stability. At the present time, there is ample evidence of serious imbalances in employment and population growth between the various regions of Ireland. On the one hand, the heavy concentration of economic activity and population in the Eastern region is causing considerable "diseconomies" in terms of traffic congestion, increased energy consumption and pollution. These costs contribute to a fall in competitiveness and inhibit national economic prospects. On the other hand, regions such as the Midlands, the West, the North West and Donegal have experienced poor employment growth, and consistently lower incomes. It is important to realise that a coherent regional strategy could in fact increase rather than reduce national economic growth. It is to be earnestly hoped that the new government will bring forward, as soon as possible, a comprehensive urban and regional strategy within which industrial and general economic policy can operate.

F. O'Muircheartaigh: Two factors give particular importance to this seminar on industrial policy. First the very large quantities of State money spent by Government, especially through the IDA and increasingly on the industrial State-owned companies, makes industrial policy the most important financial concern of the State. Second, there is the employment aspect, and it is the particularly depressing employment situation which really throws this issue to the fore. The Plan of the outgoing Government has been criticised for being too optimistic about employment. But the level of unemployment in the programme did not effectively decline for about three years. It is therefore evident that all our efforts must be directed towards making a contribution on the employment issue. Any industrial policy that does not ultimately take this into account would be seriously deficient.

There is a danger, however, that we could confuse industrial policy with employment policy. It would be a great disservice to represent to the public that industry can on its own resolve the challenge of unemployment. A further temptation which must be avoided is to expect that the IDA will do something in less favourable times, that it has been unable to do in the past, that is, to resolve the unemployment challenge on its

own. The only prospect of resolving this problem, if indeed it can be resolved within the framework of traditional and conventional labour markets and actions, will be by the combined action of all the resources of the State, the State agencies, private industry, agriculture and the services sector. Sending a cheque to the IDA is not even an industrial policy, much less an employment one.

The Telesis Report gives us much to build on, however. It sets out clearly some of the key issues and areas and provides an opportunity for co-operation in the construction of industrial strategy. It would be nice to see a constructive reaction to the report. There is a tendency for critics of the IDA to jump up and down on the IDA on the basis of some of the comments contained in the report. If I were in the IDA, my main concern would be to ensure, in conjunction with the Department of Industry and Energy and the other state organisations involved in industry, that future strategy will not be vulnerable to the criticisms made in the Telesis Report.

If there is to be a constructive response to the effort to define a better industrial policy and strategy, it will involve an effort on all our parts. This isn't a matter only for the IDA. In the Department of Energy, where I work, the State has another direct involvement with industrial policy, being involved in a number of industries which are undergoing radical structural change. The Department will have to assess and make recommendations to Government in relation to its involvement in major industries, which have devolved on the State, either for strategic reasons, or by historical accident. There is little doubt that, in coming years, the policy of State involvement in industry, the type of industry in which it is involved and the nature of its involvement will have to be redefined and streamlined.

Then there is the question of direction of policy itself. There is a proliferation of agencies promoting and assisting industry and Telesis has rightly pointed to the need to coordinate and direct that effort with more clearly identified purpose.

Addressing the broader industrial policy canvas, it is significant that much attention has been focussed on linkages which IDA firms have into the economy. But looked at from the perspective of Government, a Government through its capital programme and through its current expenditures is by far the biggest operator in the economy. To what extent have the Government linkages been optimised? To what extent could Government procurement of goods and services be more effectively reviewed, and made the basis for cost effective supply of various goods and services.

In conclusion, I will summarise with the following points. First, while industrial policy must in present circumstances give considerable weight to the employment aspect, an industrial policy is no substitute for an employment policy and must never be represented as such. Second, if we are to build a successful industrial policy, it must not only include a reasonable strategy for IDA operations, but also embrace a rational view for State involvement in industry (particularly "strategic" industry) and more effective use of State involvement in the economy to generate domestic cost effective supply industries.

Richard Humphreys: I can only despair when I listen to the amusing comments from the first spokesman from the Department of Finance. Have we learnt nothing over the years? Are we still so preoccupied with short term tax collecting that we continue to ignore the fundamental nature of our employment problem?

First, you cannot tax a capital gain unless there is a gain there in the first place. Second, loose talk about tax revenues foregone is meaningless in the situation where activity and investment are attracted here in the first place only because of a favourable tax regime. In simple terms, it is both misleading and provocative to complain about

tax revenues "lost" in situations where the State is by contract, debarred from receiving such revenues in the first place.

We have to create wealth in this community and unless tax levels are reduced sufficiently we will not attract the new investment necessary to produce this wealth. Indeed I am very much afraid that the present so-called 10 per cent tax regime will severely discourage new investment in Ireland. The previous tax-free regime for exports was a clear incentive for investors. The present 10 per cent tax scheme, however, has value only for funds which are retained and re-invested in a Company. If the owners wish to recover any of their investment in the form of dividends, then there is no tax relief whatsoever and tax is paid at maximum rates.

Since normal, healthy investment decisions have to be determined by the ability to recover cash, usually in the form of dividends, from the investment, this new 10 per cent tax regime will, in my opinion, discourage many such decisions. We may well be seeing the effects of this unfavourable tax regime already. I believe that these effects will become increasingly evident in the next few years.

There is a currently fashionable theory stemming from Telesis that in some way our levels of taxation and/or grant incentives have been too generous. I believe this theory is quite wrong, indeed I would suggest that since employment has been falling rather than rising at an excessive rate, our incentives have actually been seriously inadequate. When you realise that taking both fixed assets and working capital requirements into account, one viable job can easily cost from £100,000 to £200,000, the present level of grant assistance of from £5,000 to £10,000 per job is in my opinion so small as to be almost irrelevant. I would suggest therefore that grant levels generally need to be increased in order to have an impact on job creation.

The totally inadequate scale of grant assistance is painfully obvious when viewed against the massive scale of current public sector spending. The present current budget deficit is more than five times the total amount spent on IDA Grants. In 1980 the over-run on the budget alone was substantially in excess of the total amount paid out in grants that year and in real terms the value of total grants has been falling significantly in recent years. Since we depend in such a vital way on this investment to permanently ameliorate our national employment problems, I can only despair at the mentality of those in positions of power who wish to reduce rather than increase incentives to invest.

We are a small agricultural island off Western Europe without an industrial tradition or infrastructure. We do not have any God-given right to full, or even half-full, employment. I believe it is highly dangerous to start suggesting that grant levels can begin to be phased out as have been suggested. Indeed, unless we extend and increase our range of incentives we are in great danger of sliding backwards and ending up as a purely agricultural country.

We must consider the level of competition we face from other countries. I am associated with a small firm in the electronics sector in Dublin and only this week we received an attractive brochure inviting us to re-settle in Scotland, outlining the many advantages in so doing. The IDA face very severe competition from a great number of countries. The publication of some of the suggestions we have heard tonight has, in my opinion, great potential for damaging the IDA's efforts and causing irreparable damage to the true interests of our country.

R.C. GEARY: This is a great occasion. Three excellent papers, an illuminating discussion (what I could hear of it) and the largest attendance I can recall in my 60 years membership. The full printed record, papers and discussion, will be a valuable addition

to the literature on the manufacturing sector in Ireland. I will confine my remarks to a few statistical aspects, regarding employment.

The showing of Mr. White's Table 3, that in the recent period 1973-81 employment in Dublin declined by one-fifth while employment in four poorer regions increased by over one-half, is disappointing. This is, of course, the result of deliberate policy. One wonders if it is the right policy. Traditionally, in good times and bad, Dublin has been the only area of natural, autonomous, growth in the Republic and the only area with an industrial tradition. Regional development in principle is a good thing but, on this showing, it may be carried *a outrance*.

Dr. Ruane expresses scepticism at Dr. Henny's estimate of the industrial multiplier. This important aspect requires further examination. Might I suggest to Mr. White that he organise an inquiry about it in a town or small region (not Dublin — too complex) which has had an industry or industries. What employment, over say the last ten years, has been induced by this industrial employment creation, acting autonomously, using the terms in the sense of our colleague, T. J. Baker.

I notice that Mr. White's Table 4 has that familiar 27 per cent for the proportion of manufacturing employment in total non-agricultural employment in 1970. This 27 per cent has remained nearly constant, Census after Census. If this proportion or near it also appears for the 1981 Census, could one not regard the non-agricultural employment multiplier as about $100/27$? This is not a rhetorical question: we really want to know.

Without any reservation I congratulate IDA on its outstanding success. We must not carp about its failures. IDA is involved in business like its client firms, with risk capital and there must be variability in return. There has, of course, been much reference to capital and profit. My own researches have shown that recently, but before the depression, the profit rate, the reward of capital, has been far too small and diminishing in Ireland. Nevertheless profit, as a fraction of added value, must loom large in future in industry, this because of the prodigious increase in capital — intensity, an aspect which has received nothing like the attention it deserves. In 1980 R. N. Vaughan published his estimates of the volume of capital stock in the Irish manufacturing sector, for some 48 separate industries and in total. From data then available he was able to bring his estimates only to 1973 (from about 1946-1950) and more recent estimates are badly needed. However, in the decade or so up to 1973 the volume of capital stock per person employed increased per year almost regularly by a prodigious 5%. Contrast this with the almost constant number employed.

The brutal truth is that modern industry is antagonistic to employment. The practice is called improvement in labour productivity. Of course, we all gain from technology, i.e. with involvement of machinery, but indirectly. If I lose my job because of replacement by machinery, I become a Luddite (unless redundancy pay is princely and perhaps even then). An element from the employer's point of view is that machinery is cheap (compared to labour), never strikes, never is absentee.

One must view the socio-economic future with trepidation. Our philosophy of life must be involved, especially our attitude to that basic element, the work ethic. If we have to accept a society of worker bees and drones, at all costs we must avoid regarding those who can't find paid jobs as inferior in any sense. If a person likes homework or gardening or chess and cannot find economic work, why not, in a free country? Is well spent free time less worthy than an eternity of repetitive tasks in a factory — though, with automation, these may be on the way out too? The trouble is that a philosopher may accept a situation, but will the people involved accept a workless condition forced on them? "All is changed, changed utterly, a terrible beauty is born". But one must be doubtful about the beauty of it.

Reply by K. A. Kennedy: I would like to take up three points briefly. First, it was suggested that I had urged caution about adopting selective policies. What I was really trying to say was that time spent on the careful design of such an approach now could save much time and frustration later at the implementation stage. Too often in Ireland we rushed into the adoption of new policies, without adequate preparation and consultation, with the result that implementation was frustrated by problems that could have been anticipated at the design stage. In this regard, we could learn from the Japanese, who tended to have long planning discussions before deciding on a new course of action, but who were extremely effective in implementation once the plan was settled, because all relevant parties had been consulted and knew what was expected of them.

Second, in regard to the question of changing relative rewards, between, for instance, property development and manufacturing, in Ireland, we generally try to do so by subsidies to favoured activities, which are costly to the Exchequer. But relative rewards can also be changed by taxing the less favoured activities, which would benefit the Exchequer.

Perhaps the most important point was made by Mr. McCabe, who raised the question of unemployment. We are now faced with the situation where unemployment for the next 5 years will be at or above the present historically high level. Yet, there seems to be a great reluctance to face this appalling situation, which even in purely monetary terms represents an enormous burden. Mr. O'Muircheartaigh noted that if the IDA now adopted a value-added, rather than an employment creation, objective, there would be no major State body left with a specific mandate in relation to job creation. I agree that this would be a matter for concern. I am not saying that the IDA should not adopt such an approach: it is a large question that I cannot go into fully here. But I would emphasise that such a course should only be adopted within the context of a national policy in relation to employment creation. This would try to ensure consciously that the extra value added in manufacturing would result in increased employment in other sectors, such as private and public services, rather than assuming that it should automatically happen. It would be necessary to have regard to the distribution of value added between wages and profits, where those incomes were spent and the level of taxation, as well as the sourcing of inputs of raw materials and services. While there may be a good case for freeing industrial policy from specific employment objectives, national policy must keep the employment goal in the forefront, otherwise, the social consequences could be disastrous.

Reply by F. Ruane: I am grateful for this opportunity to respond to several comments raised during the discussion this evening. First, Mr. Higgins (NBST) and several other speakers, have suggested that I am far too pessimistic about the potential of the electronics sector in Ireland. My intention is to be realistic about the sectors prospects, rather than over-optimistic, which I believe some of our industrial agencies are. The electronics industry is a rapidly growing one and it is sensible and uncontroversial that we should promote it. However, rather than get carried away with high-flying hopes for local technology booms, we should concentrate on what the sector might reasonably be expected to contribute to the economy. In my view, the key contributions will be jobs in the short run and, in the longer run, an increased capacity within the economy to adjust to inevitable technological changes. On a related topic, I am seriously concerned about the rising number of unemployed third-level graduates, who have specialized in electrical engineering at considerable expense to themselves and to the state in response to public pronouncements about jobs in the electronics sector. This outcome is perhaps a reflection of the over-optimism about electronics-sector

employment prospects in the 1970s and serious efforts should be made to monitor the employment requirements of the sector more closely in the future.

Second, Dr. O'Malley (ESRI) is critical of my argument that the public sector should be involved in creating, through incentives, the desirable economic environment in which the private sector should "pick winners", rather than picking winners itself. I don't believe that there is any substantive difference between us, as Dr. O'Malley accepts entirely my argument that a priority for policy is the removal of the large disincentives to physical and human capital which are hindering the expansion of the industrial sector in general, and the traded component in particular. I believe that we both agree about the need for better co-ordination among all state agencies involved in planning. However, we do differ on the relative importance of external economies in Ireland's competitive success: realisation of such economies generally would require explicit enterprise-level state intervention, over and above the creation of the correct incentives. My argument is simply this: there is no point in attempting to pick domestic winners, as the IDA has been doing with some success in the case of foreign companies, as long as the incentives which those companies face lead them to actions which do not raise national economic welfare.

Third, Mr. Turpin (NESC) expressed the view that I was being somewhat unfair to the Telesis group in my critique of their cost-per-job figures. I stand over that criticism because I believe that the estimation of the cost per job is a crucial part of the evaluation of policy and essential for establishing a basis for policy formulation. Quite frankly, the suggested range of estimates from £7,000-£29,000 (£15,000 to £63,000 if no multiplier effect is assumed) does not provide a useful basis for analysis, and is potentially misleading. I agree however with Mr. Turpin, that the problems faced by Telesis in attempting to calculate satisfactory job creation figures were very severe because of the inadequacy of available data. Happily, these problems are finally now being solved by the IDA.

Fourth, I wish to take issue with the suggestions by Dr. McCarthy (FUE), that my paper has a "negative thrust" and that critical discussions of current policy, such as we are having here this evening, undermine Ireland's industrial promotion effort. It is normal in democracies that major policy issues are discussed in an open forum and are reported in local newspapers. I do not seriously believe that transnationals are as gullible as Dr. McCarthy suggests, although I can quite imagine that they would raise these arguments with the IDA, if they felt it might improve their bargaining position. In any case, even if some entrepreneurs do respond negatively and some projects are lost, I believe that these losses will be small relative to the benefits of a healthy economic environment due to improved policy making, to say nothing of maintaining the principle of free speech.

Finally, I wish to respond briefly to Mr. White's proposal for the introduction of a new criterion to measure the effects of industrial development policy. While I share Professor Kennedy's concerns about the problem of defining such an alternative measure, I am sympathetic to the use of a broader measure than simply "jobs" to evaluate the net benefits of a project. It is worth noting, for example, that the use of employment as a sole measure of benefit generally underestimates the contribution to national welfare of domestic compared with foreign projects. However, as employment on a new project always accounts for a major portion of the benefit of that project to the economy, the number of "jobs created" will continue to be a good indicator of its net benefits and should be reflected strongly in any alternative measure proposed.

Reply by Padraic A. White: As regards the electronics sector, I wish first to express disappointment at the continuing, unfair criticism levelled at the industry, which Dr.

Ruane reflected in her paper. Between 1972 and 1982, electronics sector employment increased from 5,500 to 17,000, an increase of over 200 per cent, the number of companies grew from 23 to 150. The contribution these companies make to the balance of payments can be gauged from the fact that in 1982 they exported goods of the order of £800 million. These firms have an exceptionally low failure rate and, contrary to what has been suggested are fundamentally different to the labour intensive assembly type operations in the Far East which IDA has long recognised as intrinsically unstable even in the short-term.

IDA's electronics sector policy can be summarised as

- select the best companies in stable productions,
- encourage the development of highest quality electronics infrastructure,
- encourage decentralisation to the Irish plant of product modification and adoption and research and development aimed at the European market. I would caution however against unrealistic expectations of the time scale needed to convince companies that the Irish environment and workforce are capable of undertaking this work.

As regard the control of industrial policy I would like to make the following points:

- (1) The Industrial Development Act 1969 set down very clear criteria and checks for IDA in the implementation of industrial policy.
- (2) The IDA has a close structural relationship with the Minister and Department for Industry and Energy. The Minister's representatives sit on the IDA Authority and decision-making Boards and Committees.
- (3) A number of the important new policy initiatives which have been implemented in recent years have resulted from this interaction:
 - Enterprise Development Programme
 - International Service Industry Programme
 - Small Business Initiatives
- (4) Legislation has also been passed by the Oireachtas on a number of occasions over 13 years raising the ceiling for cumulative IDA grant expenditure over time and levels of grant which the IDA can make to an individual company without Government approval. The passage of such legislation has enabled discussion to take place on industrial development issues in the Dail and Seanad.

As regards the suggestion by Telesis that State assistance should not be afforded to non-trading businesses, I note that no clear definition of non-traded business was given by the consultants other than citing examples (cement, structural steel, fresh milk etc.). The NESc in attempting to define it noted certain important exceptions:

- where firms were competing on export markets,
- where firms were competing directly with imports,
- where firms were providing sub-supplies to internationally traded businesses.

I would stress the practical difficulties in implementing policy under any such definition and agree that the exceptions made by NESc are a minimum critical to any chance of successful implementation.

Dr. Kieran Kennedy's paper here this evening is the first time in the discussion of Telesis that the capability of translating a broad strategic direction into a specific blue print for action has been raised. I welcome this recognition and also agree that while there are considerable merits in present policies, they do not adequately address the full range of constraints that limit indigenous industrial development. In my own paper, I

have indicated some of the ways in which IDA considers these could be overcome.

I acknowledge Dr. Ruane's point that the concept of job approvals has always referred only to a statement of an individual firm's intentions. I would point out, however, that IDA grants are paid only when actual investment in fixed assets has taken place. IDA has always stated that it does not expect every job it approves to materialise. In the 1978-82 IDA Industrial Plan, an estimate was given of 60 per cent of New Industry (Greenfield) approvals appearing on the ground within five years of the approval date. In fact, when consideration is taken of projects and stages not proceeding and allowance is made for jobs still to come on stream, 82 per cent of jobs in projects proceeding are actually created and up to 53% are sustained.

The central target set by IDA in its Industrial Plan 1978-82 was for first time jobs (68,000 over 5 years from IDA and 7,000 from Shannon Development/Gaeltarra) and not job approvals. These first time job targets were intended as a contribution to the White Paper targets. The 10,000 net job creation target referred to in Dr. Ruane's paper, was a Government target, set in the White Paper of January 1979. As regards Dr. Ruane's footnote No. 17 on the cost per job, the figure of £7,400 per job is the grant cost for IDA. At no time have I suggested that it was total cost to the State, a point I emphasised in a recent interview with *Business and Finance*.

Finally, I would like to thank my fellow speakers for an excellent debate and congratulate the Society for taking the initiative and giving this vital subject an excellent forum for discussion.