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National  
Economic and  
Social Council

An Chomhairle  
Náisiúnta Eacnamaíoch  
agus Sóisialach

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## Manpower Policy in Ireland

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## 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 will meet regularly with NESCC on their initiative or on the initiative of NESCC to discuss any matters arising from the terms of reference and in particular to discuss specific economic and social policy measures and plans and to explore together proposals and actions to improve economic and social conditions. Any reports which the Council may produce shall be submitted to the Government, and 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, and
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  - Five persons nominated by the Confederation of Irish Industry and the Irish Employers' Confederation,
  - Five persons nominated by the Irish Congress of Trade Unions,
  - Five other persons appointed by the Government, including two from the National Youth Council of Ireland,The Secretaries of the Department of Finance and the Department of the Public Service.
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6. The numbers, remuneration and conditions of service of staff are subject to the approval of the Taoiseach.
7. The Council shall regulate its own procedure.

# NATIONAL ECONOMIC AND SOCIAL COUNCIL

## *Manpower Policy in Ireland*

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PART I

THE COUNCIL'S COMMENTS ON MANPOWER POLICY  
IN IRELAND

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## **MANPOWER POLICY IN IRELAND: COUNCIL COMMENTS\***

### **INTRODUCTION**

Having completed a series of reports on Policies for Industrial Development the Council concluded that manpower policy had a key role to play in facilitating the expansion of the industrial sector. However, with the rapid growth in unemployment, which the Council considers to be the key economic and social problem, the Council felt that it would be desirable to undertake a comprehensive review of manpower policy rather than an examination of its role in facilitating industrial development alone.

The Council has reservations about the appropriateness of the title Manpower Policy. However, since the term has been used in the literature generally the Council continues to use it in this report. An alternative title for future use might be Human Resource Policy.

The study was undertaken in two stages. As a first stage the Council requested the Secretariat of the Manpower Consultative Committee to prepare a background report on Manpower Policy. On the basis of that report the Council commissioned a study with the following terms of reference:

To examine and make recommendations on the role of manpower policy in the context of overall economic and social policy and to undertake an assessment of the effectiveness of present training, placement and other labour market measures.

### **THE COVERAGE OF MANPOWER POLICY**

The consultants recommend that the traditional concept of manpower policy should be widened to that of a labour market policy. Manpower policy as conventionally understood consisted of training, placement and mobility measures. The labour market policy as proposed by the consultants would consist of a central core of conventional manpower policies together with a set of initiatives designed to bring

\* Following discussions in the Council, these comments were drafted by Gerry Danaher, Secretary of the Council. The final text of the comments was agreed by the Council on 15 November 1985.

labour market influences to bear on general economic and social policies. The consultants argue that policies with regard to taxation and social security both individually and in combination have significant effects on the labour market. In addition the industrial relations framework and incomes policies have major implications for the operation of the labour market. The consultants point out that there is no coherent policy towards the labour market and responsibility for assessing the labour market implications of the above policies is not assigned to any particular body, department or agency.

The Council recognises the relevance of these issues. In fact the Council recently completed one report and is in the process of undertaking some other work which attempts to examine these issues. In Economic and Social Policy Assessment (Report No. 79) the Council drew attention to the fact that hardly any attention has been paid to the issue of poverty and unemployment traps in Ireland. It was argued that this was due partly to the spread of responsibility for various elements of the tax/social security system across Government departments. It was shown that no less than four different Departments are involved in administering the set of income related taxes and benefits for families: the Department of Health (medical card eligibility), the Department of Social Welfare (Children's Allowances and Unemployment Payments), the Department of Finance/Revenue Commissioners (income tax and pay related social insurance) and the Department of the Environment (Local Authority dwelling rents). It is therefore not surprising that poverty and unemployment traps can occur as unintended consequences of various policies.

In the same report the Council identified unemployment as the most serious economic and social problem. The impact of the tax system on the cost of employment to the employer and the net return to the employee with its consequent implications for incentives and competitiveness was highlighted. This issue again highlights the absence of any central focus for examining the effects of the taxation system on the labour market. The Council is examining this issue in formulating its views on the reports of the Commission on Taxation.

The Council agrees with the assessment by the consultants and agrees with the need to bring the manpower implications to bear on the assessment of general economic and social policies. Such an approach would also provide a focus for the various activities of the Department of Labour and should result in a greater co-ordination of the various elements of policies across Government departments. However, the Council believes that great care is required in specifying the precise

mechanism by which the Department of Labour would bring manpower policy considerations to bear on other policies. In particular, the Council is concerned lest the impression arises that adoption of a labour market policy would involve the Department of Labour in assessing all aspects of policies which impinge on the labour market. The Council is also conscious of the fact that the Department has responsibilities other than those of manpower policy, e.g. industrial relations, and would not wish to imply that manpower policy should take precedence over all these other responsibilities. The Council would prefer, therefore, to retain the original concept of manpower policy but to include as one of its objectives an assessment of the manpower implications of general economic and social policies.

There is an ongoing international debate on the degree of flexibility/rigidity of labour markets and the extent to which flexibility fosters employment growth. This debate essentially hinges on the most appropriate role of Government in the labour market, the reasons for intervention and the most appropriate means of intervention. The outcome of this debate and the arguments marshalled on both sides will have relevance for Ireland. Finally, the Council acknowledges that any consideration of the instruments of manpower policy must be seen in the context of the general resource constraints facing the Government, to which the Council has adverted in several recent reports and which are likely to continue for the foreseeable future.

## SECOND LEVEL EDUCATION

The consultants examine certain aspects of second level education which are relevant to the labour market. The education system, in combination with the training system, provides the economy with the skills and the knowledge with which to develop and remain competitive. Post-compulsory education and training is of special importance to manpower policy because it provides the base from which most young people enter the labour market or proceed to further specialised education and training.

The growth of unemployment in recent years brings into question the most appropriate form of education and training for young people. The transition from school to working life is not a smooth process but can be a lengthy and uncertain affair. Attempts to facilitate the transition process include some special employment, training and work experience schemes outside of the educational sector. Some of these can be viewed as being complementary to the formal education system while others are a response to shortcomings in the educational system.

The previous two paragraphs demonstrate the importance of examining the education system from a manpower perspective. The Council, however, would like to emphasise a point made by the consultants, namely, that the examination of the education system from one perspective only may lead to conclusions and recommendations which may require modification in the light of a more comprehensive examination. The education system has its own aims and functions and is constantly influenced by cultural, social and political forces in addition to the narrower economic forces. The precise way in which the education system responds to any of these influences and the appropriate policy responses is a matter of delicate balance.

The consultants argue that the educational system has not responded sufficiently to current labour market requirements and may now require some modification<sup>1</sup>. They cite, in particular, the over-emphasis on general education and the failure to develop a proper higher cycle structure in the vocational sector. The consultants recommend the introduction of a greater degree of flexibility whereby those in the general stream would have an opportunity to change to a more technical or vocational range of subjects thus opening the way to a wider range of career options.

The Council believes that while the recommendation is desirable in principle it is necessary to assess very carefully its practical implications. Such implications relate primarily to the institutional structure of second level education provision. These implications are also relevant to the other main recommendation of the consultants in this area, namely, that the higher cycle of second level vocational education should be developed. Because there are minimum class sizes required to make provision of any subject viable (particularly in the vocational/technical area) schools may require significant rationalisation. There are also implications for teaching staff and the general policies of the Department of Education in this regard. In particular, if schools which cater primarily for the general stream wish to also offer a more technical or vocational range of subjects, then these schools must either recruit appropriate personnel for such subjects or share facilities with other schools in the locality. In addition, the Council believes that the solution

<sup>1</sup> It should be acknowledged that the education system has partially responded to the need for change. There are two main initiatives, neither of which escapes criticism (see consultants' report). The first initiative has been the development of Vocational Preparation Courses for 15-18 year-olds who have completed compulsory education. The second was the establishment of the Curriculum and Examinations Board which, in its specific terms of reference, is asked, inter alia, to formulate proposals for alternative senior-cycle programmes, including programmes geared to preparation for work etc.

to the problem of imbalance between the general and vocational sectors may not necessarily be found only in modifications to the senior cycle of second level education but may require modification to the junior cycle.

The international experience in this regard may be of interest. Countries with well developed general and vocational streams have been looking at the feasibility of integrating the two streams. Some of these countries have moved in the direction of closer integration within larger more comprehensive institutions. However, according to a recent OECD report, these countries do not necessarily see the integration of general, technical and vocational education as involving a common core curriculum. Closer integration is seen rather as a strategy to give equal status to all options.

The Council believes that the consultants' recommendations for greater flexibility in the general stream leading to wider career options and the systematic development of a higher cycle second level vocational stream are desirable in general from a manpower perspective. However, the Council believes these recommendations need to be examined in a much wider educational framework and balanced against all the other influences on the education system. Notwithstanding this the Council believes that there is an urgent need for much greater coherence between vocational education and early youth training.

## VOCATIONAL TRAINING

The Council's views on the various issues arising in vocational training can be divided into three main sections, following closely the division used by the consultants. The three sections are: apprentice training; resource allocation within vocational training; and the promotion of in-firm training.

### Apprentice Training

The consultants draw attention to the evidence which suggests that the current inflow into apprenticeship, particularly in certain trades, is much too high. The evidence is based on studies which have been carried out of the Retail Motor Trade and the Building Industry. The consultants argue that, unless similar information is available on a comprehensive basis across all sectors, attempts at predicting the overall pattern of manpower and training requirements would be rendered almost impossible. Since it is impossible to generalise on the basis of two studies the Council agrees with the consultants on the need for a comprehensive examination of the overall intake of apprentices in the

context of future needs. In assessing these needs the Council also recommends that consideration should be given to whether the apprenticeship system should be extended to encompass a greater number of skills.

One of the main themes running through the consultants' assessment of the apprenticeship system is the need for greater flexibility. This is so particularly with regard to the duration of the apprenticeship and its content. The consultants also recommend a more clearly defined national system of selection based on educational attainment and other relevant criteria. The Council is in favour of the apprenticeship system being developed in these ways.

The Council is concerned, however, that while many of these issues were identified in the mid 1970s and were agreed as being desirable features of a new apprenticeship system very little progress has been made. The consultants have also drawn attention to this and in their report they urge the social partners to move much more rapidly in implementing these desirable changes on which there is general agreement.

One of the main features of the new apprenticeship system announced in 1976 was for a period of full-time off-the-job training in an AnCO centre in the first year of apprenticeship. By contrast with the other elements above, substantial progress was achieved on this front, with over 80% of statutory first year apprentices being trained in this way. However, a side effect of this change is that an increasing proportion of apprentices (over 50% in 1983) are receiving off-the-job training under the direct sponsorship of AnCO rather than by private employers. The consultants argue that this development is due to an unwillingness on the part of employers to pay first year apprentices when they are not on the job.

The consultants suggest that this unwillingness should be acknowledged and recommend that the first year of apprenticeship should be organised jointly by the Educational authorities and AnCO. The consultants also suggest that this first year should form part of a comprehensive vocational education/youth training system. The Council acknowledges the difficulties which have arisen with the first year of apprenticeship and is concerned at the resultant increase in the cost of the apprenticeship system. One of the options for the future of the apprenticeship system is for a more integrated approach between in-company training and the educational system. In Germany, at present, there is a gradual introduction in schools of a full-time vocational year following initial

education with the aim that it be recognised as the first year of certain apprenticeships and there are also signs of an increased formalisation of the training within enterprises<sup>1</sup>. The Council believes that the various options must be evaluated in the context of possible future developments in the senior cycle of second level education on which it has commented above.

### Resource Allocation within Training

The consultants assess the balance of resource use in three areas: the age distribution of resources in non-apprentice training; the skill/non-skill balance in AnCO adult training programmes; the volume of resources devoted to external training by AnCO.

With regard to the age balance the consultants draw attention to a number of points. They show that trainees aged less than 25 years account for 80% of trainees at any one time. They also draw attention to the fact that the Youth Employment Levy and the European Social Fund now account for a substantial proportion of AnCO funding. However, both of these sources lay down strict conditions regarding the age groups on which the funds may be disbursed. Finally, the consultants draw attention to the changing structure of the labour force, pointing out that CSO population projections, which take into account a range of migration assumptions, project a decline in the labour force in the 15-24 age category over the period 1986-1991. Given these factors the consultants recommend some alteration of priorities to cater more for older persons.

While acknowledging that public policy and particularly the allocation of resources must be sufficiently flexible to recognise and respond to new priorities the Council wishes to emphasise that priorities are relative. The labour force projections contained in the previous paragraph do not imply that we will no longer have a youth unemployment problem. It is not possible of course to decide on the appropriate allocation of resources based on labour force growth alone. It is also necessary to consider the relative unemployment problems of the two groups and the nature of the unemployment problem. The Council attaches priority to assisting two groups: the long-term unemployed, regardless of the age category into which they fall; and to early disadvantaged school leavers. The Council believes that priorities should be determined by the needs of the target groups rather than by the sources of funding. The Council therefore recommends that the constraints imposed by sources of funding should be removed.

<sup>1</sup> Education in Modern Society, OECD, 1985.

With regard to the allocation of resources to non apprentice training by programmes directly provided by AnCO the consultants distinguish between skill related and non-skill related programmes. The latter are sometimes referred to as social programmes. The consultants call for a review of the balance between skill and non-skill related programmes in the context of providing an adequate level of skill training to meet the needs of economic growth.

The Council is of the view that some of the non-skill related programmes such as basic training courses and career development programmes should not be viewed as entirely 'social' since there are likely to be some economic benefits from basic training courses which provide basic manual instruction and which impart a knowledge of general work practice. Similarly with regard to career development programmes. However, some other programmes undertaken by AnCO do have as their objective the imparting of more social type skills. The Council believes that these would be more appropriately provided by the educational system. This, however, would require some radical changes in the educational system to ensure that those who are catered for in these special programmes are not, in future, alienated from the system. While awaiting such changes the Council recommends that these special programmes should remain in existence and that the experience gained in operating them should be made available to the educational authorities.

The Council agrees with the consultants on the need to keep the overall balance within AnCO under review and in this context recommends that the throughput and costs of the individual programmes be clearly identified. Finally, the Council endorses the consultants' concern about the content and extent of external training in the AnCO budget.

#### Promotion of in-company Training

Three instruments have been used for the promotion of in-company training. They are: the levy/grant system; domestic industry training grants; and new industry training grants. In 1983 total State expenditure on in-company training amounted to £45m. It was made up as follows:

Levy/Grant	£10m
Domestic/Industry grants	£8m
New industry grants	£22m
Miscellaneous	£5m
	-----
	£45m

(Table 4.4 of report)

The levy/grant system, which is described in detail by the consultants, is a system whereby firms in designated sectors whose payroll is above a certain level are levied at a rate between 1 and 1.25 per cent of their gross wage bill. The levy may subsequently be recouped in the form of grants if the firms initiate satisfactory training arrangements. The original objectives of the system were:

- (i) to increase the amount of training;
- (ii) to improve its quality;
- (iii) to distribute more equally between employers the cost of training in an industry.

The consultants argue that the system has now largely achieved its purpose. In fact the repayment of the levy by means of training grants is largely automatic. As a result grants are now widely dispersed among many and varied training activities. The consultants recommend that the levy/grant system should be discontinued and replaced by a more integrated system of grants in which resources would be concentrated in specific training areas which are of relevance to the long term needs of the economy.

The two other mechanisms for encouraging in-company training are domestic industry training grants and new industry training grants. Domestic industry training grants are paid to existing firms which are improving or changing their technology arising from an IDA supported capital expansion programme. The actual training funds come from the IDA. New industry training grants are paid by the IDA in the case of new overseas grant-aided industrial projects. The consultants recommend that the domestic industry and new industry training grants should be incorporated into the system recommended above in which funds would be allocated on a more strategic basis. This would involve the identification of key skill areas (for example, areas of new technology) which might be singled out for support. The consultants envisage that such a system would operate primarily on the basis of training needs and the allocation of grants would not necessarily be associated with the awarding of IDA capital grants. The consultants recommend that such programmes should be administered and funded by AnCO in close co-operation with the IDA (for manufacturing industry). The consultants also suggest that these grants should not fund the total cost, rather a contribution should also be sought from the recipient firm.

#### Council's view on the promotion of in-company training

When the levy/grant system was first introduced in the late 1960s it ensured that a certain amount of in-company training was undertaken. Now that this has been achieved in most of the companies in the

scheme there is a danger that some of the training undertaken may be designed more to recoup the levy than to meet the skill requirements of the company. The actual way in which the system now operates is also very cumbersome.

This line of argument suggests that abolition of the system is the most appropriate course of action. However, one cannot view the system in isolation; it has to be examined in the context of the two other instruments used to promote in-company training. Abolition of the levy/grant system while the other grants still remain involves the State making a significant contribution towards in-company training without a necessary corresponding input by the companies<sup>1</sup>.

In considering future policy with regard to training and how it should be funded the Council wishes to emphasise three main principles which are adverted to by the consultants. *Firstly*, the Council believes that the levy grant system, new industry training grants and domestic industry training grants must be viewed as one programme and in a broader context than heretofore. The system of state support for training now concentrates mainly on the industrial sector which accounts for only 29% of total employment. The Council believes that the competitiveness of the total economy is the important issue. *Secondly*, the Council agrees with the consultants that a more strategic approach to the disbursement of training grants in line with overall industrial policy is desirable. In particular, the Council would like to see training grants being concentrated on the skill areas required for the efficient development of the economy. *Thirdly*, it is against the background of these two principles that the funding arrangements for training should be devised. In this context also regard should be had to the degree to which it is appropriate for the State to intervene directly in training arrangements.

The Council is particularly concerned at the absence of any information on skill levels in the various sectors of the economy. This is particularly disconcerting when the large amounts of state money being spent to enhance skill levels are considered. The Council believes that the availability of such information is a prerequisite for assessing the effectiveness of such state-funded programmes. Comparisons with competing countries could then provide a benchmark for the training authorities against which they could assess skill levels.

<sup>1</sup> In this context it should also be noted that the State has now taken a significant degree of the responsibility for the first year of apprenticeship.

The consultants identified a particular problem in relation to the payment of different allowances to young participants in various manpower programmes and in certain vocational education courses. As a solution to this problem they recommend a system of vouchers to which every person aged between 15 and 20 years would be entitled. The Council, however, has strong reservations about the cost implications of such a scheme.

## TECHNOLOGY, EMPLOYMENT AND SKILLS

The consultants identify technological development as one of the main factors leading to structural change. In the Council's view they correctly emphasise the potential of technology to contribute to economic development and the penalties of ignoring technological change. From an industrial policy perspective emphasis should be placed on innovation policies. The consultants identify three sets of adjustment policies which are relevant from the labour market perspective. These are: policies relating to education and training; policies aimed at creating an acceptance of new technologies; and policies with regard to adjustment assistance for displaced workers.

Before discussing the appropriate type of policies to be pursued the Council wishes to repeat its belief in the importance of technological development in raising living standards. The Council would generally support the specific recommendations in respect of education and training put forward by the consultants. The Council also believes that specific adjustment assistance for workers displaced by technological change are justified on equity and efficiency criteria.

The Council believes that both sides of industry have a key role to play in the orderly introduction of new technology. Structural change is relatively easy to accommodate in growing economies where labour displacement in one area is matched by growth of labour demand in other areas. In these circumstances technical change is generally welcomed. However, the more sluggish labour market conditions of the late 1970s and 1980s provide an environment less conducive to the introduction of new technologies. It is in this context that there is a need for co-operation between both sides of industry with a view to demonstrating that technological change may require sacrifices in the short run but will bring advantages in the long run.

## HIGHLY SKILLED MANPOWER

The consultants recommend that steps must be taken to maintain the growth of highly skilled manpower at a level commensurate with the targets embodied in Government policy. The consultants state that

the achievement of this objective will require the stimulation of demand for highly skilled manpower in all sectors of the economy. The Council agrees that the availability of highly skilled manpower is crucial to getting the greatest possible benefit from technological and biotechnological developments. The Council would emphasise the importance of good management, both in the private and public sector, so that technical skills are matched with marketing and general management skills to exploit the advantage. The need for people who understand not only the technical sciences but the humanities and social sciences is imperative in the process of adapting to new conditions. Notwithstanding the positive benefits of highly skilled manpower the Council believes that it is relevant to ask the question: what is an appropriate supply of highly skilled manpower and how is it determined. The Council wishes to emphasise that the relationship between the supply, demand and need for highly skilled manpower is a very complex issue with particular reservations attaching to the concept of 'need'.

There are a number of possible consequences when the supply of highly skilled manpower exceeds demand. Firstly, there is the possibility that the excess supply will emigrate so that the return to an Irish investment accrues to another economy. It is estimated that approximately 11.4% of graduates found employment overseas in 1984<sup>1</sup>. While in the short run this might be considered a loss to the economy, it has to be set against the experience gained abroad by these graduates and the possibility of Ireland benefitting from this in the longer run. A second possibility when the supply of highly skilled manpower exceeds demand is that highly skilled manpower may be recruited into employment which does not utilise their skills. In this context the consultants quote a 1983 survey which indicated that a significant number of graduates were undertaking work below the level they might have anticipated. However, perceptions of this nature are not a sufficient basis for policy conclusions.

The role of highly skilled manpower in facilitating the achievement of industrial policy objectives is central, i.e. the building up of strong indigenous companies and the attraction of foreign firms with certain desirable characteristics. In some indigenous companies skilled manpower will be the key competitive factor. However, there is a need for industrial policy to articulate much more clearly the process by which

<sup>1</sup> This is not strictly comparable with the figure of 6.5% for 1983 due to changes in the method for compiling the figures.

the provision of highly skilled manpower aids competitiveness. For example, would the placement of highly skilled manpower in a company which has not demanded such manpower enhance the competitiveness of the company. The Council recommends that the career paths of highly skilled individuals who emigrate should be monitored, if possible, and that regular audits of the occupations and skill utilisation levels of domestic highly skilled manpower be undertaken. In addition, the Council wishes to emphasise that highly skilled manpower is necessary for competitiveness not only in high technology sectors but throughout the entire economy. In this context the Council endorses the recommendation of the Sectoral Development Committee that the training agencies should devote resources to schemes which would enable companies, over a development period of up to three years, to improve their management, marketing and technological personnel.

The Council supports the consultants' recommendation that the expansion programme for higher education up to 1990 should continue to give priority to the provision of education opportunities for scientists and technologists (the definition of scientists and technologists used by the consultants includes engineers, agricultural, medical, natural and computer scientists). In addition, the Council does not believe that it makes sense that there should be such a wide gap in emphasis given to the different engineering disciplines between graduates, diplomas and national certificate award holders. The Council also supports the recommendation that the NIHEs and the RTCs should adopt more positive policies towards the transfer of students and qualifications between institutions. The Council however, would widen this to include transfers between the universities and other parts of the third level system.

The Council supports the consultants' recommendation on the development of closer co-operation between industry and education. In this context the Council would also like to see a system of modular certification for people at work whereby persons could achieve qualifications while at work through link-ups with their local RTC for example.

The Council agrees with the proposal to establish a Manpower Research Unit. However, while the consultants recommend that the unit should be located in, or adjacent to, a third level college or research institute the Council recommends that it should be located within the Department of Labour<sup>1</sup>. This would not preclude drawing, where necessary, on expertise in outside institutions.

<sup>1</sup> Dr M. Hederman O'Brien supports the view of the consultants that "the proposed 'Manpower Research Unit' be established in or adjacent to, a third level campus or in a research institute rather than in a Government department or agency" for the reasons set out by the consultants on pages 197 and 198.



The Council wishes to add a number of observations about the activities of the unit. Obviously one of the main activities would be manpower forecasting which would then form the basis for policy making in the educational and manpower areas. However, since such forecasting can be very inexact the Council recommends that it should be oriented more to producing sets of alternative projections based on varying assumptions thus giving policy-makers options for decision making. The Council also believes there should be greater concentration on short-term projections and analysis with aggregate projections supplemented by more micro-oriented sectoral and occupational analysis which can quickly indicate supply and demand imbalances as they arise in different sectors, occupations and geographical areas. Priority should also be accorded in the unit to studies designed to ascertain how the products of education and training are faring in the labour market, thus providing valuable feedback to the education/training authorities. The audits of skill utilisation levels could also be carried out by the unit.

#### **PLACEMENT SERVICE**

The consultants' main recommendation with respect to the placement service is that the main focus of the service should now be the special groups who experience particular difficulties in the labour market such as young people, the long-term unemployed, re-entrants to the labour force etc. The consultants also recommend that the service should assume responsibility for, and become the co-ordinating focus for, all special manpower schemes. The Council supports this recommendation but would also envisage the service retaining a limited placement function. In the context of any detailed consideration of institutional arrangements in this area the Council believes that consideration should be given to the development of mechanisms for greater collaboration between benefit payment offices and the NMS.

#### **SPECIAL LABOUR MARKET MEASURES**

The Council agrees that the long-term unemployed and the early disadvantaged school leaver merit special attention. The Council also agrees with the recommendations that responsibility for the disadvantaged school leaver should be organised from within the education system and that the Social Employment Scheme should incorporate at least the more basic elements of the Alternance Scheme.

The Council also supports the recommendation that where reliance is placed on a response at the local level there is a need for very close monitoring with provision for intervention by a central agency to provide resources on a 'needs basis'.

#### **INSTITUTIONAL ARRANGEMENTS**

In addition to examining specific areas of manpower policy the consultants identified a number of deficiencies in the institutional arrangements for formulating, implementing and evaluating manpower policy. The consultants put forward a number of detailed recommendations designed to overcome these deficiencies. The recommendations of an institutional nature put forward by the consultants are:

- (i) a strengthening of the Department of Labour to adopt a more active policy role;
- (ii) a system of formal cabinet sub-committees with statutory powers to deal with broad but related areas of public expenditure, one of which would cover the manpower/education area;
- (iii) the setting up of a Joint Education and Training Council with effective powers to co-ordinate activities in the area of vocational education and youth training;
- (iv) a merger of the activities of the existing executive bodies in the manpower area into one comprehensive agency (State Manpower Agency);
- (v) the establishment of a single national higher education authority with functions relating to the whole of the third level sector.

The Council is of the view that the simultaneous adoption of such radical institutional proposals is not the most appropriate strategy. Rather, the Council believes that the most appropriate strategy is to initially identify the key deficiency, remedy it and that this may lead to a solution of some of the other institutional problems.

The Council agrees with the consultants that the primary deficiency relates to the role and strength of the Department of Labour. Linked to this deficiency is the overlap and duplication which has been evident in the executive area and the overlap between policy and executive responsibilities. The concept of a manpower policy originated in the mid 1960s. However, since then the environment within which manpower policy operates has altered significantly. Despite this there has been no fundamental look at the concept; the authorities being content to simply add further special schemes onto the basic structure. Manpower policy, which is the responsibility of the Department of Labour, came to be defined as a collection of agencies and schemes.

When overall policy direction does not emanate from the sponsoring Department it is inevitable that the executive agencies take on the policy function by default. However, since executive agencies are only

interested in their own sphere of activities there is a danger that policy becomes unbalanced. Another consequence of a lack of policy direction is a lack of coherence in the executive area. For example, the education/training overlap arises partly from the absence of an overall manpower policy. Finally, the response to the difficulties which were arising due to the absence of a manpower policy was the setting up of an agency with policy functions, namely the YEA. This was, essentially, a further abrogation of policy functions by the Department.

The Council therefore sees the primary deficiency in the manpower area as the weakness of the Department of Labour and believes that the most immediate priority must be to strengthen the Department. This priority assumes even more urgency in the context of the recommended extension of the objectives of manpower policy. The strengthening of a Government department is not necessarily a matter of increasing overall staffing levels. It does, however, require staff with appropriate skills — both professional and administrative — in formulating and evaluating manpower policy. Aside from staffing issues the entire ethos and mode of thinking of the Department must change from being passive to being innovative and accepting responsibility for policy.

A second major deficiency in the Council's view is the lack of effective co-ordination between the Departments of Education and Labour. The Council is of the view that it is not sufficient to have educational representatives on the boards of executive manpower agencies and for the two Departments to share a Minister of State. However, apart from the above recommendations on strengthening the Department of Labour the Council is not in a position to draw up a detailed blueprint for organisational arrangements in the manpower and education areas.

In the Council's view the success achieved in strengthening the Department of Labour will have a significant bearing on what further organisational arrangements might be suggested. For example, if the Department is successful in accepting responsibility for policy then this has implications for the future of the YEA. Similarly, any efforts to separate policy and executive responsibilities has implications for the NMS. While not making detailed recommendations the Council believes there is an urgent need for more integration and streamlining of executive agencies. In this context the Council would urge that the size of the country should be taken into account in devising appropriate arrangements. The issue of formal cabinet sub-committees is, as the

consultants point out, a question of the administration of Government which the Council would wish to examine in much more detail before coming to conclusions. In general, therefore, the Council confines itself to supporting the consultants' argument for a clear outline of policy and a strengthened and much more active Department of Labour.

The Council also recommends that the Department of Labour should undertake regular reviews of the success of manpower policy in meeting its objectives. One possibility here is for an in-depth review every three years (as with industrial policy) supplemented by annual reports monitoring on-going developments in the labour market. In this context the Council welcomes the recent annual report of the Department of Labour. However, the Council believes that there is much greater scope for developing the report in an analytical direction. Finally, the consultants have made some recommendations on information requirements. The Council recommends that the Department should take particular note of these by developing a comprehensive data-base, and by encouraging its satellite agencies to do similarly.

**PART II**

**MANPOWER POLICY IN IRELAND**

by

G. Danaher  
P. Frain  
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A background paper on the Economic and Social Objectives of Labour Market Policy was prepared by Professor R. M. Lindley of the Institute for Employment Research in the University of Warwick.

The authors also wish to acknowledge the contribution of Professor G. Wedell of the European Institute for the Media in Manchester University.

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## PREFACE

### Terms of Reference

The last decade in Ireland has seen a paucity of research and discussion into the appropriate role and function of manpower policy. The most recent work was in 1974 when the OECD undertook a review of manpower policy. There was, however, no official published response. Prior to that there was a series of policy documents in the mid 1960s including a Government White Paper on Manpower Policy (1965).

The economic and social environment within which manpower policy must operate has altered radically in the course of the two decades since 1965. It is therefore not before time that a study of manpower policy, in the context of the environment of the 1980's, should be undertaken. It was against this background that the National Economic and Social Council commissioned us to undertake a study of manpower policy in Ireland with the following terms of reference:

"To examine and make recommendations on the role of manpower policy in the context of overall economic and social policy and to undertake an assessment of the effectiveness of present training, placement and other labour market measures."

### Approach to the Report

We looked upon the terms of reference as comprising two interrelated parts. The first part of the terms of reference required us to examine the role of manpower policy in the context of overall policy. To fulfill this requirement what we have done is to illustrate in broad terms how we believe manpower policy as presently understood should be altered to meet the challenges of the next decade. We also address in depth the institutional structure necessary to give effect to our recommended policies.

The second part of the terms of reference essentially involves an assessment of the individual components of a manpower policy. Each of these is examined in turn with a view to identifying which policies

are deficient or inappropriate in the context of future labour market developments. We will indicate under each heading some new or different approaches which might be followed relating to both the policy area and to institutional and administrative structures.

It should be noted that, even though this report is extensive in its coverage of manpower activities, it does not extend to agriculture or the non-commercial public sector. This is not to imply, despite intrinsic differences with the rest of the economy, that the manpower aspects of these sectors should not fit logically into an overall national framework. The problem was the question of the time and resources needed to cover them adequately. The treatment of training and vocational education in agriculture alone would require an in-depth knowledge of a great many features of the sector and would differ fundamentally from a similar assessment in other sectors as it would be primarily concerned with preparation for self-employment.

### **Parallel Developments**

There are of course opinions and views on manpower issues other than those expressed in this report. The Department of Labour is currently preparing a White Paper on Manpower Policy. AnCO has been working on the development of a Strategic Plan designed to chart priorities and requirements in training up to the end of this decade. Indeed it is necessary to acknowledge that the views expressed in this report have been influenced to a considerable extent as a result of consultations with many interested parties, particularly the Department of Labour and AnCO with whom we had extensive and helpful discussions.

The AnCO document referred to (a first version of which was circulated in mid-1984) addresses a number of the issues raised in Chapter IV of this Report, including for example, the implications of the changing labour force age structure, the need to update the apprenticeship system, the desirability of a more strategic approach to in-firm training and the distinction between purely "economic" and "social" training.

Our view is that it is appropriate at this stage to have a range of opinion and advice available since this should ultimately lead to more informed decision making. We see the intrinsic usefulness of our contribution as constituting an independent assessment which ranges across a very broad area covering not only the traditional elements of manpower policy but also emphasising the importance of related activities in other areas of Government activity, and how those might be influenced with a view to optimising conditions in the labour market.

### **Outline of the Report**

The body of the report is preceded by a Summary and Conclusions chapter. A List of Main Recommendations is contained at the end of the report.

Chapter I of the report sets out the historical evolution of manpower policy since the mid-1960s from both international and domestic perspectives. The chapter also sets out the labour market trends over this period and examines the likely future evolution of the labour market. Chapter II sets out our recommendations on the future direction of manpower policy.

Chapter III deals with the development of those aspects of second level education which are of relevance to the labour market. Chapter IV deals with the development of vocational training, including the question of State expenditure on training and its funding.

Chapter V of the report examines the technological aspects of the changing structure of Irish industry. It discusses the factors which influence the transfer and diffusion of new technology and analyses the links between technology and employment and also between technology and skills. Chapter VI examines the education and training of highly qualified people at the tertiary level or its equivalent.

These four chapters (III, IV, V and VI) seek to examine the way in which the various parts of the system have changed and the degree to which policy has contributed to or reacted to those changes. They assess whether the education and training systems have been sufficiently well-attuned to the needs of the economy in the past and to what extent reform is necessary to correct present inadequacies and to anticipate future circumstances of skill shortages amidst potentially very high levels of unemployment.

Chapter VII examines the development of the public placement service in Ireland and assesses its impact upon the operation of the labour market.

Whilst post-compulsory education, training and the placement service are the principal elements of long-term manpower policy a number of schemes have been introduced to ameliorate the effects of unemployment. These programmes cover a wide range, including direct job creation schemes and employment subsidies, and are reviewed in Chapter VIII.

This study is concerned with the institutional arrangements for policy development and execution as well as with the objectives and precise instruments of intervention. Chapter IX explores the broader institutional requirements in the manpower area which we consider are necessary to give effect to both the comprehensive labour market strategy proposed and to other more specific recommendations. In this regard the chapter contains suggestions concerning certain aspects of Government administration with a view to improving co-ordination across the broad front of manpower related activities; the role of the Department of Labour is also examined and recommendations are made regarding the reorganisation of the executive agencies in the manpower sphere.

## SUMMARY AND CONCLUSIONS

### INTRODUCTION

In undertaking this study a number of major problems were evident. In detailing these problems it is useful to distinguish problems at an overall level and those arising in respect of the individual instruments of manpower policy. Three issues were initially identified:

- (i) is the *overall* concept of manpower policy and the *collection* of instruments which comprise manpower policy appropriate to the present social and economic environment?
- (ii) is each individual instrument of manpower policy attuned to the changing nature of the labour market in which it operates?
- (iii) are the administrative arrangements for formulating, implementing and reviewing manpower policy appropriate?

Having identified these as the major issues the precise problems under each heading were isolated and considered in turn.

### A LABOUR MARKET POLICY

The first problem related to the concept of manpower policy. The historical evolution of manpower policy is documented in Chapter I while Chapter II outlines our views on how manpower policy should develop. The major objectives of manpower policy as conventionally understood were as follows:

- to develop human resources and adjust manpower resources to structural change with a view to fostering economic growth;
- to improve the employment opportunities of marginal groups and thus contribute to social equity;
- to improve the trade-off between inflation and unemployment by stabilising employment during the cyclical downswing and by removing labour-market bottlenecks during the upswing.

However, the environment within which manpower policies originally developed, at least in Europe, was one of full employment. As a result the policies used were designed primarily to achieve the first objective outlined above. The main instruments were training, placement and mobility measures, all of which operated on the supply side of the labour market.

The environment began to change in the mid 1970s with a deteriorating trade-off between unemployment and inflation. More emphasis began to be placed on the short-term objective of manpower policy, i.e. maintaining high levels of employment over the business cycle while not aggravating inflation. Additional responses adopted were designed to encourage the maintenance of existing employment. These defensive-type measures were subsequently followed by selective job creation measures. These initiatives operated on the demand side of the labour market and were based on the assumption that the economic downturn was cyclical. However, the unemployment problem has deteriorated further and while a cyclical upturn may now be occurring in a general economic sense, the prospects of anything even approaching full employment in the medium term have now faded. Manpower policy has, therefore, to operate in the context of significant unemployment for the foreseeable future.

Given this background, policy in this area must have as its *ultimate* objective the alleviation of this unemployment situation. Our view is that this problem must be tackled, not just by means of measures designed to address the issue directly, but also by an ongoing re-orientation of general social and economic policy. One of the features of policy over the last two decades has been the lack of progress in integrating general economic and social policy with manpower policy and the absence of any overall perspective on the labour market. As a result many decisions have been taken without sufficient regard to their labour market implications. The need to enhance the manpower contribution to policy discussions and decision making in the general economic area and in other related fields such as education and social welfare is now clear. In addition to placing all new policy initiatives under the labour market microscope all settled policy should be similarly reviewed.

With a view to formalising the sentiments in the previous paragraph we recommend the broadening of manpower policy to that of a labour market policy with the following components:

- (i) long-term manpower policy primarily intended to promote the efficiency of the labour market through training, placement etc. with an additional dimension covering

technological change and education; under this broad heading would also come the overall functioning of the labour market and the development and adaptation of policies to enhance its operation;

- (ii) short-term special employment and training measures often introduced from a mix of economic (efficiency) and social (equity) motives;
- (iii) long-term policies dealing with the social infrastructure of the labour market (individual labour law, health and safety, discrimination, and broader questions of equity than those covered in (ii));
- (iv) the industrial relations framework;
- (v) incomes policy, taxation and social security;
- (vi) public sector employment and pay policies;
- (vii) the labour market implications of sectoral policies covered in items (i) to (vi).

This report is primarily concerned with (i) and (ii) above with in-depth reviews of the training system, placement service etc. The flexibility/rigidity of labour markets debate, which is relevant in any consideration of the overall functioning of the labour market, is briefly reviewed in Chapter II. While no definite conclusions are drawn it is argued that there is a need to know much more about how labour markets work and the feasibility of introducing a greater degree of market orientation and the advantages and disadvantages of doing so. More general comments are offered on components (iii) to (vii) in the report with emphasis being placed on how these components fit into a labour market policy both conceptually and institutionally.

In the context of the above seven components we have identified the following set of objectives for a labour market policy:

- (i) to develop and adjust human resources in response to structural change with a view to facilitating the process of structural change in the economy and hence contributing to economic growth;
- (ii) to maximise the employment content of economic growth subject to the maintenance/improvement of competitiveness;
- (iii) to take an overview of the labour market and to ensure its efficient operation;
- (iv) to improve the employment opportunities of groups with special labour market problems and hence to contribute to social equity.

In essence, the type of broad strategy which we envisage, which would be primarily the responsibility of the Department of Labour, would involve a central core of conventional manpower policies (but much better co-ordinated) and a second set of activities which would consist mainly of initiatives designed to influence general economic and social policies with the above mentioned objectives in mind. This effectively means that viewing manpower policy as comprising the existing instruments and agencies is not appropriate. It should be emphasised that this policy direction is what drives the entire report. The institutional arrangements which we recommend in Chapter IX are designed to give effect to this policy; they are irrelevant if considered in a policy vacuum.

### **INSTITUTIONAL ARRANGEMENTS**

Chapter IX is concerned with the institutional arrangements in the manpower area. This question is dealt with under a number of different headings:

- (i) the role of the Department of Labour;
- (ii) the need for a more coherent approach to all manpower related activities;
- (iii) measures to deal specifically with the interface between education and training;
- (iv) the resources required by the Department of Labour in fulfilling its expanded role;
- (v) the re-organisation of the executive agencies in the manpower area.

Our view is that the Department of Labour should be principally concerned with the formulation, co-ordination and evaluation of manpower policies. While it should maintain a firm hold, through its work in the policy and legislative areas, over the general direction of the activities of its satellite agencies, it should not become involved in detailed executive matters related to settled policy. This is in broad agreement with the principles set out in the 1968 Devlin Report on the Reorganisation of the Public Service.

In assuming a more dominant role, the Department should furthermore adopt a comprehensive approach to issues in the labour market as a whole and not confine itself to a particular range of manpower policies as traditionally defined. In Chapter II we have attempted to illustrate the desirability of pursuing a comprehensive labour market strategy covering not only areas such as training, placement, and special employment initiatives but also the labour market implications

of general economic and social policy, for example in the fiscal, social welfare and industrial relations spheres. The Department of Labour is not, of course, responsible for policies in all of these areas, but we consider it an essential element of its enlarged role that it should achieve a more influential voice in regard to the formulation of policies in other areas which impact on the labour market. One of its objectives, therefore, should be to promote a situation where the direction of key aspects of overall economic and social policy, while fulfilling their own purpose, also embrace a consistent approach to tackling the problems of the labour market.

It should be mentioned that in making these suggestions it is not intended that the Department of Labour should become excessively involved in affairs outside of its own sphere of responsibility. We envisage, as explained in Chapter II, two spheres of departmental activity, one related to areas for which the Department has direct responsibility (such as training, special employment schemes, industrial relations) and another concerned with bringing influence to bear on policies in other areas with a view to optimising labour market conditions. We consider that, heretofore, the Department has had a much too narrow perception of its position in a manpower context. The result has been that many manpower problems have arisen as residual issues with the Department acting in the role of "sweeper up" to deal with the less desirable consequences of general policies.

We also see a need for a more coherent approach to all manpower related activities whether these relate to the manpower sphere itself or to associated areas such as education, social welfare, etc. The current position is that substantial manpower oriented expenditures are arising in a largely independent fashion in different areas of Government. As a result the delivery of the entire body of these programmes lacks consistency and cohesiveness and we are not deriving the optimum benefit from the resources allocated to them. The wide range of expenditure data covering the manpower and education areas, given in Table 9.1, illustrates the extent of the fragmentation to which we refer. In our view new systems are necessary which involve both administrative arrangements for drawing together information on such related expenditures and new governmental structures which can determine priorities and allocate resources in this wider context. We are, therefore, of the view that a system of *formal* Cabinet Sub-Committees with delegated powers to deal with such issues should be instituted, one of which should cover the broad manpower area.



This chapter also contains some suggestions for bringing a degree of rationalisation to the specific area of youth training and post-compulsory Vocational education. It is recommended that a joint Education and Training Council be set up with specific powers to co-ordinate activities in this area. Its primary function would be to institute measures designed to harmonise programmes etc. We do not envisage the proposed Council becoming involved in the actual delivery of courses which would continue to be the responsibility of the institutions in the manpower and education spheres. It is also suggested that the Council should direct attention to a number of other important issues. These relate to approaches to the European Social Fund (for which the Council should act as a co-ordinating agent in relation to youth programmes), legislation covering the areas of vocational education and training (which at present conveys overlapping powers) and procedures to rationalise the payment of allowances to participants on training courses and in certain vocational educational programmes.

With regard to the last mentioned we suggest that one possible way to deal with the question of allowances which would help to achieve consistency and meet the required objectives, would be to have a system of "vouchers" or "entitlements" to which every young person aged between 15 and 20 years of age would be entitled. These could cover the equivalent of one year's fulltime instruction and could be drawn down at any time when the young person undertakes a recognised programme of Vocational education or training. The allowances should be graduated according to age (with the payments being quite modest at the lower end of the eligible age band) and should be the same irrespective as to what form of course is involved, and where it is taken. Since it is intended that this system should subsume all existing youth training and vocational education programmes (including the first year of apprenticeship) the implications for public expenditure should not be substantial.

The extended range of policy and other activities described in the preceding paragraphs clearly imply a considerable extension of the role of the Department of Labour. This would require special resources, particularly in the form of more personnel with analytical and interpretive skills who would be able to actively contribute to the evaluation and formulation of policies in the broad context envisaged. Our view is that special measures would be required to assemble such a multidisciplinary team. This is an important issue since real progress in moving towards a more broadly based labour market strategy as suggested will depend crucially on strengthening the Department of Labour so that it can play a far more effective role in the policy area and in co-ordinating the activities of the State manpower agencies.

With regard to the executive manpower agencies we see a need for significant changes. The present position is most unsatisfactory for many reasons, but particularly because the functions of policy formulation and execution have become intermingled both within the Department of Labour itself and among its satellite agencies. Our basic premise is that *all* policy responsibility should lie exclusively with the Department and that the agencies should fulfil an executive role, with, of course, the opportunity for consultation on policy proposals.

Three options are considered with a view to changing the existing agency structure. The first option involves a highly integrative approach which would entail drawing all existing functions back into the Civil Service; a second option involves making minimal changes in the existing structures, and a final option involves a single executive State Manpower Agency embracing all existing bodies in the manpower area. We favour the last mentioned as representing the most appropriate way to achieve co-ordination in regard to manpower activities in the field and to ensure the delivery of programmes in the most effective and efficient manner.

We see such an organisation as having a twin organisational structure involving a training division concerned mainly with skill training and a division dealing with placement and all special manpower schemes (including all community based activities currently operated by AnCO). The National Manpower Service should be absorbed into the placement and special schemes division of the new Agency, as would the activities of the Youth Employment Agency, except those of a policy nature which would be taken over by the Department of Labour. The board of the new agency should contain representatives of employers, trade unions and the educational sector in equal numbers, as well as a number of independent members.

We wish to emphasise that in recommending the integration of the existing agencies we envisage it as being a real amalgamation. We do not have in mind something marginally more than a mere change of name with a largely ineffectual higher management tier with operational components which consist essentially of the existing agencies. Our proposals involve abolishing all existing agencies and reorganising them within a more coherent and efficient framework.

Finally, it should be noted that the entire body of our proposals relating to institutional arrangements, is consistent with the broader labour market strategy as described in Chapter II. The recommendation

regarding strengthening the position and functions of the Department of Labour, particularly concerning its role in influencing all aspects of economic and social policy from a manpower point of view, is clearly a central requirement if such a strategy is to be put into effect. The suggestion to have cabinet sub-committees with proper delegated powers to assess and monitor wide but related areas of public expenditure clearly provides an administrative or governmental setting within which such policies would operate. At a more detailed level the proposals for dealing with the interface between education and training can be taken as further examples of a broader approach. It would involve both the manpower and education authorities in a joint exercise to facilitate the transition from education to working life which would in turn contribute to improving the operation of the labour market.

## **SECOND LEVEL EDUCATION**

In Chapter III some aspects of the Irish educational system at second level which are of particular relevance to the labour market are considered. Even though some points of criticism are raised in this report we recognise, however, that the question of education when considered in its own right must be viewed in a much wider perspective. Its essential role is, and will continue to be, a general preparation for life and it must, therefore, embrace a major core element which conveys basic standards of numeracy, literacy and powers of communication. This, after all, provides the necessary base which subsequently facilitates individual flexibility in life, whether in relation to occupational or other forms of mobility and change.

There are, however, now signs that the system no longer embodies a sufficient recognition of current labour market requirements. The very substantial expansion in second level education which occurred over the last two decades related mainly to the general or more academic sphere and there are now deficiencies in the provision of scientific, technical and technological education. In the latter context the failure to develop a proper higher cycle structure in the vocational sector constitutes a notable lapse. It is only fair to say, however, that the manner in which second level education developed was in many respects consistent with the previous pattern of labour demand, the latter being significantly influenced by a substantial and continued rise in administrative type employment in the services sector (much of it in the public service). The over-emphasis on general education (which is exceptional in a broader European context) is now not only inconsistent with the current pattern of change on the employment front but is also out of harmony with developments in

third level education which has seen a massive expansion in the technical and technological areas, particularly in the non-university sector.

The responses which have emerged to meet the current labour market difficulties (both within the educational sector and in the manpower sphere) have tended to be of an ad hoc piecemeal nature. Essentially they consist of individual and largely unrelated programmes grafted onto a system which has not undergone any basic change. In our view there is no alternative at this stage to a wide-ranging re-assessment of second level education which looks simultaneously at both general and vocational education with a view to achieving a more co-ordinated and cost effective structure which would be more responsive to the changing nature of society generally. In particular, the system should involve a greater degree of flexibility which allows students a wider range of career options. The approach to teaching should instil a greater degree of self-reliance and highlight all employment opportunities, including self employment even though the latter may not be an immediate option for many.

Our view is that post-compulsory vocational education and early youth training activities (including the first year of apprenticeship) should be rationalised to form consistent parts of one coherent structure, without, however, imposing an excessive degree of integration on either sub-sector. We are also of the view that such a rationalisation should extend to having a uniform system of allowances for participants on such programmes.

It is important to emphasise at this juncture that in criticising what may be described as technical or scientific deficiencies in Secondary education we do not seek to diminish or in any way devalue the importance of the general components of education. It goes without question, as we have stated already, that the acquisition of such fundamental knowledge is a necessary prerequisite to engage in any further specialisation and to provide the necessary intellectual and attitudinal adaptability to enable one to avail of different occupational options. It can be argued, however, that the whole concept of what constitutes general education should be widened to embrace a greater technical or scientific element. An ever increasing number of functions in the employment environment, and in society generally, involve the application of new technologies at the individual level and it would appear desirable that young people should emerge from the educational system with at least a basic appreciation of what this entails.

## TRAINING

Vocational training is considered in Chapter IV. While the discussion covers a great variety of activities that fall under the training umbrella, one can distil out a number of major issues. These are (1) the inflexible nature of the apprenticeship system and the need to review the system in the broader context of all youth training and vocational education, (2) the distinction between 'social' and 'strategic' training (3) the balance of resources allocated between youth training and that for older persons, (4) the need to rationalise in-firm training and (5) the funding of training and other manpower activities.

With regard to apprenticeship, the study finds that the system is excessively rigid and inflexible and not responsive to changing labour market conditions. Aspects of particular concern are the number of first-year apprentices now sponsored directly by AnCO instead of by employers and the high unemployment rate among older apprentices. We are of the view that the first (off-the-job) year of apprenticeship should be run jointly by the training and vocational educational authorities and should form but one (albeit a special) part of a coherent and flexible system of youth training options. This stage should not involve a contractual arrangement with an employer and the allowances should be no different from those paid to other young trainees in parallel training and vocational education programmes. The duration of apprenticeship (currently four years in all cases) should relate more sensibly to the time required to acquire the skills in each trade and should be based on a proper system of assessment and certification. The interests involved (employer, trade unions and the educational authorities) should adopt a more flexible attitude to the need for change, otherwise the system will gradually become irrelevant in a labour market environment involving a multitude of new skills.

Within the training sphere as a whole the extent of programmes designed to meet mainly social or counter-cyclical needs has become very substantial. In this regard we are referring to general type programmes which do not relate to a particular skill and to community based initiatives. While we accept the need for such measures in view of the continuing economic difficulties we consider that the position regarding the allocation of resources to these activities and to what must be regarded as the primary task of training for skills (especially new or strategic skills) should be reassessed with a view to achieving the most appropriate overall balance in a broad manpower context. Both objectives (i.e. economic and social) would be better served if there was a clearer identification of programmes in each area (in so far as this can be achieved) along with more precise information on the extent of each

type of activity. It will be noted that our suggestions for re-organising the institutional arrangements in the manpower area (Chapter IX) involve the relocation of responsibility for all special schemes within one administrative entity, which is consistent with this aim.

Turning to the question of skill training as such, there is now a growing adaptation to changing labour market needs insofar as there are more programmes covering the commercial, sales, business, ADP areas, mainly provided through AnCO's External Training Services. While this is to be commended one must sound a cautionary note in order to avoid a situation where the State training system may be used to fund training which should, and probably would in any case, be provided by employers. While we basically agree with the changing orientation a more discerning approach may be required in order to restrict training support to areas of real need which would not otherwise be catered for.

The current nature of the funding of training has resulted in a situation where older workers are insufficiently catered for. A sizeable element of the domestic funding for training comes from the Youth Employment Levy (and must, therefore, be expended on youth programmes) and the position is reinforced by the EEC convention that 75 per cent of ESF resources must relate to programmes for persons aged under 25 years. This is a situation which cannot be sustained in view of the changing age structure of the population. A further factor which calls for a new emphasis here is the sharp rise in the numbers of long-term unemployed, the majority of whom are in the older age groups. Such changes should be gradual, however, and we do not envisage, or advocate, a rapid or drastic running down of support services for youth.

With regard to State support for training within firms, we consider that the three existing systems, the Levy/Grant scheme, and the IDA funded New Industry and Domestic Industry grant programmes, should be reorganised and integrated into a new unified scheme involving the allocation of grants on a purely strategic basis (e.g. vital skill areas, designated sub-sectors, etc.). While the Levy/Grant system initially gave a much needed boost to in-firm training activities it has now largely outlived its usefulness. The funds from this scheme are now dispersed among a great many activities, many of which are of doubtful utility from an overall economic point of view. While the New Industry and Domestic Industry grant programmes, by their very nature, tend to be concentrated in more strategic areas, we must express some doubts about their links with capital grants (in the sense of generating windfall gains) and we consider that the new system of training grants should be

allocated purely on the basis of training criteria. We do not consider that grants under the new system should be total, i.e., recipient firms should bear a proportion of the training costs involved.

Turning to the question of the funding of training an important feature here has been our growing dependence on the European Social Fund. The proportion of our total outlay on training supported by the ESF was about 18 per cent in the mid-1970s, now it is over 40 per cent. This raises certain questions as to how stable or dependable this source is, and, therefore, the nature of any possible changes in the manner of operation of the fund should be a matter of prime concern to us. The pattern of social and demographic change across Europe will eventually necessitate changes and the manner in which these changes eventually turn out (in terms, for example, of the criteria for dispensing ESF aid) may not be as advantageous to Ireland as in the past. A further complicating factor here is the impending enlargement of the Community to include Spain and Portugal which is likely to result in substantially increased drawings from the Fund without a commensurate rise in the Fund's resources.

While not disputing the substantial benefits which Ireland has derived from the fund, one can raise questions about certain aspects of our utilisation of this resource. The nature of some programmes seems to suggest that they are designed more to attract ESF support rather than to address longer term social or economic problems. There is a danger, therefore, of introducing an element of distortion in the overall direction of manpower policies. In our view this problem, in so far as it exists, is due to our fragmented approach to the fund (in the institutional or agency sense) which militates against an optimal utilisation. The issue is considered further in our discussion of institutional arrangements for the youth area in Chapter IX.

Regarding the domestic element of funding for training we consider that this should come from one source only – general taxation. The present funding situation involves a most inappropriate mixture involving the Youth Employment Levy, the Levy/Grant scheme and the general Exchequer. We are not in favour of specific or earmarked taxes which eventually lead to inflexibilities and tend to distort the situation both within the manpower area and in the taxation sphere as a whole. They can also militate against a proper distribution of resources on strategic grounds as one can have numerous groups laying prior claim to the funds. A simple direct approach to funding is the most appropriate and we consider that the two above-mentioned special arrangements should be discontinued.

This view is not, however, based solely on the need for financial simplification. Our proposals in this regard are consistent with the view that the Department of Labour should be in a position to exercise its policy functions in a flexible and efficient manner and in this context overall control of funds is a primary requirement. Furthermore this report refers to a number of respects in which the existing arrangements (the Youth Employment Levy and the Levy/Grant Scheme) are inappropriate in a general manpower context.

The original intention was that employers should bear the greater part of the cost of training, even though events never really materialised in this way. In fact, over the years the direct contribution from employers to training costs has formed a small and dwindling proportion of the total. It must be borne in mind, however, that in a theoretical or conceptual context, the whole notion of assessing employers' contribution to training can be quite uncertain as it is bound up with many other factors such as the net output of trainees relative to the wages they are paid, etc. It is true, however, that the more direct approach to domestic funding now recommended (i.e. general taxation) would result in a minimal contribution from the manufacturing sector in view of the low rate of Corporation Tax (10 per cent) applicable to industrial enterprises. It is recommended, therefore, that this rate be adjusted upwards in order to recoup the amount of the total levy currently taken from the manufacturing sector as part of the Levy/Grant system.

### TECHNOLOGY AND STRUCTURAL CHANGE

Technology with its increasing application across all sectors of the economy, is one of the factors contributing to structural change in Irish industry. The importance of technology and particularly new technology from a manpower viewpoint is emphasised by both the changing skills necessary for its successful acquisition and development and by the very significant impact it is likely to have on employment and skills. There is likely to be a significant shift from manual to non-manual skills, from manipulative to intellectual skills and from craft to technician or graduate skills. There will also be a need for more multi-disciplinary skills with a breakdown in the barriers between traditional job titles, traditional activities and skills.

In order to manage the labour market implications of new technologies three sets of adjustment policies are relevant: education and training policies; policies geared to the creation of a climate for acceptance of new technologies; and policies for adjustment assistance for those adversely affected. It should be emphasised that policies which are

typically aimed towards facilitating labour market adjustment will not be sufficient in themselves to maximise the potential of technology for employment and skill creation. Positive well defined innovation policies will also be required.

The main education and training policy implications of the introduction of new technologies are summarised in the relevant sections of Chapter V. They relate mainly to the level of adaptability, relevance and content of first time education and training, the need for increased emphasis on continuing education and training, and the need for increased coordination in the planning and provision of education and training. One issue of crucial importance, which is not treated elsewhere, is the need to develop and update management skills to facilitate the acquisition and development of new technologies.

The climate for acceptance of new technologies would be facilitated by giving employees both a share in the decisions and the consequences of the introduction of technology. The provision of adequate information to workers and adequate consultations in planning the manner and pace of technological change is also essential. The introduction of new technology should also be exploited to facilitate job redesign thus making work more challenging and rewarding.

The pressures of technological change will increasingly impact on certain groups of the labour market, particularly older workers and new entrants to the labour market. These groups of workers are largely catered for by the recommendations set out in other sections of this report including the revised training arrangements, the change in balance of resources for non-apprenticeship training, the changing emphasis of second level education, the increased access to continuing education and re-training and the programme aimed at bridging the experience gap for new graduates. However, the situation should be continuously monitored and reviewed to see if additional measures are required to increase the occupational and geographical mobility of these workers.

#### **HIGHLY SKILLED MANPOWER**

The availability of an appropriate supply of highly skilled manpower with innovative and entrepreneurial skills is a key factor in Ireland's future economic development. Despite significant improvements over the past decade in the output of scientists and technologists from the third level sector, the stock and the numbers employed in R & D remains low by international standards. While civil engineers, general science graduates and some types of technicians are experiencing

difficulties in finding employment, the indications are that the overall need for scientists and technologists will continue to increase in the future. However, it may be necessary in certain areas to provide incentives to translate this need into demand.

It is important for our industrial and economic development that steps be taken to maintain the growth of highly skilled manpower at a level commensurate with the targets embodied in government policy. In this regard serious consideration must be given to bringing the stock of highly skilled manpower in Ireland more into line with that of our international competitors. The achievement of this objective would require not only increases in the output from the third level sector but also the introduction of a coordinated programmed aimed at providing experience and stimulating demand for highly skilled manpower in all sectors of the economy.

On the supply side significant restructuring has taken place within the higher education sector since the mid sixties. A number of initiatives have been undertaken aimed at increasing participation in higher education and increasing the emphasis on science and technology. These trends are likely to continue with almost 20,000 additional places being provided in higher education by 1990. The rapid growth of knowledge and the pace of technological change will also result in increasing demand for continuing professional education and retraining. These developments are likely to take place against the background of increasing financial constraints thereby increasing the need to find alternative sources of funding and methods of provision of education, including educational technologies and distance learning.

It is imperative that graduates and other highly skilled operatives possess not only scientific, technological and business skills, but also the motivation and innovative and entrepreneurial skills necessary for success in the market place. The development of such skills will require changes both in the content of science, engineering and business curricula and in the teaching methods employed. The quality and relevance of the very highly skilled manpower produced by the higher education sector is also dependent on the achievement of an increased level of basic, applied and cooperative research and development within the sector.

The level of higher education facilities and expertise required to meet the national needs for highly skilled manpower can only be achieved by increased cooperation both between the educational institutions themselves and between education and industry. Existing links between

educational institutions both at home and abroad involve joint research and teaching programmes as well as staff and student exchange programmes. One important form of cooperation between educational institutions which should be improved is the transfer system. The degree of vertical integration achieved between the regional technical colleges and the national institutes for higher education is particularly disappointing.

Higher education/industry cooperation is an important factor in increasing the relevance of skilled manpower. It improves the attitudes and perceptions and raises the level of expertise of the graduates, the educational institutions and the firms involved. It increases the graduates' employment prospects by providing industry with access to a source of tested skills while reducing the graduate experience gap by providing him or her with direct involvement in industry during the educational period. While much progress has been made in recent years, continued emphasis must be placed on the development of closer cooperation between industry and education in relation to curriculum development, staff and student mobility and research and consultancy.

While higher education planning must be based on social as well as manpower demand, it is essential that priority be given to the production of the key skills necessary for our future economic development. This can only be achieved if improved arrangements for forecasting future needs for skilled manpower at all levels are introduced. It is recommended therefore that a manpower research unit be established in, or adjacent to, a third level college or research institute. The need for objectivity and independence in manpower research will be an important factor in determining both the administrative arrangements and the location of the proposed research unit.

In responding to the need for highly skilled manpower, strengthened mechanisms for planning and financing of third level education will also be required. Long-term multi-annual planning is essential together with increased flexibility in overcoming short-term shortages and surpluses. Serious consideration should be given to the establishment of a single national higher education authority which would provide the uniform approach necessary for the success of the above strategy. The new authority would have advisory planning functions and executive financing functions relating to the whole of the third level sector. The Department of Education would then be free to adopt a more positive, development oriented policy role with less emphasis on the operational details of the system.

## PLACEMENT SERVICES

The State placement service (The National Manpower Service) is considered in Chapter VII. The basic rationale as originally set out for the Service when it was set up in 1971 involved rather ambitious objectives, the aim being to "win over" a substantial part of the private placement market. In order to try and achieve this it was necessary to adopt criteria based on the premise of selecting the best individual for a job irrespective of any social considerations (such as unemployment). In common with the experience in many other European countries where similar policies were followed during the period since the late 1960's, the progress achieved has not been spectacular. However, for much of the time in question labour market conditions were such that placement activities could hardly be expected to thrive.

The changed economic circumstances of today call for a different approach which directs the activities of the placement service more to helping disadvantaged groups. It would be more appropriate therefore for the NMS to adopt a new primary role in co-ordinating, organising and operating the many special manpower schemes now in existence. Indeed the NMS had already begun to operate in this manner to a considerable extent and had it not existed, it is likely that an operational mechanism would have been needed to carry out this function in view of the large number of special schemes which have been introduced in recent years. The Service will, of course, still engage in a certain amount of conventional placement work in so far as a demand exists for it. We do not see its new orientation as being disadvantageous in this regard; indeed the involvement of the Service in so many new activities in which it has an active rather than a passive role (many of which involve contacts with employers) should enhance its overall standing and influence.

We envisage that this expanded role should extend not only to special programmes but should also embrace a wider range of functions such as access to training and liaison with schools with a view to promoting better and more labour market oriented career guidance services. We are also of the view that the Service would be able to perform its new range of functions in a more effective manner if it were given more operational flexibility and had stronger functional links with other manpower agencies (discussed in Chapter IX).

## SPECIAL LABOUR MARKET MEASURES

Given the constraints on conventional economic policies for reducing unemployment over the past decade, many countries have resorted to special measures, particularly on the demand side of the labour market.



In Ireland the introduction of such measures was concentrated in two phases; the periods 1975-78 and 1983-1984. The schemes involved a mixture of cyclical and structural objectives and provided various combinations of training, work experience and job creation. Those introduced since 1983 have attached a greater emphasis to the encouragement of individual enterprise, particularly through self employment programmes. Many of the schemes in both periods were community based.

Employment subsidies are generally regarded as most effective if they are temporary, targeted and incremental. The Employment Incentive Scheme generally satisfies the last two criteria although we have some reservations on its efficiency as an instrument for helping the long term unemployed. The amount of deadweight in the scheme is very high with the most recent work indicating that only in one out of every four jobs subsidised was the additional employment due to the availability of the subsidy. This ignores the extent of displacement outside the firm which could be significant. In our view there is a strong case to be argued for the reallocation of resources devoted to the EIS to schemes which are likely to be more effective.

In view of the growth of unemployment and its extension to previously low risk groups it is necessary to carefully target specific individuals/groups for assistance through special schemes. It is recommended that two groups should command priority status: the early disadvantaged school leaver and the long-term unemployed.

Long-term unemployment is generally thought of as affecting older workers. However, the general lack of employment opportunities results in young people and prime-age adults now becoming increasingly prone to long-term unemployment. During a prolonged period without work, skills, work-habits and knowledge deteriorate. Special measures to help the long-term unemployed can be justified on both equity and efficiency grounds. Such measures break the vicious circle whereby lack of success in job search reduces motivation which reduces even further the chances of finding work.

Many of the special schemes originally catered for young persons generally, without priority being systematically allocated to any sub-groups within this overall group. Some schemes, it must be said, did contain reference to certain disadvantaged groups. However, the extent to which the programmes were tailored to these groups was minimal. The introduction of the Social Guarantee, which provides a

framework within which groups in the labour market with different priority status can be identified and accommodated is a welcome development.

It is only since 1984 that the older long-term unemployed have been targeted for assistance. The first initiative designed to assist this group was the doubling of the basic premium of the Employment Incentive Scheme in their favour. The response to this has been disappointing. The Social Employment Scheme and the Alternance Scheme were introduced in 1984 to assist the older long-term unemployed. The schemes are modest in the context of the total numbers of long-term unemployed. In addition, both schemes plus the financial weighting of EIS have been introduced without attempting to ascertain the obstacles which this group are likely to have to overcome to re-enter employment.

While the Alternance scheme is likely to be the more costly initiative it would appear to be a more appropriate response to the needs of the long-term unemployed. We recommend that the Social Employment Scheme should incorporate at least the more basic elements of the Alternance Scheme. With regard to the EIS the provision of subsidies to employers is unlikely to alter the composition of their recruitment significantly if the characteristics of the target group do not match employers' requirements. The low response to the weighting in the EIS merits examination and in this context the specific characteristics and needs of the long term unemployed could be identified.

Our view is that the long-term solution to the serious early school leaver problem should be sought in the first instance from inside the educational system by introducing fundamental changes in second level education, particularly in the vocational sector. The indications are that a great many of the young people who leave prematurely have developed an acute sense of alienation regarding the education system which they perceive as being largely irrelevant to their current and future circumstances, particularly insofar as employment is concerned. Changes in the education system to cater for this group will, therefore, have to be quite radical. We accept, however, because of the long-term nature of the current labour market problems and the time required to adapt educational programmes that a comprehensive range of post-school measures will be needed for some years to come. We are of the opinion, however, that these should be viewed as largely short-term expedients and the position should be subject to continuing review as time progresses.

Measures to assist particular individuals/groups should be viewed as attempts to prevent segmentation of the labour market. However, such measures are unlikely to be successful in this task through the provision of temporary placements only with participants subsequently returning to the unemployed register. Measures should, where possible, incorporate a strong training input and provide participants with experience and knowledge which is supportive of their future development. In this context it is essential to track the subsequent paths of those who participate on these schemes.

A final noteworthy feature of the special schemes is the increasing reliance on local community effort and the expectation that voluntary groups will provide project proposals. We would urge caution with regard to the degree of overloading the voluntary system. Given the likely geographical variability of the response there may be need for central intervention to provide resources on a 'needs' basis.

## CHAPTER 1

### THE HISTORICAL EVOLUTION OF MANPOWER POLICY

#### INTRODUCTION

Before undertaking any study of manpower policy it is necessary to be clear on what comprises a manpower policy and how it has evolved historically. In addressing that part of the terms of reference concerned with the role of manpower policy in the context of overall economic and social policy it is necessary to examine the overall environment within which manpower policy evolved. This is an essential backdrop to considering how the overall environment might evolve over the next decade and how policy might be attuned more closely to that environment. This chapter is concerned with the historical evolution while the next chapter looks at likely future developments.

Much of the conceptual thinking about manpower policy originated in the OECD in the mid-1960s. Based on that thinking this Chapter sets out the various stages of development of manpower policy at an international level with each stage illustrated by particular developments in Ireland. The Chapter also sets out very briefly in the final section an overview of labour market trends and likely future developments.

The chapter takes as its point of departure the 'active manpower policy' concept of the mid 1960s. This was formulated against the background of strong and stable economic growth and was viewed essentially as an instrument for the promotion of economic growth. With the deterioration in economic conditions in the mid-1970s the emphasis was altered, giving a higher priority to the maintenance and creation of employment, leading to the concept of a 'general employment and manpower policy', the background to which was a downturn assumed to be 'cyclical'. With the downturn being perceived as being more than cyclical, particularly in the European economies in the early 1980s, policy has turned more towards



examining the barriers to employment growth. This examination has resulted in the debate being focussed on the functioning of labour markets and whether, in particular, excessive rigidity has inhibited job creation.

### **AN ACTIVE MANPOWER POLICY**

In Europe the 1960s were characterised by strong and stable economic growth and steady full employment. Hence, the manpower policies devised were designed to operate in a full employment context. It was in this broad context that the OECD conceived of an *active manpower policy* as a useful complementary tool of general economic management (see OECD Council Recommendation on Manpower Policy 1964 in Appendix 1). The main instruments of an active manpower policy generally adopted by OECD member countries as a result of the 1964 Recommendation were policies affecting the supply side of the labour market. Those instruments affecting labour supply have generally become known as "traditional manpower measures" or as "manpower adjustment measures". Manpower adjustment as defined by the OECD covers measures to adapt the pattern of labour supply to a given pattern of labour demand (training and mobility measures) as well as measures to match the existing pattern of supply to a given pattern of labour demand (placement).

In a more general macro-economic policy context manpower policy was seen, in the 1964 OECD Recommendation, as having a complementary anti-cyclical role in a business cycle context through picking up the slack in the form of training measures on a downswing and by removing potential skill or geographical bottlenecks on the upturn. However, the idea of using an active manpower policy as a short-term anticyclical measure closely allied to traditional demand management policy was little used in this context. While the 1964 recommendation did contain provision for special employment measures during slack periods they were little used due primarily to buoyant labour market conditions of the late 1960s and early 1970s.

While many aspects of the training measures adopted were generally successful, efforts in the placement area and in regard to increasing geographical mobility did not have the expected impact. In most OECD countries, however, the need for such measures was obviated to a large extent by the concept of moving jobs to people rather than vice-versa. The 1964 recommendation argued that an active manpower policy should encompass measures for bringing jobs to workers in underdeveloped areas as well as the promotion of geographical mobility

through the removal of hindrances to mobility.

In addition to the initiation of new programmes and the development of comprehensive new legislation many countries also took the opportunity to reorganise their institutional arrangements for manpower, employment and unemployment benefit services.

### **EARLY DEVELOPMENTS IN MANPOWER POLICY IN IRELAND**

When economic growth first began to materialise on a significant scale in Ireland in the early 1960s there developed a growing awareness that radical changes and improvement were urgently needed in the manpower area. The rapid expansion in national output which followed the initiation of the First Economic Programme brought benefits in the form of employment increases, but there were also job losses as the industrial structure began to change. The movement towards free trade in particular, placed the older and more traditional industries, such as clothing and textiles, in an increasingly exposed position. Throughout this decade there was quite an intense debate on the question of manpower policy and there emerged a series of policy documents on the issue including, in particular:

- (i) NIEC' Report on Manpower Policy (1964);
- (ii) Government White Paper on Manpower Policy (1965);
- (iii) NIEC' Report on Full Employment (1968).

The Government White Paper of October 1965 aimed at the institution of measures to help workers to benefit from the new employment opportunities, in particular, those expected to follow from the targets set out in the Second Programme for Economic Expansion (1964-70). The main objectives of manpower policy as set out in the White Paper were:

- (a) the forecasting of changes which were likely to occur in the supply and demand for labour,
- (b) arrangements for the training and re-training of workers;
- (c) the provision of a redundancy payments scheme;
- (d) the availability of financial assistance to workers who were required to change their place of residence in order to find employment;
- (e) the further development of the Public Placement Services; and

<sup>1</sup> National Industrial Economic Council (NIEC's predecessor).

(f) the assignment to one agency of the overall control and direction of the different activities.

With regard to (f) above the Government's original intention was to assign overall responsibility for manpower policy to the Minister for Industry and Commerce. It was also of the view that the State placement service should remain within the Department of Social Welfare. When the Government finally decided on new institutional manpower arrangements, however, it set up a separate Department of Labour in July 1966 with overall responsibility for manpower policy. The new Department initially took over responsibility for the employment service and the Employment Exchanges which had until then been administered through the Department of Social Welfare.

Further important initiatives followed from the White Paper proposals which we will describe in more detail in later chapters. The 1967 Industrial Training Act led to the setting up of An Chomhairle Oiliuna (The Industrial Training Authority, AnCO). This legislation signalled the beginning of a more comprehensive approach to training problems. AnCO was charged with the task of promoting and organising all forms of industrial and vocational training, including apprenticeship training. Subsequent to the setting up of AnCO industrial training expanded significantly under a number of headings including the introduction of permanent training centres, the promotion of in-company training and measures to update and improve the apprenticeship system.

Attention was also focused in the 1960s on the reorganisation of the placement service to ascertain how it might be developed in the context of an active manpower policy. The late 1960s as has already been mentioned was particularly buoyant economically. Against this background the perceived function of the national placement service was to facilitate economic growth by expediting the normal clearing mechanisms of the labour market. This was to be achieved through assisting in the filling of vacancies, minimising mismatches and avoiding skill shortages and bottlenecks. The primary objective of the National Manpower Service (NMS), which was set up in 1971 as a separate functional entity within the Department of Labour, was to actively address these issues in a practical way.

Other initiatives over this period included a redundancy payments scheme and a resettlement assistance scheme both of which were introduced in 1968. It was also during this period that the establishment of eight new Regional Technical Colleges was planned,

to provide improved courses in a range of scientific and technical specialisations.

With regard to manpower forecasting (which was one of the priority items indicated in the 1965 White Paper) a certain amount of feasibility work was carried out by the Department of Labour after it was set up, but detailed forecasting was not proceeded with mainly because of technical reasons and the absence of sufficiently detailed statistics. Other countries (notably Sweden) carried out detailed work on manpower forecasting during this period based on analytical methods, but even in countries with greater technical resources and more advanced information systems, the results were not altogether satisfactory. A further factor, not fully appreciated at the time, was that rapid technological change would present a particular problem in projecting the composition of manpower demand, especially when the methodology used depended largely on past trends. Such forecasting efforts as are carried out nowadays are usually at a more micro level (e.g. relating to a particular industrial sub-sector or skill etc.) based on special detailed inquiries (see Chapter IV).

Thus, developments in Ireland in the 1960s reflected the concept of an active manpower policy as envisaged in the 1964 OECD Recommendation. Many of the measures which were adopted were primarily concerned with the supply side of the labour market reflecting an economy experiencing strong and stable economic growth. The structural changes likely to follow on from this growth and from the lowering of tariff barriers were acknowledged, not only in schemes such as the redundancy payments scheme and resettlement assistance programme, but also in the extension of training and re-training activities.

#### **A GENERAL EMPLOYMENT AND MANPOWER POLICY**

The 1974/76 recession heralded significant changes in labour market conditions in all countries with the simultaneous appearance of high inflation and high unemployment. During the first years after the onset of this recession the main objective of Governments was to develop holding operations based on the assumption that what was being experienced was a cyclical downturn. The main policy instruments used were designed as temporary expedients such as short-time working and job preservation subsidies. The persistence of labour market slack in OECD countries after 1974/76, together with the continuing constraints on global policies resulted in many countries resorting to a more active approach in tackling the problems. These consisted of direct job creation schemes in the public sector and employment

promotion incentives for private enterprises through altering the costs of employment, recruitment and training. In addition to special job creation schemes being initiated in the public sector the public service itself was used as a job creation instrument in some countries.

However, the persistence of relatively high rates of unemployment led to concern that many of the defensive measures (such as the provision of subsidies to protect the status quo) might have undesirable side effects such as the creation of impediments to structural change and technological innovation. This concern, together with the view that manpower adjustment measures are of reduced effectiveness during a prolonged period of sluggish economic growth and slack labour market conditions, led to a changing emphasis in the concept of manpower policy. The OECD conceived of 'a *general employment and manpower policy*' which was to be integrated into the framework of economic and social policies (see OECD Council Recommendation on a General Employment and Manpower Policy, 1976, in Appendix II).

The 1976 Recommendation was an attempt to reinforce the 1964 Recommendation by a general and positive strategy for creating and maintaining employment. A much higher profile was given in the 1976 Recommendation to the systematic use and evaluation of selective employment and manpower measures with the objective of achieving and maintaining high levels of employment and balance between the supply and demand for labour. Principles were devised to guide these selective measures. For instance, subsidies designed to promote employment in the private sector were to avoid supporting inefficient enterprises and inhibiting necessary structural change.

The 1964 Recommendation referred to the necessity for adequate unemployment benefits and compensation in case of redundancy. By the mid 1970s the cost of income maintenance for the unemployed had expanded considerably. Based on the principle that it is better to pay people to be gainfully occupied than for them to remain unemployed the 1976 Recommendation suggested that it might be more desirable to spend money on activities which contribute to the expansion of employment rather than the payment of income maintenance. It was also argued that the nature of the income maintenance policy should be such as to encourage workers to adapt to new employment opportunities and avoid any tendency to weaken work incentives.

As well as recommending the continuing implementation of the

principles of an active manpower policy the following elements were specifically reiterated in the 1976 Recommendation:

- (a) the close linking of employment and manpower policy and general economic policy;
- (b) organisational arrangements for the co-ordination of all elements of policy affecting employment and manpower;
- (c) the promotion of more equity in the distribution of employment opportunities.

Three elements were identified as necessary for the effective pursuit of manpower policy objectives. *Firstly*, the institutions responsible for implementing manpower policy were to be closely co-ordinated with those responsible for those elements of social and economic policy which have manpower consequences. This was deemed necessary to ensure that the manpower implications are assessed as part of policy evaluation and given proper weight in decision making. *Secondly*, it was necessary to achieve an improvement in the techniques for assessing these manpower consequences and *thirdly*, substantially more knowledge about the functioning of the labour market was required together with a significant improvement in the information base.

The general attitude at the time of the widening of the concept of manpower policy to a general employment and manpower policy was one of moderate optimism as to the capacity of both labour market and macro-economic policy measures to overcome the employment problems in the not too distant future. However, even by 1978 (see OECD 1978) this optimism had diminished considerably due to the weakness of the upturn in the OECD area. Developments since then, including the 1979 recession, which are dealt with later in the chapter have confirmed the decline in optimism.

### DEVELOPMENTS IN IRELAND IN THE 1970s

In order to examine developments in Ireland since the mid 1970s in an international context it is necessary not only to look at the new initiatives undertaken in this period but also at the performance of those instruments of manpower policy which were already in place (i.e. those associated with the earlier concept of 'an active manpower policy'). The importance of these, of course, was reiterated in the 1976 OECD Recommendation which must be seen as giving a changed emphasis to manpower policy rather than a completely new orientation.

Following the basic institutional restructuring carried out in the late 1960s under the original active manpower policy initiative the individual components of the institutional manpower arrangements were broadly reasonable. However, as time progressed, it became apparent that the whole Government structure in the manpower area lacked an overall sense of cohesion and did not have adequate linkages (a deficiency which was accentuated by the severity of the recession). This arose mainly because the Department of Labour did not evolve into a central force with the authority and drive to co-ordinate, further develop and review manpower policies according as economic and social conditions changed.

The reaction in Ireland in the aftermath of the 1974/76 recession was similar to that of most other countries. The period 1975-78 saw the introduction of a number of special schemes designed to operate on the demand side of the labour market. The schemes involved a mixture of cyclical and structural objectives and provided various combinations of training, work experience and job creation. Among the various measures undertaken were, marginal employment subsidies (introduced in 1975 and extended in various ways since then) — an Employment Maintenance Scheme designed to retain jobs and prevent redundancies in the textiles and clothing industry (discontinued at the end of 1980 because of objections from the EEC) — a range of special schemes to counter youth unemployment, which were administered by different Government departments and under different conditions.

The setting up of the Manpower Consultative Committee in Ireland by the Minister for Labour in 1978 could be deemed to be a first (indeed the only) recognition of the need for a more comprehensive approach to manpower matters. Its membership included representatives from Government departments, the State agencies in the manpower area and the social partners. Its terms of reference were

“To advise generally on the role of manpower policy in economic and social development and to assist the Minister for Labour in his overall responsibility for the supervision and co-ordination of manpower policy”.

The impact of the Committee has, however, been very limited as it has confined its attention to studying specific areas (such as skill shortages, long-term unemployment etc.) and has never attempted to address manpower issues in a comprehensive manner. A further limiting factor is that

the Committee's activities are largely confined to the sphere of influence of the Minister for Labour. This is a significant constraint in view of the need to enhance the manpower contribution to policy discussions and decision making in the general economic area and in other related fields such as education and social welfare.

**THE 1979 RECESSION AND ITS AFTERMATH: INTERNATIONAL**  
Even though the labour market situation worsened dramatically in the 1970s within the OECD as a whole, this deterioration was not equally pronounced in all countries. After an initial sharp rise in unemployment following the first oil price shock, employment improved considerably in the United States. In Europe sluggish labour demand characterised the recovery from the 1974/76 recession. The base from which these two main country blocs faced the 1979 recession thus contrasted sharply. Not only did the labour market situation in Europe deteriorate but the trade-off between inflation and unemployment also moved more adversely, thus further constraining traditional demand management policies. The rapid growth of public sector deficits was a further inhibiting factor.

As unemployment continued to increase after the 1979 recession attempts were made to explain the worsening trade-off by various structural factors: the composition of labour supply, the narrowing of wage differentials, restructuring in the manufacturing sector involving the decline of traditional industries, labour saving technological change etc. On a macro level other factors were referred to: the emergence of inflationary expectations: real wage resistance in collective bargaining etc. Over this period there was also a significant departure from the Keynesian view of the world which explained unemployment by a deficiency of aggregate demand and a shift towards the view that reflationary policies would lead to ever accelerating rates of inflation with minimal influence on unemployment. The search for the causes of unemployment thus focussed much more on structural factors and particularly on the build up of inertia in the functioning of labour markets. There was thus a gradual withdrawal internationally from the traditional concept of a manpower policy towards a greater concentration on seeking ways to reduce unemployment. This is not surprising since traditional manpower policy was formulated in the context of full employment and the measures adopted were thus essentially supply side orientated. The next chapter discusses in more detail the structural factors alluded to above.

## **DEVELOPMENTS IN IRELAND IN RECENT YEARS**

The employment situation deteriorated much more seriously in

Ireland in the aftermath of the 1979 oil price shock than after the earlier mid decade recession. Between April 1980 and April 1984 the total numbers at work declined by almost 4 per cent or by nearly 46,000 in absolute terms (see Table A1). Over the same period unemployment increased from 7.3 per cent of the labour force to 15.5 per cent. There has been a tremendous shake-out in industrial employment even though this has been partially offset by an increase in the numbers at work in private services. Public sector numbers have also increased but at a very much reduced pace, as a result of the restrictions place by the Government on public service staffing levels.

The response of government in recent years has revolved around the introduction of further schemes even though these now involve a greater emphasis on the encouragement of individual enterprise and the targeting of aid to new groups such as the long-term unemployed. The latter form of intervention has now become necessary as the degree of restructuring and intersectoral adjustment in the labour market has given rise to sizeable numbers of older redundant workers who are likely to lapse into long-term unemployment unless remedial steps are taken. During the early stage of the current crisis when youth unemployment again began to escalate the Government responded by setting up the Youth Employment Agency which was given the brief of promoting and co-ordinating manpower measures to aid youth in the labour market.

A foretaste of how the labour force is likely to evolve over the next few years is given by the labour force projections shown in Table A3. The total work force is predicted to expand at an annual average of nearly 17,000 (on the basis of a net migratory outflow of 7,500 per year between 1986 and 1991). The attainment of growth levels necessary to generate extra employment of an order sufficient to match this growth of the work force is highly unlikely. One must assume, therefore, that the socio-economic environment which we face will continue to involve high levels of unemployment. A further notable feature of the projections is the changing age structure of the labour force. The figures show that between now and 1991 the bulk of the growth will take place in the 25 to 44 year age group and the youth work force will decline slightly.

## CONCLUSION

Over the past 10 years the manpower scene has been characterised by a serious lack of coherence and much confusion in relation to policy formulation. In the early 1970s the policy instruments arising from the developments of the preceding decade were not long in place and one

would not have expected a revision at that stage. Subsequently, the economic and social dislocation caused by the 1974/76 recession was such that the main preoccupation of governments was to steer their economies through this period with minimum damage; against this background little attention was paid to longer term manpower strategies.

However apart from the brief expansionary 1977/79 period, we have now experienced ten years of sluggish growth and high unemployment. A fundamental and basic revision of manpower policy is long overdue given that, basically, the existing framework was drawn up in a period where there was an expectation of sustained and continuous economic buoyancy.

As we have already indicated the future scenario will involve a different labour force age structure and holds out the prospect of further changes in employment structures. These will require flexible manpower policy responses in the training and employment areas if, on the one hand, we are to make the most of the new employment opportunities arising and if, on the other hand, we are to maintain the overall level of unemployment within reasonable limits and restrict the emergence of particular problems such as excessive long term unemployment. Many of the policy suggestions contained in the subsequent chapters of this report have been framed with this scenario in mind.

## CHAPTER II

### TOWARDS A LABOUR MARKET POLICY

#### INTRODUCTION

We have identified in the first chapter the need for a fundamental look at the concept of a manpower policy which was initially formulated in the mid 1960s. Aside from the fact that all policies should be subject to regular review, manpower policy now needs reassessment because of the changed nature of the labour market to which it applies. In addition to the examination of the overall concept, many of the individual instruments of manpower policy now require some modification in the context of the changed labour market environment. Further justification for review can be found in the deficiencies we have identified in the institutional arrangements for formulating, implementing and evaluating manpower policy discussed in Chapter IX.

This chapter is divided into a number of sections. The first section briefly examines the role for Government in the labour market. The second section reviews the current debate on the flexibility/rigidity of labour markets. The third section of the chapter sets out the components of a proposed labour market policy together with the aims and objectives of policy in this area.

#### GOVERNMENT INTERVENTION IN THE LABOUR MARKET

The traditional rationale for Government intervention in the economy is market failure. In this context policies are designed to correct for: externalities, the existence of economies of scale (leading, perhaps to monopoly power), lack of information etc. These are the efficiency arguments normally put forward to support Government intervention. There are also equity considerations which give rise to Government intervention, i.e. where the market outcome is not socially desirable.

The main justifications for intervening in the labour market should, therefore, be to increase efficiency and to promote greater equity. The efficiency of any market will be impaired if participants are poorly informed, operate under great uncertainty, are slow to make decisions, are subject to very restrictive contracts, or encounter high barriers to entry; it will also be impaired if the market interacts with other markets which are themselves inefficient<sup>1</sup>. The extent of the impact of low labour market efficiency will depend upon the strains being placed upon actual market mechanisms. In a period of steady growth accompanied by modest cyclical fluctuations these will not be great. But in a period of considerable structural change the inefficiency of the labour market can seriously impede the adjustment of the whole economy.

An efficient labour market is an essential underpinning to rapid economic growth. The overall objective of policy in the labour market should be to support economic growth and within a medium term perspective this implies facilitating and encouraging structural change. In the medium term, the process of economic growth is essentially a series of structural changes: inter-sectoral and intra-sectoral output and employment shifts<sup>2</sup>; shifts from low value added to high value added output, etc. Such shifts arise from changes in relative prices, cost structures and patterns of demand. The role of policy is to remove barriers to these changes and create favourable conditions for adjustment.

Another reason for intervention in the labour market arises from the notion that employers are myopic and slow to adapt their skill demands to the dual challenge of present product market competition and future technical change. This is especially so in the case of the employment and training of those who are highly qualified in the technological field. Moreover, the education system is seen to fail to produce enough young people with sufficient foresight to invest in the relevant skills ahead of the demand actually materialising. Thus a "need", unperceived by the business sector and the educational system, is identified by an external agency, typically a Government manpower agency. Efforts are then made to encourage employers to adopt the "need" as "demand"; education and training programmes are introduced to supply the

<sup>1</sup> For example, the operation of the labour market is impaired if inflexibilities in the housing market impede geographical mobility. Similarly, with regard to pension arrangements and occupational mobility.

<sup>2</sup> Inter-sectoral shifts are those between agriculture, industry and services. Intra-sectoral shifts refer to those within these sectors.

"need"; the expectation being that jobs will be generated for those who eventually enter the labour market. The particular rationale for intervention in the more general training area is discussed in the chapter dealing with vocational training.

Improving the efficiency of the labour market was also the rationale behind the introduction of a placement service. This service provided information, was intended to reduce costs for both employer and employee and generally to expedite the filling of vacancies. However, the changed nature of the labour market since the time this service was originally introduced would suggest that an equity rationale for intervention is now more appropriate.

Once a rationale for Government intervention has been established it is important to consider the most appropriate form of intervention. In particular, it is necessary to decide where the evidence points to the need to *bypass* the market mechanism and where it suggests that measures should be adopted to *make the market work more effectively*<sup>1</sup>. Judgements of this kind are difficult to make. They depend not only upon an assessment of the practical problems facing decision-makers in the labour market now and in the past but also on a view of the sort of environment likely to arise in the future.

While the traditional rationale for Government intervention was market failure and equity considerations, Governments have been drawn into policy intervention across a much broader front. In some countries a reaction is now beginning to set in against Government assuming the extensive and manipulative role it has adopted in the labour market. In fact it is now argued that it is precisely *because* of Government intervention that the market has failed. It should be noted, however, that other countries have not accepted this argument.

It is now argued that structural unemployment can result from imperfections in the basic institutional framework of the labour market. It is also held that institutional rigidities have increased substantially in the post-war period. The manpower policy debate has now begun to incorporate elements of a more general thesis of labour market failure in industrial economies. Attempts are made to buttress this argument by comparisons of the relative employment performance of the various blocs of the OECD in the last decade. Over the ten years

<sup>1</sup> Examples of policies which are designed to help the market work more effectively are employment subsidies while an example of policy intended to bypass the market would be direct job creation programmes such as the Social Employment Scheme.



in 1983, almost 18 million extra jobs were created in North America compared with 5 million in Japan and a net loss of 1.5 million jobs in Europe. Further disaggregation of these comparisons, however, is necessary before valid policy conclusions can be drawn. In particular, relevant sub periods should be identified and variations within blocs examined.

The divergent performance of these three blocs has focused attention on the underlying reasons for such differences, in particular, the extent to which the nature of the respective labour markets might be responsible. Some Governments have accepted the argument that labour market failure partly accounts for the inability to generate employment and see the way forward as through the strengthening of labour markets. As Governments and international agencies search for ways of promoting faster economic recovery without higher inflation, increasing importance is being attached to improving labour market flexibility. In some respects this marks a broadening of the concepts usually associated with "active manpower policies" and "general employment and manpower policies". What is involved now, however, is not so much the introduction of new labour market measures (for example, subsidies to training and geographical mobility) but the de-regulation of the market and the reduction in distortions created by the impact of other policies, notably those concerned with social security benefits, the tax system and the social infrastructure of the labour market.

### THE FLEXIBILITY/RIGIDITY DEBATE

The accumulation of Government interventions in the labour market and the continued increase in unemployment has fuelled the debate on the nature of the labour market. The way forward as seen by some Governments is through the improvement of labour market flexibility. Labour market flexibility in broad terms, refers to the extent and speed of price, quantity and quality (skills) adjustments to changing labour market conditions. This section explores some of the issues which are involved.

Virtually all Government intervention in the labour market affects price, quantity and quality adjustments in the labour market. For example, Governments often take a direct role in the wage determination process; the National Understandings in Ireland are a case in point in which nonpay issues were traded against pay developments. Even when Government is not directly involved in wage bargaining it can exert a significant influence on the process. It also frequently maintains

statutory control over minimum pay levels in certain occupations. Government policy in the taxation and social security area also impacts directly on the labour market. Another form of intervention (this time through the use of legal instruments) is the regulation of employment contracts. These interventions are sometimes seen as comprising the essence of the rigidity/flexibility debate. However, the instruments of the traditional manpower policy — education and training, placement etc. — are equally important in this debate since these instruments play a significant role in determining the extent and speed of adjustment to changing labour market conditions.

A number of these issues are examined in detail in the individual chapters dealing with specific policy instruments. Some of the issues are now examined in this chapter but not in sufficient depth to draw definite policy conclusions. It would be necessary to undertake some indepth research to examine the net benefits of some interventions in the labour market, such as those in the area of income policy and industrial relations<sup>1</sup>. We are more concerned with devising a system which will, in the normal course of events, ensure that these issues are subject to regular reappraisal. However, in the following paragraphs some of the arguments are outlined, partly to demonstrate the complexity of the issues.

We begin with a consideration of the wage-bargaining system. It should be emphasised that the points made here only refer to one implication of the system: that for flexibility in the labour market. As pointed out earlier in the chapter economic growth is inextricably bound up with structural change. The process of structural change involves the movement of labour between sectors, within sectors and between firms. Labour market theories emphasise the importance of incentives in the form of relative wage movements across sectors and firms in facilitating this movement. Where price/wage adjustment does not occur, it is argued that quantity adjustment, in the form of employment change, may be forced upon the firm. The implications for the system of wage bargaining inherent in such a labour market theory are significant. A bargaining system which allows for relative wage movement, thus encouraging occupational and geographical mobility and facilitating structural change, contributes to a flexible labour market it is argued.

Counter-arguments to this line of reasoning question the need for mobility in the current environment of high unemployment, arguing that the issue becomes irrelevant when there are vastly greater numbers

<sup>1</sup>The Commission of the European Communities in the *Annual Economic Report 1984-85* concluded that a fundamental re-examination of labour market regulation is a "highly complex and time consuming process" (page 52).



of unemployed than there are vacancies to fill. In addition to the economic environment those who argue in this vein emphasise the adaptability of the work force and its ability to develop new skills as the key to labour market flexibility. Stress is therefore laid on education and training rather than on pay differentials as the key factor in facilitating mobility. Emphasis is also placed on internal mobility and career progression within particular firms and organisations. Finally, in the overall context of the type of wage bargaining system and its relationship with employment performance the Scandinavian countries are often cited as combining solidaristic wage policies and selective regulation of labour markets with good employment records.

We now turn to Government policy in the area of taxation, social security and non-wage labour costs. The rapid growth in the burden of taxation in Ireland since the late 1970s must have had a significant impact on the labour market. The combination of the rapid growth in personal taxation (thus reducing disposable income) and the increasing social insurance taxes (thus increasing the cost of employment) drives a wedge between the cost of employing an individual and the return to the employee with the consequent implications for the incentives to employ and to take employment. The rapid increase in the incidence of personal taxation has also led to an increase in after-tax wage bargaining with its implications for competitiveness. Finally, the combination of taxation and industrial subsidies has altered the relative prices of factor inputs with consequent implications for factor usage.

Non-wage labour costs such as social security taxes etc. are costs which do not vary directly with the amount of work supplied i.e. this 'fixed cost' element is incurred regardless of hours worked. These costs have implications for the manpower practices for the firm through, for example, influencing the response of firms to cyclical downturns in demand, e.g. labour hoarding, working hour variations etc. The existence of these costs also has implications for the division of labour markets into internal and external markets.

Another issue which arises in any consideration of the flexibility of the labour market is the question of job security provisions. In the 1960s in many countries negotiated agreements at the firm, industry and national levels began to increase the individual's employment protection substantially. These provisions covered grounds for dismissal, period of notice, severance payments etc. In the 1970s these provisions were generally incorporated into legislation. In addition, the growth in unemployment in the 1970s resulted in the introduction of provisions

covering collective dismissals involving prior notification and consultation. Such provisions of the 1960s and 1970s are perceived by some as having reduced employers' discretion and made dismissals more costly.

Some international research on the effects of the rise in non-wage labour costs and the extension of job security provisions has indicated some significant modification of manpower utilisation practices at the level of the enterprise. These practices involve essentially a segmentation of the labour market as an attempt to maintain flexibility and circumvent the restrictions on efficient manpower utilisation. The internal labour market consists of a core group of permanent staff within which reallocation and redeployment of human resources within the enterprise occurs.

The external labour market consists mainly of an unprotected workforce and results from firms engaging in practices such as the hiring of temporary or casual workers, part-time workers who have little or no employment security, workers on fixed-term contracts etc. Other practices with the same objective are sub-contracting, buying-in etc. The essential characteristic of this group is numerical flexibility in the sense that they are highly mobile and adaptable and can be taken on or laid off easily. The workers in the core are insulated from market fluctuations while those in the external labour market bear the brunt of adjustment to structural change. The OECD (1982b) identify a third group of workers which is characterised by structural unemployment. This group consists of those, who, for a variety of reasons, are unable to emulate the characteristics of those in the secondary labour market. Specifically identified in this group are older workers with obsolete skills who eventually become long-term unemployed and/or withdraw from the labour market.

In an assessment of the economic and social implications of a three-way segmentation of the labour market, the OECD (1982b) concludes that it is "not only detrimental in social terms, but also inefficient in economic terms, at least in the longer run" (page 65). While efficiency gains may be reaped in the short-term by the individual firm this need not necessarily be the case for the entire economy in the event of a need for structural adjustment in the medium term. This is due particularly to a lack of access to work experience and on-the-job training for the secondary labour force. In the absence of this the chances of being absorbed into the primary labour force are considerably reduced. Such a denial of opportunities impairs the long-term efficiency of the economy.

Those who argue in favour of the development of new skills as the key to improved mobility also argue that one of the key determinants of long-term dynamic efficiency is technological change. The argument then continues that the existence of job insecurity will not provide the right basis for developing effective industrial adjustment and technological change. Rather, the emphasis is placed on the development of institutional structures for handling technological change and flexibility through negotiation between management and trade unions.

While we do not draw any specific conclusions on the whole issue of non-wage labour costs and job security provisions it is worth quoting from OECD (1984e): "depending on a whole range of factors, policies of collective bargaining outcomes that promote job security may well be as consistent with internal flexibility as more rigorous hire and fire policies" (page 8).

One final issue which is relevant in the context of the flexibility/rigidity debate is that of working time. Again there are opposing arguments regarding the contribution of the reorganisation of working time and/or reductions in working time to facilitating enterprise manpower practices, to enhancing overall labour market efficiency and to employment creation.

One side of the argument emphasises the importance of working time reductions as an important instrument of an active employment policy. The reduction of working time and the introduction of new technologies is seen as providing an opportunity and a means to change work organisation with a view to improving working conditions and adapting production methods to the present economical and technical conditions. This line of argument also emphasises the necessity for flexibility of production to be underpinned by a work force with appropriate training.

The other side of this argument is usually concerned about the likely adverse effects on competitiveness of reductions in working time if compensating reductions in income are not achieved. Emphasis instead tends to be placed on various forms of reorganisation of working time. Reorganisation in this context covers such measures as the extension of part-time working, flexible working hours, an easing of the regulations on overtime etc.

There are undoubtedly many aspects in the operation of the labour market which need to be addressed. Many of the problems have arisen because of the accumulated effects of years of ad hoc Government intervention which was not carried out in the context of an overall

policy framework and often with insufficient regard to the longer term consequences.

We have been loath to make definite recommendations in this area. It is our view that if the idea of making the labour market work more effectively is to acquire more substance than has been evident in policy debates over the last decade or so, then we need to know much more about how labour markets work and the feasibility of introducing a greater degree of market-orientation and the advantages and disadvantages of doing so. These issues are the subject of intense international debate, the results of which are not yet entirely clear. For example, in OECD (1984e), when assessing the argument that the disparity in employment growth between the US, Japan and Europe is due to more flexible labour markets, it was concluded that "the evidence for this thesis is so far patchy". The way forward identified in OECD (1984e) was that "the various dimensions of labour market flexibility must therefore be carefully defined and the evidence organised before realistic policy conclusions can be drawn".

The appeal to empirical evidence may be galling to those who believe that the labour market is, in the first place, inherently competitive but creeps beneath the weight of subsidies, taxes, social benefits and the activities of trade unions, large corporations and public agencies. It may be equally unpalatable to those who dislike the market paradigm anyway and see no need to pose questions for research in such terms. But neither group is clear about the practical implications of changing or retaining existing arrangements and there is a lack of broadly-based empirical work from which to form an appropriate assessment.

## TOWARDS A LABOUR MARKET POLICY

The lack of progress in integrating general economic and social policy with manpower policy, which featured prominently in the 1976 OECD Recommendation, has probably been one of the more disappointing features of developments since that time. Policy makers on the labour market front have generally operated within a framework of limitations placed upon them by imperatives, often created in national negotiations, over such matters as the practice of price control, incomes policy, taxation and social security arrangements etc. Those concerned with labour market policy might be expected, nonetheless, to be more conscious of the emasculation of their role in this way.

The continuous upward rise in unemployment since the late 1970s and the prospects of continued high unemployment in the medium term is the background against which a review of manpower policy must now be set. Any policy in this area must have as its *ultimate* objective an alleviation of the current unemployment situation. It is now more imperative than ever that general economic and social policy is linked with manpower policy. Given the extent to which the entire range of Government policies affects the labour market in various (often unintended) ways, it is now essential that policy in the area is not only operated as part of a set of coherent manpower initiatives but rather part of a wider strategy in which many aspects of general economic and social policy, while continuing to meet their own requirements, are formed with a view to facilitating the efficient operation of the labour market.

The overall objective of labour market policy, and by implication, the objectives of the Department of Labour, should be to facilitate and support, through the labour market, the maximum sustainable rate of economic growth. In addition to this, given the immediate priority attached to unemployment, policy should seek to maximise the employment content of economic growth, subject to a number of constraints, in particular, that adverse effects on competitiveness would be avoided. The objectives we would envisage for a labour market policy are as follows:

- (i) to develop and adjust human resources in response to structural change with a view to facilitating the process of structural change in the economy and hence contributing to economic growth;
- (ii) to maximise the employment content of economic growth subject to the maintenance/improvement of competitiveness;
- (iii) to take an overview of the labour market and to ensure its efficient operation;
- (iv) to improve the employment opportunities of groups with special labour market problems and hence to contribute to social equity.

In essence the type of broad strategy which we envisage would involve a central core of conventional manpower policies (but much better coordinated) and a second set of activities which would consist mainly of initiatives designed to influence general economic and social policies with the above mentioned objectives in mind<sup>1</sup>. While the

<sup>1</sup> The Department of Labour already has full responsibility for a number of these activities, e.g. industrial relations.

success of the latter would depend crucially on the influence of the Department of Labour and the force with which it would be able to pursue its case in individual circumstances, we also envisage concrete administrative or institutional arrangements in some areas of prime importance such as the interface between education and the labour market and areas of common concern *vis-a-vis* social welfare activities. The central core of activities is considered in some detail in a number of different chapters in this report.

The labour market policy which we envisage can be divided into seven broad areas concerned with:

- (i) long-term manpower policy primarily intended to promote the efficiency of the labour market through training, placement etc. with an additional dimension covering technological change and education; under this broad heading would also come the overall functioning of the labour market and the development of policies to enhance its operation;
- (ii) short-term special employment and training measures often introduced from a mix of economic (efficiency) and social (equity) motives;
- (iii) long-term policies dealing with the social infrastructure of the labour market (individual labour law, health and safety, discrimination, and broader questions of equity than those covered in (ii));
- (iv) the industrial relations framework,
- (v) incomes policy, taxation and social security;
- (vi) public sector employment and pay policies.
- (vii) the labour market implications of sectoral policies not covered in items (i) to (vi).

We would envisage a labour market policy dealing with both the demand and supply sides of the labour market. The active manpower policy of the 1960s and early 1970s was constrained by the notion of the sovereignty of labour demand in which policy basically involved the manipulation of labour supply to match the demands expressed by firms. It was also further narrowed by its neglect of income policy/wage determination issues, industrial relations issues, taxation/social security issues and the long-term, cumulative implications of various employment regulations. In defining labour market policy as dealing with both the demand and supply sides of the labour market we would expect it to be particularly concerned with the position of the individual member, or potential member, of the labour force, and the position of the employing organisation and the incentives which each of these face.

For the individual the crucial questions relate to the incentives governing participation in a particular market and his or her capacity to respond to those incentives. In the context of joining the labour force a relevant question concerns unemployment traps and once in the labour force the question of poverty traps. Both of these are determined by the interaction of the tax and social welfare systems (i.e. item (v) above).

With regard to the firm the most general issue in the context of incentives is the cost of hiring labour, both relative both to the price of output and to the price of other inputs, particularly capital. In Ireland, at present, there is the anomalous situation of capital grants and labour taxes. A strong institution with responsibility for labour market policy should provide a counterbalance to this type of situation arising. Also, the type of pay policy which is pursued has implications for the operation of the labour market and its ability to perform its function of allocating available skills to jobs. In many types of pay policy the main consideration tends to be a reduction of the rate of wage inflation to a certain specified level. However, the wage structure is thus left to the mercies of whatever compromises are required to get agreement on overall wage increases in firms and across industries. There is a danger of ignoring one of the functions of wages: acting as a mechanism for allocating workers and skills to various occupations.

There are also a number of other reasons for a closer linking of manpower policy and incomes policy (which were viewed as entirely separate under the traditional concept of manpower policy). There is now some evidence for other countries (research has not been undertaken for Ireland) that skill shortages are often due to inappropriate wage structures rather than to short-sighted training decisions. Under these circumstances there is perhaps a tendency for industry to attempt to train its way out of shortages caused by institutional difficulties in adjusting relative wages.

Another issue which would suggest the desirability of a closer linking of incomes policy to labour market policy relates to the growth of special labour market schemes. In some of these schemes there is a standard wage or allowance; in others a locally determined rate for the job is paid. Embodied in these payments is some notion of an appropriate relative income position of participants in the schemes. These payments, of course, have implications for the structure of wages in the economy and for the wage bargaining system.

The questions which we have raised here give a flavour of the types of issues with which a labour market policy should be concerned. However, many of these issues are quite fundamental, each meriting individual and detailed examination. We had neither the time nor the resources to cover all these issues; neither were they part of our terms of reference. However, some of them are dealt with in this report where they come under the umbrella of the topics we cover. Our main objective in setting out the concept of a labour market policy is to provide some coherence to an area, which previously lacked any, and to suggest institutional arrangements which will ensure that those fundamental issues which we raise but do not address are dealt with. In fact the NESC might consider undertaking some further work in this area.

The broadening of the concept of manpower policy is inextricably bound up with the role and functions of the Department of Labour, which we address in detail in Chapter IX. However, it is relevant to point out here that the concept of a labour market policy provides a focus for the Department of Labour which it has not had prior to this. For example, all of the areas for which the Department now has responsibility could be linked together much more cohesively in the context of a labour market policy.

One final issue which regularly gives rise to difficulties and which needs to be clarified is the borderline between "job creation" in a labour market policy context and in the context of other policy systems. The main criterion which we adopt for distinguishing between mainstream job creation policies and those relevant in a consideration of labour market policy is the selective/global distinction. The non-selective or global policy measures refer, in particular, to overall macro-economic policy and industrial policy. In this report the main orientation of policy in these areas is taken as given and we formulate our recommendations in the context of such fixed parameters. Effectively, the National Plan (Building on Reality) sets out the macro-economic framework while the White Paper on Industrial Policy sets out of industrial policy background. In this report job creation is considered under the aegis of labour market policy only to the extent that it is selective.

## CHAPTER III

### SECOND LEVEL EDUCATION

#### INTRODUCTORY REMARKS

In this chapter we shall consider some aspects of the Irish educational system at second level which are of particular relevance to the labour market. We recognise, however, that the question of education when considered in its own right must be viewed in a much wider perspective. Its essential role is, and will continue to be, a general preparation for life and it must, therefore, embrace a major core element which conveys basic standards of numeracy, literacy and powers of communication. This after all provides the necessary base which subsequently facilitates individual flexibility in life, whether in relation to occupational or other forms of mobility and change.

It is also necessary to dispel any notion that the problems of the labour market can be solved by changing the educational system. There is no particular optimum orientation, which, if introduced, could lead to a situation where the greater part of the student outflow could be absorbed into various forms of employment. Even if there were, the lead-in times in effecting changes in the educational system can be quite long, while shifts can now occur fairly rapidly in the labour market. When, therefore, new approaches are considered to be necessary, one must have reasonable grounds for assuming that the external factors which call for these changes (whether these be labour related or otherwise) are of a fundamental and long-term nature and not merely transient developments.

There has, however, been a long-standing tendency in educational circles to undervalue the employment-related aspect in the above-mentioned general context. This, when coupled with the rapid changes which have occurred in the labour market and in society generally in recent years, has created a situation where the composition of the output from education is significantly out of tune with the changed

employment structures. There has been criticism of inflexibilities in the system and of deficiencies in regard to the provision of technical and scientific education and of the fact that too many young people leave school prematurely. As a result there has been increasing pressure on the system to respond in new ways which reflect the need to prepare young people more adequately for working life and in recent years we have seen the emergence of a range of special programmes, both inside and outside the educational system, designed to improve their labour market prospects. The schemes organised from inside the educational system, while involving specific employment related elements, have been merely grafted onto the existing structures which have not really undergone any basic change. The programmes run by the State manpower agencies, in addition to conveying various forms of introductory training and/or work experience, often include some basic education in order to try and redress deficiencies in this regard. The entire response has been distinctly ad hoc and lacking in co-ordination, with the result that the already ill defined area of interface between education and the labour market has become even more confused.

#### **THE STRUCTURE OF IRISH SECOND LEVEL EDUCATION**

At the lower cycle of second level education (which relates to students up to the age of 15 or 16 years) the Irish system involves two streams — one general and one vocational. Those in the "general stream can progress to take the Intermediate Certificate at the end of the first cycle. Young persons in this stream would normally move on to the second cycle to take the Leaving Certificate, which is again general and largely academic in character. Persons in the "vocational" stream of the first cycle can take the Group Certificate at the end of this stage, which involves a wider range of technical and vocational subjects. There is no formal full-time technical or vocational stream within the educational system in the higher cycle of second level to which these young persons can progress (i.e. in the sense of being equivalent to the Leaving Certificate for persons in general education). Therefore the great majority from this latter group enter the labour force directly at or before the end of the first cycle, or undertake vocational training outside of the educational system. Some young persons from this stream (e.g., many of those who take up apprenticeships) subsequently take the Department of Education Junior and Senior Trade Examinations on a block or day release basis. However, this can be a lengthy process; the normal duration for the successful completion of the Senior Trade Certificate course would be about four years.

Until recently the only full-time programmes of a distinctly vocational or work related nature available in the higher cycle of second level education consisted of Pre-Employment Courses, courses in typing and

clerical skills (mainly taken by girls) and a limited range of other vocational programmes.<sup>1</sup> In 1984 the Department of Education introduced a new one-year Vocational Preparation Programme for persons aged 15 years or over. This programme involves three distinct elements — a vocational component, a general studies component and work experience. It embraces most of the existing one-year higher cycle full-time vocational courses (e.g. those referred to above) even though these had to be extended or modified in various ways to meet the new requirements (e.g. the introduction of work experience where this was not already included). The scheme is eligible for European Social Fund support and the participating students are paid an allowance of £300 a year. While the new initiative does not in any sense purport to be the equivalent of a full senior cycle vocational programme, it could be deemed to form the basis on which such a programme could be developed and the Department of Education has indicated its intention to extend the programme to cover a second year. The new scheme is open to all second-level schools (including Secondary schools) but its nature suggests that, initially at any rate, the take-up will relate mainly to Vocational and Community schools.

An indication of the size and changing nature of the different subsectors of the Irish educational system can be obtained from Table 3.1 which gives figures for the total stock of full-time post-primary students in 1967/68 and in 1981/82 classified by educational level and type of institution attended. These figures show that in 1981/82, of the total of 310,000 persons in second level schools, up to two-thirds (some 204,000) were in Secondary schools following general type courses, a further quarter of this total (73,000) were in Vocational schools while Community and Comprehensive schools (which provide both general and vocational education), accounted for a further 30,000 or nearly 10 per cent of the total at this level. These figures seem to suggest that, in terms of actual numbers, the vocational component in the higher cycle of second level education is fairly substantial; they indicate that over a fifth of the 107,000 students in this cycle in 1981/82, were in vocational and comprehensive schools. It must be remembered however, that the range of vocational courses offered in this cycle is quite limited and furthermore, a significant number of young persons in these institutions would be following more general Leaving Certificate courses, a feature which has become more prevalent in Vocational schools in recent years. A more detailed subdivision of the data in this Table (which are taken from the Annual Statistical Report of the Department of Education) indicates that, of the 24,000 included in the higher cycle vocational education category in 1981/82, nearly 10,000 were on

<sup>1</sup> Such as those in residential Agricultural schools.

secretarial or pre-employment courses. The introduction of the previously mentioned Vocational Preparation Programme may significantly alter the overall scene in future years, particularly if the scheme is extended to include a second year.

Table 3.1

Number of Persons Receiving Full-Time Post-Primary Education in 1967-68 and 1981-82, by Type of School or College Attended and by Educational Level

Education Level Type of School etc.	1967-68		1981-82	
	Males	Females	Males	Females
<b>2nd Level, 1st Cycle</b>				
Secondary	41,800	51,100	58,300	74,500
Community	—	—	11,600	9,200
Vocational and Comprehensive	23,400	14,200	33,800	15,000
Total	65,200	65,300	103,700	98,700
<b>2nd Level, 2nd Cycle</b>				
Secondary	15,400	17,100	30,200	41,400
Community	—	—	4,200	4,800
Vocational and Comprehensive	1,700	1,900	10,300	13,700
Other*	1,000	2,700	1,400	1,200
Total	18,100	21,700	46,100	61,100
Total 2nd Level	83,300	87,000	149,800	159,800
3rd Level	15,000	6,800	25,000	19,500
Total	98,300	93,800	174,800	179,300

\*Mainly Vocational type institutions.

Source: Department of Education Statistical Reports 1967-68 and 1981-82.

From the figures shown for the different periods in this Table it is possible to discern the broad nature of the changes in post-primary education over the period since the late 1960s when free second level education was first introduced. The great bulk of the increase of 139,000 in the stock of second level students over the period in question took place in Secondary schools -- nearly 80,000 compared to a rise of 32,000 in vocational schools while the new Community and Comprehensive schools accounted for a further 30,000 of the net increase. There was a very substantial increase in the number of girls in the higher cycle of second level education between 1968 and 1982 (up 39,000 as against 28,000 for boys) which suggests that a significant influence on the overall rise in numbers was a tendency for more girls in particular to remain in education for a longer period and complete all stages. This occurred also for boys, but to a lesser extent; the figures

indicate that over the years boys have shown a tendency to remain longer in the early stages of second level education whereas previously greater numbers may have dropped out.

It is necessary however to add some qualifications to these broad analyses which are based on changes in the institutional framework rather than on the nature of courses or programmes taken. Generally speaking the education provided in Secondary schools is of a general or academic orientation (and somewhat less so in Community and Comprehensive schools) but one cannot, as we have already said, assume that the nature of activities in vocational schools is wholly occupational or vocational in character. In response to demand over the years these institutions have tended to include in their programmes more general-type courses designed to prepare students for the Intermediate and Leaving Certificates. Thus if anything, the figures in Table 3.1 understate the extent of the imbalance towards general education in the overall growth in second level education. This contrasts with the intended pattern of expansion. The original view was that the greater part of the growth in second level courses should relate to vocational and technically oriented education in order to provide a further stimulus to economic growth which was seen as requiring an increasingly higher level of technical expertise in the community at large (see Breen, 1984).

While Table 3.1 provides a broad picture of the relative importance of the "general" and "vocational" components of second level education, since it relates basically to the stock of students at particular times, it does not provide a clear indication as to how the educational system directly impacts on the labour force scene. Our current population structure still involves relatively high proportions in the younger age groups and thus the annual outflow from education is a very significant influence in terms of its effect on labour force change. Table 3.2 which shows gross annual movements in and out of the labour force between 1978 and 1979, illustrate the importance of the gross flows relating to the educational sector. The total gross inflow of 75,000 persons during this period involved 53,000 from education and when the changes are interpreted in net terms the flows relating to education are pre-dominant because of the offsetting nature of the other gross inflow and outflow movements (relating to migration, home duties, retirement, etc.).



Table 3.2  
Labour Force Flows, April 1978 to April 1979

Flow Category	In	Out	Net
		'000	
Education	53	2	+51
Home Duties	10	15	-5
Other Status (mainly retired)	3	12	-9
Deaths	—	8	-8
Migration	10	8	+2
Total	75	44	+31

Note: These flows are annual in the sense that they reflect the survey respondents change in status between April 1978 and April 1979. Thus the figures would not include short term (e.g. seasonal) flows in and out of the labour force where these occurred within the year.

Source: Sexton (1983) using estimates from the 1979 Labour Force Survey.

Table 3.3  
Persons Who Left the Education System in 1981 at Second Level, Classified by Stage Completed

Educational Level Completed	Males	Females	Total
Group Cert not completed	3,400	1,100	4,500
Inter Cert not completed	1,900	2,200	4,100
Group Certificate	4,200	1,000	5,300
Intermediate Certificate	6,800	5,800	12,500
Leaving Certificate	8,000	13,200	21,200
Total	24,300	23,300	47,600

Note: The figures relate to persons aged 15 to 24 years who were resident in private households in the State in late Spring 1982.

Source: 1982 ERSI Survey of Youth Employment and Transition from Education to Working Life.

A more detailed insight for second level education is provided by Table 3.3 which shows information on the annual outflow from this level classified by the stage completed. These data, which relate to those who left the system in 1981 have been derived from the 1982 ESRI Survey of Youth Employment and Transition from Education to Working Life, which dealt with the question of educational attainment in some detail. The particular features which stand out in relation to these figures are (a) the very large numbers who leave the system with general or more academically oriented education and (b) the sizeable number of young persons who drop out prior to completing the first cycle of second

level education. The estimated total outflow from second level education in 1981 was nearly 48,000<sup>1</sup> and of this some 38,000 (nearly 80 per cent) came from the more general Intermediate or Leaving Certificate streams. Less than 10,000 young persons (21 per cent) emerged from the vocational stream proper in the year concerned, and of these nearly a half left without having attained a formal Group Certificate qualification. This represents a much higher drop-out proportion when compared with those in the corresponding general stream; the table shows that some 16,600 young persons in this latter stream left the educational system prior to, or at the end of, the first cycle and of these just over 4,000 (25 per cent) quit without having achieved an Intermediate Certificate qualification. In overall terms, first cycle drop-outs in the year concerned were estimated at 8,600 or 18 per cent of the total second level outflow.

### GENERAL SECOND LEVEL EDUCATION

An important point of criticism therefore in relation to the second level education system concerns the sheer size of the "general" or more academic stream in relation to the total outflow. This is an important issue, not only in relation to the problem of absorption into the labour force, but also concerning the inflow into third-level education which now involves a large and still expanding technical sector, much of it involving shorter technician type courses (see Chapter VI). In other European countries the vocational or technical component tends to form a much larger proportion of second level education as a whole. It is difficult, however, because of differences in administrative structures, to make exact comparisons but even a summary observation of the details of the student population in EEC countries<sup>2</sup> makes it clear that the "general" stream in these countries is much smaller in relative terms and these systems invariably include specific technical or vocational programmes in the higher cycle.

1. In order to compile a comprehensive picture of the total outflow from education in 1981 one must consider in addition a flow of almost 8,000 from third level relating to those who actually acquired qualifications and some 1,500 young persons who quit the system at the Primary stage. When these are taken in association with the flow of 48,000 from second level this suggests a total gross 1981 outflow of over 57,000, a figure which is reasonably consistent with the 1978 outflow of 53,000 shown in Table 3.2 which is derived from the 1979 Labour Force Survey. It must also be remembered that the 1978/79 figures represent the inflow to the labour force while the 1981 estimates cover all persons who left education, including those who remained in inactive occupations.

It should also be borne in mind that the 1981 figures are based on a sub-sample from the 1982 ESRI Survey and thus the sampling variability could be substantial. However, similar classification for earlier cohorts (i.e. those who left the educational system in the years 1978-1980 — see Appendix Table A.4) yielded similar results and this suggests that the basic picture presented in Table 3.3 provides a reasonably accurate representation of the flows in question.

2. Such as those contained in the annual SOEC Publication on Education and Training



It should be remembered, however, that despite the original intention the growth in second level education should be mainly technical in nature, the kind of expansion which did occur was largely in response to demand and was consistent with the pattern of change in the labour force. A great deal of the employment creation over the period from 1960 to 1980 was in administrative and clerical employment (much of it in the public sector) and therefore the general thrust of second level education was consistent with meeting this demand. Public or parental attitudes also played a part in influencing the system; for many parents their strongly held aspirations were that their children should attain secure administrative type employment, or progress to higher education unless constrained from doing so for reasons of insufficient income or child ability. However, the labour market scene is now changing rapidly. Traditional employment opportunities (particularly in the administrative area) are diminishing, not only because of the prolonged recession but due to structural changes in labour demand. Unemployment is now hitting hard, not only at school leavers with low attainment (who have always encountered problems) but across the full spectrum of all second level leavers and this is causing increased attention to be focused on virtually every aspect of second or third level education.

There is a need to introduce a greater degree of flexibility into the second level system which allows students to have a wider range of career options. At present, as we have already illustrated, young persons who progress along the general stream are on an irreversible path with virtually no opportunity to change to a more technical or vocational range of subjects. Already, with this problem in mind, some Secondary schools are introducing a choice of vocational and technical subjects. While this may represent a new and desirable approach in the interests of promoting flexibility, it should not be allowed to obscure the fact that even within the existing range of second level subjects the Secondary school system has been considerably deficient in promoting the take-up of technical and scientific subjects. According to recent work by Breen (1984) nearly one quarter of boys and over a third of girls leave higher second level education without having taken any science subject, which he defines as higher mathematics, biology, physics, chemistry or applied mathematics: a further 50 per cent of both boys and girls take only one such subject which in the case of the latter is frequently biology. Some 20 per cent of boys (but virtually no girls) leave second level education with what the author describes as "technical" subjects (technical drawing, engineering, workshop and building construction); the numbers taking these subjects have, however, increased fairly significantly in recent years. The relevant data are summarised in Appendix Table A.5. In summary therefore, not only

did the bulk of the expansion in second level education over the period since the late 1960s take place in secondary schools, but even within this sector the expansion did not materialise in such a way as to significantly augment the level of scientific and technological expertise in the community. It is true, however, that the take-up of business oriented subjects, such as economics, accountancy and business organisation, increased fairly substantially over this period.

It is important to emphasise at this juncture that in criticising what may be described as technical or scientific deficiencies in Secondary education we do not seek to diminish or in any way devalue the importance of the general components of education. It goes without question, as we have stated at the start of this chapter, that the acquisition of such fundamental knowledge is a necessary prerequisite to engage in any further specialisation and to provide the necessary intellectual and attitudinal adaptability to enable one to avail of different occupational options. It can be argued, however, that the whole concept of what constitutes general education should be widened to embrace a more technical or scientific element. An ever-increasing number of functions in the employment environment, and in society generally involve the application of new technologies at the individual level and it would appear desirable that young people should emerge from the educational system with at least a basic appreciation of what this entails.

In airing these views we are conscious of the difficulties of adding to already overcrowded curricula. However, now that the duration of the higher cycle of second level education is to be extended, consideration could be given to using this opportunity to achieve the type of scientific broadening of general education to which we refer. How this might be achieved in practice is something on which we are not competent to comment in detail. One could, for example, attempt to ensure that all students taking higher cycle second level education should take at least a general scientific and technical subject or module. Under the existing arrangements the combined subject "Physics and Chemistry" is nearest to this idea, but it is significant to note that very few students take this subject since the system guides them entirely into the scientific area or emphatically out of it, the majority taking the latter path.

The educational system has also been criticised for a failure to promote an attitude of self reliance among young people. This is a matter which is intrinsically bound up with the manner in which knowledge is imparted and with the reform of curricula. Certainly it is necessary to encourage a more broad and flexible attitude of mind in relation to employment opportunities and we must move away from the situation

where young people form the impression that the only source of work lies in the provision of paid employment. It must be recognised, on the other hand, that self employment is not necessarily an immediate option for many young people leaving the educational system as it generally requires the acquisition of skills and experience. Nor can it be assumed that the current unemployment problems can be solved in this way, even though there may be some significant possibilities in the non-agricultural sphere.

A further disparity to note, arising from the manner in which second level education has evolved, concerns its relationship with developments in the third level sector. In Chapter VI it will be noted that the greater part of the expansion in the latter sector over the past fifteen years has been in scientific and technical disciplines, much of it in non-university institutions. It seems all the more anomalous, therefore, that the general thrust of second level education with its strong emphasis on non-scientific subjects, should have been significantly out of line with this development.

### **VOCATIONAL EDUCATION**

Turning to the question of second level vocational education the most notable deficiency here relates to the failure to develop a comprehensive higher cycle system which would provide a structure encompassing not only courses in schools but also apprenticeships and similar systems involving practical training for youth. A further perennial problem in this sector has been the high drop-out rate, which also applies of course to lower cycle general education, but to a lesser extent. We shall consider the latter question of drop-outs from second-level education on a more general basis in the next section.

Despite the extensive powers conveyed on the Vocational Education authorities by the 1930 Vocational Education Act (see Chapter IV) the substantive role originally envisaged for this sector has not been adequately developed over the years. As we have already indicated, the great bulk of the expansion in second-level education over the last two decades has been in Secondary schools and this has been of a largely academic nature. It is not altogether appropriate in this report to attempt to detail the reasons why the vocational education sector has suffered from official neglect over the years — the issues involved are many and complex. There has been, in educational circles, a very limited perception of vocational education, based on the premise that education is a quite separate and distinct sphere from training and other labour market matters. The end result has been the emergence of a significant divergence between what vocational (and indeed all) educat-

ion has been offering and the changing requirements of the general employment scene. Also from the very beginning, and for some considerable time thereafter, the whole system of State run vocational education met with substantial opposition from the Roman Catholic Church, which viewed its introduction in the early 1930s with a considerable measure of hostility.

Little attempt has been made over the years to develop the higher cycle of vocational education on a systematic basis where the possibilities exist for both conveying a higher level of technical competence and developing other work related skills. Attempts in recent years to inculcate a greater knowledge of the labour market by means of special programmes such as Pre-employment Courses, represent no more than belated attempts to meet this need after it has been ignored in the earlier years of schooling. The vocational education authorities have only an indirect involvement in apprenticeships. When steps were taken to restructure the apprenticeship system in the mid 1970s, consideration was given to assigning responsibility for first year off-the-job apprentices to the Vocational Education Authorities, but the final decision, in 1976, assigned this function to AnCO. This is a matter which is considered in more detail in Chapter IV.

It should be stressed that we do not view the issue of vocational education solely in a school based context. We are of the opinion that the issues must be considered within a framework which provides a logical structure encompassing both school-based vocational education and many existing forms of early youth training which heretofore have been regarded as being in the manpower sphere (including the first year of apprenticeship).

The debate regarding the future of vocational education and youth training is not unique to Ireland at present. Throughout many developed countries the impact of changing technology and labour market conditions have caused a critical eye to be focused on systems of vocational education. If we confine the discussion to our nearest neighbours in Europe one can broadly subdivide vocational education/youth training into two systems. One is based on apprenticeship involving a system of on-the-job training and formal course work on a release basis, predominant in Germany and Denmark. In other countries, such as Belgium, France and Italy, youth vocational education and training is carried out mainly by means of full-time programmes within the educational system at the post compulsory stage. In countries where the latter approach is followed, some apprenticeships do exist, but only to a limited extent. In other countries, notably Ireland, the United Kingdom and the Netherlands, both systems exist side by side.

In recent years many countries have been attempting to adapt their systems of vocational education and youth training to meet the changing labour market environment. In countries where the apprenticeship system is the dominant approach, problems have arisen with inflexibilities in the system arising from the fact that much of the training is too "skill specific". This limits the employment opportunities open to the young trainee, particularly in those skills which are affected by changing technology. In order to counter this problem, the concept of a "foundation year" has been introduced which involves basic or introductory education and training in a group or family of related skills. This, initially at any rate, gives the young person a broader range of options and allows more time for reflection and hopefully more informed choice. In countries where vocational training is conducted mainly within the educational system, steps have been taken to establish better links with the labour market by extending courses to include a greater degree of on-the-job experience and practical training.

Where vocational education and youth training has tended to follow one or other of the two above-mentioned approaches there is, perhaps, greater facility for adapting the system. Each approach has its merits, and the problem is basically one of modifying a system which is already unified or intergrated to a considerable extent. In Ireland, the system is not only fragmented, but is operated under separate institutional arrangements which makes it all the more difficult to devise a new coherent structure. It may be some consolation to note that there appears to be similar problems in the United Kingdom. In its (1982) Report on Youth Training in the EEC, the House of Lords Select Committee on the European Communities identified a similar form of fragmentation and summarised the position by stating:—

"In the United Kingdom there is an urgent need to bring together the whole education, training and employment of young people in a coherent framework which can be understood by employers, parents, educators and trainers, and above all by the young people themselves".

However, steps are now being taken to rationalise the position. The April 1985 Government White paper "Education and Training for Young People" contains proposals to further develop work-related initiatives already underway within the educational system, to extend the Youth Training Scheme to cover a period of two years and to review vocational qualification to allow for the certification of education, training and work experience within an integrated programme.

The new Vocational Preparation Programme recently introduced by the Department of Education in 1984 marks at least a tentative step in the direction of attempting to structure vocational education at the post compulsory stage. However, its origins derive solely from inside the educational sector and it is therefore yet another narrowly defined "sectoral" initiative which does not fit into any overall structure. Indeed the speed and manner with which it was introduced strongly suggests that a significant factor was a perceived need to activate the vocational sector in order to retain ground already held in the face of competing programmes organised from outside the system. By its nature it can no more than provide an introduction to vocational education and training but it remains to be seen how the programme develops, particularly in regard to the proposed second year of the scheme, the details of which have not yet been announced. One could perhaps envisage the Vocational Preparation Programme as being in the nature of a "foundation year" along similar lines to these programmes in Germany and Denmark. However, the introduction of a more advanced second year, which will presumably have to involve more in-depth involvement in a particular skill, along with a system of national certification, immediately raises the question of the relationship of this course *vis-a-vis* other forms of early youth training (including the first year of apprenticeship). In short, this exemplifies a need for a comprehensive approach to the whole area of vocational education and youth training if we are to avoid a proliferation of similar and overlapping courses.

Basically the fundamental issue is whether there should be some kind of formal mechanism which ensures an adequate degree of coordination and coherence covering all vocational education and youth training. The realisation of this type of approach would, in effect, be an intrinsic part of a broad labour market strategy as outlined in Chapter II. It is not that we are suggesting that manpower issues should unduly influence the educational system (the separate requirements of each sector should be recognised where they genuinely differ) but it is essential that labour related aspects are taken account of in ongoing developments, and in areas of direct interface, such as we are discussing here, sensible joint arrangements should be made. Such an approach would clearly involve a form of joint co-operation from the Educational Authorities, AnCO and the National Manpower Service which has not existed up to now. However, this is a matter which must also be considered in the context of reviewing specifically manpower issues and the existing institutional arrangements in the manpower area, which are dealt with in later Chapters. Apart therefore, from stating the above

mentioned broad view, we will defer a more detailed consideration of this matter until Chapter IX when the links between the manpower area and education are reviewed in a more general context.

There are further important issues to be considered in the context of vocational and technical education, particularly now that new developments are emerging at the post compulsory stage. If higher cycle vocational education is to be developed then it would appear desirable that this should enable students to progress to at least some form of third level education, subject to adequate certified standards being attained. This would appear to be at least as appropriate a channel of entry as a non scientific Leaving Certificate, given the increasing technical orientation of many third level programmes, particularly those at subdegree level.

There is also the question of the most efficient use of scarce resources if vocational or technical type programmes are to be a standing feature in all types of schools (both Vocational and Secondary). Overlapping and duplication of resources in different centres must be avoided and this raises the question of having some mechanism, such as regional or local education committees, with powers to influence schools with a view to obtaining the optimum utilisation of resources, whether capital or current. Some tentative steps are being made to deal with this situation. The Government "Programme of Action in Education 1984-87" contains proposals which envisage the setting up of Local Co-ordination Committees in order to obtain maximum co-operation and integration in the provision and use of school facilities. While this is to be commended, the increasing pressures to which the educational system is being subjected suggest that definite and formal arrangements on a national basis should be considered as a matter of urgency.

Another problem concerns the question of equity consequent on a "loosening up" of the second level educational system in order to provide a wider range of options for all. The vocational sector has traditionally provided education for the less well off sections of society and it would be necessary to avoid or mitigate a situation whereby in opening up a better range of career prospects for students in all sectors, the less well endowed were put at a significant disadvantage.

#### **THE PROBLEM OF EARLY SCHOOL LEAVERS**

Finally let us consider the question of young persons who leave the educational system without having obtained even a minimum qualification, a problem which applies particularly to those in the vocational stream. This group immediately become a problem on

entering the labour market; they are particularly prone to unemployment and even when they do find a job, often it is of a tenuous or short-term nature. Work by Sexton, Whelan and Dillon (1983), based on the 1982 ESRI Survey of Youth Employment and Transition from Education to Work, indicate that the incidence of unemployment among unqualified school leavers is almost twice that which prevails in the youth labour force generally. This study also indicates that such initial deficiencies in educational attainment are not generally compensated for by later skill acquisition; the majority of the young persons in question do not subsequently receive any training and therefore remain unqualified and generally unskilled. It should be borne in mind, however, that this problem does not derive solely from deficiencies in the educational system; it is also related to other deep-rooted social and economic defects in society which influence the position and attitudes of the young persons concerned.

There has been a general recognition for some time of the scale of the early school leaver problem and certain steps have been taken to alleviate the situation. Some early school leavers have been accommodated on schemes such as the Community Youth Training Programme and the Work Experience Programme even though it will be noted from Chapter VIII that there was, in the past, a tendency to accommodate a disproportionately large number of better qualified young people on these programmes. On the other hand, the AnCO Community Training Workshops are specifically run for early school leavers from socially deprived urban areas even though the extent to which these centres cover the problem is clearly limited. The previously mentioned Vocational Preparation Programme is another initiative which has been designed with a view to tackling the early school leaver problem. The nature of this scheme, with its emphasis on non traditional approaches such as work experience, makes it potentially suitable in meeting this need. This programme is being operated almost exclusively from inside the educational system even though it involves a formidable work experience component involving the provision of temporary work stations for the 20,000 young people who participate in the scheme each year. AnCO is also planning a major restructuring of its training programmes for teenagers with a view to developing a Skills Foundation Programme; it is intended that this should provide those who are still unemployed, even after initial work preparation, with an integrated programme of training, education and work experience leading to a specified standard of achievement and possibly national recognition.

The Youth Employment Agency is in the process of implementing its "Social Guarantee for Young People" in response to the provisions

contained in the 1983 EEC Council Resolution "Vocational Training Policy in the Community in the 1980s". Basically, the proposed scheme involves a guarantee for all young persons of a place on a full-time programme of training and/or work experience if the person remains unemployed for six months after leaving the educational system. However, priority is to be given in the first instance to unqualified school leavers. It is envisaged that the young people involved will be accommodated on the existing youth schemes but these will have to be extended and their content altered somewhat in order to meet the new requirements. The whole operation will necessitate a considerable degree of coordination and cooperation between all the agencies operating in the manpower area. It is intended that in each locality the National Manpower Service should provide the organisational focus for identifying young people in the target group, and, in co-operation with the other interests involved (AnCO, Education Authorities etc.), in assigning them to appropriate programmes. While the degree of coordination envisaged here is to be welcomed, it should be noted that it relates only to facilitating the flow of young people on to schemes. It does not address the crucial question of the extent to which these programmes overlap and duplicate one another, or whether they form part of an overall coherent structure. This issue is covered in Chapter IX under the heading of Institutional Arrangements.

Our view is that the long-term solution to the serious early school leaver problem should be sought in the first instance inside the educational system by introducing fundamental changes in second level education, particularly in the vocational sector. It does not make a great deal of sense that our long-term approach to this issue should be based on a policy of "recapturing" young people by means of special more expensive schemes after they have left the educational system. We recognise, however, that the problem of catering for young persons who have already left education, and who will continue to quit the system in the years immediately ahead before substantive improvements can be made, will have to be addressed. In this context we accept the need for measures such as those outlined in the YEA Social Guarantee proposals, even though we are of the opinion that many of these should be of an interim rather than a permanent nature and the scale and extent of these programmes should be reviewed as time progresses. Another factor to be borne in mind is that our changing population structure, with a greater concentration emerging in the older age categories, will call for a gradual change in emphasis in regard to priorities.

If the educational system is to be adapted to deal with the problems as discussed, then the changes will have to be quite radical. The indications are that a great many of the young people who leave

prematurely have developed an acute sense of alienation regarding the education system which they perceive as being largely irrelevant to their current and future circumstances, particularly insofar as employment is concerned. One of the major difficulties to overcome therefore will be to present programmes in a manner significantly different from that involved in the traditional approach to education. One of the reasons (aside from the question of participants allowances) why the recent initiatives such as the Community Training Workshops have proved popular is that they are conducted in an atmosphere quite different to that which prevails within the educational system. It would obviously be worthwhile to draw on this experience, as well as the experience acquired with the Vocational Preparation Programme and other exploratory initiatives such as the Early School Leavers Project carried out by the City of Dublin VEC and the Community Based Learning Programmes organised by the Curriculum Development Centre at St. Patrick's Comprehensive School in Shannon, Co. Clare.

#### **OTHER ISSUES WHICH AFFECT THE INTERFACE BETWEEN EDUCATION AND TRAINING**

An issue of particular relevance in the context of education and training schemes concerns the payment of allowances to the participants. Young persons on AnCO training courses and in Community Training Programmes receive allowances of some £28 per week; the allowance for first year apprentices are significantly higher ranging between £40 and £45 per week. As we have already indicated young persons involved in the Vocational Preparation Programme are receiving an annual allowance of £300, payable monthly to the participants. We cannot see any particular objection to paying allowances to young persons on training courses, as long as the amounts involved and the context in which they are administered do not create problems in the educational system (by enticing students to leave) or give rise to anomalies or distortions *vis-a-vis* the labour market.

However, the payment of allowances to young persons on vocational programmes who are still in second level education is a matter which requires careful consideration. Admittedly the size of the allowances involved in the Vocational Preparation Programme is not particularly large but once this path has been taken it will be very difficult to turn back and we really do not know what kind of Pandora's Box is being opened by taking this highly significant step. What problems will arise if we move towards a position where part of the higher cycle of second level education (i.e., the vocational part) is to be viewed as a "paid segment?" This could create distortions in the educational sector, particularly if the allowances are significantly increased or are applied

on a more widespread basis. On the other hand, we are arguing forcibly in this report that vocational education and youth training should be delivered within the framework of a consistent and coherent structure. With this approach it is difficult to suggest that those who receive vocational training within the educational system should be treated any differently from those who follow parallel courses outside it.

An aspect which is closely related to the above problem is the system of European Social Fund grants which runs through the whole series of programmes like a catalytic thread. There appears to be no coordinated approach by the Government to this resource which seems to be contributing to a fragmentation of effort rather than being used in an optimal fashion in order to maximise the benefits. Indeed, there is a danger that the whole thrust of youth vocational education and training may be drawn in inappropriate directions due to a form of competitive momentum arising from the availability of ESF funds. A further factor to keep in mind is that there is no guarantee that such external funding will last indefinitely for any of these programmes. Towards the end of this decade the youth population will begin to fall rapidly in all other EEC countries and there may be less general willingness to subvent youth programmes at Community level according as other priorities emerge.

Clearly, therefore, whatever form of rationalisation is introduced to cover the interface between vocational education and youth training it will have to involve a consistent approach to the problem of allowances for participants and such issues as the allocation of European Social Fund grants. These matters are dealt with in more detail in Chapter IX where the whole question of achieving a more coherent set of institutional structures for the entire vocational education/youth training area is considered.

## CHAPTER IV

### VOCATIONAL TRAINING

#### 1. COVERAGE

Vocational training when viewed in its broadest sense covers many aspects and it is therefore necessary to subdivide this rather long chapter into separate sections. The earlier sections (1) to (4) set out some conceptual aspects, include a brief history of recent training developments and assess the current extent of training in Ireland. Section 5 deals with apprentice training while section 6 covers various forms of non-apprentice direct training. Training carried out within firms is considered in section 7 while section 8 deals with the question of State expenditures on training as well as the funding thereof.

Even though, as already indicated, the coverage of this report does not extend to agriculture or the non-commercial public sector it is of interest to make at least some summary references to training initiatives in these areas. The State body responsible for Agricultural training and education, An Chomhairle Oiluina Talmhaiochta (ACOT) produced a report on education and training in the sector in 1981<sup>1</sup>. This document contained detailed recommendations relating to courses and programmes for farmers and other agricultural operatives, the most notable of which was a proposal (since implemented) to introduce a three year course for young people leading to a certificate in farming<sup>2</sup>. The report also recommended the establishment of a representative Educational Council for the Agricultural sector (which would embrace the Farm Apprenticeship Board and other related educational activities) as well as suggesting means to enhance and improve the

<sup>1</sup> Report of the Expert Group on Agricultural Education and Training.

<sup>2</sup> The Certificate in Farming has been in operation for some years and the current annual intake to the programme is of the order of 1,200 young persons. This programme receives extensive support from the Youth Employment Agency, currently running to about £1 million per year.



The first mentioned represents the classical justification for State intervention, the argument being essentially that the private sector will not make adequate provision for training requirements on a more long-term basis across the economy as a whole.

While this problem is considered to exist to some extent at all times, it is likely to arise particularly in the downswing of an economic cycle when firms are more likely to withdraw from training activities as a cost-cutting exercise. This can lead to skill shortages when conditions subsequently improve, which then act as a break on the achievement of attainable levels of output and rates of economic growth. In the particular case of Ireland these arguments assume even more relevance due to the nature of the economy and the particular stage of development which we have reached. The achievement of a sufficiently high level of growth depends crucially on continued expansion of industrial exports which in present day circumstances necessitates in turn the availability of a work force with a high level of technological skills if we are to maintain and enhance our competitive position. A further important consideration is the need to develop the skills and expertise of the Irish work force to an adequate level as part of the general programme of incentives designed to attract overseas industrial investment.

When the State first began to intervene substantially in the training area in the late 1960's, it was principally on the basis of the first of the above-mentioned reasons — i.e., the need to further augment and stimulate the labour market mechanisms. This it set out to do by means of Government funded direct training initiatives and schemes to promote in-firm training. The second of the above-mentioned aspects, the question of equity, was not accorded any special prominence during these early years even though there was, of course, a not unreasonable expectation that the then rapid pace of economic growth would lead to higher living standards generally and contribute to alleviating inequities in our society. However, no specific attempts were made to direct training or other manpower programmes towards particular groups and the relevant services were, in general, equally available to all comers whether employed, unemployed or entering or re-entering the labour market. As time progressed, however, the deteriorating economic circumstances and changes in labour market structures gave rise to the need to accord priority to certain groups such as school leavers and the young unemployed. More recently the intensity and duration of the current recession has caused active consideration to be given to developing training programmes for older long-term unemployed workers. The scale of the current economic difficulties has also led to the situation where there is now a significant counter-cyclical

relationship between agricultural education and training and corresponding activities in the educational and other spheres. The proposal regarding the setting up of the Educational Council has not been acted on.

There is no centralised responsibility for training in the non-commercial Public Sector even though the Department of the Public Service is directly responsible for training in the Civil Service. Certain institutional arrangements have been made over the years, for example, the establishment of the Civil Service Training Centre; each Government Department also has a Training Officer to deal with specifically departmental training needs. The brief of the Institute of Public Administration is to promote and enhance administrative and executive functions throughout the entire Public Sector, which it does mainly by means of short training courses. However, a comprehensive assessment of training activities in the Public Sector as a whole has not been carried out and it is difficult to visualise such a study given the diversity of activities involved in areas such as education, security, health etc. A number of sectoral training assessments have been done but it was beyond our capacity to review all of them and to attempt to form overall judgments in a general manpower context.

## 2. SOME CONCEPTUAL ASPECTS RELATED TO TRAINING

Even though the principal objectives of this study are essentially practical in nature, it is appropriate that we should begin this particular chapter with a brief discussion of some basic theoretical aspects in order to assist in identifying our aims and to provide at least rudiments of a conceptual framework for our subsequent analysis and assessment. Since we are concerned principally with State involvement in the training area our discussion of the conceptual aspects deals mainly with this issue.

One can identify a number of headings under which State intervention in the vocational and industrial training sphere can be justified, the principal ones being

- (a) failures or inadequacies in the labour market which may give rise to a deficiency in the national training effort;
- (b) considerations of equality;
- (c) for counter-cyclical reasons, in order to alleviate unemployment while simultaneously making a contribution towards enhancing skill levels, etc.

element involved in the overall State training effort, i.e., training facilities are being used to an increasing extent as a means of containing the level of unemployment. This is evident, not only from the sharp increase in the numbers accommodated on State training programmes in recent years, but also from the nature of many of the courses delivered. Currently, therefore, State training policy in Ireland has reached the stage where it involves elements of all three of the above-mentioned aspects.

### **The Evaluation of State Training Schemes**

The impact of State training programmes can be looked at from a number of points of view. One can evaluate such programmes from the standpoint of (a) the individual, and (b) the economy or community as a whole (i. e. from a resource point of view).

Looking at the question of training in terms of the advantages to the trainee, the primary purpose here would be to maximise the lifetime benefits accruing to the individual. The imparting of a greater level of skill should lead to an enhancement of human capital with a consequential positive effect on future earnings and living standards. In this context the prospective trainee would ideally assess the costs in terms of actual expenses during training and potential earnings foregone, and against these would be weighed the extra financial benefits from presumably higher post-training earnings, making due allowance for other considerations, such as a lower incidence of unemployment. There would also be non-pecuniary benefits in the form of a better sense of fulfilment, the likelihood of better working conditions consequent on acquiring a higher level of skill and an occupational status higher up the socio-economic scale. If one is to view training purely from this viewpoint, then the entire issue becomes inevitably entwined with problems of equity. In this context social considerations would dictate that assistance be directed principally to those who need it most, in the belief that the greatest social advances can be made if the position of the sizeable numbers on the lower rungs of society is significantly improved. This, however, may not be consistent with the objective of maximising economic growth and in reality a balance has to be struck.

When the effects of State training initiatives are considered from the point of view of the economy as a whole, the scene becomes particularly complex. Any Government training programme imposes certain costs on society in the sense that the resources utilised in operating these programmes will be unavailable for use in other ways. Apart from

initial capital costs (such as the construction of training centres) the economy loses the potential output in other occupations of those administering and running the training programmes. On the other hand, the direct benefits of training may be represented by the additional output of goods and services generated in the economy as a result of the subsequently higher productivity levels of those trained. Ideally, therefore, one should approach the issue on a cost-benefit basis and a training programme should be considered profitable from an overall resource utilisation point of view if the net present value of the long-term benefits, less costs, is positive<sup>1</sup>.

Most cost-benefit studies of training programmes carried out in other countries have been confined to an evaluation of direct costs such as those indicated above. However, a wider view of benefits and costs should also take account of resultant indirect labour market effects on other members of the work force and other external effects of a non-economic kind. By the latter we mean decreased crime and unsocial behaviour, improved health and so on — issues which are important and relevant, but because of difficulties of measurement are not usually covered in quantitative evaluations.

With regard to external or spillover effects in the labour market, there are two major aspects to be borne in mind which may be termed 'replacement' and 'displacement' effects. Replacement occurs when the jobs which would have been held by trainees, had they not joined training courses, are now filled either directly by the unemployed or are taken by other employed workers whose vacated jobs create in turn a chain reaction throughout the labour market, leading eventually to the employment of hitherto unemployed workers. Therefore high replacement implies that the greater part of the net contribution that trainees would have made to output, had they not joined a course, is made instead by other workers who would otherwise have remained unemployed. The effect of replacement therefore is to raise benefits and lower costs. Similarly, to the extent that on leaving their courses trainees are placed in jobs that other workers held hitherto, or take up vacancies that would have been filled by others in the absence of training, then a 'displacement' effect occurs, resulting in lower aggregate benefits from training. However, even when there is displacement, the exercise of a particular function by a person who has received relevant training is likely to result in greater efficiency and higher productivity.

<sup>1</sup> For a more comprehensive treatment of the principles of evaluating State training programmes and related issues, see Ziderman (1978).



The above effects work in opposite directions and therefore this makes it difficult to interpret the overall net benefit of training. In a tight labour market situation with labour demand exceeding supply it may be very difficult to replace workers who have left their existing employment to engage in training and therefore replacement costs would tend to be high. However, also in these circumstances, the displacement effect would tend to be minimal as newly trained workers are unlikely to dislodge, either directly or indirectly, persons already in employment. In the current Irish situation of excess labour supply, clearly firms would not experience any great difficulty in replacing workers who had departed to take up training courses. Furthermore, a significant proportion of AnCO trainees come from the ranks of the unemployed (many of them first job seekers), or are persons re-entering the labour force. Therefore, the 'replacement' cost element should not be significant. However, in the present depressed economic circumstances it is also likely that a significant amount of displacement is taking place, particularly in the non-traded sector of the economy. This suggests that one should be cautious about using the ratio of the number of trainees placed in employment (i. e. placement rates) as a criterion for measuring the success of training programmes. Looking at the issues purely from the point of view of maximising economic benefits, the foregoing suggests that an appropriate training strategy for Ireland should involve a concentration on vital skills in the traded sector, since this virtually excludes the likelihood of displacement on any significant scale, while at the same time difficulties on the replacement side should not ensue because of the excess labour supply position. It should be noted, however, that a degree of current displacement would not of itself justify a curtailment of training activities as one must also keep in mind medium and long-term future training requirements. Furthermore, one cannot downgrade the importance of training in services since inefficiencies in this area impinge adversely on the goods producing sectors which depend on a wide range of domestic service activities. Finally, social issues and questions of equity do have to be taken into account. In other words, a proper balance has to be struck which gives due consideration to all the aspects involved.

### **Who Bears the Cost of Training**

We conclude this section with a brief discussion which attempts to address the question as to who in effect pays for various forms of training programmes. In the case of a programme involving attendance at a State-sponsored course with training allowances etc., there is little dispute that the State bears the cost. The question therefore centres on how these programmes are funded, which may be out of general taxat-

ion or by means of special designated manpower taxes (for example, levied jointly on employers and employees) or from a combination of sources. In the case of schemes which are financed from general taxation it is virtually impossible to suggest a distribution of the cost burden among different groups in the community. The funds are drawn from the central exchequer which consists of moneys from a variety of different direct and indirect taxation sources. Here the problem is bound up with the question of equity in the taxation system as a whole — an issue which we obviously cannot discuss in any detail. If State training activities are funded by means of a special manpower tax (based, for example, on employee earnings but involving contributions from both employers and workers) then it is relatively easy to assign or notionally distribute the funding costs on the basis of the aggregate proportion which each group pays into the manpower tax fund.

When one turns to consider the question as to who bears the cost of training within firms, the situation is much more complex and is again fraught with conceptual difficulties. At first sight one might conclude that in the absence of any State subsidies, etc. the employer clearly bears the training costs in this instance. However, this depends crucially on the wages of the trainee in relation to the output which he or she produces. There is a body of opinion which holds that in many circumstances trainees actually bear the cost of their training by accepting wages which are significantly less than the output they generate. This contention is, however, essentially bound up with the question as to whether the training involved is 'specific' or 'general' (see Becker, 1964). By the former is meant training which is specific or particular to a firm and conveys skills which cannot subsequently be traded openly on the labour market. In this case, it is argued that the firm will bear the cost of training (by paying a relatively high wage during the training period) since the expertise cannot be acquired elsewhere and the very unique nature of the skill ensures that the trainee will remain with the firm long enough for it to recoup its training costs in the form of increased output. Since the trained employee is not in a position to readily change jobs, wages will not be pushed upwards by means of competition between employers. With 'general' skills, however, there is no incentive for the employer to fund the training (in fact quite the reverse) since trained employees may subsequently leave, or be 'poached' by other employers before sufficient time has elapsed to enable the employer who trained to recoup the training investment. There is, therefore, in these circumstances an incentive to depress wages during the training period. If this is not possible then many employers are unlikely to train at all thus leading to a deficiency in aggregate skill levels. However, the employee will subsequently benefit from increased

earnings subsequent to training because of the competitive situation in the labour market in relation to the skill acquired. This theoretical rationale can be deemed to explain why there are such low wages for occupations such as articulated clerks in the legal and accountancy areas, and why in earlier times prior to regulation, very small allowances were paid to apprentices. The above approach has also led some economists to cast a very critical eye on State intervention which aids or supports in-firm training. It has been held, for example, that interventions such as levy/grant systems have little basis in economic logic, since the funds redistributed to employers who do train represent a bonus in respect of an activity for which they did not bear the costs in the first instance (see Lees and Chiplin, 1970, in commenting on the effects of the UK 1964 Industrial Training Act). However, theoretical conditions are rarely reflected in reality and other factors impinge on the situation.

Institutional aspects such as labour legislation, general wage agreements, training subsidies affect the market mechanisms and have the effect of altering the level of trainees' wages from that which would prevail in a free market situation. Where these interventions contribute to raising trainees' earnings and where additional costs are imposed on employers (apart from the question as to whether they should be justifiably borne by them or not) the end result is likely to be a reduction in the overall amount of training provided.

The above-mentioned distinction between 'specific' and 'general' skills is far from clear-cut in practice and many, if not most, occupations involve an element of both. What may appear to be general in terms of basic skill content may become largely specific because of other factors. An unemployed electronics technician in Sligo may be quite unwilling to avail of financially rewarding vacancies in Cork and therefore the situation becomes distinctly specific in nature even though the skill is general. The lifetime commitment given to employees by Japanese firms effectively translate many skills which are general in character into the specific category, thus rendering profitable much training investment which in another institutional setting would be general (and therefore potentially unprofitable to the firm).

Some commentators have suggested that if there is to be State intervention to aid training then the Government's role should be mainly in the area of directly financing trainees by means of loans etc. It is questionable, however, as to whether this is really feasible in practice apart from some limited interventions at the stage of transition from education to the labour force.

The foregoing is merely a brief theoretical expose and the various concepts have not been empirically tested in an Irish context. It does, however, serve a useful purpose in helping to clarify some of the principal evaluative issues relating to training. This is important even if the views which we finally express are largely matters of judgement, as indeed they have to be in the absence of any comprehensive studies of the issues involved.

### 3. THE HISTORY OF TRAINING IN IRELAND

In order to trace the origins of vocational training in Ireland it is necessary to reach back to the periods covering the beginnings of vocational education, since it was from initiatives in this area that vocational training, as we now know it, gradually evolved. The earliest attempts to promote vocational training and education took place towards the end of the last century with the introduction of the Technical Instructions Acts of 1891 and 1899. The main purpose of this legislation was to provide a basic framework to deal with various initiatives in the vocational education field which were already evolving in different locations. Some significant developments had taken place in the larger urban centres, such as the Bolton Street College in Dublin and the Crawford Institute in Cork. These Acts empowered Local Authorities to initiate programmes of commercial and technical instruction which in some cases evolved to forms of local apprenticeships. After the foundation of the State the first significant advance in the area of vocational training and education emerged with the passing of the 1930 Vocational Education Act and the 1931 Apprenticeship Act. This legislation was quite comprehensive. The 1930 Act provided for the setting up of Vocational Education Committees (VECs) in each Local Authority area, the activities of which were to be funded partly from local taxation sources (rates) and partly from the central Exchequer. This Act conveyed quite extensive powers on the newly formed VECs. The relevant part of the legislation stipulates that each of these bodies should:

- (a) "establish and maintain in accordance with this Act, a suitable system of continuation education in its area and to provide for the progressive development of such systems, and
- (b) to supply or aid the supply in accordance with this Act of technical education in its area".

In this context "continuation education" was meant to relate to education designed to continue and supplement education provided in elementary schools and included general and practical training in the preparation for employment in trades, manufactures, agriculture,

commerce, and other industrial pursuits and also general and practical training for the improvement of young persons in the early stages of such employment. "Technical education" was defined as relating to non-agricultural trades manufacture, commerce etc. (including domestic science), as well as education in science, art and physical training. The Act empowered the VECs to establish and maintain schools as well as to organise courses in continuation education and technical instruction outside these schools.

The 1931 Apprenticeship legislation gave the Minister for Industry and Commerce power to designate certain trades or occupations with a view to instituting apprenticeships on a statutory basis. The terms of this Act provided for the establishment of Apprenticeship Committees, comprising representatives of employers and employees as well as independent members. The Committees were empowered to make detailed regulations relating to the training of apprentices covering the nature and form of instruction, the obligation on employers and apprentices relating to wages, hours worked, etc., and courses of relevant educational instruction (which were to be provided by the VECs). Such regulations had, however, to be confirmed by the Minister for Industry and Commerce prior to implementation. This legislation was altered by means of a further Apprenticeship Act in 1959. At this stage the relevant powers which were previously vested in the Minister for Industry and Commerce were delegated to a new statutory body, An Ceard Comhairle (The Apprenticeship Board). This body had full-time staff concerned solely with the development of the apprenticeship system. The Board in addition to containing representatives of employers and trade unions (in equal numbers) also involved formal representation from the educational sector. The individual Apprenticeship Committees for the designated trades had a similar form of representation. An Chomhairle assumed a greater degree of direct responsibility for some aspects of the regulation of apprenticeships (e. g. relating to the educational requirements, age limits) in order to achieve more uniformity across the system as a whole.

However, the activities of An Ceard Comhairle were rather quickly overtaken by events in the general manpower area. As we have already indicated in Chapter 1 the 1960's saw quite a range of significant developments in this area, including the introduction of the 1967 Industrial Training Act which led to the setting up of An Chomhairle Oiliuma (AnCO), The Industrial Training Authority. This legislation signalled the beginning of a more comprehensive approach to training problems. AnCO was charged with the task of promoting and organising

all forms of industrial and vocational training, including apprenticeship training. The 1967 Act empowered AnCO to:

- (a) "provide for the training of persons for the purpose of any activity of industry and
- (b) to promote, facilitate, encourage, assist, co-ordinate and develop the provision of such training by such means as An Chomhairle (AnCO) considered necessary or desirable".

The Act goes on to state that AnCO should "provide or secure the provision of such courses or other facilities for the training of persons employed, or intending to be employed, in any activity of industry as it considers necessary, having regard to any courses or other facilities otherwise available to such persons". AnCO was also empowered under this legislation to set the terms and conditions of training programmes, to set procedures for checking and certification and to award certificates. The Authority took over full responsibility for apprentice training from An Ceard Comhairle (which was abolished) and the 1959 Apprenticeship Act was repealed.

Under the terms of the 1967 Act the board of AnCO consists of an independent chairman appointed by the Minister for Labour, ten representatives nominated by the social partners (five from each side), one member nominated by the Minister for Education and two other members appointed by the Minister for Labour. The Act also contains provisions for the setting up of Training Boards for individual industrial subsectors. At present there are seven such boards<sup>1</sup>, the composition of which involves equal representation from the social partners along with an independent chairman in each case. These boards have been mainly concerned with the operation of the Levy/Grant scheme in each sector (in regard to which they have statutory functions) and other training matters such as apprenticeships.

There are agencies other than AnCO engaged in training in the non-agricultural area. Training related to the hotels and catering trade is the responsibility of CERT<sup>2</sup> while the Irish Management Institute (IMI) is involved in managerial and executive training at all levels. The former body, which was set up in 1963, is a State sponsored agency funded entirely from public sources. It has a council which contains representatives of the social partners in the industry as well as members nominated

<sup>1</sup>Covering the Textiles, Clothing, Food, Drink and Tobacco, Engineering, Construction, Printing and Chemical Industries.

<sup>2</sup>Council for the Education Recruitment and Training of personnel for the hotel, catering and tourism industry.

by the Ministers for Labour and Education. The IMI is financed mainly by the private sector even though it does receive an annual grant from the Government.

- Subsequent to the setting up of AnCO industrial training expanded significantly under a number of different headings. These related to:
- the introduction of permanent training centres (of which there are now 18);
  - the promotion of in-company training in the industrial and building sectors by means of a levy/grant system and, at a later stage, by the introduction of special training grants for new and domestic industry (the latter are administered by AnCO but financed from IDA funds);
  - measures to update and improve the apprenticeship system, and
  - more recently, special projects to counter youth unemployment and to assist socially deprived groups (already referred to in Chapter III).

The scale of the increase in State training activity over the period since the early 1970's is indicated by the growth in the related financial expenditure. Total State outlay on all training activities in the non-agricultural sector between 1973 and 1983 rose from £8 million to £133 million (see Table 4.4) which represents an annual average rise of nearly 17 per cent in real terms<sup>1</sup>. This rate of increase far outstripped the real growth in domestic output which was some 3.3 per cent per annum on average over the same period. The increase in the extent of AnCO's activities (which account for the bulk of the above expenditure) can also be gauged from the figures for direct training throughout; Table 4.1 shows that the provisional figures for the number of persons who attended formal AnCO training courses in 1984 was 39,400<sup>2</sup> compared with just over 5,000 a decade earlier in 1974. The approximate number of adult (i.e., non-apprentice) training places which relates to the above-mentioned 1984 direct training throughput was about 10,200; if one considers in addition some 19,000 apprentices at all stages of training, this implies a totality of over 29,000 persons undergoing AnCO training at that time, slightly in excess of 2 per cent of the then total labour force of 1,325,000.

<sup>1</sup> Reducing the nominal growth to real terms by means of the GDP deflator.

<sup>2</sup> Including first year off-the-job apprentices and persons on special youth schemes.

Table 4.1

Numbers Trained by AnCO 1971-1983, with an Estimated Throughput for 1984

Year	Non-Apprentices				1st Year off-the-job Apprentices	Total
	In Training Centres	On External Courses	CYT Programmes	CT W/shops		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1971		478			184	662
1972		1,177			246	1,423
1973		3,874			486	4,360
1974		4,558			535	5,093
1975		6,637	80		826	7,543
1976		9,429	460		838	10,727
1977		11,137	598		1,102	12,837
1978	7,320		5,338		1,541	16,268
1979	7,830		5,097	267	1,740	17,795
1980	7,546	3,149	2,071	914	2,033	15,713
1981	8,555	4,402	2,125	887	2,234	18,303
1982	9,936	8,334	3,290	1,127	2,611	25,298
1983	13,544	11,283	4,799	1,898	3,143	34,658
1984	15,100	12,300	5,000	2,900	3,700	39,000

Notes: Col (1) The figures for 1971, 1972 and 1973 relate to the years ending in April of 1972, 1973 and 1974 respectively. The figures for 1974 cover the nine month period, April to December 1974. The 1984 figures are provisional.

Col (2) The figures given in this column for the number of persons trained in centres include redundant post first year apprentices. These numbered 1,675 in 1983 with smaller numbers in earlier years (there were 118 in 1979).

Col (5) The figures for Community Training Workshops include Travelling People's Workshops.

Col (6) These figures relate to first year apprentices being trained in AnCO centres or in other approved centres. At any one time of course the total number of apprentices at different stages of training would be substantially greater; it was over 18,600 in 1983 (see Appendix Table A8(ii)).

Source: AnCO.

Finally, in this brief historical review, it is relevant to refer to another more recent development, namely the setting up of the Youth Employment Agency (YEA) in early 1982. This initiative stemmed from growing concern at the rapidly growing problem of youth unemployment. The objectives set out for the Agency, which was constituted as a limited company are, according to the enabling legislation:—

"To establish, develop, extend, operate, assist, encourage, supervise, co-ordinate and integrate either directly or indirectly schemes for the training and employment of young persons, being principally persons over the age of 15 and under the age of 25 years".

The above mentioned legislation also contained provisions to introduce a 1 per cent levy on all personal incomes for the purpose of funding youth manpower schemes. Even though it was originally envisaged that these funds would be distributed through the YEA, in effect most of these monies have been channelled directly by the Government to the existing manpower agencies in order to support and expand their activities relating to youth employment and training. Currently the Agency is in the process of initiating the implementation of a Social Guarantee for young people which basically involves the guarantee of a place on a full-time programme of training and/or work experience if a young person remains continuously unemployed for six months after leaving the educational system.

#### 4. ASSESSING THE FULL EXTENT OF TRAINING IN IRELAND

Even though the expansion of AnCO's activities over the years has placed the Authority in a predominant position in the overall training sphere, it must be borne in mind that there are other training activities in existence<sup>1</sup>. There is, for example, a range of long-standing non-statutory apprenticeships, some of which are well organised and involve a significant element of educational instruction (such as those in the bakery and butchering trades). In other instances, however, such arrangements are of a rather casual nature and operate on a purely time serving basis on the job, with virtually no formal educational content. Outside of the apprenticeship area, (statutory or otherwise) many other forms of training exist – even though the further one considers this aspect the more definitional and conceptual problems arise in identifying training as distinct from normal work or job experience. Heretofore, apart from some information on the non-statutory apprenticeships, very little information was available which would enable one to assess the extent of training carried on outside of AnCO's sphere. Some estimates are available from 1982 ESRI Survey of Youth Employment and Transition from Education to Working Life<sup>2</sup> in which an attempt was made to assess the overall extent of training in the youth population (i.e. for those aged less than 25 years). In this survey persons were regarded as "trained" if they had acquired a tradeable or portable skill based on a recognised programme or form of instruction which extended over a period of time, even if this was of an informal on-the-job nature. Summary information from this source given in Table 4.2 shows that of the total number of 395,000 young persons who had left full-time education, some 149,000 (38 per cent) were either in training or

<sup>1</sup> That is, apart from the more specialised activities of CERT and the IMI.

<sup>2</sup> See Sexton, Whelan and Dillon (1983) – Survey of Youth Employment and the Transition from Education to Working Life – Final Report to the EEC Commission, ESRI, 1983.

had completed a training programme when the survey was taken in Spring 1982. The large residual group of 246,000 'untrained' young persons included some 22,000 who had commenced training programmes but who did not complete them.

Table 4.2

Youth Population Outside of Education in 1982 Classified by Training Received

Training	Persons	
	Males	Females
Training in progress	40.8	14.6
Training completed	42.3	51.4
Started training but didn't complete it	12.4	9.6
Others (i.e. no training)	111.7	112.1
Total	207.1	187.8

Source: Sexton, Whelan and Dillon (1983). Survey of Youth Employment and Transition from Education to Working Life – final Report to the EEC Commission, ESRI, 1983.

Further information on the overall pattern of training derived from the above-mentioned Survey is given in Appendix Table A.6 which shows information for different occupational groups. For the more specifically skill related categories the highest incidence of training is evident for occupations in the electrical and electronics area where about 65 per cent of young persons were either in training or had been trained. At the other end of the scale a particularly low incidence of training existed for those with agricultural occupations and for persons whose employment was related to transport and communications where in each case over 80 per cent of the young persons concerned were without any formal training. Not unexpectedly, by definition very few young persons (about 10 per cent) in the unskilled manual category were either in training or had been trained.

A further notable feature of the above-mentioned results concerns the differences between males and females. While at the overall level these differences may not appear to be all that significant (the proportion of 'no training' for girls was 64 per cent as against 59 per cent for boys) there are some very marked variations for individual occupations. In fact, if one excludes the predominantly female 'clerical workers' category, which involved a substantial training element for girls, the figures show a significant deficiency in training for females. This applies to virtually all other occupational categories but particularly for industrial

occupations where nearly 80 per cent of the girls were neither in, nor had received, any form of training; the corresponding proportion for boys was 33 per cent. The results of this inquiry also indicated a noticeable tendency towards a higher incidence of training among the better educated. In fact, at the lower end of the educational spectrum, for those who had left the educational system without any qualifications, 80 per cent were also without any training.

This source can also be used to obtain an indication of the extent of AnCO's involvement or penetration in the context of overall training activities. Appendix Table A.7 contains estimates from the 1982 survey which indicate the degree to which AnCO was involved in training of different kinds relating to the 94,000 young persons who had actually *completed* training courses. In overall terms the figures indicate that over 30,000 (about one-third) of this 'trained' group had been on training which was directly sponsored by AnCO. However, a very large component of the 'non-AnCO' total relates to the 'clerical/administrative' category for which a sizeable part of the relevant training would have been provided within the educational system. If this large group is excluded from the figures, AnCO-sponsored training is calculated as accounting for nearly 40 per cent of all other training activities. In view of the fact that the estimates for AnCO training are likely to be understated (see note to Table A.7), in broad terms it can be inferred that AnCO accounts for between 30 per cent and 40 per cent of all training acquired by the group under discussion, and perhaps for up to 50 per cent of training provided if the clerical/administrative sub-category is excluded. The figures show, however, that AnCO is responsible for over 60 per cent of training in the industrial sector (including building and construction) and in the engineering and metal work group the AnCO coverage is very high — over 80 per cent. In the distribution and general services area, however, training was almost exclusively provided by means other than through AnCO.

It should be borne in mind that these data relate to the youth population; if similar figures were available for the adult population as a whole, it is likely that the overall incidence of training would be lower and that the relative extent of AnCO's penetration would be less. On the other hand, it must also be remembered that AnCO must have been indirectly involved in some of the training categorised as 'non-AnCO'. Part of this training activity in the manufacturing and building sectors would have been in the form of on-the-job training, a significant proportion of which is aided by AnCO through its system of grants for in-firm training, (which are described later in this chapter). Therefore, the classification of training according to whether it is AnCO sponsored or

not is not a particularly straightforward matter and the data can only be regarded as providing a broad and somewhat incomplete picture of the general institutional pattern.

## 5. APPRENTICE TRAINING

The origins of apprenticeship go back very far into European history, beginning with the Medieval Guilds. We have already indicated, however, that over the years the term 'apprentice' has been used to describe a wide range of youth training schemes ranging from quite informal arrangements involving purely on-the-job training to statutory schemes which entail employment experiences on a monitored basis and regulated educational release courses. The latter type of activity was first formalised in the 1931 Apprenticeship Act which enabled the Minister for Industry and Commerce to designate certain trades and to set out mechanisms and regulations for the training of apprentices in these trades. As indicated earlier, the statutory apprenticeships are now the responsibility of AnCO and currently there are nearly 19,000 young persons undergoing this form of training (see Appendix Table A.8).

It should be recognised, however, that even in the case of the statutory apprenticeships, some of the codes and regulations are little more than voluntary guidelines and there has been a rather indifferent attitude in regard to their implementation. Attendance at courses in vocational schools and colleges is not compulsory and many apprentices still do not attend such courses; even when they do, they are not obliged to present themselves for (let alone pass) any examinations held on the termination of such courses. In effect, the traditional position has been that, even for statutory apprentices, the 'time serving' element has been the major requirement. Heretofore, once this condition was fulfilled the young person automatically qualified as a registered craftsman and this in turn established eligibility for the Craft Union concerned, membership of which was a vital necessity in order to obtain subsequent employment. Entry into apprenticeship has also been largely informal. Once a young person had the required minimum qualifications (currently three D grades in the Group Certificate) and found an employer in the relevant trade who was willing to make the necessary written commitment, registration was virtually automatic. In this regard in the past family ties were a common phenomenon and in earlier periods in some trades entry was virtually restricted to the sons of existing craftsmen. The registration formalities for new apprentices have also been rather loosely applied. In many instances employers do not initially register new apprentices and it is not uncommon for years to elapse before this is done. In these circumstances, in order not to do an injustice to the young apprentice who may not have been fully

aware of the requirements, it is necessary to afford recognition for time already served (i.e. retrospective registration).

In 1976 AnCO announced the introduction of a new apprenticeship system which was to be gradually phased in over the following years. The main objective was to revise and update the system, improve standards and to plan the annual intake of apprentices in order to ensure sufficient numbers of skilled workers in each of the designated trades. The principal features proposed for the new system were:

- (a) A period of full-time off-the-job training in an AnCO centre or in another approved institution in the first year of apprenticeship which would cover the basics of industrial training in the trade concerned;
- (b) Release from work to attend courses of technical instruction in educational establishments in the first three years of apprenticeship;
- (c) Standard national training and educational curricula for each trade as recommended by a Curriculum Advisory Committee;
- (d) A four year apprenticeship with provision for three years under certain conditions;
- (e) A system of testing and certification of apprentices leading to the award of a National Craft Certificate;
- (f) Planned annual intake of apprentices to ensure sufficient numbers of skilled workers in all trades.

Progress in implementing these changes has been mixed. The introduction of the period of full-time off-the-job training in the first year of apprenticeship has been taken quite some distance and by 1983 over 80 per cent of statutory first year apprentices were being trained in this way; the remainder, however, were still being trained by 'traditional' means, i.e., 'on-the-job' with individual employers. Current plans envisage the complete changeover to the new system by 1986. A disturbing feature of the current situation, however, is the increasing proportion of first year apprentices receiving off-the-job training under the direct sponsorship of AnCO rather than by private employers. The number of such apprentices was 1,700 in 1983, representing over half of the total of 3,000 first year apprentices receiving off-the-job instruction in special centres. It has been suggested that the intensification of the current recession is one possible reason for this but a more likely reason may be an unwillingness by employers to sponsor and pay wages to first year apprentices under the new system when they cannot derive any immediate benefits from them<sup>1</sup>. This, when considered with

<sup>1</sup> Employers can in some circumstances recover a proportion of the wage costs of apprentices by applying for Apprenticeship Grants.

the additional expense of maintaining redundant post-first year apprentices in training centres (who numbered 1,700 in 1983), has resulted in an unforeseen substantial increase in the overall cost of maintaining the apprenticeship system. This can be estimated to be in the region of £30 million in 1983 when all aspects are taken into account.

With regard to duration, all apprenticeships now cover a period of four years with a relaxation of this condition down to three years where the applicant has obtained the Leaving Certificate; previously the apprenticeship period was five years in all cases. Some progress has also been made in updating curricula but a complete set of revised curricula is not yet in existence. With regard to certification, even though discussions between the interested parties<sup>1</sup> have been in progress for some time, the stage has not yet been reached where a system of testing and certification is in existence.

It is clear from the foregoing that it takes an inordinately long time to implement any change in the apprenticeship system. It is now nearly ten years since the detailed basics of the new system were first unveiled, yet its implementation is still not complete and is unlikely to be completed for some time yet. This is hardly an acceptable situation in a rapidly changing labour market environment. If this pace of progress is to be the norm in the years ahead, then revisions to this form of training will be out of date by the time they are implemented. There are a number of reasons for this inability to adapt. It arises partly from the fact that the quasi-legal system of regulation is over elaborate but it is due mainly to the inability of the various interests involved to come to grips with the need for change. Any significant alteration to the apprenticeship system proposed by AnCO has to be agreed in committee by representatives of employers, trade unions, and the educational authorities and the end result is very often a compromise arrangement after years of discussion which does not adequately address the original problem. It is not being unduly critical to say that the various parties are invariably over influenced by the pressures and exigencies of the current situation and appear to be manifestly incapable of taking a more comprehensive or long-term view. During the course of discussions which we had with a wide range of interests in connection with this study, the view was more than once expressed to us that the system of apprenticeship had reached such a moribund and arthritic state that it would inevitably die a slow death, especially in areas where rapid technological change is taking place. In this regard it is of interest to

<sup>1</sup> AnCO, the Social Partners and the Educational Authorities.



note that across many European countries the systems of statutory apprenticeships as we have heretofore known them are in decline. The number in the UK has been falling very rapidly, declining from 100,000 in 1979/80 to 45,000 in 1982/83<sup>1</sup>; a similar trend has been evident in Denmark. In each of these countries however, specific initiatives have been taken to gradually replace the traditional apprenticeships with new flexible arrangements, a question which we will comment on in more detail in this chapter.

At present there are numerous new skills emerging in the Irish industrial and commercial scene, particularly in the new industries in the technician area. In many instances, these skills, even if they are of a particularly up-to-date nature, could be held to fall within the ambit of some of the existing statutory apprenticeships but there is a tendency to consciously circumvent the system (by assigning new or different occupational or skill titles) in the interest of maintaining flexibility. While such new arrangements may be desirable in many respects, the question of recognition or certification of the individual trainee or worker does need to be kept in mind. If these practices proliferate there will be a growing number of persons who have acquired up-to-date skills in modern technology but who do not possess any certification to confirm the possession of such expertise. This would not be in the best interests of the individuals concerned, nor would it be consistent with the orderly operation of a planned national training programme.

With regard to planning the future intake of apprentices in different sectors or occupations, research undertaken by AnCO some years ago (1978) indicated that at that time the overall intake of apprentices should be of the order of 4,000 per year. Recently, however, on the basis of more up-to-date assessments of the impact of new technology and other factors, this has been reduced to 3,400. The demand situation is rapidly changing and this raises questions as to whether the assessments which have been made are based on a sufficiently comprehensive spread of sectoral studies. In recent years major studies have been carried out in two important sectors, namely the Retail Motor Trade and the Building Industry, with a view to determining future employment levels and skill requirements, and it is instructive to review briefly the findings of these enquiries. These reports are particularly interesting in that they make specific attempts to cater for the effects of productivity and technological change in different skills and occupations.

The survey of the Building Industry, which was published in 1981, envisaged a modest increase in total employment in the sector of some 5,000 (from 113,000 to 118,000) between 1980 and 1985. Clearly the impact of the current recession calls into question the level of total employment projected for 1985 — current indicators suggest that employment in Building and Construction has dropped below 80,000. However, the importance of the findings from this study arise not so much from the size of the employment projections but in relation to the predictions regarding changes in the pattern of labour demand in this sector. It is anticipated that there will be a greater relative need for site managers, foremen, plumbers/fitters, brick/stonelayers and installation electricians, and a static or perhaps declining demand for carpenters, etc., because of the increased use of prefabricated timber components. It is difficult to assess from this study the future position regarding the overall demand for apprentices in the designated building trades since a significant proportion of statutory apprentices in these trades find employment outside of the industry. The report predicts, however, that despite the projected increase in the level of activity in Building and Construction, there should be a fall in the overall apprentice population in the sector if the supply/demand position is to be balanced on the basis of the assumption then made. It must be assumed therefore, in the light of more recent economic experience, that there will be a very substantial over-supply of apprentices in this sector, at least in the short term and perhaps on a more long-term basis unless activity in the industry regains the levels which prevailed prior to the current recession.

The second report<sup>1</sup> referred to above makes rather more dramatic reading. It deals with employment and training requirements in the Retail Motor Trade up to the year 1990 and it takes into account not only changes in productivity and technology, but also market growth and the likely extension of vehicle testing. The report predicts that total employment in the trade will fall from 18,000 to 14,000 between 1981 and 1990, mainly because of productivity advances and technological change which will particularly affect persons in the skilled mechanical trades. It is anticipated that there will be quite dramatic changes in vehicle technology over the coming years arising from the use of better materials, sealed life components and a greater utilisation of electronic and solid state parts leading to a tendency to replace rather than repair. This will create a need for a greater emphasis on the updating of skills and a concentration on diagnostic rather than purely mechanical expertise. The report also envisages a much greater use of computerised methods in the area of administration, stock control, etc., and this is also likely to lead to reductions in employment levels. These

<sup>1</sup> Source: Manpower Services Commission, based on estimates from industry sources.



developments will give rise to a substantially reduced demand for new apprentices. The study indicates a required projected annual intake of about 370 mechanics etc. to cover demand in all sectors over the coming years. This represents a considerable reduction on historical figures which were approximately twice this level (see Appendix Table A.8).

The principal message which emerges from these studies, particularly the latter, centres on the impact of rising productivity and technological advance which will affect both total numbers involved and the changing nature and mix of skill requirements. These studies provide only a partial insight but they do raise questions as to the extent of likely change in other sectors, particularly those where the scope for the application of new technology is substantial. This is a matter which is considered in more detail in Chapter V. In reality it is virtually impossible to even begin to try to predict the overall pattern of manpower and training requirements (whether these relate to apprenticeships or other forms of training) covering the period up to early 1990's unless similar information is available on a comprehensive basis across all sectors. Further such studies should, therefore, be carried out, particularly in these areas where technological advance is likely to be significant. This was one of the principal requirements which led us to recommend, in Chapter VI, the establishment of a special independent manpower forecasting unit. The interpretation of the results of such projections must always be subject to qualifications, but we are of the view that it is necessary to have a comprehensive assessment of the nature of future changes across a wider spectrum of the economy. The experience of other countries is relevant here and it might be fruitful to assess the situation from this point of view first even though our particular stage of development and other special features of our economy suggest that the pattern of change which takes place elsewhere might not apply here.

One might well ask in the light of the foregoing discussion, whether the apprenticeship system as we know it has a future. In its present form, is it destined to become a dwindling entity in an expanding environment of new and modern skills acquired by more flexible and less formal means? The likelihood of such a scenario is illustrated in Chapter V where reference was made to likely convergence of craft and technician-type skills. One can, of course, push this argument to extremes and envisage the virtual disappearance of the apprenticeship system. However, it must be remembered that the system does encompass a sizeable number of fundamental and basic skills (particularly in the Building Industry) which will be required long into the foreseeable future.

Furthermore, we should not let our disenchantment with the way in which the system has operated cloud our perception of its positive aspects. These we would identify as:-

- (a) it involves a joint system of work experience and programmed educational instruction. It should be remembered that such an approach is being suggested by many commentators in relation to the educational system and is embodied in the new Vocational Preparation Programme;
- (b) from the point of view of the prospective trainee, there is an obvious need to ensure that training offered in key skills is of an adequate standard, is properly certified and that the terms for acquiring this training afford due recognition to the rights of the trainee;
- (c) there is the question of the protection of the consumer of the services in question, whether this be a business enterprise or a private citizen. It is necessary to strive to achieve the situation whereby if work is carried out involving a specific skill, one can reasonably expect this work to be of an adequate standard with regard to functional efficiency, safety, etc.;
- (d) the degree of State involvement provides a means of influencing intake levels with regard to key skills which is important in the context of forward planning.

#### **The Future Development of the Apprenticeship System**

What measures can, therefore, be recommended regarding the future development of apprenticeship in the light of our assessment? One approach would be to do little or nothing and let labour market conditions dictate and influence the changing skill situation. This, however, as suggested earlier in this chapter, would lead to the slow but eventual disappearance of the apprenticeship system as we now know it in a sea of new skills and technologies – and without any coherent structure to replace it. Our view is that it would be unwise, indeed irresponsible, to adopt this approach as inadequacies in the labour market would eventually create serious problems – for example, a failure to provide a sufficient range of skill levels to meet long-term requirements. However, it is not easy to set about reforming the present situation without instituting another set of controls which would again tend to introduce inflexibilities and stifle progress. On the basis of our assessment of apprenticeship as it currently stands we consider that the following general approach should be considered with a view to adapting the system to meet future needs.

The proposal that employers should financially support apprentices in their first year of off-the-job training has turned out to be a myth in reality. Even if economic circumstances improve it is unlikely that

employers will voluntarily fund this stage of the apprenticeship programme, when the young persons in question are totally absent from the workplace. The first year of apprenticeship should be run jointly by AnCO and the Vocational Education Authorities and it will be necessary to have a special administrative mechanism in order to provide a means for joint decision-making. We have expressed the view in Chapter III that all forms of post-compulsory vocational education and youth training should form consistent parts of an overall coherent framework and we envisage the first year of apprenticeship as being part of such a structure. Ultimately this first apprenticeship year could be regarded as one component of the second stage of the Vocational Preparation Programme, on the assumption that this initiative is further developed. Indeed there is no reason why some form of recognition or certification should not be available to the apprentice at the end of this first year which, subject to adequate standards being attained, could give the young person the option of following other forms of vocational education or training, such as technician courses in RTCs. In this context the first year of apprenticeship should be regarded as a period in which the theoretical and conceptual basics of the subject concerned are thoroughly covered, even if with a substantial element of practical work.

During the course of our discussions with interested parties some criticism was voiced regarding a lack of co-ordination between the practical work in AnCO centres and the educational release courses. It was suggested that by compressing too much off-the-job practical training into one year at the beginning of the programme in some areas the practical work tended to run too far ahead of the theoretical knowledge required. Some of the practical content currently included in the first year could be transferred to later years when it could be taken in the form of a series of block release training periods.

It follows from the foregoing suggestion that the State (with ESF aid) would be totally responsible for funding the first year of apprenticeship. This would then involve a continuing commitment to meeting these costs, but there are possible ways by which they could be reduced in relation to the current level of expenditure. In the first instance there is the question of the apprentice allowances paid. First year apprentices are normally paid one-third of the standard adult rate for the craft in question and in practice, in current terms, this works out between £40 and £45 per week. This is substantially greater than the allowances paid to other young AnCO trainees for whom the minimum weekly allowance is £28. Under the system as proposed the first year of apprenticeship would only be one (albeit a special) form of State-aided

training and there is no particular reason why the allowances should be greater than those paid to participants in other parallel forms of vocational education or training. It is our view therefore that the weekly payments made to first year apprentices should be determined on the basis of the uniform system of allowances covering all participants in youth training and post-compulsory vocational education programmes as set out in Chapter IX. Another factor which could contribute to lowering costs relates to the size of the current intake. We have already drawn attention to evidence which suggests that the current inflow is much too high, particularly in certain trades. There is a need to reassess the overall future requirements in a comprehensive manner as suggested earlier.

The system as proposed would afford a better opportunity to regulate the inflow into apprenticeship, both in terms of numbers and other factors relating to suitability, questions of equity, etc. At present the system of enlistment is a confused mixture of direct entry via application to AnCO, through the National Manpower Service (who screen large numbers of applicants and carry out aptitude tests) and by the traditional means by registering with a sponsoring employer. The most logical approach would be to have a clearly defined national system of selection based on educational attainment and other relevant criteria. In view of the mix of economic and social aspects to be considered, such a selection system, even though integrated and uniform, should involve an input from AnCO, the Educational Authorities, and NMS. It should be noted that the more integrated arrangements envisaged for the manpower agencies as set out in Chapter IX would make it possible to operate such a registration procedure in a more efficient and streamlined way.

We do not essentially envisage any change in the basic approach to apprentice training after the first year apart from the important question of rendering the whole system more flexible in order to meet changing conditions. Sponsoring employers (who would, of course, have to be found) would be responsible for the wages of the apprentices and for providing appropriate on-the-job training and work experience.

The question of the duration of apprenticeship is of particular relevance here. This is at present four years for all trades with provision for a reduction down to three years if the applicant has attained Leaving Certificate standard. There is no valid reason why all apprenticeships should involve a duration of four years. Undoubtedly a substantial period of training is required to acquire reasonable proficiency in the case of some of the more technical trades which involve a substantial

theoretical element. However, in other, such as the wet trades in the Building Industry, it is stretching credibility to suggest that it takes four years to acquire the necessary skills. The current inflexibility in the system with regard to duration is, of course, related to the traditional concept of 'time serving'. This is an anachronism which must disappear in the face of technological advance and positive steps should be taken to achieve a more flexible system in which the duration of programmes is sensibly related to the time needed to acquire the skills.

The lack of progress made in implementing the changes proposed for the apprenticeship system in 1976 derives to a considerable extent from the inability of the various interests involved to reach agreement on the details of the new system, particularly in relation to such aspects as new curricula and certification. It is essential that all parties involved adopt a more long-term perspective in relation to training problems. For employers this would involve a more enlightened attitude towards accommodating trainees and in facilitating educational and training release; and for the trade unions a more ready acceptance of the implications of technological change and the altering needs of the labour market. In the case of the educational authorities it is to be hoped that a more direct involvement in the development of apprenticeship, coupled with a more forward looking attitude to the position of vocational education as a whole, would provide a further impetus to the overall development of the system.

Other countries have begun to introduce changes in the area of vocational education/youth training which are broadly similar to what we are suggesting. In the UK it is envisaged that the early stages of apprenticeship will be eventually subsumed into the comprehensive Youth Training Scheme (YTS) which is now being extended to cover a second year. It is clear from the 1985 White Paper on Youth Training and Vocational Education that the YTS is seen as providing a permanent framework which will bring a greater degree of coherence to the whole area. In Denmark the number of traditional apprentices have been falling rapidly but the gap has been filled by a more flexible system (the EFG programme) which begins with a school-based foundation year before further specialisation is engaged in and an arrangement with an employer is established.

## 6. ADULT NON-APPRENTICE DIRECT TRAINING<sup>1</sup>

This area of AnCO's activities relates to training provided for young unemployed persons outside of apprenticeship, for redundant workers and for persons wishing to re-enter the labour force. The range of AnCO programmes available for adult trainees is very extensive. The courses range from a few weeks to a year in terms of length and cover a wide spectrum of activities in the industrial and construction area, the electrical trades, in electronics and in the clerical and administrative sphere. There are also a very considerable number of programmes of a more general kind which are not specifically skilled-related (such as Career Development, Return to Work courses, etc.) as well as community-based projects such as the Community Youth Training Programme (CYTP). AnCO training courses provided for adults are conducted both in training centres and on contract by external agencies.

Many of the issues raised in relation to apprentice training are, of course, also relevant in relation to AnCO's other training activities. The need to up-date the content of existing courses and to introduce new programmes to keep abreast of changes in the labour market are as relevant in the case of adult training as they are for apprenticeship. In this regard, however, more flexible arrangements are possible and AnCO is able to monitor such changes through its contacts with industry and the commercial sector generally. These are maintained through its corps of instructors, most of whom are recruited from the industrial sector, and through the process of placing trainees in employment which provides valuable information on the relevance and other aspects of the actual training provided. Another important aspect is the involvement of AnCO in the training grants programme for new overseas industry (described later in this chapter); this also provides AnCO with the opportunity to gain valuable insights into the most up-to-date industrial processes which have in the past influenced decisions to invest in new equipment for training purposes (e.g., numerically controlled machine tools).

### Access to Training and Related Problems

At present, a very high proportion of AnCO training is organised for young people (i.e., aged less than 25 years), who currently account for up to 80 per cent of the total stock of trainees. This arises partly from the structure of the Irish labour force but it is also due to policy considerations. A substantial and increasing proportion of the Exchequer

<sup>1</sup> By 'adult' training is meant formal non-apprentice training activities. Not all of the participants are adults in the strict sense of the term since many of them can be quite young. However, AnCO does not normally accept young persons for training courses unless they have left the educational system for at least six months.

funding which AnCO receives now comes from the Youth Employment Levy, which must be expended on schemes for persons aged less than 25 years (see section 7 of this chapter). Furthermore, the conditions under which advances from the European Social Fund are made stipulate that the greater part of this finance must also relate to training activities for youth. The existing convention is that 75 per cent of the total Fund's expenditure must relate to schemes for persons aged less than 25 years.

While the need to allocate substantial resources to training and manpower programmes for young people is not a matter of dispute, it must be recognised that the structure of the Irish labour force is changing. By the end of this decade one half of the entire workforce will be in the 25-44 year age category according as the advance guard of the Irish population bulge rolls forward into this higher age bracket (see Table A.3). Even if there is some improvement in the economic climate over the coming years, we still face the prospect of having to cope with sizeable numbers of unemployed persons in this older age group who are at a stage of the life cycle when domestic and family pressures are considerable (because of the need to cater for dependants). Indeed even aside from questions of age, the nature of the current crisis is causing numerous redundancies among older workers because of changing employment structures. Thus the broad pattern of priorities will have to be altered to provide a greater measure of access to manpower programmes for older workers, many of whom will not be all that old and will still be facing a considerable span in the labour force. It should not be overlooked that there is a long-term advantage to be gained here in regard to catering for future generations of young people. Children who grow up in relatively deprived circumstances are more likely to have problems later and it does not make a great deal of sense, either economically or socially, to essentially fail to provide assistance for the very young in a family context and then try to retrieve the situation when they subsequently emerge, severely disadvantaged, on the labour market. More training aid for older workers would also help to contain the rising incidence of long-term unemployment since such workers, once out of a job, present serious problems of re-integration into the labour market and are much more likely to drift into long duration unemployment. This issue has now become a serious problem throughout the European Community as a whole.

There are now, however, signs of a change in emphasis. Outside of the training area the introduction of the Social Employment Scheme, which is confined to persons aged 25 years or over who have been

unemployed for a year or more, and within the training sphere the proposal to initiate an 'alternance' programme for the same target group are indications that a new set of priorities is in the process of development. We are not, however, in any sense implying that there should be sudden and drastic change in emphasis, nor are we suggesting a significant and immediate running down of the present level of support for youth programmes. What we are saying is that the changing population structure, coupled with continuing difficulties in the labour market, is likely to result particularly in high levels of long-term unemployment which will confront society with some rather difficult choices. A proper balance will have to be struck between the needs of young persons and the desirability of catering for older unemployed workers; the former may be more receptive to training and involve relatively less expense in terms of financial support, but many of the latter may be more deserving from a social point of view. Indeed, even if one views the problem from a strictly economic standpoint, account must be taken of the prior costs of human capital acquisition in the case of redundant workers, i.e. a choice has to be made as to the extent to which this stock should be enhanced or up-dated against the alternative of allocating resources for imparting training to youth.

This changing scenario raises questions concerning the nature of the funding of AnCO's activities which are discussed later in this chapter. With regard to the European Social Fund it is somewhat incredible that this is being administered in such a rigid manner in relation to age, since the balance of the population structure in other European countries is changing even more rapidly in favour of the older age groups. Towards the end of this decade the youth population in virtually all other EEC member states will actually begin to fall.

There are of course criteria other than age which are of relevance in considering access to training. To what extent, for example should there be an emphasis on catering for the unskilled persons from areas of high unemployment, or women who on the basis of the evidence presented earlier appear to be particularly under-represented in the national training effort outside of the traditional clerical/office skills area. It is true of course that some programmes described already, such as the Community Training Workshops and the recently initiated schemes designated to assist long-term unemployed older persons, go some distance in meeting such special requirements.

One significant problem however in catering for the needs of special groups is that frequently their requirements involve more than training. Very often the basic problem of unemployment is compounded by

others such as low educational levels, discouragement, poor motivation etc. It follows therefore that any schemes drawn up to deal with such groups have to incorporate elements designed to counter these deficiencies, such as the provision of special training modules to improve motivation and self-reliance and periods of employment as an aid to reintegration. Such multi-aspect schemes are best delivered as part of a co-ordinated and integrated institutional manpower framework — a matter which is discussed in more detail in Chapter IX.

In considering the question of access it cannot be overlooked that the primary objective of the national training effort is the provision of an adequately trained workforce as a means of promoting economic growth. Thus while the system has to respond to the needs of particular groups, it must meet this primary economic need which in turn requires that the State training arrangements encompass a significant body of high skill activities. Such training can only be realistically directed at individuals who already possess significant skill capabilities.

#### The Nature of AnCO's Direct Training Activities

Let us now turn to consider the various forms of non-apprentice training which are provided by AnCO on a direct basis (i.e., as distinct from support for on-the-job training which is discussed later in this chapter). Appendix Table A.9 contains a profile of the AnCO training throughput for 1983 in terms of type of training. Basically the adult courses on offer may be grouped into four broad categories — (1) basic training courses; (2) skill related programmes; (3) career development and other programmes not specifically skill related; and (4) community based initiatives. The data are summarised under these headings in Table 4.3. Some 2,600 of the 29,500 adults trained by AnCO in 1983 were on, what are termed, 'induction' or 'basic' training courses. These cater for unskilled persons of fairly low aptitude and cover basic manual instruction as well as imparting a knowledge of general work practice. Some persons on these courses may show sufficient aptitude to subsequently progress to more advanced skill related forms of training, but the majority are destined for the semi-skilled or unskilled sector of the labour market. The second group referred to, those undergoing specific skill related training, comprised over 14,000 in number or just less than 50 per cent of the total 1983 throughput. Within this category 9,200 underwent training related to industrial skills (of which over one-half were in the engineering, metalwork and motor trades); the remaining 5,000 received instruction in a variety of non-industrial occupations of which a substantial element (nearly 3,000) related to the general business area of sales, marketing, finance, data processing etc.; nearly 1,800 persons (mainly young women) were trained in office

procedures and clerical etc. skills. Up to 6,000 persons undertook general type courses which were not specifically skill related. These consisted principally of career development programmes, equal opportunity courses and other such programmes. Finally, some 6,700 young persons were accommodated on community based projects, of which nearly 4,800 were on the Community Youth Training Programme and 1,900 in Community Training Workshops.

Table 4.3  
Number of Adults (Non-Apprentices) Directly Trained by AnCO in 1983,  
by Broad Sector of Training

Broad Sector of Training	No. Trained	%
Basic Training Courses	2,577	8.8
Skill related programmes	14,158	48.1
Industrial (inc. building)	9,120	31.0
Others	5,038	17.1
Career Development and other Programmes not specifically skill related	5,995	20.4
Community Based Programmes	6,688	22.7
Total	29,418	100.0

Note: See Appendix Table A.9 for a more detailed subdivision.  
Source: AnCO.

The Community Youth Training Programme is designed primarily to assist unemployed young persons and normally involves activities in the building area, such as the construction of recreation and sport centres etc. The local community (which must form a representative committee) provides the capital and materials and AnCO (subject to certain conditions being met) will then supply trained instructors and pay training allowances to the young persons concerned. The participants, who are recruited through the National Manpower Service, are normally taken on for a period of about six months. The Community Training Workshops, referred to already in the preceding chapter, are designed to assist young persons with low educational attainment from socially deprived urban areas. These programmes involve the provision of very elementary training in manual skills (such as metalwork, woodwork, sewing etc.) as well as elements of remedial teaching. Again the initiative must come in the first instance from the local community and if specified conditions are met (including the formation of a representative committee), the entire operation is organised and funded by AnCO.

In overall terms therefore the figures show that about 50 per cent of AnCO's adult training throughput in 1983 was specifically skill related, 20 per cent related to general type programmes, nearly 23 per cent to community based initiatives and 9 per cent involved the provision of induction courses in basic industrial skills. If one is to assess the position of AnCO's direct training activities in terms of the proportion which is skill-related, it is perhaps more appropriate to consider all such training, including apprenticeship. If one includes in the total the 3,600 first year apprentices which AnCO registered in 1983 (and who were trained mainly by direct means as distinct from on-the-job) then the proportion of skill related training increased to nearly 55 per cent.

The current pattern of AnCO training, with its heavy concentration on general type programmes and community based activities, is a feature which has developed gradually since the mid 1970's and has intensified throughout the course of the current recession. Even though corresponding figures to those contained in Appendix Table A.9 are not available for earlier years, the manner of change is evident from Table 4.1 which sets out details of the administrative structure of AnCO's direct training activity over the period since 1971. The community based programmes commenced in 1975 and the external training operation, which encompasses nearly all general career development type programmes, was initiated about the same time. The type of development which did materialise was largely inevitable in the face of the deteriorating economic situation. As pressure mounted for a visible response to the problem of escalating unemployment it was only to be expected that AnCO, by virtue of its potential and of its unique position, would be drawn into this general area. Even though voices have been raised in criticism at both the nature and growth of what has become known as 'social training' there are clearly some advantages to be gained. Some benefits must accrue to the participants on these courses even if these do not immediately emerge in the form of employment. A further important issue is the question of support for morale. It would hardly have appeared acceptable if the State manpower agencies were seen to singularly pursue a strict policy geared to longer term strategic objectives and appeared totally unwilling to provide any kind of assistance to the legions of young unemployed. This type of involvement by manpower agencies (i.e., in social or counter-cyclical programmes) is not unique to Ireland and has been a prominent feature across all western economies since the mid-1970's.

The fact that we have dwelt so much on the social or counter-cyclical element of non-apprentices training should not deflect attention from the fact that skill related training is still the major component in

AnCO's direct training programme. A range of courses designed to cater for the changing pattern of employment demand has been introduced. We have already adverted to the fact that courses in the general sphere of business, marketing, finance, data processing etc. are now a significant element in the overall training programme. The greater part of these courses are provided by external agencies on contract.

However, the general picture of training as portrayed by Table 4.3 suggests that the balance in the overall structure in AnCO's activities has tilted very far in the direction of catering for social and counter-cyclical needs. In the final analysis AnCO's principal preoccupation must be with the long-term needs of the economy and if recent trends continue there is a danger that this requirement will not receive sufficient emphasis in the context of overall priorities. It is not that we are suggesting a re-orientation to the extent that strategic skill requirements should totally dominate the scene. The economic circumstances will for many years necessitate the retention of a significant social element in the overall body of manpower strategies. However, the position regarding the extent of counter-cyclical programmes included under the training umbrella should now be reviewed. These and specific skill training activities should be separately and clearly identified so as to facilitate continuous appraisal and an appropriate allocation of priorities. This is one of the factors which leads us to suggest (in Chapter IX) that all projects of a social etc. nature should be dealt with separately but comprehensively in a revised institutional framework and that more responsibility for socially oriented initiatives for teenagers (particularly those with a strong remedial element) should be transferred back to the educational sector.

A further essential requirement here is the provision of relevant statistics setting out details of the numbers engaged in different forms of training and the related costs. The kind of information contained in Appendix Table A.9 (which covers only numbers of participants) should be regularly compiled and published along with a subdivision of corresponding costs in order to facilitate an ongoing assessment of the allocation of expenditures on the various activities involved. Some new information of this kind is now included in the Annual Public Services Estimates publication;<sup>1</sup> the 1984 issue included for the first time additional information on expenditure by AnCO and CERT in the form of an appendix to the Department of Labour Vote details. This source gives separate expenditures for apprentice training, for the Community Youth Training Programme and for Community Training

<sup>1</sup> And in the new series of comprehensive reports on Public Expenditure Programmes.



Workshops. However, the foregoing discussion illustrates that one needs to go much further than distinguishing details of schemes such as the CYTP before a full identification of the extent of social or counter cyclical training activities is attained. Indeed even if one is to consider only skill related training as such, within this category there is a need for a continuous appraisal of activities in order to assess whether the range of programmes on offer is keeping pace with changing labour market developments.

We will conclude this section by making some general observations on the sub-division of AnCO's direct training between that conducted in permanent centres and that carried out by external (contract) agencies. The basic rationale for the introduction of external training is fairly clear. Obviously there are limits as to what can be achieved in permanent training centres in terms of initiating new courses and bringing training to all areas and to all groups in the population; and, of course, overheads and capital costs associated with fixed centres are quite substantial. By the mid 1970's the demand for training was such that a more flexible response was called for and a system of 'external' training was initiated. The stage has been reached where external training, at least in terms of numbers of participants, is now almost as extensive as AnCO's other activities in centres (see Table 4.1). Essentially the system operates on the basis of specific contracts placed by AnCO with private agencies. The latter may be firms engaged in some commercial or industrial activity, or they may be engaged in training or similar pursuits (such as commercial or management courses etc.) or they may be educational institutions. A significant advantage is that this approach provides a flexible means of extending and complementing the training activities carried on in centres and makes it possible to have a rapid response to current identifiable needs. The provision of courses in marketing, business, computer methods etc. referred to earlier is an example of this. Table A.9 shows that some 3,000 persons attended external contract courses in these areas in 1983. However, the programme of external training is also heavily weighted towards general career development type activities which do not relate to the provision of any particular skills. In 1983 up to one half of the total throughput of 11,000 persons received general training of this kind. The numbers trained by external agencies on courses covering manual or technical skills was nearly 2,500 or 23 per cent of the total. All external courses can of course be readily discontinued if they are no longer considered to be of relevance.

There is also a very heavy emphasis placed by AnCO on organising external courses for which a higher placement ratio is likely to be realised. This is a rather questionable approach. Apart from the

problem of displacement (discussed already in a theoretical context) and the possibility of promoting elitism, placing too much stress on the achievement of high placement rates also increases the likelihood that such courses may be increasingly directed towards areas where such a result is largely guaranteed. This may in turn give rise to a situation where persons are being trained, at State expense, for jobs for which employers would have been obliged to provide training in any case, i.e., a type of windfall or hidden subsidy effect. On balance therefore even though the principle of external training is basically sound, particularly in regard to the facility it offers in responding to changing labour market conditions, it has developed to a stage where the mix of courses being delivered by this means does not appear to be altogether appropriate. The overall scope and content of the programme should be reassessed in the light of AnCO's primary objective of providing mainly skill related training, with particular attention being paid to dealing with genuine training deficiencies which the labour market would not otherwise adequately meet.

It has been claimed that a number of AnCO's external training programmes (and some courses in centres) overlap with courses available within the educational system. The areas to which we refer relate to work experience and career development programmes, office skills, electronics etc. This is a matter of some controversy and it is our view that not much will be gained by attempting to pursue the matter in any detail within the context of the existing institutional arrangements. This problem is really a symptom rather than an ailment — a symptom of a much deeper defect relating to the absence of an overall co-ordinated government strategy covering the interface between vocational education and training which would define roles, set out guidelines and provide proper consultative mechanisms. This issue is basically an institutional and political one which is addressed in more detail in Chapter IX.

## 7. THE PROMOTION OF TRAINING WITHIN FIRMS

While the provision of training by means of special courses is important, it constitutes only one part of the overall training scene and it can be argued that, at the individual level, progress to full maturity in terms of skill acquisition can only be achieved after lengthy exposure to actual working conditions. Therefore State programmes designed to encourage training within firms are of considerable importance. One might say that it is only in this very practical and competitive environment that one can obtain a proper perception of the relevance and importance of new emerging skills and changes in existing skill requirements. The present approach to the area of promoting training within companies

involves three distinct components (a) the promotion of training activities in existing firms by means of a levy/grant system; (b) domestic industry grants and (c) new industry grants.

*The levy/grant system*, which applies only in the manufacturing and building sectors, was one of AnCO's earliest initiatives. During the late 1960's and early 1970's the system was gradually extended throughout different sub-sectors in manufacturing and building by means of a series of statutory designation orders. Firms in the designated sectors whose payroll is above a certain minimum level are levied at a rate of between 1 and 1.5 per cent of their gross wage bill. The levy may subsequently be recouped in the form of grants if the firms initiate satisfactory training arrangements. It is possible to recoup up to 90 per cent of the levy payments by means of such grant applications. AnCO retains about 10 per cent of the total aggregate levy to cover the costs of administration, field advisory work, overheads etc. Apart from the principal objective of promoting improvements in training in terms of quantity and quality, the system was also intended to re-distribute the costs of training among all firms; those who do not train pay the levy but cannot claim any element of it back. Some would however dispute this form of "redistribution" argument as indicated in Section 2 of this chapter.

A set of special operating criteria has been developed by AnCO for the payment of grants under this scheme. A company must have established a formal training function which should take the form of a special initiative involving perhaps the introduction of new training, or measures designed to improve the extent and quality of existing training. In larger firms this could involve the appointment of a training manager. A standard rating system has been developed, on a scale from zero to 100, which takes all aspects of training into account. At present, 63 per cent of companies within the designated sectors (covering 87 per cent of employees) have established training functions which adequately meet AnCO criteria. The companies which have not established such a function are usually small ones, where the size of the levy paid does not constitute a sufficient incentive to initiate training activities. In many cases, in the craft sector, these small firms can recover the levy paid through independent per capita apprentice grants which are not part of the levy/grant system proper. A detailed statistical outlay of the financial aspects of the levy/grant system for 1982 is given in Appendix A.10. It will be observed that the total outlay on grants paid to firms in the designated sectors in that year was £9.2 million (which rose to £9.9 million in 1983).

The general view is that the introduction of the levy/grant system in Ireland has enhanced the overall training situation. The number of training managers and training instructors and demonstrators employed by firms has increased very considerably, and there is a general acceptance that the level and quality of training has been significantly improved. However, there are now signs that the system has largely achieved its purpose. Many firms have reached a satisfactory level of training competence in terms of the criteria used and the repayment of the levy by means of training grants is largely automatic, in many cases up to the full extent of 90 per cent. In fact, for a number of highly rated concerns a 'net' arrangement is operated in that they pay only 10 per cent of the gross levy in the first instance. Under the present system any firm which submits a reasonable training proposal will generally receive a grant and this has led to a situation which is essentially a recirculation of the same funds. As a result, grants are widely dispersed among many and varied training activities, which, even if individually adequate, may not be sufficiently important or relevant from an overall strategic point of view. In other words, the available resources are distributed in too diffused a manner when they should be concentrated in specific training areas which are of special importance from the point of view of the longer-term needs of the economy as a whole (such as in particular industrial subsectors or in technology related new skills). The experience with levy/grant type schemes in other countries has been somewhat similar. Ziderman (1978) in referring to various studies of the system as operated in the UK, concluded that the levy/grant approach was deficient in the long-term in that it achieved at best a once-for-all increase in the overall level of in-firm training along with a reduction in the degree of variation in training between companies. Once a netting arrangement for the payment of the levy is introduced for firms with a proven training record, any incentive to raise standards further is no longer present. Subsequently any further increase in the overall level of training is brought about by improvements in below average firms. Thus the whole system, as it were, loses its cutting edge in the form of training initiatives in the more dynamic firms who are no longer motivated to enhance their skills and expertise.

The operation of the levy/grant scheme entails quite an elaborate administrative system involving the maintenance of seven different sets of statutory accounts corresponding to the sectoral Industrial Training Boards. These have to be kept distinct and it is not possible to re-allocate funds between sectors irrespective of different sectoral training needs. The nature of the system creates an attitude of mind among the Boards (and particularly among employers) that the funds are



exclusively theirs which militates against a distribution of grants on a more selective basis.

The levy/grant system has been reviewed by a joint working party of the Department of Labour and AnCO which considered a number of possible alternative schemes ranging from preserving the existing arrangement as it stands to a total discontinuation of the system. The options listed do refer to the question of distributing grants on a more strategic basis as described above. However, the report does not express a preference for any of the alternatives considered. With regard to acquiring funds, the report adverts to (but does not necessarily recommend) the possibility of collecting these through the PRSI system which would simplify the collection mechanism from the firm's point of view.

*Domestic Industry Training Grants* are paid to existing firms which are changing or improving their technology arising from an IDA supported capital expansion programme. The actual training funds come from the IDA. To qualify, a company must normally be in the manufacturing sector and have an approved training record. This form of support covers training costs in relation to the wages of the workers concerned while in training, as well as related travelling and subsistence costs, expenditure on special courses attended, etc., but not administrative overheads. Grants amounting to over £7 million were paid under this heading during 1983. In a sense therefore the allocation of these grants can be said to follow a generally strategic pattern insofar as the associated capital grants can be deemed to be dispensed in this manner.

There is a separate system of *New Industry Grants* to cover situations where training requirements arise in the case of new overseas grant-aided industrial projects. The actual training grants are again funded by the IDA and AnCO's Training Advisory Service provides a consultancy service in assessing the training requirements and advising on the extent of grant levels. As in the case of Domestic Industry Grants the support extends to covering the wages of trainees and related direct expenses. In many cases, AnCO provides 'hands on' assistance during the initial starting up period. This interval can last for up to three years during which time training activities are monitored and grants are paid on a phased basis. To date over 700 new manufacturing projects have been assisted under this programme. Grants totalling nearly £23 million were paid out in the course of 1983. The system of New Industry grants is essentially an integral part of the package of overall incentives designed to attract foreign industrial investment to Ireland.

Table 4.4 in the next section of this chapter, which gives details of training expenditure, provides a good indication of the changing pattern

of State support for in-firm training over the years. Up to the mid-1970's the levy/grant system was a major component. The system of Domestic Industry Grants was introduced in 1977 and the expansion of both this programme and the already existing New Industry Grants has gradually led to a situation where these forms of support now constitute the greater part of the total State outlay in assisting training within firms. In 1983 the expenditure of £9.9 million on grants under the levy/grant system accounted for only just over 20 per cent of the total State expenditure of £45 million on in-firm training, while the combined outlay of £30 million on New and Domestic Industry grants accounted for two-thirds of this total.

The diminishing role of the levy/grant system, when considered in association with the serious doubts now being expressed about its relevance and effectiveness, suggests that a more rational and integrated approach is required in regard to State aid for training within companies. On the basis of the available evidence, the most appropriate course to follow would be to discontinue the levy/grant system and to incorporate the existing systems of Domestic Industry and New Industry grants into a new comprehensive and unified programme of training aid for *all sectors* of the economy which would involve the allocation of funds on a more strategic basis. Such a programme should be administered and funded by AnCO, even though there would have to be close co-operation with the IDA insofar as manufacturing industry is concerned. The scheme should involve the identification of key skill areas (which may be areas of new technology or industrial or commercial subsectors) which would be singled out for support to the general exclusion of other less vital forms of training. This new approach should be linked with the re-orientation of State policy for industrial development in favour of technology acquisition as set out in the White Paper on Industrial Policy. It is envisaged that such a system would operate primarily on the basis of training needs and the allocation of grants would not necessarily be associated with the awarding of IDA capital grants to industrial enterprises. However, it is clear that in many cases both sets of grants would be involved but each element of funding should be judged on the basis of its own merits. While it is not our intention that such grants be confined solely to manufacturing industry, their application in other areas should be limited to activities which are of importance in promoting efficiency in the economy as a whole — for example in improving support services for exporting sectors or those facing foreign competition on the home market. However, it must be borne in mind that with the allocation of grants across all sectors (even if on a strategic basis) the possibility of displacement effects becomes more of a problem.

The implementation of such a strategy would involve a significant degree of political and administrative courage in that objections emanating from those who are denied support would have to be resisted. It has been a disturbing feature of the whole economic and social scene in Ireland that State aid generally tends to be dispersed far and wide in order to try and keep all interests content. Inevitably the end result is a fudged and ineffective initiative which may not even come near meeting the original objective. However, it is not being proposed that a policy such as that set out above should be unilaterally imposed by the Government or by AnCO. The criteria for the allocation of grants should be drawn up in consultation with the IDA and with the Industrial Training Boards. The latter should continue to have an important role to play, not only in relation to training within firms but across the whole spectrum of training activities. However, the interests represented on these Boards will have to show a greater willingness to view issues in a wider and more long-term context and be prepared to rise above preoccupations with current matters.

There are certain problems associated with any system of State grants which raise questions as to the extent to which they contribute to achieving the desired objectives. One is the possibility that a proportion of the outlay is 'lost' or wasted in the form of windfall gains, i.e., circumstances where the recipient firm would have proceeded with the initiative even if State aid were not forthcoming. In relation to training this could arise, for example, in the case of an entirely new industrial project in which the training requirement was only one of many elements to be considered. It should be noted for example that in 1982 the outlay of £22 million on both new and domestic industry training grants must be compared against a related expenditure of £110 million in capital grants. Clearly the support for capital investment and the expectation of future profits subject to minimal rates of tax are the main incentives. There is thus a danger that the relatively smaller training grants may be regarded as a mere 'icing on the cake'. When grants relate to new training activities in existing firms there may be difficulties in distinguishing between genuinely new training (related, for example, to new product development) and the provision of further expertise required in connection with alterations or innovations to existing industrial processes — the costs of which should be borne by the firm concerned.

Some steps can be taken to minimise such losses. The adoption of strategic criteria in relation to training grants as suggested would obviously help. Another desirable feature is that the grants system should involve a contribution from the recipient firm. Clearly, if the

State support in question is total (i.e. 100 per cent) then such windfall losses can be very substantial. On the other hand where the funding covers only part of the training costs involved there is less incentive for firms who have the potential to enhance their skill complement to rise to the occasion and seek the grants. However, a system of partial support embodies the principle that the firm makes a definite contribution, which is important in the current Irish context where in all spheres of economic and social activity there is a growing tendency to look to State handouts to solve all difficulties. Our considered view is that any new system of State grants for training should involve a contribution from the recipient firm towards the cost of the training, even though it would be appropriate to allow flexibility here to meet different circumstances, (e.g. perhaps a higher level of grant for small enterprises).

## 8. THE FINANCIAL ASPECTS OF STATE TRAINING PROGRAMMES

Table 4.4 contains a comprehensive profile of State expenditure on training outside of the Agricultural sector<sup>1</sup> covering the period from 1972 to 1983. This table covers all expenditures by AnCO and by the IDA on the Domestic and New Industry Grant schemes, by CERT on training in the hotel and catering trades as well as subventions to the Irish Management Institute from the State and from the European Social Fund.

On the basis as set out above total gross State expenditure on training in 1983 amounted to nearly £133 million. More than £72 million of this total related to direct training (i.e. in centres or on external training courses) £45 million was in respect of State support for in-company training programmes, while the remaining £15 million related to AnCO administrative expenses, CERT and the subventions to the IMI. Total government expenditure on training expressed as a percentage of GNP rose from just over 0.2 per cent in 1972 to 1.0 per cent in 1983.

During the earlier part of the period in question there was a much more even allocation of resources between training in centres and in-firm training. In the mid 1970's, for example, each of these forms of training accounted for about 40 per cent of total State expenditure. Since then, however, with the gradual extension of the training centre network and, more recently, because of the rapid rise in the numbers taken into train-

<sup>1</sup> Expenditure by ACOT on training in the Agricultural Sector in 1983 amounted to over £24 million.

ing for social and counter cyclical reasons, the direct training element has become predominant. Expenditure on this form of training in 1983 accounted for 55 per cent of the total State outlay while support for in-firm training, even though it was increased significantly in absolute terms, declined to just over 34 per cent. It will be noted that AnCO sponsored direct training carried out by external training agencies has expanded rapidly in recent years, the related expenditure rising from £3.5 million in 1980 to nearly £20 million in 1983.

It should be borne in mind that a very large part of the total expenditure under the training centres heading relates to apprentice training. In 1983, of the 9,400 training places in centres (including those relating to the CYP and Community Training Workshops which are organised through the training centre network) over a third, some 3,400 were occupied by apprentices (over 1,700 first year off-the-job apprentices and a similar number of post first year redundant apprentices). The total costs associated with the apprenticeship system in that year amounted to almost £30 million out of the £53 million expended on training centre activities as a whole.

It is possible on the basis of the above-mentioned expenditure figures to derive some broad estimates of unit costs for AnCO direct training activities. Table 4.5 gives data covering the period from 1975 to 1983 for total expenditure on direct training, the numbers of related training places and the derived averages for expenditure per training place. This average was just over £6,000 in 1983, having risen from £2,400 in 1975. However, when all the figures are expressed in terms of 1980 prices it will be noted (column 5) that the average unit cost expressed in real terms fell between 1975 and 1980; it has shown a tendency to rise again in recent years, but not to any marked extent. Allowances paid to AnCO trainees are, of course, a significant element in the above-mentioned figures and the average unit costs are substantially reduced if these are excluded. For 1982, for example, the average expenditure per training place decreases from £4,800 to £2,900 if such allowances are omitted from the calculations.

It is of interest to compare the latter figure with similar unit costs for different sectors of the educational system. However, one must exercise considerable caution here as such comparisons may not be valid as the underlying situation may be different in a number of respects. Figures for annual expenditure per student for different sub-sectors of Second and Third Level education are given in Appendix Table A.11<sup>1</sup> and from

<sup>1</sup>These figures are taken from Table D of Chapter IV.2 of the publication 'Proposals for Plan 1984-87 produced by The National Planning Board.

Sources: Anco, IDA, CERT, IMI, accounts (see Note 2).

(5) The AnCO gross expenditure totals (Col. 15) include the outlay on Domestic Industry Grants as these are processed through the AnCO of the Institute's expenditure on training (£3,655 million in 1983) is financed by the Private sector.

(4) The figures given for the Irish Management Institute (Col. 12) relate only to the Government grant-in-aid and income from the ESF. Most apprentices and is included in the costs shown for permanent centres (Col. 2).

(3) The amounts shown for AnCO's general administration planning etc. (Col. 11) include some expenditures related to Apprenticeship Fund. The IDA pays the New Industry Grants directly, on the recommendation of AnCO; these also attract European Social Fund support.

(2) In the case of both Domestic Industry Grants (Col. 8) and New Industry Grants (Col. 9) the Exchequer funding comes via the IDA. In April to December 1974.

Notes: (1) The figures for 1972 and 1973 relate to the years ending in March 1973 and 1974. The figures for 1974 relate to the nine month period

Year	AnCO Direct Training Costs		Expenditure on In-Firm Training					Total	of which AnCO
	In Centres	On External Courses	General Admin. Planning, etc.	IMI	CERT	Total	Total		
1972	n.a.	n.a.	1,490	n.a.	349	221	5,126	3,066	(15)
1973	n.a.	n.a.	888	n.a.	583	256	7,972	6,245	(14)
1974	2,954	2,954	1,251	3,555	410	257	8,364	6,446	(13)
1975	5,424	5,424	5,841	2,049	600	529	14,443	11,406	(12)
1976	8,520	8,520	8,580	2,573	600	677	20,950	15,772	(11)
1977	11,748	11,748	4,245	10,553	650	711	26,987	21,381	(10)
1978	15,501	15,501	4,660	12,341	675	771	33,713	27,607	(9)
1979	21,752	21,752	6,561	15,693	772	1,248	45,329	36,748	(8)
1980	21,396	3,556	8,796	15,904	755	1,647	55,029	43,831	(7)
1981	28,179	4,981	13,528	28,179	787	1,940	71,162	54,907	(6)
1982	40,689	10,047	18,612	35,478	835	2,286	98,188	76,455	(5)
1983	52,557	19,883	22,400	45,228	950	3,269	132,559	105,940	(4)
			7,516	7,516	—	—	—	—	(3)
			1,054	3,324	—	—	—	—	(2)
			1,037	2,872	—	—	—	—	(1)
			921	2,812	—	—	—	—	(15)
			560	1,628	—	—	—	—	(14)
			514	830	—	—	—	—	(13)
			399	282	—	—	—	—	(12)
			370	3,901	—	—	—	—	(11)
			305	1,908	—	—	—	—	(10)
			240	1,251	—	—	—	—	(9)
			n.a.	877	—	—	—	—	(8)
			n.a.	518	—	—	—	—	(7)
			n.a.	1,642	—	—	—	—	(6)
			n.a.	2,888	—	—	—	—	(5)
			n.a.	3,422	—	—	—	—	(4)
			n.a.	4,576	—	—	—	—	(3)
			n.a.	5,121	—	—	—	—	(2)
			n.a.	5,286	—	—	—	—	(1)
			n.a.	6,939	—	—	—	—	(15)
			n.a.	7,664	—	—	—	—	(14)
			n.a.	9,181	—	—	—	—	(13)
			n.a.	1,054	—	—	—	—	(12)
			n.a.	1,037	—	—	—	—	(11)
			n.a.	921	—	—	—	—	(10)
			n.a.	560	—	—	—	—	(9)
			n.a.	514	—	—	—	—	(8)
			n.a.	399	—	—	—	—	(7)
			n.a.	370	—	—	—	—	(6)
			n.a.	305	—	—	—	—	(5)
			n.a.	240	—	—	—	—	(4)
			n.a.	877	—	—	—	—	(3)
			n.a.	1,642	—	—	—	—	(2)
			n.a.	2,888	—	—	—	—	(1)
			n.a.	3,422	—	—	—	—	(15)
			n.a.	4,576	—	—	—	—	(14)
			n.a.	5,121	—	—	—	—	(13)
			n.a.	5,286	—	—	—	—	(12)
			n.a.	6,939	—	—	—	—	(11)
			n.a.	7,664	—	—	—	—	(10)
			n.a.	9,181	—	—	—	—	(9)
			n.a.	1,054	—	—	—	—	(8)
			n.a.	1,037	—	—	—	—	(7)
			n.a.	921	—	—	—	—	(6)
			n.a.	560	—	—	—	—	(5)
			n.a.	514	—	—	—	—	(4)
			n.a.	399	—	—	—	—	(3)
			n.a.	370	—	—	—	—	(2)
			n.a.	305	—	—	—	—	(1)
			n.a.	240	—	—	—	—	(15)
			n.a.	877	—	—	—	—	(14)
			n.a.	1,642	—	—	—	—	(13)
			n.a.	2,888	—	—	—	—	(12)
			n.a.	3,422	—	—	—	—	(11)
			n.a.	4,576	—	—	—	—	(10)
			n.a.	5,121	—	—	—	—	(9)
			n.a.	5,286	—	—	—	—	(8)
			n.a.	6,939	—	—	—	—	(7)
			n.a.	7,664	—	—	—	—	(6)
			n.a.	9,181	—	—	—	—	(5)
			n.a.	1,054	—	—	—	—	(4)
			n.a.	1,037	—	—	—	—	(3)
			n.a.	921	—	—	—	—	(2)
			n.a.	560	—	—	—	—	(1)
			n.a.	514	—	—	—	—	(15)
			n.a.	399	—	—	—	—	(14)
			n.a.	370	—	—	—	—	(13)
			n.a.	305	—	—	—	—	(12)
			n.a.	240	—	—	—	—	(11)
			n.a.	877	—	—	—	—	(10)
			n.a.	1,642	—	—	—	—	(9)
			n.a.	2,888	—	—	—	—	(8)
			n.a.	3,422	—	—	—	—	(7)
			n.a.	4,576	—	—	—	—	(6)
			n.a.	5,121	—	—	—	—	(5)
			n.a.	5,286	—	—	—	—	(4)
			n.a.	6,939	—	—	—	—	(3)
			n.a.	7,664	—	—	—	—	(2)
			n.a.	9,181	—	—	—	—	(1)

Table 4.4 Gross State Expenditure on Training 1972-83 (£000)

Table 4.5

Unit Costs for AnCO's Direct Training Activities 1975-1983

Year	Current (1) Expenditure £ m	Number of Training Places No.	Expenditure per Training Place (2)	
			Nominal	at 1980 Prices
(1)	(2)	(3)	(4)	(5)
1975	5,424	5	2,398	4,657
1980	24,952	2,262	3,670	3,670
1981	33,160	6,798	4,544	3,881
1982	50,736	7,297	4,765	3,532
1983	72,440	10,647	6,009	4,025
		12,055		

Notes: (1) The current expenditure heading shows the costs of AnCO direct training activities in Centres and arising from External Training programmes, excluding the administrative costs by Headquarters staff and related expenditures. (See Table 4.4.)

(2) The expenditure per training place figures expressed in 1980 terms have been derived using the GDP deflator.

Source: AnCO.

this it can be seen that the derived unit cost for AnCO training in 1982 (excluding allowances etc.) was significantly greater than that for vocational education (which was £1,020) and somewhat greater than that for Third Level education (which was £2,306), even though the latter includes Higher Education Grants. It must be borne in mind however that Second Level vocational education and Higher Education contain many courses of a general non-vocational character (e.g. mathematics, languages, commerce etc.) which do not give rise to costs necessitated by the purchase of equipment or materials etc. Broad comparisons of this kind therefore are not altogether meaningful; realistically one should perhaps compare training costs with comparable sub-sectors of vocational education, such as those programmes covering technical or manual instruction, but such a sub-division of educational costs is not available.

With regard to support for training within firms, the largest expenditure component here is the IDA funded system of New Industry Grants which accounted for over £22 million out of the total outlay of £45 million on this form of training support in 1983. Expenditure on such grants has grown very rapidly in recent years — more than doubling between 1980 and 1983, or rising over 70 per cent in real terms. Domestic Industry Grants have also been expanded rapidly but the extent of this activity is not as substantial, amounting to £7½ million

in 1983. On the other hand, the rise in expenditure on grants paid under the levy/grant scheme has been very much slower in recent years, rising by 42 per cent over the 1980/83 period which in fact represents a decline (of some 4 per cent) in real terms. This is a further indication of the stagnant nature of the particular programme.

Basic information on the non-capital funding of state training activities is given in Table 4.6 which distinguishes three sources — the Exchequer, Levy/Grant receipts and the European Social Fund. In 1983 of the total current funding of £127 million nearly £61 million came from the Irish Exchequer, about £12 million from the receipts under the levy/grant system and nearly £54 million from the ESF. It will be noted that when these figures are compared with the expenditure data there are some significant differences in individual years. In 1979 for example, there was a substantial excess of expenditure over income followed in 1980 by an excess of income over expenditure. These differences are mainly due to the timing of individual advances from the ESF. In fact the figures for any one year may give a somewhat distorted picture of the relative distribution between the sources and it is necessary to aggregate the years into longer periods in order to obtain a better representation from this point of view. This is done in Table 4.7 which gives a percentage distribution of the funding of training for aggregate three year periods covering the span from 1972 to 1983. The first period (1972/74) relates to the early EEC era and at that time, broadly speaking, the funding was largely divided between the Exchequer and the levy/grant receipts, the former accounting for a somewhat greater share. After entry into the European Community, however, the relative importance of the ESF as a source of funds for training increased significantly; by the late 1970's and early 1980's the proportion of total funding attributable to this source had risen to over 40 per cent. Throughout the whole ten year period the relative contribution from the levy/grant source declined, from 34 per cent to just over 11 per cent.

There are some aspects of the direct Exchequer contribution to industrial training which deserve further comment. The 1983 total given in Table 4.6 for this element comprised the Exchequer grant-in-aid to AnCO, CERT and the IMI which amounted to £45 million, and IDA expenditure (net of receipts from the ESF) on New Industry Grants and Domestic Industry Grants which totalled over £16 million. Prior to 1982 all of these funds were provided in the form of relatively straightforward Exchequer advances. However, since 1982, when the Youth Employment Levy was introduced, a large and increasing proportion of the domestic funding for AnCO and CERT has come *directly* (i.e. without the involve-

Table 4.6

## State Training Activities: Current Funds by Source 1972-83

Year	Exchequer (1)	Levy/Grant Receipts	ESF (2)	Total
		£000		
1972	4,032	1,998	74	6,104
1973	3,931	2,948	1,481	8,360
1974 (3)	3,264	2,941	2,548	8,753
1975	7,509	3,781	3,533	14,823
1976	11,860	4,167	1,813	17,840
1977	14,083	5,353	5,539	24,975
1978	16,161	6,400	12,582	35,143
1979	18,840	6,745	16,068	41,653
1980	22,699	8,842	32,164	63,706
1981	33,557	9,654	26,301	69,512
1982	44,388	11,697	41,567	97,652
1983	60,818	12,204	53,635	126,657

Notes: (1) This category includes the Department of Labour Grant-in-Aid to AnCO, CERT and IMI as well as IDA expenditure on New Industry Grants and Domestic Industry Grants (net of receipts from the ESF in the years concerned). Also included under this heading are small amounts relating to fees etc. received by AnCO and CERT.

(2) These amounts relate to receipts from the ESF to AnCO, CERT, the IMI and the IDA in the years concerned.

(3) The figures for 1974 relate to the nine months period April to December.

Table 4.7

## Distribution of Current Training Funds by Source 1972-1983

Period	Exchequer	Levy/Grant Receipts	ESF	Total
		%		%
1972/74	48.4	34.0	17.7	100.0
1975/77	58.0	23.1	18.9	100.0
1978/80	41.1	15.6	43.3	100.0
1981/83	47.2	11.4	41.4	100.0

ment of the YEA) from that source under the terms of Section 8 of the 1982 Youth Employment Agency Act. In 1982 over £19 million out of the total grant-in-aid of £29 million for these bodies came from this source and in 1983 this total had risen to £33 million out of a total Exchequer advance of £44 million<sup>1</sup>. Apart from the questionable nature of this from the point of view of overall training strategy (which we have adverted to already in section 5 of this chapter) it creates administrative difficulties in that the costing procedures for all AnCO and CERT training activities have to be sub-divided on an age basis since the levy funds must, by law, be expended on programmes for young people. Thus the overall domestic element of funding for training has become unnecessarily complex; it involves built-in legal rigidities which are inconsistent with demographic trends and with the changing nature of the unemployment situation in which long-term unemployment among adults is emerging as a particularly serious problem. We are not implying that youth unemployment is in the process of solving itself but as time progresses there will clearly have to be a change in emphasis and it is necessary that the funding arrangements for training and other manpower activities should be flexible enough to meet these requirements. It is an anomalous situation for example that the Social Employment Scheme or the new Alternance Training Scheme cannot be funded from the levy source.

Another feature of the funding of training and manpower activities which requires further consideration relates to the high proportion of support which currently derives from the European Social Fund. The extent to which this country has benefitted from the Fund is not a matter of dispute but one must question as to whether our longer term interests are being served by currently engaging in certain forms of manpower and training activity more because these attract ESF support rather than for reasons based on appropriate long term strategies. One is moved to suggest, for example, that the recent rapid growth in general non-skill related forms of training is in no small part due to the existence of EEC funding and that a more discerning approach would have been applied if these programmes had to be fully supported from domestic sources. Furthermore one must not lose sight of the fact that approximately one half of the cost of EEC funded projects must still be met by the Irish taxpayer and it will be recalled from Table 4.5 that in overall terms 60 per cent of the aggregate cost of all State training programmes are provided from national sources. One must view the

<sup>1</sup> In fact in 1983 only £5.7 million of the total Youth Employment Levy of £77 million was allocated to the YEA. Apart from the advances to AnCO and CERT, the remainder was used to fund various youth employment schemes such as the Work Experience Programme and to support Pre-Employment and Secretarial courses in the educational sector.

EEC contribution in a proper perspective and while Ireland is a net beneficiary in overall terms we do have to make a sizeable contribution to the Community budget and therefore any grants received must be viewed in this net context and not as outright gifts.

It should be noted that the amount of £54 million ESF funding for training in 1983 indicated in Table 4.6 does not represent the totality of support from this source. An additional £4.5 million was acquired by the Department of Labour in the form of support for employment promotion schemes (such as the Work Experience Programme) while the Department of Education received a further £11.5 million in respect of certain vocational education programmes which involved close links with the labour market. Thus the total receipts from the ESF in 1983 were of the order of £70 million. There is a need for a more co-ordinated approach to our drawings from the ESF as a whole. The present position is that different Departments and Agencies make independent applications for funds. These are channelled through the Department of Labour which is the official designated ESF agency, but the Department's role in this regard is basically one of administrative co-ordination. We would derive a greater benefit from this resource if we adopted a more unified approach based on a coherent set of policies relating not only to different aspects of training but covering also related areas such as vocational education. The problem of the availability of a sufficient level of funds has not been particularly pressing up to now as the pressure of demand on the fund throughout the Community remained within reasonable limits. Generally speaking, an application once lodged and deemed to be valid and appropriate, could be relied on to yield the required support. However, the constraints on the allocation of ESF funds over the coming years are likely to be very severe (see following paragraphs) and on the domestic front some hard decisions may have to be made as to which programmes are to be retained for official sponsorship if the extent of ESF support is reduced.

There are a number of considerations which indicate that the extent of ESF funding may be significantly curtailed. The first of these concerns the enlargement of the Community to include Portugal and Spain in 1986. There is little doubt that large areas of these countries will be classified as under developed in terms of ESF criteria. Therefore many programmes in the labour and related areas carried out in these localities will be eligible for support from the fund. Since it is highly unlikely that the size of the fund will undergo any substantial increase (since like Ireland, the two new member states will be net recipients of EEC aid) one must draw the rather obvious conclusion that the size of the amounts currently dispensed to existing member countries will be

significantly reduced. Indeed such a possible development has already been publicly referred to by the Director of the European Social Fund<sup>1</sup>. Little comfort can be drawn from the prospect that the ESF might be further augmented from the system of EEC 'own resource' taxes. One will remember the protracted negotiations on the question of the EEC finances before agreement was reached to allow a modest increase (as from 1986) in the Community's own resource VAT based funding. Another feature (touched on already) which may cause uncertainty is that the rapidly changing age structure of the labour force in European countries is likely to give rise to changes in the allocation of priorities within the fund and there is no guarantee that the outcome would be particularly beneficial to Ireland. In short what we are arguing is that there are dangers in allowing the availability of ESF grants to over-influence the direction and pattern of training and other manpower strategies since the resultant policies may not be appropriate in the longer term and the current level of European support may be significantly reduced, (in which event a continuation of the programmes concerned would depend entirely on the availability of domestic finance). Our recent unpleasant experiences with the problem of diminishing EEC support for milk production should be a salutary lesson in this regard.

Turning to the issue of the domestic funding of training activities, we are of the opinion that these should be financed from one source only. This is consistent with our views relating to other aspects of the manpower area, in particular the recommendation that the entire executive range of manpower activities should be dealt with by one State Agency (see Chapter IX). In these circumstances it would not be appropriate to retain specific taxation or funding arrangements for particular parts of the overall system. This approach therefore implies the discontinuation of the Youth Employment Levy or, if the Government wishes to retain such a levy on incomes, to remove the condition that the proceeds be earmarked solely for problems in the youth labour market. The proposed discontinuation of the Levy/Grant system, along with our suggestions for a more integrated approach to the whole question of State support for in-company training, constitutes further reasons for having a more uniform approach to the question of training finance. The problem therefore reduces to one of deciding on the most appropriate single mechanism for raising the necessary funds from national sources and it is to this issue that we now turn.

<sup>1</sup> At a Co-operation North Conference on the 13 September 1984.

There are basically two options:

- (a) to have a special levy on employers and employees in all sectors designed to fund all manpower activities<sup>1</sup>;
- (b) to raise the necessary funds from general taxation.

We favour the latter approach but we shall consider the advantages and disadvantages of both options. It should be mentioned that both of these options are different from the existing system in that all domestic manpower funds would come from one source, without any proportion of these funds being earmarked or predestined for certain subsectors. Under the present system the manpower agencies have to cope with the administrative problems arising from the allocation of funds from the Youth Employment Levy and AnCO has to administer seven different Levy/Grant sectoral accounts. Either system would thus allow much greater administrative flexibility even though in the industrial training area this would of course have to be exercised in consultation with the Training Advisory Boards for different sectors concerned.

Looking first at the possibility of a special manpower tax an advantage here is that the required finance is obtained directly from those who benefit from the services provided — i.e. employers and employees. Employers derive a benefit from State manpower programmes and it is reasonable therefore to suggest that they should contribute directly to the cost of providing these. Indeed it has always been a basic tenet of training policy in particular that the costs incurred should be borne primarily by industry, even though Table 4.6 shows that currently this is anything but the case. It is true that in the earlier years when industrial training was first tackled on a comprehensive basis there was a more even sub-division of funding between the State and the industrial sector. However, over the years, mainly due to the influence of the European Social Fund and the increasing emphasis on direct training, the balance has shifted to the position where currently only some 10 per cent of this funding comes directly from employers (or about 17 per cent if one considers only the purely domestic component). Not all employers benefit directly from state training activities, but, on the other hand, industry generally benefits to the extent that such programmes contribute to raising output and to improving the overall quality of the labour force, thus resulting in a more widespread dissemination of the advantages.

Employees benefit to the extent that their human capital is augmented which should result in higher post training average earnings and in greater job satisfaction etc. Another advantage in having a specific

<sup>1</sup> For an employee this would obviously be based on a percentage of gross earnings. The employer's contribution could be determined in the same way, or it could be derived from some other mechanism, e.g. profits.

manpower tax is that those who pay in are made more aware of the uses to which the funds are put and thus, hopefully, contribute more willingly.

If such a system were adopted then the most appropriate means of collecting the tax would be through the PRSI/PAYE system. This would involve the designation of a component of the contribution from each employer and employee to be earmarked for payment into a special fund from which all manpower activities would be financed. This is in fact similar to the present arrangements relating to Health contributions which are collected through this system and subsequently forwarded to the Department of Health.

One cannot however consider such a proposal in isolation from the rest of the taxation system. It has to be assessed in the context of the more general question of the reform of taxation as a whole and in this regard there are views which do not look with favour on 'designated' or 'earmarked' taxes of the kind just described. The first report of the Commission on Taxation (1982) comes down strongly against such taxes. It is argued that if such an approach were to be adopted on a more widespread basis it would lead to an unduly complicated taxation system overall which would militate against a properly balanced approach on the grounds of equity and efficiency. Experience has shown that often the proceeds from designated taxes have to be topped up from general taxation sources when ongoing commitments cannot be met in individual years. When there is a surplus, any attempt to divert funds to other needs, however desirable, is usually met with protests from those in the contributing sectors. Even apart from the question of an overall surplus or deficit with such a tax some subsection will always consider that they are over-contributing (or not receiving aid commensurate with their contributions) with the result that there would tend to be perennial disputes about the sectoral allocation of the fund. Once a designated tax is in place it is politically very difficult to remove it, or even alter it, even though its relevance may be seriously in question. Finally if the employers' contribution is to be based on payroll size the tax would constitute a further disincentive to employment, a point on which the current PRSI System has been consistently criticised.

Turning to the second option, the financing of training expenditures solely from general taxation, there are obvious advantages of flexibility insofar as the Government is concerned. The problem of particular groups laying prior claim to the fund would not arise (or at least not to the same extent) and therefore the Department of Labour would have



more discretion in allocating funds. The fact that the Department should have this further discretion is consistent with our recommendation in Chapter IX that it should assume a more dominant and active role in formulating and co-ordinating manpower policy.

With the approach suggested, however, taxpayers would not perceive any direct relationship between their contribution and the resultant benefits and questions of equity etc. become tied up with the treatment of such issues in the context of the taxation system as a whole. It should also be noted that the manufacturing sector, even though it draws very considerable benefits from state manpower activities, would contribute very little in the way of direct support because of the very low rate of Corporation Tax which applies in that sector (10 per cent).

On balance, however, we are of the opinion that the second option (i.e. the funding of manpower programmes from general taxation) is preferable principally because of the flexibility involved but also because we consider that this approach is more in step with current thinking in the general taxation area. However in view of the obvious deficiency which would arise in regard to the direct contribution from the manufacturing sector, we consider that the rate of Corporation Tax for this sector should be raised to the extent that the income previously derived from Industry via the Levy/Grant payroll levies should be recouped (which was some £12 million in 1983). We are, of course, aware of the commitment that has been given to maintain the current rate of Corporation Tax for industry until the end of the century as an incentive to attract overseas investment. However the change we are suggesting will not involve any net increase in overall taxation for this sector and will contribute towards easing the administrative burden placed on firms.

### **Do We Get Value for Money from Training Expenditure?**

Having outlined the financial and other aspects of state training activities in some detail it is pertinent to ask whether we obtain value for money as a result of this substantial expenditure. This is not an easy question to answer as there are significant conceptual difficulties in defining what we mean by 'value' in this context. The most straightforward and pragmatic view is that training expenditures should yield a net gain in national output (which in turn one hopes would augment the level of employment). However, in current circumstances one must also take social and societal aspects into account even though here the

problem of even conceptualising measurement criteria are fromidable. Consequently any assessments must be primarily matters of judgement.

Turning first to the question of 'social' training, even though many pragmatists look upon such activities with a jaundiced eye, one must accept that there are benefits. Such programmes provide an alternative to unemployment and despite the questionable nature of some of them they convey a sense of purpose, improve motivation and impart some skills. If they did not exist disadvantages would accrue in the form of greater personal hardship and dissatisfaction, increased unemployment and a somewhat lower level of skill or competence in society generally. The principal question in relation to this form of training is the extent to which it can be provided in an overall manpower context. We have tended to the view that currently its extent appears to be excessive but this is a matter which has to be kept under review. Ultimately the degree to which such activities are provided is a matter of political judgement made on the basis of the prevailing socio-economic situation.

It is when one turns to review 'economic' or skill training one can be more overtly critical of the existing situation in terms of value obtained for expenditure incurred. One can point for example to the inordinate cost of the apprenticeship system, coupled with its many structural defects and the fact that such a high proportion of apprentices are unemployed. There is also the administratively complex Levy/Grant system which generates sizeable financial flows but now appears to yield little in the way of improving in-firm training. Certainly other skill training initiatives are more attuned to current labour market requirements (such as the growing concentration on business, commercial and ADP skills) but when one stands back and views State sponsored skill training as a whole there is certainly scope for improvement and an urgent need for a more integrated and strategic approach along the lines we have proposed.

**CHAPTER V**  
**TECHNOLOGY, EMPLOYMENT AND SKILLS**

**INTRODUCTION**

As pointed out in Chapter I, Ireland, as a recently industrialised country, is undergoing significant structural change. Long term shifts are taking place with declining employment in the agricultural sector being accompanied by increases in the services sector, and until the late seventies, in the manufacturing sector. Industrial policy as enunciated in the White Paper involves a reallocation of resources towards indigenous and foreign firms with certain desirable characteristics. Increased emphasis is to be placed on projects which embody key strategic functions such as marketing, research and development and which provide an opportunity for the creation of highly skilled employment. As a result of these developments significant structural change is taking place in the composition of the workforce and the balance between different occupations and skills. Technology with its increasing applications across all sectors of the economy is a major factor in these developments.

The overall level of structural change is therefore dependent to a large extent on our ability to acquire and develop new technologies and to adapt quickly and innovatively to technical change. The potential for success in Ireland is increased by a growing awareness of the need to improve our level of international competitiveness and by the desire to provide highly skilled employment for our young population. Other positive factors include the increasing level of educational attainment of the workforce and the growing recognition of a need for continued investment in the technological education sector which is developing closer links with the industrial and services sectors. There is evidence of an increasingly positive attitude to research development, innovation and entrepreneurship (e.g. NBST, 1982a; Department of Industry, Trade, Commerce and Tourism, 1984; NBST, 1984).

However the present level of technology, research, development and skills in Irish industry is a barrier to the acquisition and development of technology. The development of appropriate innovation policies is therefore seen as a vital factor in increasing the impact of technology on economic growth, employment and skills.

Technology and structural change also has serious implications for labour market policy. In relation to education and training policy we must ensure that the range and mix of skills needed for the acquisition and development of new technologies is in balance in terms of quantity, quality and utilisation with the skills being produced and updated by the education and training institutions. Labour market policies must also be developed to improve the climate for acceptance of technology and to provide adjustment assistance for workers whose jobs are displaced by technical change.

In developing appropriate innovation and labour market policies in the Irish context it is necessary to consider a number of issues including the characteristics of new technologies, the impact of technology on the structure of the economy and the factors likely to affect the transfer and diffusion of technology. These issues are discussed briefly in the early sections of this chapter. We then consider the impact of technology on employment and skills and in the final section we highlight the major policy implications.

#### **New Technologies**

Many important technological developments can be identified in areas such as energy, engineering, materials, chemicals and pharmaceuticals. However, it is generally accepted that the technology which will be of major significance in the short-term is microelectronic technology including all aspects of information and communications technology. It is anticipated that in the medium to long-term biotechnology will also become increasingly significant.

Besides the direct manufacturing opportunities it provides microelectronics has a growing range of application across all sectors of the economy in areas such as automation, robotics, advanced manufacturing systems, computer aided design and communications. It is replacing or extending the capability of a wide range of both skills and equipment. Its reliability and flexibility are increasing while its cost is decreasing making it more appropriate for applications in Irish firms. The technology is also transforming information storage, retrieval and communication systems.

Microelectronics or information technology is different from previous technologies in a number of aspects including its range of applications in many products and processes across all sectors of the economy, its contribution to intellectual as well as physical activities, its speed of development, its high dependence on research and development and its falling price. For these reasons it is also likely to have a more significant impact on employment and skills. The speed of technological change which provides both considerable opportunities and challenges, places increased emphasis on the need for technological innovation and highly skilled flexible manpower.

Biotechnology is also affecting a wide range of industries including pharmaceuticals and diagnostics, fine chemicals and food processing. Although most international investment has been in areas such as new drugs and diagnostics, very significant applications are also evident in food, speciality chemicals and agriculture. Biotechnology also has many environmental applications such as waste recycling, oil recovery and pollution control. While key skills will be essential to ensure the exploitation of this technology in Ireland it is unlikely, at least in the short term, to have the same impact as microelectronics.

#### **Changing Structure of Irish Economy**

Broadly speaking most developed countries are moving towards the so called post-industrial or information-based economy. This economy is characterised by a restructuring of the workforce with a rapid decline in the share of employment in the agricultural sector, a reduction in the share in the manufacturing sector and a rapid increase in the share in the services sector. For example, in the period 1970-82 service sector employment in the nine member states of the EEC increased from 47% to 57% of total employment. In the same period employment in industry declined from 43% to 36% of total employment. Employment in agriculture declined from 10% to 7% of total employment. Figure 1 shows that similar intersectoral shifts are being observed in all the mature industrialised economies.

The move towards an information based economy in the US is demonstrated in Figure 2 which gives a four sector breakdown for the workforce 1860 - 1980 (Bell 1979). Over 50% of the workforce are employed in the fourth sector which consists of all information activities including electronics, communications and administration. This sector grew rapidly in the last decade and a half resulting from both the introduction of new technology in computers and telecommunications and the economic growth rate which financed it. It has been estimated that by 2029, 80% to 90% of the entire US workforce will be in jobs that

involve the accumulation and processing of information (Joseph, 1979). While we are not suggesting that there is any comparison between the Irish and US economies, this example provides a pointer to the potential for growth in the fourth sector. Unfortunately, sufficient data is not available to prepare a four sector breakdown for Ireland.

In relation to the three sector breakdown for Ireland, trends similar to those in other countries are observed for agricultural and service sector employment (Figure 3). However, the debate regarding the potential of the Irish manufacturing sector for employment creation remains inconclusive (e.g. ESRI, 1984; IDA, 1983). Employment in this sector depends to a large extent on the successful implementation of the industrial strategy outlined in the White Paper on Industrial Policy. (Department of Industry, Trade, Commerce and Tourism, 1984.)

Overall employment in the manufacturing sector showed little increase in the 1970's with a decrease in employment being observed in the early 1980's. However, during this period significant restructuring has taken place within the sector. Figure 4 shows that in the past 15 years there has been a steady decline in employment in the more traditional labour intensive industries, particularly textiles, clothing and footwear. Significant increases have been observed in technology based industries such as chemicals, pharmaceuticals, metals and engineering. Figure 4 suggests that Irish industry is moving towards the average European structure with the expansion of sectors with potential for highly skilled employment at the expense of the more labour intensive sectors. Overall, therefore, the technical content of Irish industry is increasing and the manufacturing sector is becoming increasingly dependent on the technological factors such as product and process innovation to increase its level of competitiveness on the domestic and international markets.

The employment increases in the services sector over the past two decades have already been broadly indicated in Tables A2(i) and A.2(ii). Rapid employment growth was observed in the public sector and in insurance, finance and business services. The public sector (which includes a sizeable professional component) accounted for a large proportion of the increase in services employment over the period. Major infrastructural investment in areas such as telecommunications and transport has provided highly skilled employment. The development of an appropriate scientific and technological infrastructure, which is recognised as an essential prerequisite for the success of a technology based development strategy, is also a source of highly skilled employment.

In recent years the private services sector has played an increasingly important role in employment creation. While public sector employment policy is likely to remain a key factor in the overall employment growth in the services sector, highly skilled employment is likely to be provided in the private services sector particularly in technology based services in the computer and communications fields and in services with high export potential including education, training, health care, agricultural and financial services.

The role of technology in Irish industrial development is likely to be increased if the strategy, proposed in the White Paper, for development of manufacturing industry and traded services is implemented. The indications are that industrial policy is moving towards a more strategic approach to development, through increased reliance on building up domestic firms in internationally traded goods and services along with greater concentration of foreign investment on specialisation and higher value added sectors. The aim is to provide increased job opportunities in all sectors of the economy by wealth creation in the manufacturing sector. Wealth creation in the manufacturing sector would be achieved by concentration on technology-based firms which employ high proportions of highly educated personnel. In manufacturing, the sub-sectors targeted for development by the IDA include electronics, information technologies, robotics, biotechnology, chemicals and health care. In the international services sector increased emphasis will be placed on areas such as data processing, software and engineering/architectural services. The strategic technologies identified by the National Board for Science and Technology are information technology, engineering, advanced materials and biotechnology.

It is clear from the above that technological change is playing a central role in the restructuring of the Irish economy. Our future economic development, therefore, depends to a large extent on our ability to acquire and develop the technology.

#### **Acquisition and Development of Technology**

The impact of technology depends on the rate of development of the technology and the speed at which the economy accepts it. The new technologies have many diverse applications all of which are at different stages of development and have different rates of diffusion throughout the various sectors of the economy. The rate of transfer and diffusion of technology in a given sector has important manpower implications in terms of the speed of change in the overall level of employment and skills within the sector including the rate of decline of old skills and emergence of new skills. Conversely the level of skills within a firm or

sector and its ability to adjust by retraining or reallocating its staff has implications for its capacity to acquire and develop a technology. Existing skill levels are but one of a number of important factors related to the acquisition and development of technology which must be given serious consideration in developing appropriate policies to maximise the impact of technology on employment and skills. Some of these factors are discussed in Appendix III. The main observations are summarised below.

The mechanism used in transferring technology is a major determinant of the impact of technology on employment and skills. The transfer of technology through the attraction of foreign firms would make a greater contribution to increasing skill levels if these firms could be persuaded to locate highly skilled functions in Ireland. Greater emphasis on technology transfer through licensing and joint ventures coupled with increased transfer of skills from foreign firms would also increase the skill levels in indigenous industry. A number of factors mitigate against the transfer and diffusion of technology and skills including the size of Irish firms and the cost of adopting the technology, the present level of technology and skills and the social attitudes to technology.

These factors are offset to some extent by the assistance of the supporting infrastructure and the urgent need for Irish firms to increase their international competitiveness. In order to maximise the benefits of technology for employment and skills it will be necessary to develop new policies both to stimulate innovation and technology transfer and to facilitate the adoption of technology by the labour market.

#### **Technology and Employment**

Since the mid-sixties there has been a revival of the debate on the relationship between technology and employment. This debate has tended to crop up whenever radical technological change and increasing unemployment have coincided. However it does have special significance at present because of the nature of the technology which is most in question in the short term. Unlike previous technologies, micro electronic or information technology competes with man's "intelligent" functions rather than with his physical strength. The pervasiveness of the technology, its speed of development and decreasing cost are also significantly more impressive than for previous technologies. The speed of diffusion of the technology adds to the international dimensions of the problem.

The relationship between technology and employment is difficult to assess. At constant output the introduction of technology and the

resulting increase in productivity would result in a reduction in employment. However, it must be emphasised that higher productivity growth is likely to improve competitiveness and market share thereby providing increased employment opportunities. Conversely, any reduction in competitiveness due to failure to raise productivity would have serious implications for employment. This hypothesis is supported by the findings of a study of job losses in Irish manufacturing industry (NESC, 1983) which showed that, in the period 1973-78, those sectors with relatively high productivity growth tended to have a relatively good employment record. The NBST study of Innovation in Small Manufacturing Firms (NBST, 1981a) also showed a strong positive correlation between technological innovation and employment growth.

A recent study carried out by the EEC (FAST, 1982) found that in the medium term the rate of growth in output in the more industrialised countries would be insufficient even to compensate for the reduction in employment attributable to improvements in labour productivity.

However, at national level, factors such as the mode of adoption of the technology are of critical importance. It has been suggested (Rothwell and Zegveld, 1981) that in an economy whose industry is characterised to a significant extent by the rapid growth of new firms based on the emergence of new technological opportunities, the relationship between output and employment is positive. For economies based more on mature industries and in which existing large firms exploit the same new technologies, the relationships between output and employment is weaker. Ireland, with its few large traditional industries and its growing emphasis on the establishment of technology based firms, should fall into the former category.

At firm level, there are also many factors which influence the impact of technology on employment. The pace of development of the technology and its mode of adoption within the firm are important factors. The skills, awareness and attitudes of the management and the workforce in the introduction of the technology and their ability to achieve its full utilisation will influence the impact on employment. Other vital factors include the financial situation within the company, the rationale behind the introduction of the technology and the appropriateness of the technology for improving the performance of the company. Managerial skills are particularly important in relation to the introduction of technology. There is a danger that the planning effort going into the introduction and operation of microelectronics will be insufficient and that the need for new training and changes in work organisation will be neglected. In these cases the employment implications will probably be negative.

Technology can impact on a firm through process innovation or product innovation. On the surface it would appear that process innovation results in job displacement while product innovation is responsible for job generation. However, this is not always the case. The impact of process innovation and the resulting increases in productivity on employment depends on the state of development of the technology and the level of demand for the goods produced. The firm which introduces the new process technology is less likely to suffer employment losses than its less innovative competitor. The process innovation within a firm producing consumer goods may be the product innovation of a capital goods firm. New product innovations can also, in special circumstances, result in job losses away from the point of production. One example is the effect of digital watches on the traditional centres of watch production. In general however, the introduction of new goods and services either for the consumer or international market will result in significant job creation both in the industrial and distribution sectors.

The report on the Implications of Microelectronics (NBST, 1981b), provides an overall assessment of how the various sectors are likely to develop during the 1980's and, in particular, how microelectronics will affect productivity and employment. It also gives an indication of historic trends and an assessment of how microelectronics will alter these trends in the decade up to 1990. For each sector the potential for increased productivity resulting from the introduction of microelectronics was examined together with the extent to which the productivity increases can be translated into increased production and bigger market share. The study indicated that productivity gains from expected use of microelectronics would be achieved in a number of sectors including electronics, engineering, food, chemicals, textiles, printing and paper and professional and financial services. Having examined the market potential for increased output, the study forecast employment gains in the period in all of these sectors except printing and paper and textiles. While the recession has had a serious impact on some of the employment predictions, the study still provides useful indicators of the potential impact of technology on employment in the sectors concerned. Drawing on this report and discussions within the relevant sectors, some of the implications of technology for employment are set out below.

#### (i) Electronics

The development and manufacture of the technology itself and the associated goods and services provide a significant source of employment in Ireland. The electronics sector is one of our fastest growing sectors having increased from about 7,800 jobs in 1973 to its present

level of approximately 17,000. The impact of microelectronics on productivity in the sector is likely to be significant. Factors which may influence the pace and direction of the industry in Ireland include:

- the increasing impact of automation on manual tasks (gradual introduction in Ireland because we are mainly involved in batch rather than high volume production);
- the increasing level of integration of components;
- the increasing standardisation of packaging of integrated circuits which makes them suitable for automatic testing.

All these factors tend to decrease the proportion of employees in assembly and testing and reduce the skill level of testing. In view of the high proportion of employees in the Irish electronic sector involved in these tasks and the close links between Irish, US and Japanese electronics firms which will facilitate the transfer of automation, these trends have significant implications for employees in existing firms in this sector. It must be emphasised that the possibility of dramatic changes in assembly and test employment varies with the product being produced, production volumes and product mix being manufactured. The technologies introduced into the electronics industry in general will include those relevant to the engineering industry, such as information processing, computer-aided design (CAD) (essential because of greater integration of components and introduction of more custom built integrated circuits), production monitoring, as well as component insertion and automatic test equipment.

While the growth of the sector in Ireland over the next five years may not be as great as anticipated in the past, it should more than balance the effects of displaced labour. In the long term, however, electronics assembly is likely to become less labour intensive. Emphasis is likely to be placed on the development of the industry in Ireland so that it employs more highly skilled personnel. This could be achieved through both development of strong indigenous firms which can compete on international markets and identification and attraction of overseas firms likely to perform vital competitive functions, including R and D and marketing in Ireland.

#### (ii) Engineering

In certain parts of the engineering sector, the introduction of greater automation may cause some job displacement. In 1982 it was estimated that 150 computer numerical control (CNC) machines were in use in 66 engineering companies in Ireland (Cummings 1982). It is anticipated that, with the easing of the recession, the number of such machines will increase rapidly. Because of their flexibility, CNC machines are appropriate for small batch production, as encountered in Irish industry.

Recent advances in computer technology have also increased their reliability. However, CNC technology provides a unique opportunity for the Irish engineering industry to develop precision engineering manufacturing thus providing opportunities for increased employment.

It is unlikely that robotics will be introduced on a large scale in Ireland in the immediate future because of their cost and the structure of Irish engineering industry. In 1982, only one robot was in operation in a manufacturing environment in Ireland (Brown et al, 1983) and the present level is probably still less than 50. The introduction of more advanced manufacturing systems, such as flexible manufacturing systems (FMS) which link the operation of several machines, is unlikely in Ireland in the near future. On the positive side, employment creation in the robotics industry is possible if the IDA succeed in developing this area as one of their target sectors.

Computer-aided design (CAD) systems can achieve operator productivity of about 3:1 compared with manual drawing. The introduction of CAD in large firms may reduce job opportunities for less experienced draftsmen. This, in turn, is likely to exacerbate the shortage of in-firm experienced draftsmen in the future. It is unlikely that smaller firms in the engineering industry will be able to afford the cost of CAD at current prices.

#### *(iii) Food*

In the food sector, the dairy subsector has strong technological capabilities while the meat, cereal and convenience food subsectors are technologically weak. The major need of the sector is the development of high value products and new markets overseas. While many of the problems of the industry relate to those of the farming community including seasonality of supply etc., a further deterioration in competitiveness and consequent loss of jobs is likely if the industry fails to undertake a major research and development programme. Micro-electronic technology will be useful in both production processes and in management systems. With the recent developments in biotechnology, the range of possible inputs to research, should be extended to include microbiology, biochemistry as well as food and dairy science. The new technologies are likely to lead to new skilled employment opportunities in the sector.

#### *(iv) Services*

In the medium term, the provision of new services particularly in the fields of communications, education and health, made possible by new information technologies, could result in higher employment. Technical

change has major implications for our international trade in services through development of new facilities to process, store and retrieve data and new networks to transfer information. New technologies coupled with Ireland's long tradition and high reputation in areas such as education, training and healthcare offer a basis for development. The IDA international services programme offers significant increases in employment over the next decade, particularly in software and engineering services. New technology and recent legislation have important roles to play in the development of this area. Developments in the public sector, in transport and telecommunications are also likely to increase the potential for high level technological employment.

A major issue in the debate on technology and employment is the possible job displacing effects of technology in certain areas of the growing services sector. It is important to determine whether there are developments in the technology which are liable to cause a dramatic increase in labour productivity in the service sector which will reduce employment growth in the sector. In the banking sector for instance, the impact of microelectronics on employment is likely to be significant. By 1990 full automation of the back office function of the banks will be introduced together with the installation of external automated teller machines in all branches and the rationalisation of single multi-purpose cards. While the industrial relations climate is a major determinant in relation to the changes in employment, it is likely that few new employment opportunities will occur in this sector. There are already signs of a significant reduction in recruitment although this may to some extent be a reaction to the major expansion programme of the 1970's. The NBST study indicated that the major implications of technical change in this area are likely to be a reduction in the number of clerical staff and in upgrading of the skills of those remaining. In public administration, public policy considerations rather than technology are probably the major determinants of changing employment patterns.

A recent Sectoral Development Committee report (SDC, in preparation) on ways of accelerating the application of information technology in the services sector examined changes in the occupational structure of the services sector. It found that changes in office-related occupations over the last two decades have resulted more from changes in the size of subsectors (with different occupational structures) than from shifts in occupations within subsectors, due for example to technical change. The report also examined the results of occupational projections to 1995 which were prepared by the US Bureau of Labour Statistics. These projections do not indicate any dramatic changes in occupations such as a drastic



reduction of clerical jobs due to office automation. The clerical proportion is expected to remain steady, with a slight increase in administrative, professional and technical occupations and significant increases in low-grade "service" occupations. It is worth noting that most of the top ten fastest growing occupations are related to information technologies. While these results cannot be directly applied to the Irish situation, they indicate that fears of job losses due to the introduction of information technologies in the services sector may have been overstated.

While limitations due to the shortage of up-to-date research must be acknowledged, the above discussion suggests that, with the exception of some jobless growth in certain parts of the services sector, there is little evidence of any reduction of employment resulting from technical change. It is also obvious that it would be an over-simplification to describe technical change in itself as a cause of increasing employment or unemployment. Clearly labour-saving technical advances have been systematically introduced in some if not most sectors of the economy. However, even labour saving devices are not necessarily a cause of unemployment as they can result in increased productivity and improved competitiveness which may in turn result in more jobs either in the firm itself or in the economy as a whole. Failure to introduce technology may have more serious consequences in terms of reduced competitiveness and job losses. Technology also presents opportunities for direct job creation through the introduction of new products and even new sectors in the economy. It must be remembered that new technology in itself does not have predetermined consequences. Overall employment implications depend not only on the nature of the technology being introduced but also to a large extent on the economic, social and political context in which the technical change takes place. The mode of adoption of the technology at both national and firm level and the prevailing attitudes to technology, work and employment are also of crucial importance.

### **Technology and Skills**

As in the case of employment, the skill levels and the appropriate mix of skills required will not be determined purely by the technology but also by a combination of managerial, industrial relations, social and political considerations. The impact will depend on the individual firm and the sector concerned and on the mode of adoption of the technology. This section is not intended to give a detailed account of Ireland's future skill requirements. The intention is to give a general flavour of the types of skill changes likely to occur as a result of the introduction of new technology.

While some information relating to specific sectors is available (see Chapter IV), the overall impact of technology on skills is difficult to quantify. Many contradictory theories have been suggested including deskilling, upskilling, polarisation and new skill theories. The consequence of the microprocessor revolution may eventually be more qualitative than quantitative. It is likely that automation will mainly replace repetitive and semi-skilled tasks. Trends also suggest less need for simple manipulative skills in many industries with more need for workers with intellectual skills. In some sectors, technological change will increase the requirement for engineers and highly qualified technicians at the expense of the craft and other intermediate grades. There is likely to be a significant shift from manual to non-manual skills. One major impact of new technology will be a breakdown in the barriers between traditional job titles, traditional activities and skills. Management, professional technologists and craftworkers will need to possess multidisciplinary skills. Mechanical engineers and craftworkers for instance will need to acquire computing, electronics and software skills. The barriers between design and production and between craftworkers and technicians will have to be broken down. The key requirements will be for multidisciplinary skills with increased flexibility and adaptability.

Any assessment of the impact of specific technologies on skills are complicated by variations in the mode of adoption in different countries, sectors and firms. With the introduction of CNC, for instance, the impact on employment depends to a large extent on the mode of adoption particularly in relation to the skill level of the operator rather than on the nature of the technology itself. The Japanese have shown that, for optimum performance, CNC machines should be operated by craftsmen. (Sorge et al, 1983) have shown that, British and West German firms reacting to broadly similar market conditions with similar product strategies, have created very different occupational structures with the introduction of CNC. While there are of course variations from firm to firm, the British tend to separate the programming and operating functions, whereas German firms tend to integrate them. While different approaches will be adopted by different firms in Ireland, the impact on skills will eventually depend on the efforts made to ensure that the software for these CNC machines is developed in Ireland and not imported from overseas.

Drawing on both published material and on the discussions with interested parties mainly in the food, engineering and electronics sectors some major changes in skill requirements resulting from the increasing impact of technology are set out below.

(i) *Managerial, Professional and Marketing*

The introduction of technology is likely to have a positive effect both on the demand for these personnel and on the skills they will require. Increased emphasis would be placed on the following skills:

- strategic management skills, particularly in relation to the introduction of technology;
- management of innovation (including introduction of new technologies);
- total business management skills;
- social and psychological skills relating to job design and organisation of work;
- improved information analysis and analytical/problem solving skills;
- manpower and training planning skills;
- production and marketing skills including market related management skills for managers of small firms;
- international marketing skills including knowledge of different languages, cultures etc.;
- technical skills to improve understanding of new technologies for all management and marketing personnel;
- industrial relations skills to combat the difficulties in introducing new technologies.

The development of technology will facilitate the work of these professionals in a number of ways, through more accessible computing and analysis facilities, and specialised equipment in some cases. The increased availability of personal computers and software in areas such as accounting and general business may present some threats to the future employment at middle management level.

(ii) *Engineers, Scientists and Technicians*

With the increasing emphasis on the development of high technology industries, the requirement for these professions is likely to continue to increase. The availability of an adequate number of these personnel with an appropriate mix of skills is absolutely essential for our future development. More multidisciplinary skills will be required including a knowledge of relevant scientific and technological areas for those involved in management and marketing. Management and professionals in areas such as banking and insurance must also acquire greater technical knowledge. Greater innovative and entrepreneurial skills will also be required.

Highly qualified personnel will be required for research and development and product and process design in all sectors from food to engineer-

ing. These personnel will also need to be familiar with the state of the art in various technologies and with the relevance of these technologies to Ireland and the possibility of their acquisition and development. In food for instance, research scientists in areas including biochemistry and microbiology will be required. Increased emphasis on quality control is also essential. In engineering in-company design expertise is a priority.

All categories of engineers and technicians will be increasingly exposed to electronic developments including electronic process control in chemical and food processing plants, electronic enhancement of products and production techniques in engineering. The role of the technician in Irish industry may change with the increasing introduction of sophisticated automatic test equipment. Some less demanding technician jobs may be deskilled.

In relation to computer manpower there is evidence of a need for a general appreciation together with basic skills across all sectors of the economy. Specific skills will be required in a number of areas including:

- experienced systems analysts and high level software designers;
- specialist software development (e.g. industrial applications);
- microprocessor software development;
- systems software.

(iii) *Craft/Semi-Skilled Workers*

There is likely to be a reduction in demand for traditional craft skills which will be replaced by more flexible, multidisciplinary technician level skills. At very best there is likely to be a convergence of craft and technician skills.

(a) *Printing*: The development of technology in this area has led to some deskilling and reskilling. However the overall impact on employment is difficult to determine because of the considerable restructuring and increased flexibility which has resulted from the introduction of this technology.

(b) *Construction*: The trends towards factory based prefabrication may affect both the skills and the numbers of craftsmen required towards the end of the decade (see Chapter IV).

(c) *Engineering*: Fitters and electricians will need additional training in basic electronics and in electronic diagnostic skills with decreasing emphasis on mechanical and electrical skills. Instrument mechanics will experience increased emphasis on the electronic components of instru-

mentation. Tool makers will experience a shift in skill requirements as CNC machines increase in number and sophistication. The impact of CNC on skills will depend on the mode of adoption of the technology. Multidisciplinary skills including part-programming skills may be required. Skills will be required for machining of new materials (e.g. composites such as GRP (Glass Reinforced Plastic)).

(d) *Motor Mechanics*: Increased need for diagnostic skills, knowledge of electronics and computer appreciation. Increasing technological sophistication likely to reduce service requirements and need for motor mechanics (see Chapter IV).

(e) *Draftsmen*: Significant developments in the relation to CAD, graphics techniques and equipment give rise to a danger of considerable displacement or at least deskilling of junior draftsmen. In the long term this may exacerbate the shortage of high quality in-company design expertise.

(f) *Maintenance*: Need for greater training in diagnostic skills and multiple skills including electronics, hydraulics, pneumatics, electrical and mechanical skills. As sophisticated machinery is produced mainly overseas, the availability of local maintenance is essential.

(g) *Electronic Test and Assembly Operatives*: More automated test and assembly procedures should be more than balanced by the growth in the electronics and computer sectors in Ireland. Some deskilling will occur with a widening gap between personnel involved in routine testing and a small number involved in highly skilled testing.

(iv) *Unskilled*

In many sectors technology will result in a decreasing requirement for unskilled operatives.

(v) *Clerical and Office Workers*

In large offices the range and number of jobs involving work which can be standardised will diminish. Jobs to be increasingly automated include:

- Clerical work in insurance and banking
- General routine and standardised typing.

The jobs displaced are likely to be replaced to some extent by higher skilled information processing jobs with the consequent need for adequate education and training. Recent studies indicate that the number of jobs displaced in this area may be less than previously feared.

## Conclusions and Policy Implications

In this chapter we have shown that the Irish economy is undergoing significant structural change and that technology is one of the important contributors to this change. In relation to the impact of technology on employment and skills, it has been argued that in the manufacturing sector new technology in the form of product and process innovations will be more likely to affect the structure of labour demand than the overall level of demand. Given the present low level of technology in Irish firms and the link between technology, innovation and international competitiveness, technological development is likely to present significant opportunities for wealth and employment creation in many parts of this sector. In the service sector it is maintained that technology will present many employment opportunities and that the risk of job displacement is less dramatic than generally feared. Overestimates of job losses may be due to excessive optimism regarding cost, rate of diffusion and application of the technology coupled with underestimation of compensating employment effects. The key question for the future relates to whether technology can create sufficient wealth and job opportunities to compensate for displacement of labour brought about by automation, mechanisation and other forms of technical change.

The impact of technology on economic growth and employment will therefore depend on the development and implementation of appropriate policies at both macro and micro levels. Most common among such policies are "labour market adjustment policies". These policies are generally aimed at improving the existing labour market by increasing flexibility through education and training, by providing support for groups of workers most affected by technical change and by the creation of an industrial relations environment in which new technologies can be introduced. However, given the present level of technology and skills in Irish industry and the pace at which structural change must take place, it is unlikely that policies which are typically aimed towards facilitating "labour market adjustment" to technological change will be sufficient in themselves to maximise the potential of technology for employment and skill creation. Positive well defined innovation policies will also be required.

Innovation policies should concentrate on the creation of an appropriate infrastructure and climate and on the provision of incentives to increase the level of innovation, research, development and skills and to enhance the transfer and diffusion of technology. While a detailed discussion of these policies is beyond the scope of this report, consideration should be given to the recommendations set out in the Sectoral

Development Committee report on the technological capacity of indigenous Irish industry (SDC, 1985). Policies designed to improve the co-operation between various parts of the science-technology-industrial-education and training systems are also of critical importance. In relation to industrial policy for instance, technology can be used as a positive instrument in job generation by concentration on the selective attraction of the highly skilled functions of foreign industries and on the development of highly skilled export orientated indigenous industry.

The success of these innovation policies is dependent on the provision of adequate information and the creation of an awareness of technology and its impact. Of particular importance is the early recognition of new and changing technologies, the effective assessment of their impact or opportunities for Ireland and as appropriate, their rapid acquisition, adaptation and use. Serious attempts must therefore be made to monitor the development of new technologies, the relevance of these developments for all sectors of the Irish economy and the factors affecting their speed of transfer and diffusion. The NBST with its close links with the expertise in the higher education sector should provide a coordinating focus for this work which would be carried out in association with the IDA and IIRS.

The adoption of new technologies has significant implications for the labour market. While new technologies provide prospects for real economic growth and must therefore be adopted, they have serious side effects in terms of skill obsolescence and displacement of workers. Unless the benefits of new technologies are shared equitably and the level of disruption minimised, it will be difficult to create a climate for the acceptance of new technologies. In order to manage the labour market implications of new technologies three sets of 'adjustment' policies are relevant: (a) policies relating to education and training; (b) policies aimed at creating an acceptance of new technologies, particularly industrial relations policies, and (c) policies aimed at providing adjustment assistance, that is both equitable and efficient, to workers who are disproportionately affected by the introduction of new technologies.

#### *(a) Education and Training Policies*

The successful adoption of new technologies will require significant changes in present education and training policies. The all pervasive nature of the technologies, their rapid development and pace of change have a significant impact on the level and mix of skills and the flexibility of the workforce. New technology is resulting in a breakdown in the barriers between traditional job titles, traditional activities and skills. There is also evidence of skill convergence in areas such as craft and

technician qualifications which were formerly regarded as the separate responsibilities of the education and training sectors. These changes have serious implications for education and training policies in terms of the adaptability, relevance and content of first time education and training at all levels, the need for increased emphasis on continuing education and re-training, and the need for increased co-ordination in the planning and provision of education and training. (Institutional issues relating to the co-ordination of education and training are discussed in Chapter IX).

In view of the pace of change of technology and its implications for occupations and skills, it is essential that the education and training sectors place greater emphasis on the development of adaptable skills to enable students to take advantage of a wide range of job and further education opportunities. Participants should be given a broad appreciation of science and technology and its impact on society. They should also be sufficiently flexible to update their skills many times during their working lives and to accept different career opportunities as they arise. At higher levels, students must be able to acquire the key specialist skills necessary to tackle the increasingly sophisticated problems associated with new technologies. A major dilemma facing the education system is the creation of an appropriate balance between the broad education/training required to produce adaptable skills and the education/training designed to produce highly skilled specialists or experts to cope with rapidly developing technologies.

The relevance of education and training must also be increased. In this regard greater emphasis should be placed on the development of stronger education/industry links. This should include the introduction of industrial/work experience as a precondition for the training of lecturers and teachers. Co-operative education and training should also be encouraged between individual employers, research institutes and higher education institutions. This would be particularly important in relation to numerically smaller skill needs. The relevance of many youth training programmes also needs to be examined. The necessity of introducing a more flexible approach to youth training, including apprenticeship training, has been discussed in Chapter IV as has the importance of targeting training resources to high priority areas such as information technologies, advanced engineering and biotechnology.

Innovation, entrepreneurship, motivation and enterprise development are also regarded as key skills which must be imparted to students at all levels. The provision of these skills will involve changes in teaching methods as well as in course content. The development of these skills

in the third level sector is discussed further in Chapter VI. Greater emphasis must also be placed on the development of skills of analytical thought and problem solving through multidisciplinary team work and project work.

The introduction of technology is also likely to have a significant impact on management training. Of particular importance are strategic management skills relating to the introduction and development of technology. Managers will require technical skills to improve their understanding of new technologies. Management skills related to innovation, production, marketing, industrial relations and manpower planning must also be developed to facilitate the acquisition and development of technology.

The provision of practical continuing education programmes is an urgent priority to enable the workforce to adjust to changes in the balance between different occupations and the changing skills within them. This could be achieved by changes in employers' attitude to educational leave coupled with increased flexibility in the provision of continuing education programmes. In this regard greater emphasis should be placed on the provision of part-time education and distance learning and on the use of educational technologies. These recommendations are discussed further in Chapter VI.

The problem of labour market induced inflation resulting in skill shortages would be offset to some extent by the increased adaptability and mobility of the workforce. However, it will also be essential for the education and training sectors to become more aware of the skill requirements and particularly the key high quality skill requirements of our future workforce. It is therefore necessary that methods of monitoring both the decline of old skills and the emergence of new skills resulting from the introduction of technology be developed. This work would be undertaken by the Manpower Research Unit proposed in Chapter VI. Our education and training institutions and various labour market measures should then be adapted to meet these emerging needs.

The firms themselves also have an important role to play in the identification of future skill needs. Manpower is regarded as a key resource by most firms and the cost of recruitment and the long term investment involved in the employment of skilled staff is significant. In order to take advantage of technological change, it is becoming increasingly important for firms to increase the level of flexibility and skills of their employees. It is essential therefore that they pay greater attention to planning their future skill requirements and to working with the educat-

ion sector to ensure that the requisite skills are developed. Greater emphasis must therefore be placed on corporate manpower planning so that firms can better identify their own future manpower and training requirements and thereby offer a more stable pattern of demand and improved career prospects for present and potential employees.

#### *(b) Climate for Acceptance of New Technologies*

The development of policies aimed at creating an acceptance of new technologies involves, as a first step, a greater understanding of the nature of these technologies and their possible impact on the workforce. It must be recognised that innovation and productivity issues are not only technical but also behavioural and organisational, and the linkage between these elements needs to be understood if we are to improve the productive capability of our society. Improved communications between technologists, social scientists and other social groupings will be required together with fundamental research studies to increase awareness of the social implications of innovation and technological development. The shift in the balance of skills and the availability of vastly improved information flows could, for example, lead to the introduction of new working conditions and new organisational structures with serious implications for management and industrial relations policies. Greater understanding of these issues is essential to develop an acceptance of new technologies.

At firm level the introduction of new technologies would be facilitated by a co-operative approach by management and employees. Employees should be given both a share in the decision and the consequences of the introduction of technology. The provision of adequate information to workers and adequate consultations in planning the manner and pace of technological change is also essential. Both management and employees must understand the rationale behind the introduction of new technology and its implications for the future development of the firm. In particular the relationship between innovation, the competitive position of the firm and the skills and working conditions of the employees must be understood. The introduction of technology with its resulting productivity increases and potential for decentralising work (e.g. employees working from home or from a number of different locations) with increased responsibility and autonomy, should be exploited to facilitate job redesign thus making work more challenging and rewarding. It should also provide opportunities to improve working conditions through the introduction of shorter or more flexible working hours. Greater acceptance of "new technology agreements" in Ireland may help to create an industrial relations climate which is more sympathetic to the acceptance of new technologies.

*(c) Adjustment Assistance for Displaced Workers*

The pace of introduction of new technologies will impact particularly on certain sections of the workforce. Those most at risk include women, since they mainly occupy clerical and typing jobs, and manual and semi-skilled workers. The need for higher intellectual skills and for continuous updating and retraining means that the pressures of technological change will increase the impact on certain sections of the workforce. Those particularly at risk will include both older workers and those who are very young including new entrants to the labour market. The workers in small firms are particularly vulnerable to skill obsolescence; large firms are better able to cope with skill obsolescence by re-training, re-deployment or other internal labour market measures.

These groups of workers, who are identified as being most at risk, are largely catered for by recommendations set out in other sections in this report. Of particular importance in this regard are the revised training arrangements and the change in balance of resources for non-apprenticeship training as recommended in Chapter IV. Workers displaced by technology would also be assisted in finding new employment by the increased access to continuing education and re-training as recommended in Chapter VI. The employment prospects of new entrants to the labour market would be improved by increasing the emphasis placed on science, technology and vocational education at second level (Chapter III) and by the programmes aimed at bridging the experience gap for new graduates (Chapter VI).

The above recommendations should decrease the impact of technical change on the more vulnerable sections of the workforce. However, the situation should be continuously monitored and reviewed to see if additional measures are required to increase the occupational and geographical mobility of these workers. In the long term the impact of technology on employment in areas most at risk might also be alleviated by a more realistic approach by the social partners to the introduction of job sharing etc.

In summary, the impact of technology on economic growth and employment is dependent on the development of a broad range of policies for innovation and labour market adjustment. The innovation policies relate mainly to the development, acquisition and adaptation of new technologies. The introduction of new technologies will involve significant changes in the pattern of employment and skills of the workforce which will require new approaches to education and training, management and labour attitudes, industrial relations and worker participation, working arrangements and a whole range of labour market issues.

## CHAPTER VI

### THIRD LEVEL EDUCATION AND THE PROVISION OF HIGHLY SKILLED MANPOWER

#### INTRODUCTION

We have seen in Chapter V that the present industrial environment is characterised by a growing dependence on the development of high value added technology based industries in the face of increasing international competition and rapid technological change. In this environment, strong innovation policies and well defined labour market policies are regarded as necessary for the achievement of increased productivity, growth and employment. The availability of an appropriate supply of highly skilled manpower with innovative and entrepreneurial skills is seen as a key factor in our future development. Of particular importance in this regard are scientific, technological, management and marketing skills. In view of the direct relationship between the availability of these key skills and the capacity for industrial and technological development, many countries including Ireland are placing increasing emphasis on the role of the higher education sector in ensuring this capacity.

Over the past two decades considerable restructuring has taken place within the higher education sector to meet the growing demand for skilled manpower. The development of these skills and the fostering of technological innovation by the higher education sector is becoming a major objective of educational policy. Overall educational policy still depends on a wide range of social, demographic, cultural, economic as well as scientific, technological and manpower factors. However, given the level of importance of the highly skilled manpower now being produced by the higher education sector, all aspects of educational policy relating to the provision of such manpower must be regarded as an integral part of labour market policy.

In this Chapter, emphasis is placed on issues relating to the education of degree and technician level scientists and technologists. (For the

purpose of this section a narrow definition of scientists and technologists is used. They are persons who have completed a post second level course of at least two years duration in engineering or in agricultural, medical, natural or computer sciences or who have achieved an equivalent standard of competence through experience). This group is particularly important since any inadequacies or shortages would have a detrimental effect on the performance of the economy. The production of these skills also requires long periods of education at considerable expense to the State. It should be noted that the main emphasis in this chapter is on issues related to skilled manpower produced by the higher education sector as distinct from other agencies involved in education and training e.g. ACOT, AFT, BIM etc.

The first section of the chapter deals with the present stock of highly skilled manpower and the likely trends in future demand. The initiatives undertaken over the last two decades to increase participation in higher education, and to meet the growing demand for scientific and technological manpower, are examined, together with a number of issues related to the development of the sector up to the end of the decade. Approximately 20,000 new places are to be provided by 1990 and it is important to examine the allocation of these places particularly in relation to the provision of first time and continuing education for scientists and technologists. The possible impact of financial constraints on the allocation of places between different levels and faculties is also an important consideration, as is the extent to which this could be overcome by increased access to external funding and the use of educational technologies. These alternatives could also increase the relevance and flexibility of the system.

Issues related to the quality and relevance of the highly skilled manpower produced by the system are examined, including the teaching of innovation and entrepreneurship, the link between R & D and training, and the benefits of increased cooperation between higher education institutions and between higher education and industry. Finally, suggestions are made for improved arrangements both for forecasting requirements for skilled manpower and for financing and planning higher education to enable it to meet these requirements.

## **PRESENT STOCK AND FUTURE DEMAND FOR HIGHLY SKILLED MANPOWER**

### **Stock of Highly Skilled Manpower**

Our analysis of the stock of highly skilled manpower is restricted by a scarcity of relevant national and international data. The present analysis is based on the results of the 1971 Census of Population, preliminary

results from the 1981 Census of Population and the OECD and NBST R & D surveys. Emphasis is placed on scientific and technological qualifications and occupations.

### **(a) Scientific and Technological Qualifications**

The total number of persons with S & T qualifications, as estimated from the preliminary results of the 1981 Census of Population, is about 50,000 or 144 per 10,000 population. This represents an increase of 127% on the 1971 level which was almost 22,000 or 73 per 10,000 population.

The breakdown of the S & T qualifications by broad discipline is shown in Table A.12 (because of the difference in definitions used in the 1971 and 1981 Censuses only persons who have completed post leaving certificate science and technology courses of at least two years duration are included). The greatest increases over the period were in science and engineering. The total number of natural scientists increased by 156% while those with degree level qualifications increased by more than 117%. The exact increase is difficult to estimate because of the number of respondents who did not specify their level of qualification. The number of persons with engineering qualifications increased by 214%, while the number with degrees increased by at least 59%.

These data demonstrate not only the significant increases in the numbers of persons with science and engineering qualifications but also the impact of the restructuring of the higher education sector to increase emphasis on the provision of sub-degree awards.

### **(b) Scientific and Technological Occupations**

Rough estimates of the numbers of persons employed as engineers and scientists at graduate and technician levels in 1971 and 1981 are shown in Table A.13. At both graduate and technician levels, the numbers employed as engineers increased significantly faster than the numbers employed as scientists. The number of persons employed as engineers in 1981 was 100% higher than in 1971. The corresponding increase for scientists was 49%.

It is important to distinguish between persons qualified as scientists and engineers and persons employed as scientists and engineers. At degree level, the numbers employed as scientists and engineers was significantly lower than the numbers with science and engineering qualifications. The opposite was true at technician level. It should be noted, however, that technician occupations are taken to include persons classified in the Census of Population as telephone installers and repairers, radio and



television mechanics, draftsmen and other technical and related workers. Prior to the growth of NCEA awards in the second half of the seventies, many of the persons employed in these occupations would not have had third level technician qualifications.

Table A.14 shows the number of scientists and engineers involved in R & D expressed in full-time equivalents (FTE). The data refers to persons employed as researchers and technicians. Persons included in either category could have degree or technician qualifications. However, rough estimations of the number of FTE scientists and engineers working in R & D expressed as a percentage of the total number of persons with S & T qualifications shows a decrease from 12% to 7% between 1971 and 1981. The number of FTE scientists and engineers working as researchers, expressed as a percentage of persons with S & T degree level qualifications, also decreased dramatically between 1971 and 1981 from 8.5% to 7.0%. In this calculation the breakdown of graduate and technician qualifications in medical and related sciences in 1971 is estimated on the basis of the 1981 data. It is difficult to interpret the impact of these reductions without access to more detailed information on the occupations of all persons with S & T qualifications.

#### (c) Employment of Scientists and Technologists

The number of persons with scientific and technological qualifications, at work in 1971 and 1981, classified by industrial group and by main branch in which qualification is held is shown in Table A.15. In 1981 almost 43% were employed in professional services, 18.5% in manufacturing industry and between 7% and 9% in each of the sub-sectors Public Administration and Defence, Building and Construction and Commerce.

The professional services sector included 80% of employed persons with qualifications in medical and related sciences, 58.7% of employed persons with natural science qualifications and 23.6% of employed persons with engineering qualifications. These three groups are mainly employed in hospitals and other medicine, education and consultant engineering respectively. The manufacturing sector included 25.7% of employed persons with engineering qualifications and 21.4% of employed persons with qualifications in the natural sciences. The engineers were mainly employed in the metal, metal products and machinery sub-sector and the scientists in chemical, rubber and plastic products.

The overall employment of persons with S & T qualifications increased by 127% between 1971 and 1981. In the manufacturing sector, S & T

employment increased by 200% mainly due to the dramatic increase observed in the metal, metal products and machinery sub-sector (666%). Only two sub-sectors of manufacturing displayed lower than average growth in S & T employment in the period — food beverages and tobacco and other manufacturing industries. Higher than average increases were observed in building and construction, insurance, finance and business services as well as sub-sectors of professional services including education and consultant engineering.

In Table A.16 the number of persons with scientific and technological qualifications at work is expressed as a percentage of the total number of persons at work in each industrial group. The table shows that the overall percentage for all industrial groups increased from 1.8% to 3.7% between 1971 and 1981. While the gap is narrowing, the proportion of persons with scientific and technological qualifications in public administration and defence is still higher than in the manufacturing sector. However, significant increases were observed in metals, metal products and machinery and in chemical, rubber and plastic products where the percentages increased from 1.3% and 3.7% to 5.8% and 7.1% respectively. Overall the table indicates significant increases in the level of scientific and technological qualifications in almost all sectors of the economy.

#### (d) International Comparisons

There are a number of difficulties associated with international comparisons of S & T manpower statistics. Even where data are available for national use it must be remembered that the national statistical practices, concepts and definitions are not necessarily designed for the specific requirements of international comparisons. Bearing these reservations in mind, the data suggests that, despite the significant educational developments over the last decade, Ireland has a lower level of S & T skills than our international competitors. Three tables have been prepared to demonstrate this point.

In Table A.17 the number of scientists and engineers per 10,000 population is shown for selected countries. While the definitions may not be exactly comparable, the table shows that only Denmark and the Netherlands have levels of scientists and engineers per 10,000 population similar to that in Ireland. All the other countries have between twice and four times the Irish stock of scientists and engineers per 10,000 population. It should also be noted that each of the other countries has between two and eight "technicians" for every scientist or engineer. However, in view of the wide variation in technician qualifications in different countries, it is not possible to make comparisons with Irish technician levels.

Table A.18 gives the output of primary degree graduates in different countries, as a percentage of a particular age cohort as presented in the Report of the Committee of Inquiry into the Engineering Profession in the UK (HMSO, 1980). The table shows that in order to reach comparability with the UK level of output, Irish engineering output expressed as a percentage of the age cohort would have to be doubled. Further increases would be required to reach German and Japanese output levels. Based on current plans for engineering output over the present decade, it is expected that engineering output expressed as a percentage of the relevant age cohort will reach 1.8 by 1990.

The number of R & D personnel per 1000 of workforce in selected OECD countries is shown in Table A.19. The figures, which are expressed in full time equivalents, show that Ireland has among the lowest levels of R & D personnel for the selected countries.

In summary, the data presented in this section shows that the output and stock of scientists and technologists has increased rapidly since the early seventies. The proportion of the workforce with S & T qualifications has also increased substantially in almost all sectors of the economy. However, the stock of scientists and engineers and the numbers involved in R & D are still low by international standards.

#### **Likely Trends in Demand for Third Level Graduates and Technicians**

The purpose of this section is to examine past and current trends in the demand for highly qualified manpower together with indications of the level of future demand. It should be emphasised that such an analysis provides indications only of the minimum requirement from the educational sector. In determining the appropriate level of output from the educational sector other strategic factors such as the need to increase skill levels and the impact of supply on demand would need to be given serious consideration.

Over the past decade there has been a rapid growth in the skill requirements of all sectors of the economy. In the manufacturing sector increased skill requirements have resulted from the attraction of foreign investment in technology-based firms. In addition, demand in the private services sector and some major developments within the public sector, notably telecommunications, have added to the overall need for skilled personnel.

In the late seventies it became apparent that the success of the IDA programmes in attracting technology-based industries was being limited by shortages of skilled manpower, particularly in the engineering area.

As a result the Manpower Consultative Committee (MCC) in association with the HEA and the educational institutions initiated a programme aimed at doubling the output of engineering manpower over the decade up to 1990. It is likely that the recession is having a significant impact on the employment prospects of graduates from this programme. Over 70% of the projected demand for engineers was in IDA grant-aided manufacturing and service industries and 60% of IDA demand related to grant-aided electronics industries. However, new job approvals and the rate of conversion of job approvals to actual jobs in these industries are now significantly lower than in the late 1970s. The international services programme is also encountering severe difficulties due to the recession. These setbacks together with the constraints on recruitment in the public sector are tending to ensure that the overall demand is less than was anticipated.

Table A.20 provides information on the pattern of graduate employment in the January following graduation for the years 1976 to 1983. Data for 1984 is also included in Table A.20 and subsequent tables. However, since this data relates to the April following graduation and is, therefore, not compatible with previous years it is ignored in the following discussion. Table A.20 shows that the proportion of graduates seeking employment in the January following their graduation has increased significantly since 1979, mainly because of the depth of the recession. However, in seeking indicators of the employment potential of graduates, it is necessary to examine the pattern of graduate employment over a much longer period than 3 or 4 years. Table A.20 for example also shows that the overall employment situation for primary degree graduates is better at present than in the mid 1970's (Careers and Appointments Services 1977-1982, HEA 1983a-1985a). Despite the increasing numbers graduating each year, the proportion of graduates obtaining employment by the January following their year of graduation was 35.8% in 1983 compared with 29.8% in 1976 with a maximum of 39.2% being achieved in 1979. The actual numbers finding employment has increased by almost 50% in the period. The proportion of graduates finding employment overseas decreased to 6.5% in 1983 from 8.6% in 1976. In the same period, the proportion doing research work and further academic study increased from 12.1% to 15.3%, while the proportion doing other vocational and professional training showed a major decline from 42.6% to 32.0%.

Caution must be exercised in interpreting these patterns of employment figures. The total numbers of graduates finding employment has increased significantly since the mid-seventies, when expressed as a percentage of overall graduate output. However, only 81.5% of those who offered themselves for employment in 1983 actually found

employment compared with 86% in 1976. The report of the HEA also stresses that the actual replies to the 1983 survey indicated that a significant number of graduates were undertaking work below the level they might have anticipated. Approximately 8.5% of those classified as employed in Ireland were in part-time employment while 3.2% were on work experience schemes. (The corresponding figures for earlier years are not available). At the same time, it must be noted that in 1983 only 47.3% chose the alternative career path of research or further education or vocational training compared with 54.7% in 1976. The extent to which those choosing the alternative career path are influenced by limited employment opportunities is impossible to estimate. Account must also be taken of the fact that certain types of graduates have specific skills and pre-defined career paths. Some of these graduates may wait for the correct job opportunity to arise while others may decide to return to research or further study or accept a less than ideal job opportunity as a short term measure while they wait for a more suitable opportunity to arise.

These overall pattern of employment figures also mask the difference in the employment prospects of graduates from different faculties and different fields. While a detailed analysis of all graduates or even all scientific and technological graduates is not within the scope of this chapter, the pattern of employment statistics for engineering and science graduates shown in parts (b) and (c) of Table A.20 serve to illustrate the variation in success rates for graduates seeking employment during the recession. The number of engineers finding employment is growing at a slower rate than the number graduating. However, the number of engineering graduates finding employment in Ireland in 1983 was higher than in any previous year with the exception of 1979. While demand for electronic and mechanical engineers has increased, demand for civil engineers had dropped dramatically, partly due to the public service embargo but also because of the effect of the recession on the construction industry. The number of science graduates going directly into employment remains low despite increasing numbers of computer science graduates who find it relatively easy to obtain employment. The pattern of employment of science graduates varies with the field of study and with the level of degree awarded. Clearly there is an urgent need for a detailed investigation of the role and utilisation of science graduates in Ireland's future economic and social development. This is particularly important in view of the increasing emphasis on technology and R & D in Irish industry.

It is important to note that of those gaining employment in recent years, the proportion being employed in the private sector, particularly

the industrial sector, has increased steadily while the proportion employed in the public sector has declined. Table A.21 shows the number of new graduates (primary and higher degrees) in selected fields, finding employment in industry, expressed as a percentage of the total numbers finding employment in Ireland. The number of graduates finding work in industry was significantly higher in 1983 than in any previous year. The total number of new graduates and technicians finding employment in industry in 1982 and 1983 is shown in Table A.22. The number of new graduates and technicians employed in Irish industry was 23% higher in 1983 than in 1982. The corresponding increases for selected disciplines were 50%, 20% and 23% for Engineering, Science and Business Studies respectively.

One major issue regarding the employment prospects of graduates is the intake to the public sector (Sexton 1983). While the immediate intake to all areas of the public sector is constrained by the Government embargo on recruitment, the situation in relation to second level teachers is particularly critical. Despite the fact that demographic factors indicate that the requirement for second level teachers in the 80's will be only 25% of that in the 70's there has been little reduction in intake to the Higher Diploma in Education course. The Programme for Action in Education (Department of Education, 1984) has highlighted this problem and stated that the Department intends to control the entry levels to the Higher Diploma. In implementing this proposal, consideration will have to be given to ways of ensuring the provision of an adequate supply of good mathematics and science teachers. Overall, however, this proposal is likely to have serious implications for the future of many science, arts and commerce graduates, particularly those acquiring general degrees, since a large proportion of these graduates traditionally take the Higher Diploma in Education.

Other major problems affecting the employment of S & T graduates are the level of technology and perceptions of existing industry and the inexperience of graduates. The extent to which it is possible to provide incentives to stimulate demand, bridge the graduate "experience gap", and meet Irish industries' expressed requirements, is an important policy issue, which warrants serious consideration. Many Irish indigenous firms with low levels of technology seem to have serious reservations regarding highly qualified manpower. While the situation improved in 1983, the pattern of employment statistics for recent years shows that relatively few science and engineering graduates achieving their primary degrees in the universities find their first employment in industry.

Measures such as AnCO courses, the YEA/NBST/IIRS Young Scientists and Technologists Employment Programme and Market Place organised by the YEA and IGC may help to alleviate this problem in the short term. Over 65% of graduates and holders of diplomas employed under the YEA/NBST/IIRS programme in 1983 were retained by their employer on completion of their contract under the programme. However, it is vital that Irish employers both in industry and the public sector, make more deliberate provision for the recruitment, immediate training and continuous updating of these personnel.

In 1983 over 12% of primary degree engineering graduates found employment overseas and of these over 71% obtained employment in industry. The percentage finding employment overseas increased in 1984 to almost 27%. While the change in survey date may have contributed to this increase, the present emigration level has probably surpassed even the high levels of the mid-seventies. However, it must be recognised that overseas employment provides a valuable source of experience for young graduates, provided they intend to return. A study carried out by Leahy in the early 1970's has shown that the majority of mechanical engineers do return to take up employment in Ireland. While this study related only to one area of expertise, it indicates that experience gained by graduates who go abroad after graduation can provide a significant economic return to the State. Greater emphasis could be placed on the attraction of Irish graduates from overseas to work in new enterprises being established in Ireland. The spin off employment created by these graduates would help to bridge the experience gap for the growing number of qualified personnel graduating each year. However, monitoring and control will be required to ensure that a high proportion of these young people who emigrate after graduation do return to Ireland.

Given the lack of data it is difficult to draw any conclusions on the future demand for technician manpower. The indications are that technicians are making a significant contribution to economic development. Some interesting features of the pattern of employment of technicians from 1979 to 1984 are shown in Tables A.23 and A.24. From Table A.23 it would appear that the recession is having a greater impact on technician employment prospects than graduate employment prospects. Table A.24 shows a steady decline in the absolute numbers of technicians obtaining full-time employment between 1981 and 1983. Despite a doubling of technician output between 1979 and 1983, the numbers going into full-time employment has only increased marginally. The percentage classified as seeking employment has trebled in the period. The data for 1984 shows a change in this trend with an increase

in the numbers obtaining full-time employment and a significant decrease in the numbers seeking employment. A special feature of the pattern of employment of technicians is the numbers employed in their region of origin which was 59.9% in 1983.

The output of technician manpower is likely to increase substantially over the next decade arising from expansions in existing colleges and the plans for four new Regional Technical Colleges in the Dublin area. Clearly a detailed examination of issues related to the future demand for technicians is required. The technician possesses skills, aptitudes and training which are fundamentally different from those of the professional or the craftsman. Because of their potential contribution to Ireland's future industrial development, it is important that issues relating to their provision and utilisation be examined carefully.

It is clear from the above that it is difficult to make an accurate interpretation of pattern of employment statistics. However, it can definitely be said that the absolute number of graduates entering employment in 1983 was significantly higher, particularly in the private sector, than in 1976. Despite the recession in recent years, the numbers finding employment has continued to increase, thereby increasing the potential skill level of the workforce. In relation to future trends there are a number of factors which indicate that the demand and the need for highly skilled manpower will be accentuated in Ireland. In Chapter V we outlined Ireland's future industrial strategy as described in the recent White Paper on Industrial Policy. The availability of an appropriate supply of highly skilled personnel in the targeted sectors will be a key factor in the successful implementation of a number of elements of the strategy including:

- attraction of foreign industries willing to perform key business functions in Ireland and thereby likely to employ relatively high proportions of highly qualified manpower;
- development of new technology based indigenous enterprise; strengthening of existing enterprise in the face of growing international competition;
- the development of a strong supporting technological infrastructure including the third level sector.

Increased development of management, marketing, design, research and development skills is recognised as an essential prerequisite for the stability and expansion of foreign-owned industry and the development of indigenous industry. This is particularly the case where emphasis is being placed on the development of total businesses. These

activities have a disproportionate demand for highly skilled manpower with innovative and entrepreneurial skills. While technology-based foreign industries in Ireland employ considerable technical and production skills, their impressive performance in terms of output and exports has been based to a large extent on marketing and research and development carried out in the parent companies. The marketing and technical dependence of foreign industry, together with the low level of related skills in indigenous industry, is resulting in a declining level of international competitiveness. Table A.25 shows, for example, the skill profiles of the Irish and United States electronics industries (O'Brien, 1985). The main reason for the higher skill profile in the United States is the different levels of R & D carried out in the two countries. Responsibility for very highly skilled strategic R & D has been retained by the United States parent companies while the Irish subsidiaries concentrate on product adaptation for the European market in product groups such as instruments, industrial control equipment and telecommunications. The successful implementation of the Government's proposed industrial strategy would help to redress this situation.

It is also argued that if Irish industry is to remain competitive, our level of scientific and technological manpower must move towards that of the more industrialised countries. In Tables A.17, A.18 and A.19 we have shown that Ireland's present stock and educational output of S & T manpower is low by international standards. Some doubt exists in relation to the accuracy and relevance of these statistics owing to differences in definition and economic structures. However, there is strong evidence to suggest that it will be necessary to increase our skill levels if we are to be successful in international competition. Allowance must also be made for scientists and technologists working in non-technical occupations. Given the pervasive nature of the new technologies, it is evident that in the future increasing numbers of people with technological backgrounds will be employed in non-specialist occupations in all sectors of the economy. The growing need for S & T specialists in the international services area is also a major source of demand particularly in areas involving software and computer skills.

Another source of demand for highly qualified manpower is the third level education sector itself. The difficulties experienced by this sector in recruiting sufficient scientific and technological staff of adequate quality were exacerbated by the general skill shortages in the late 1970's and the embargos on recruitment which followed in the early 1980's. Under the present conditions of increasing student enrolment the need for recruitment and updating of such personnel is likely to increase. The quality of academic staff is a major factor in determining

the relevance and quality of the highly skilled manpower produced by the third level sector. Issues related to the development of expertise and experience of academic staff are discussed in a later section of this Chapter.

In summary the data presented in this section shows that the overall demand for highly skilled manpower has increased over the last decade despite the recession. The employment prospects of certain types of engineers and scientists have improved dramatically while others are experiencing difficulties. The indications are that overall demand for highly qualified manpower is likely to increase, particularly in certain engineering and science fields at both graduate and technician levels. There is a need to examine issues related to the future employment potential of general science graduates, technicians and civil engineers. It is important however, for our future industrial and economic development, that steps be taken to maintain the overall growth of highly skilled manpower at a level commensurate with the targets embodied in government policy. In this regard serious consideration should be given to bringing the stock of highly skilled manpower in Ireland more into line with that of our international competitors.

This section has dealt mainly with the demand for scientists and technologists. While expertise in other areas such as the humanities and social sciences is important in its own right, it is also essential in seeking an understanding of the impact of rapid technological development on our society. Multidisciplinary expertise covering both science/technology and the humanities and social sciences is therefore an important requirement for our future economic, social and technological development.

#### **RECENT INITIATIVES AND FUTURE PROSPECTS FOR EDUCATION OF HIGHLY SKILLED MANPOWER Restructuring of Higher Education 1965-1983**

Since the publication of the reports of the Commission on Higher Education (Stationery Office, 1967) and the Steering Committee on Technical Education (Stationery Office, 1969) in the mid-sixties, successive governments have undertaken a number of initiatives aimed at increasing participation rates in Higher Education and at increasing the emphasis on Science and Technology. These initiatives are outlined in Appendix IV. Major developments in the non-university sector included the establishment and subsequent expansion of the Regional Technical Colleges and the National Institutes for Higher Education. Initiatives in the University Sector included the expansion of facilities for Science at UCD, for Dairy Science at UCC, for Agricultural Science at UCD and,

following the intervention of the Manpower Consultative Committee (MCC) the expansion of facilities for Engineering at UCG and TCD.

Since the mid 1960s the establishment of new types of teaching institutions and the introduction of new programmes has resulted in considerable growth, restructuring and changing emphasis within the third level sector. Between 1965/66 and 1982/83 the number of students in higher education increased by over 140% from its initial level of just under 21,000 to almost 50,000. This expansion mainly reflects the pressure of social demand for higher education from the vastly increased post primary sector which has grown from approximately 143,000 pupils in 1965/66 to over 300,000 pupils in 1981/82.

The most striking feature of Ireland's changing higher education sector is the increased enrolment in non-university colleges. The additional 29,000 places provided between 1965 and 1982 have been, to a large extent, met by 10,000 places in the University colleges, 14,500 places in the Colleges of Technology and the Regional Technical Colleges and over 3,200 places in the National Institutes for Higher Education (see Table A.26). Given the fact that the courses provided by the universities have moved increasingly in the direction of scientific and technological education, the change in emphasis in terms of throughput is even greater than these figures suggest. The growing emphasis on science and technology inherent in this restructuring is further demonstrated by the growth in NCEA awards (Table A.27) and by the fact that in 1980, 6,672 students were admitted to colleges in the technological sector compared with 5513 entrants to the university sector (Clancy, 1982). Table A.28 shows that even within the university sector the main growth areas have been in commerce/business studies, and science and engineering (Hayden, 1983a).

Another feature of the recent expansion of the higher education sector which has serious implications for manpower planning is the increasing female participation. In 1983/84 female students represented over 45% of all third level students compared with 34% in 1970/71. This upward trend is continuing with 46% of new entrants in 1980/81 being female. In 1983/84 full-time students attending teacher training colleges were predominantly female (76%) while female students represented 48% of university students, 38% of students attending the National Institutes for Higher Education and Regional Technical Colleges and 37% of students attending the Vocational Technical Colleges (HEA, 1984b). The Clancy study shows that few female students take engineering while females predominate in the humanities, art and design and education. While one of the objectives of the RTCs was to increase

female participation in technology, the study of first destination of award recipients in 1984 shows that, of the 1,122 students receiving NCEA awards in engineering, only 98 were female (HEA, 1985a).

Major increases in female participation have been observed in certain fields of study within the HEA colleges. (Hayden 1983a) has shown that female participation is moving rapidly towards equality in law, medicine and dentistry. In science the number of students is split equally between male and female. Major imbalances still exist in engineering and in agricultural and dairy science.

The overall increase in participation of female students in third level education will add to the uncertainties involved in manpower planning. However, relatively low participation in areas such as engineering, where job opportunities are likely to increase, coupled with their high participation in arts and general science where job opportunities may be constrained by public sector cuts etc. will probably have serious implications both for their future careers and for the future availability of highly skilled manpower.

#### **Future Prospects for Education of Highly Skilled Manpower**

In this section, we examine the prospects for development of first-time and continuing education of highly skilled manpower. Consideration is also given to the impact of financial constraints and use of alternative sources of funding and methods of provision of higher education.

##### **(a) Development of First-time Higher Education**

Commenting on the future development of higher education in the Dail in March 1984, the Minister for Education stated that an additional 20,000 places would be provided by 1990. The number of students enrolling in Higher Education would then be 30% of the relevant age cohort compared with 12% in 1968 and 20% in 1980. It is important to consider in what areas and in what types of institutions these additional places might be provided. In her Dail speech, the Minister for Education indicated that 7,600 of the 20,000 additional places would be in the NIHE's (3,400 places), the DIT colleges (1,200 places) and the new RTCs in the Dublin area (3,000 places). It is likely that a large proportion of the remaining 12,400 places will also be in the science, engineering and business areas. In identifying priorities for capital expenditure the Programme for Action in Education (Department of Education, 1984) stated that "priority in financial expenditure will be given to those academic courses, which are geared to developments in modern society and thus ensure that our graduates are kept abreast of rapidly changing technology". Taking account of the existing distribution



of places and planned new buildings, Hayden (1984) has estimated the distribution of places in 1990/91 (Table A.29). He has predicted significant increases in the percentage enrolments in science, technology and commerce with corresponding decreases in humanities, education, medical sciences, and other fields.

One area of higher education for which fairly detailed plans exist is that of degree level engineering. As mentioned above a ten year plan for engineering output was prepared as a result of initiatives proposed by the MCC. In 1978 the committee identified skill shortages in a number of key occupations which were crucial to the successful implementation of the IDA industrial development programme. Working closely with the MCC, the Higher Education Authority and the third level colleges developed a programme to overcome these shortages which included the expansion of output from existing third level courses, the introduction of new full length degree and technician courses, and the provision of short conversion courses to meet immediate demand. This educational package was supplemented by a programme aimed at attracting skilled people from abroad, particularly returning emigrants. The impact of the MCC initiatives on graduate engineering output from the third level colleges up to 1990 is shown in Table A.30 which gives the projected output of graduate engineers as prepared by the Higher Education Authority in 1983. Despite increasing constraints on public expenditure, most of the development programme has continued on schedule.

#### **(b) Continuing Professional Education**

Besides the additional 20,000 places in first time education to be provided by 1990, there is also likely to be increased demand for continuing professional education and retraining.

Continuing education encompasses long life liberal education in academic study and creative activities as well as updating of technical and professional skills and training for new occupations and careers. The rapid growth of knowledge and the increasing pace of technological change has been a major contributor to increasing the urgency for a coordinated programme of continuing education. The more liberal, less career directed aspects, will become more important in the long term because of increased availability of course time and the need for greater awareness of science and technology. Increased emphasis on the career aspects will result from changes in the balance between different occupations and the changing skills within them. It is reasonable to assume that the knowledge of an engineer or scientist in the future will need to be constantly updated. He or she can expect that their basic

education will become obsolete not just once but a number of times over the working life. Our future economic development depends on the capacity of people to understand the potential of new technologies, new products and processes and to incorporate them in applications as soon as they become economically viable. It must be remembered that new entrants annually account for only 3% of the workforce. The existing 97% must be kept up to date with new developments. The resulting need for increasing levels of updating and retraining has important implications for both life long continuing education, through closer integration of education with work and for initial education in relation to the production of more adaptable personnel. It also has implications for the length of first time education and training at all levels.

In the past continuing education has developed in many centres and institutes in the absence of any coordinated programme. Given the growing need for such courses it is important that studies be initiated to determine the level and mix of courses required and the appropriate institutions to provide them. When estimating the facilities available for implementation of the continuing education programme consideration should be given to the possibilities presented by increased utilisation of existing facilities, increased cooperation between institutions, and increased flexibility in funding and deployment of resources. Universities in the US have been particularly successful, both in the US and other international markets, in selling continuing education packages based on the best expertise and facilities available from a number of colleges. The National Working Party of Deans of Science, Engineering and Commerce, which was established under the auspices of the NBST in 1980, is at present examining ways of increasing co-operation within the Irish higher education sector in the provision of continuing professional education programmes and in their promotion both at home and overseas. Boundaries between different levels of education and training should not act as obstacles in assigning facilities for continuing education and retraining programmes. Given the vocational nature of many of the required courses, distinctions between the funding arrangements for education and training may have to be re-evaluated.

The availability of paid educational leave has serious implications for the development of continuing education and retraining. The ratification of the ILO Convention 140 on paid education leave, which is at present under consideration by the government would help to increase participation in continuing education and retraining courses.



The development of continuing education and retraining should be closely related to increasing the provision of part-time and second chance education. Greater provision in these areas coupled with greater institutional flexibility to facilitate student transfer and course accreditation would greatly increase access to education and reduce social inequalities. In 1983/84 only 12% of students in the HEA-designated institutions were studying on a part-time basis (HEA, 1984b). While this represented an increase of almost 50% on the 1976/77 figure, it is still very low by international standards. With the exception of the DIT colleges which cater for over 7,000 part-time third level students, the situation in the non-university colleges is even more critical. The number of part-time students expressed as a percentage of all students who received NCEA awards in 1982 was only 4.6% (NCEA, 1983). It is hoped that NCEA initiatives in introducing NCEA awards in continuing education, single subject certification and part-time professional, technical and vocational courses will increase the level of participation of part-time students in third level education.

### **(c) Impact of Financial Constraints on Production of Higher Skilled Manpower**

In the past ten years expenditure on higher education has more than doubled in real terms while the number of students has increased by only 66%. However, it must be remembered that the courses provided have also changed with increasing emphasis being placed on disciplines such as science and engineering which require higher staff student ratios and more expensive materials and facilities. Given the present economic situation and the growing pressure for restraint on higher education expenditure, this is not surprising. These constraints may have important implications for the quality as well as the type and level of graduates produced.

A reduction in graduate quality may result from the effect of expenditure constraints on the balance between pay and non-pay expenditure. Between 1978 and 1982 pay pressures reduced the non-pay element of current expenditure in the five university colleges from 39% to 25%. This reduction has a significant impact on the purchase of equipment and facilities when changes in VAT and inflation are taken into account. The situation becomes more serious when one considers that, in this period, there was an increase of 19% in the number of students taking laboratory subjects compared with the overall increase of 12% in full-time student numbers.

In view of the rapid expansion of higher education because of increased social and manpower demand, there is a danger that quality may suffer

at the expense of quantity. Cutbacks in non-pay expenditure are particularly serious for the more traditional departments. In the case of new institutions, equipment and other facilities can be purchased under the capital allocation. Older colleges must purchase equipment out of the small equipment sub-head or out of the current allocation. The present state of equipment in many of the science and engineering departments in these colleges is likely to act as a constraint on their attempts to attract and retain good students for research. A failure to attract good students and to give them access to modern equipment will have serious implications for the future quality of skilled manpower. Other factors which may affect the quality of student output and which are exacerbated by the cuts in non-pay expenditure include retraining/updating of lecturing and emphasis on research. It is important to ensure that a reasonable balance is achieved between expenditure related to expansion (e.g. capital expenditure on new buildings etc) and expenditure on consolidation and improvement of quality of output (e.g. staff development, equipment, research etc.).

The Action Programme for Education suggested a number of cost saving measures including increased rationalisation, increased utilisation of building and facilities, and reduction in contact hours in the RTCs. Consideration is also being given to further fee increases (fees have increased from 12% to over 20% of total income of HEA-designated institutions since 1979) and the introduction of a student loan system. These measures are not likely to have a significant impact given the magnitude of the expansion required.

Possible sources of funding for higher education are the Irish industrial, financial and commercial sectors. While the yield from these sources is unlikely to be significant in relation to the total budget for higher education, it could ease the financial problems of individual departments or colleges while developing their links with outside agencies. In other countries, particularly the US, these sectors make significant direct and indirect contributions to the educational sector. In recent years Irish third level colleges have received funds from these sources in the form of sponsored chairs, joint research, academic consultancy etc. Given the benefits which can accrue to both sides, the potential for such funding is considerable. Closer cooperation with other state agencies could also lead to reduced expenditure. AnCO in particular has a growing stock of highly sophisticated equipment and facilities. The use of these facilities and equipment by the third level sector would make a significant contribution to the quality of some third level courses while reducing the need for new expenditures. Other possible methods of reducing expenditure include distance learning, educational broadcasting and the many developments in the area of educational technologies.

**(d) Alternative Methods for Provision of Higher Education for Skilled Manpower**

The growth in demand for first time and continuing education coupled with the increasing cost of educational plant and facilities has focussed attention on the need for increased flexibility in the provision of education. Consideration should be given to increased use of education technologies and other methods of increasing access to higher education. New electronic and telecommunications developments will expand the possibilities of access to education. The success of the recent Distance Learning initiative launched by NIHE Dublin in association with RTE may possibly lead to increased development of educational broadcasting in Ireland. Greater emphasis should also be placed on the provision of other forms of distance education such as link-colleges and out-centres as proposed in the Action Programme for Education. The establishment by the Minister for Education of a Distance Education Council should facilitate many of these developments.

The availability of satellite broadcasting as well as equipment such as computers, video tapes/cassettes, video discs, audio tape cassettes etc. is likely to have a significant influence on the provision of education in the future. These technologies will enable participants to interact with educational programmes in a self-paced instructional mode. In the case of computer based learning the lecturer is able to determine both the needs of the learner and the progress being made as he goes through a particular programme. This will become increasingly important, where the pace of changes of technology necessitates careful monitoring of staff development.

Much could be learned by examining the situation in other countries including Norway, Sweden, United States and United Kingdom. A recent trend in the United States is for groups of universities and private companies to get together to develop continuing educational and retraining packages using their joint expertise and facilities. Some of these packages are now being marketed in Europe. Unless Irish institutions cooperate to produce similar packages they may find it difficult to remain competitive in the future. AnCO is testing a number of the most modern educational technologies at its centre at Loughlins-town including the new IVIS system being developed by DEC. Their agreement with DEC includes provision for training of AnCO staff in the development of educational packages for the IVIS system. The development of such packages would be enhanced if close cooperation could be achieved between AnCO and the higher education sector using the best expertise available.

It is evident that serious consideration must be given to more extensive use of the so called "Information Technologies", telecommunications, electronics and computers in the future expansion of first time and continuing education and training programmes. In the long term these technologies will enable the maximum number of people to avail of the maximum information content at the lowest cost.

In this section we have seen that, with the increasing provision of higher education, decisions need to be taken on the balance between the types and levels of courses to be provided. It is vital for our future industrial and economic development, that continuing priority be given to the provision of an adequate supply of scientists and technologists. The emphasis on sub-degree programmes, which has been evident since the early seventies, is likely to be enhanced by the availability of funding from the European Social Fund for one and two year courses. However, it is important that decisions regarding the future development and composition of higher education be taken in the context of an overall policy for higher education taking account of manpower and social needs as well as financial, regional, institutional and technological considerations.

**INCREASING THE RELEVANCE AND QUALITY OF HIGHLY SKILLED MANPOWER**

The pace of technological and industrial development is placing increasing demands on the higher education sector in relation to the range of skills of the graduates it produces. Management training, for example, must emphasise skills in the management of innovation, the introduction of technology and the elimination of vertical and horizontal barriers to communications. Scientists and technologists must have innovative and entrepreneurial skills and must be competent in the key strategic technologies and their application. In the development of these skills increasing emphasis must be placed on issues such as the teaching of innovation and entrepreneurship and the level of support for research and development within the higher education sector. Given the level of sophistication of modern technologies increased cooperation between educational institutions and between education and industry will also be required in the development of the required skills.

**Education for Innovation and Entrepreneurship**

We have seen in Chapter V that the future development of Ireland's industrial policy will employ a greater need for skills appropriate for "total business" and indigenous enterprise. The need to concentrate on the conscious planning for the acquisition and adoption of key technologies for indigenous manufacturing industry in areas where we

can achieve the competitive advantage is also obvious. These policies have implications for the educational sector in relation to the education of scientists and technologists with innovative and entrepreneurial skills.

There are those who believe that entrepreneurship and innovation cannot be taught. In North America, however, over 160 graduate schools are at present running courses in entrepreneurship. In a recent report, the National Working Party of Deans (NBST, 1982a) suggested a number of changes in science, engineering and business curricula and in teaching methods aimed at increasing entrepreneurial and innovative skills. They recommended that curriculum development take greater cognisance of industrial needs and that science courses in particular should emphasise the industrial applications of the discipline. They suggested that topics such as patents, licensing, innovation and entrepreneurship should be included in all science, engineering and business curricula. In relation to teaching methods, emphasis was placed on the need for creative project work particularly in multidisciplinary groups to break down boundaries between disciplines such as engineering, science, marketing and business studies.

In Ireland many third level engineering programmes consist of necessity of basic engineering technology courses. A good grounding in basic sciences is often regarded as the only objective of science degree programmes. While it may be difficult to increase the subject matter in already crowded degree programmes, every effort must be made to implement the Deans' recommendations. Two schemes have been introduced to encourage the development of ideas with commercial potential, one by the IDA (Student Enterprise Award), and the other by the NBST in association with the YEA and IDA (Student Project Development Programme). It is hoped that these schemes will help to develop the innovative and entrepreneurial skills of third level students by providing financial support and awards for the development of their commercial ideas. It is imperative that graduates possess not only scientific, technological and business skills, but also the motivation and innovative and entrepreneurial skills necessary for success in the market place.

### **Research and Development**

Research and development must be closely linked to higher education to ensure the quality of education of highly skilled manpower. Research and development in the higher education sector increases the ability of lecturers to follow progress in their speciality, provides an appropriate atmosphere for the teaching process and provides valuable research experience for the graduates involved.

A survey carried out in 1981 showed that expenditure on R&D in the Higher Education sector was IR£13.4m. This represented a real increase of 11.7% on the 1975 expenditure. Table A.31 shows that in 1981 Ireland had the lowest expenditure on higher education R&D relative to GDP and the lowest number of higher education R&D manpower per 10,000 labour force of the more developed OECD countries (NBST, 1982b).

The low level of R&D in the higher education sector has serious implications for the production of highly qualified manpower. While the value of basic research has been questioned in recent times, it is maintained that lecturers are better teachers when they are involved in research activities, whether the research is basic or applied. Through research they keep up to date and thereby increase the relevance of the information which they are passing on to the students. In determining the relevance of basic research to training it must also be remembered that there is a very close link between basic research and applied research and experimental development. It is only a short time since research in electronics and biotechnology was more basic than applied. These areas are now regarded as priority areas for industrial development.

Research is also regarded as a valuable training tool in itself, in the production of competent researchers for the public and private sectors. Involvement in creative project work involving the solution of very difficult conceptual problems is regarded as ideal for the development of innovative and entrepreneurial skills.

There is also a growing awareness of the value of joint research programmes with industry. Such programmes help to increase the relevance of third level courses and the employment potential of graduates. The industry contribution to research funding in the higher education sector, while still at a low level, has increased significantly in recent years. Between 1975 and 1981 it increased from 2.9% to 7.1%. The main contribution was in engineering where the business sector contributed 11% of all research funds. Schemes involving joint industry/academic supervision of post graduate research and development projects have had significant success in the United Kingdom in increasing the employment potential of graduates. In the teaching company scheme, for example, over 70% of graduates participating were offered permanent employment on completion of their projects. Similar results have been achieved with the YEA/NBST/IIRS Young Scientists and Technologists employment scheme which places graduates and diplomats in development orientated work in small firms in Ireland.

### **Cooperation in Education**

The increasing sophistication of technologies both in terms of equipment and understanding suggests that the level of Higher Education facilities and expertise required to meet national needs can only be achieved by increased cooperation. Two forms of cooperation are involved here: (a) cooperation between different educational institutions and (b) cooperation between education and industry.

#### **(a) Cooperation Between Higher Education Institutions**

Limited cooperation exists between different types of third level institutions in relation to research and joint degree programmes (eg. DIT/TCD, Galway RTC/UCG etc.) Formal links have also been established between Irish colleges and centres of excellence abroad. This cooperation involves exchange of staff and students and joint research and educational programmes. Independent initiatives such as the Smurfit sponsored UCD engineering relationships with University of Missouri, Rowla, and the relationships between Sligo Regional Technical College and Lancaster Polytechnic are indicative of initiatives that can be introduced.

In relation to training and rationalisation of resources "vertical integration" of the Irish Higher Education sector is particularly important. This involves the transfer of students between different types of institutions and particularly between the RTCs and the National Institutes for Higher Education. It is estimated that in 1982, only 2% of NCEA award recipients were continuing their studies in a National Institute for Higher Education. In NIHE Limerick 12% of students are transfers. The percentage is considerably lower at NIHE Dublin. Students approved for transfer must have achieved a high level of performance in their certificate or diploma examinations within the RTCs. Problems exist in relation to the uneven standards of the RTCs, the incompatibility between RTC and NIHE courses and the time required for the student to adjust to the more theoretical nature of the NIHE programmes.

However, the transfer system has a number of advantages. It enables students to opt for a higher qualification after commencing their studies and to spend a significant proportion of their study years in their local area thereby increasing their chances of local employment. The Institutes and RTCs would gain from greater concentration on the transfer mechanisms. The Institutes would achieve greater utilisation of their facilities. The RTCs would be able to attract higher calibre students if a realistic option of transfer to a degree programme was

readily available. While it is essential that the National certificate and diploma awards continue to be recognised in their own right, there is clearly a need for the NCEA, the National Institutes and the RTCs to adopt more positive policies towards the transfer system. Consideration could be given to a number of options such as joint RTC/NIHE programmes and the provision of special short degree programmes within the NIHEs for certificate or diploma transfers. The RTCs could provide more even standards by the introduction of national core syllabi at certificate level with electives in the second year. Greater specialisation could be introduced at diploma level.

Another factor related to the lack of success of the transfer mechanism is the evidence of academic drift within the RTCs. This may have serious implications for the future development of technician education. Most RTCs are now offering degree programmes. In some cases it could be argued that these courses have been introduced to satisfy the academic needs of highly qualified staff and in the belief that by offering such courses they may attract greater resources. Degree programmes should only be offered where a specific national or local need has been identified. Four year ab initio degrees should in general not be offered in the RTCs where they are likely to sap resources which should be allocated to certificate and diploma courses. One degree programme per Regional College would be appropriate such as Plastics Engineering in Athlone RTC and Hotel & Catering Management in Galway RTC. In general, greater emphasis should be placed on the transfer mechanism to enable diploma or certificate holders who have achieved a significantly high standard to transfer to the National Institute for Higher Education in Dublin and Limerick to take degree programmes.

While options for further qualification must remain available, efforts should be made to increase the status of technicians, thereby increasing the attractiveness of technicianship as a career. The professional institutes have a key role to play in stressing the importance of technicians and in actively seeking to increase their technician membership. The possibility of wider and more extensive use of technician skills merits serious consideration. The changing relationships between the technician and the graduate and between the technician and the craftsman also need to be examined. The future impact of technology, particularly microelectronic technology, on the need for and the role of the technician should also be investigated.

It should be noted that transfer mechanisms also exist between the non-university and university colleges although they operate on a less formal

level of transfer to the National Institutes for Higher Education (HEA, 1983a).

Any improvement of the transfer mechanisms should also apply at the craft to technician level. Despite trade union and professional implications, it is desirable that provision be made to enable craftsmen to take technician courses. Given the lack of tradition of part-time education outside the main urban centres it is, at present, difficult for craftsmen to take these courses without serious loss of earnings. Skilled workers in industry should be given the opportunity to further update their education on a part-time basis particularly in areas where the development of technology is likely to change skills and techniques. The work element is also considered to be a strong motivating factor in relation to educational performance.

### **(b) Cooperation between Education and Industry**

In recent years, there has been a growing realisation of the potential benefit to both parties of higher education/industry cooperation. The potential contribution of the third level sector to Irish industrial development is emphasised in the recent White Paper on Industrial Development by the promised allocation of IR£2m to the Vote of the Minister for Industry, Trade, Commerce and Tourism in 1985 for funding additional research in product innovation and development by third level institutions. It has been shown in many countries that policies for higher education/industry relations can be built on the mutual interests of both parties while taking account of the differences in their fundamental objectives.

There are a number of benefits for both partners in the successful implementation of such policies. The main advantages for the industrial partner are increased access to technology, university facilities and manpower, including both the students and staff of the college. The prestige of the company may also be enhanced through its support for technical excellence. The college may gain access to scientific and technological areas where the company has special expertise and also to new sources of funding. There are also a number of benefits which relate directly to the development and employment of highly skilled manpower including:

- increased relevance of education to work of an industrial nature;
- improved attitudes and perceptions of graduates to industrial employment;

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- reduction in experience gap through direct involvement in industry during the educational period;
- direct access by industry to a source of tested skills;
- increased level of expertise in education and industry through access to each others areas of special expertise;
- improved attitudes and perceptions of both industry and education to each others role and needs.

At undergraduate level industrial involvement in curriculum development and course validation is widespread in the non-university third level sector. However, it has been argued that despite the presence of industrialists on boards of studies and their use as course assessors there seems to be little feedback to the educational system on the quality, standard and relevance of the courses provided. It must be emphasised however that many industrialists and industrial associations have commented favourably on the level of skill which technicians from these courses possess.

The National Institutes for Higher Education offer cooperative education programmes. While different arrangements pertain in the two institutes, both involve the placement of students in employment related to their academic interests for six to nine months during their period of study for a diploma or degree. The system is different to that operated in the US and other countries in that the work experience is usually gained in a single period rather than in a number of shorter periods spread throughout the course. In 1983/84 the institutes succeeded in placing almost 1000 cooperative education students. The cooperative programme has obvious benefits for students, employers and the institutes. The students gain through practical work experience, interview experience, increased awareness of the relevance of academic work and an introduction to a potential employer. At NIHE Limerick about 70% of students are offered permanent employment by their cooperative employer. The employer is given an opportunity to recruit and assess potential fulltime employees and to develop links with the student's academic department. The institute obtains access to outside resources and facilities and receives important feedback relating to its academic programmes.

While the advantages of cooperative education programmes are significant, difficulties might be encountered in extending them to all third level colleges because of a shortage of suitable employers willing to participate. However, it is desirable that some element of business or industrial experience be included in all degree or technician level courses for scientists and technologists. At degree level emphasis might

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be placed on the development of familiarity with the business environment in a given sector. At technician level emphasis should be placed on practical skills and workshop content. Technicians must have hands-on experience of modern equipment and it is important for industry to realise that colleges cannot provide the practical training and experience which is essential for many types of technician. The problems related to the provision of increased access to cooperative education should not be treated in isolation. There is a need for greater coordination of cooperative education programmes with programmes aimed at providing employment and training opportunities for graduates and technicians.

The impact on employment opportunities for graduates which might result from a significant expansion of these programmes would also have to be given careful consideration. It should also be noted that the "COMETT" programme recently introduced by the European Commission will provide support for cooperative education on a transnational basis.

In the university sector, cooperation with industry is in general organised on a less formal basis. UCG and UCC employ industrial liaison officers while TCD has established a Committee on Industry and Business. All the colleges are placing increasing emphasis on cooperation through different mechanisms including joint research projects, academic consultancy, company sponsored chairs, the employment of part-time faculty from industry etc. (A survey of the mechanisms used in each college has been carried out by the Manpower Consultative Committee (MCC, 1985)). Consideration is also being given to new forms of post-graduate training similar to the "CASE Award" and "Teaching Company" schemes which involved joint education/industry supervision and industrial experience. There is a need for greater industrial involvement in curriculum development in the university sector. Such involvement could have a major impact on science, engineering and business curricula particularly in relation to the development of skills in innovation and entrepreneurship as described above.

A number of infrastructural initiatives aimed at increasing industry/education co-operation have also been introduced. These include the establishment of the Innovation Centre in Limerick, the establishment of the DIT product/project development centre at Prussia Street, the development of the technology park at Limerick, the establishment of a company to exploit plant biotechnology at UCC, the establishment of incubator factories at UCG, the development of the dairy and

food science department at UCC, the establishment of the National Microelectronics Research Centre at UCC, and the university/industry centre at UCD.

Academic consultancy to industry is a valuable mechanism for technology transfer to industry and for updating academic staff thereby increasing the relevance of their courses and their students. There are, of course, a number of factors which inhibit the development of academic consultancy services. Industry and education have different primary goals and these can sometimes interfere with close co-operation. The goals of the two sectors have different time spans with industrial goals being frequently short term while university and college programmes are generally placed within the timeframe of an academic year or longer. Other factors relate to the lack of time or inclination, high student/staff ratios, heavy teaching loads and professional career advancement based on research publications rather than industrial interaction. Financial barriers include a very high personal taxation system and the uneven implementation of the Devlin report in respect of personal earnings from research and consultancy.

Given the importance of consultancy both in terms of relevance and updatedness of staff and students and the much needed revenue it can earn for both the third level colleges and their staff, it is important that barriers to its provision by the colleges be removed. Guidelines should be set out to ensure that such consultancy does not lead to a teaching effort or contact with students which is below acceptable standards. The colleges themselves could also encourage consultancy by the introduction of personnel policies and terms and conditions of employment which give due recognition to industrial experience or interaction. Colleges will also need to develop new management and administrative skills in areas such as research and consultancy, patent management, etc.

In relation to the RTCs the interpretation of the 1930 VEC Act seems to inhibit the provision of consultancy services although some colleges are finding ways of overcoming this problem. The Programme for Action in Education stated that a review of the RTCs is to be carried out as envisaged by the Steering Committee on Technical Education. The review should examine the role of the Regional Technical Colleges, not as the Action Programme suggests, in terms of the goals set out for them in the Report of the Steering Committee on Technical Education, but in terms of their potential role in meeting the needs of industry in 1985 and beyond. The review should also consider the management structures of the colleges and the relationship between the colleges, the local Vocational Education Committees, the NCEA and the Department of Education. This issue is treated further below.



## ARRANGEMENTS FOR MANPOWER FORECASTING AND EDUCATIONAL PLANNING

Any estimate of the future requirements from the Third Level sector must involve an assessment of both social and manpower demand. These two sets of demands are often interrelated as evidenced by the enormous pressure for entry to professional courses in recent years. While professional and vocational considerations have been the basis for the change in emphasis in higher education, much of the expansion has been based on social demand. Estimates of social demand are complicated by a number of factors including the transient effects of the unemployment situation on overall participation rates, grants policies and the effects of employment potential in particular areas on course preferences.

In this section we discuss arrangements for forecasting demand/needs for skilled manpower. Consideration is also given to the planning arrangements necessary for an adequate educational response to these manpower forecasts.

### Forecasting Demand/Needs for Skilled Manpower

It must be recognised that long term manpower planning is difficult to achieve. The uncertainty in demand for manpower is dependent on the reliability of anticipated government policies in relation to public sector employment, levels of economic development, scientific and technological development and the impact of these developments on skills. This uncertainty is exacerbated by the dearth of information on present stocks. In the case of industrial needs the level of technical skills from the shop floor to top management should be sufficient to ensure that Irish firms remain competitive. The need for such skills may in many cases be higher than the demand as perceived by the employer. In determining future educational and training requirements it is necessary, therefore, to distinguish between needs and demands. It may be desirable to forecast future needs and to put considerable effort and incentives into ensuring that industry recognises its needs and translates them into demands.

While total reliance on manpower needs as a basis for educational /training planning would be unwise, it should be emphasised that to date there has not been any serious attempt to carry out manpower planning in Ireland. The planning unit established in the Department of Labour in the early 1970's was starved of resources and has therefore had little impact on the system. More recently the work of the Manpower Consultative Committee (MCC) suffered seriously from lack of resources with its main projections being based on the intuitive

judgements of participating bodies rather than, with the few exceptions, on research studies.

Manpower forecasting cannot continue to be carried out by committees which consist of representatives of agencies and departments, many of whom have little expertise or ongoing involvement in manpower planning. Their problems are exacerbated by the lack of up to date information. The establishment of an independent "Manpower Research Unit" is therefore an urgent priority. Representatives of the manpower, educational, employer and union organisations would form a consultative or steering committee for the unit.

A number of government departments such as the Department of Labour, the Central Statistics Office and semi-state agencies such as NBST have specific responsibilities in relation to manpower planning/manpower studies. However, it is suggested that the proposed "Manpower Research Unit" be established on or adjacent to a third level campus or in a research institute rather than in a Government department or agency. A high level of multidisciplinary expertise is required for manpower research especially when much of the research concerns issues related to highly technical manpower. At present this expertise is not readily available in Ireland. It will be necessary to build up a core of manpower research expertise with flexible recruitment procedures and short term contracts being used to enable additional expertise in specific technologies or sectors to be employed as required for individual studies. The difficulties associated with acquiring the required expertise, even on a short term basis, should not be underestimated. Secondments from industry result in interruption of career paths and heighten fears regarding confidentiality among competing firms. The links between the Manpower Research Unit and a third level college or research institute would alleviate this problem to some extent by enabling some of the required expertise to be developed through the provision of undergraduate and post-graduate courses and research of high academic standards in the manpower area. Post graduate research would also ensure the availability of research assistant level staff at relatively low cost.

An important issue relating to the location of the proposed "Manpower Research Unit" is the need for manpower research to be carried out in an atmosphere of total independence. It should be possible for manpower research to be conducted outside the immediate control or pressures from Government, employers and unions. Policy advice based on informed and unbiased opinion should be separated from policy implementation. The eventual location of the unit will be



dependent on sufficient assurances being available regarding the independence of the proposed research team. We believe that the required atmosphere of independence is most likely to be achieved in a unit located on or adjacent to a third level campus or in one of the research institutes.

The reasons why the unit should not be established in the Department of Labour or the CSO are obvious. Within the civil service it would be difficult to develop at a reasonable cost, the "critical mass" of expertise required for manpower research and to introduce the flexible recruitment procedures required to employ additional skills as required. It would also be impossible to achieve the level of independence required. While these problems would not exist to the same extent in the NBST or the proposed State Manpower Agency, it must be remembered that the NBST is interested mainly in highly skilled scientific and technological manpower while the State Manpower Agency would be concerned with skilled manpower and not highly skilled manpower. Neither agency would cover the full range of skills concerned. However, it is clear that while the independence of the proposed unit would have to be maintained, it would be necessary for it to work closely with these two agencies in ensuring a coordinated approach to manpower research.

The proposed unit would have a full-time director and a small nucleus of full-time staff funded either directly by Government or by earmarked funds provided through the third level college or research institute. While the director and members of the core of the unit would be solely involved in manpower research, the unit as a whole would be expected to make a contribution to the third level institution through teaching, course development and supervision of postgraduate research. The unit would also seek extra-mural funds for specific projects or programmes.

The unit would use regular monitoring and special studies to provide information on the composition and trends in the stock, supply and demand/need for skilled manpower in light of changing technology and industrial structure. Emphasis should be placed on:

- construction of a comprehensive database for manpower forecasting and planning;
- systematic indepth forecasts of medium to long term demands for skilled manpower;
- detailed examination of the impact of changes in technology on skills in specific sectors.

The assessment of manpower needs could be based on studies of specific technologies or industrial sectors. At present AnCO, HEA, IDA, and NBST in association with the Industrial and Electronic Engineering Departments at University College Galway and other university departments are attempting to forecast the future skill needs of the electronics sector. The study consists of three parts:

- (i) Estimates of future size and structure of the electronics sector in Ireland;
- (ii) Assessment of future developments of product and process technology in the electronics industry and its impact on the sector in Ireland;
- (iii) Labour Market analysis at firm level.

It is believed that a series of such indepth studies would enable the range and mix of specialist skills necessary to meet the demands of new technologies and the level of professional training required within the different specialities to be determined. The convergence of skills formally regarded as specifically educational, or training skills such as technician and craft skills, will need to be closely monitored. The outcome will have implications for the planning of both education and training. Within the educational sector itself it will be necessary to determine the appropriate balance between graduate and technician qualifications and between graduate and post-graduate qualifications.

While higher educational planning must be based on social as well as manpower demand priority must be given to the selection of skills and disciplines identified in the above process. The remaining third level provision could be set according to social requirements, student demand and other criteria. This procedure would relate both to the planning of first-time education and continuing education.

#### **Educational Planning for Production of Highly Skilled Manpower**

Given the length of third level courses, particularly at degree level, a period of at least 5-10 years is required for the planning, introduction and completion of the first cycle of a new third level programme. Long term multiannual planning is, therefore, essential with the provision for increased flexibility to overcome short term shortages or surpluses. Such planning is recognised as difficult to achieve in view of the uncertainty in demand for S&T manpower which is dependent on anticipated future levels of technical skills in the economy. However, this problem would be alleviated to some extent by the provision of increased resources for manpower forecasting as described above.

A ten year rolling indicative plan for third level scientific and technological education should be prepared and a multi-annual commitment to the capital investment required for its successful implementation should be given by Government. Such a commitment would enable priorities to be clearly established and projects to be phased in, in an orderly fashion. It would enable associated investments in libraries and other facilities to be scheduled appropriately. Public commitment would reduce uncertainty among the colleges, the community and the administrators. It should be emphasised that the proposal for multi-annual planning is not new. In the early years of the HEA a commitment was given for £15m. spread over 6 years for capital expenditures.

Mechanisms to increase the flexibility of the third level system, to enable it to respond quickly to short term shortages of skills, should also be examined. Consideration could be given to the provision of courses in particular areas of national need for an agreed period under contract to the Higher Education Authority. This would probably involve the use of non-permanent facilities and the employment of non-permanent contract staff. Greater flexibility could also be introduced by a more imaginative approach to the accessibility of educational institutions, to credit transfer and to inter-disciplinary and inter-institutional cooperation.

The successful implementation of the above approach would require greater national coordination in planning and financing higher education. It is necessary therefore to give serious consideration to the appropriateness of the present institutional arrangements involving the HEA, the VEC's the NCEA and the Department of Education.

The HEA is the funding agency for the universities and its other designated institutions. All requests from these institutions for state subvention must be submitted to the authority for examination. In general the authority's approval must be sought for all expansion plans involving additional expenditure including new buildings, new courses, increased staffing and internal promotion patterns. The authority in turn makes recommendations to the Minister for the following years estimates. The resulting grant to the authority may be accompanied by certain stipulations in relation to fees policy, pay policy, etc. and these in turn are notified to the institutions. In general funding is in the form of block grants. Earmarking of current funds is rare with few notable exceptions such as the engineering manpower programme of the late 1970's.

In relation to planning the HEA has advisory powers ranging over the whole third level sector. It is required under the Act to advise the Minister on the need or otherwise for the establishment of new institutions of higher education and on the nature and form of these institutions. It is also required to maintain a continuous review of the demand and need for higher education and to recommend to the Minister the overall provision of student places to be made within the higher education system.

Of a total of 38 higher education institutions providing full-time education courses for 47,600 students in 1982/83, the HEA financing responsibilities related to 10 institutions with 29,000 students. This poses one of the main problems for the HEA in meeting the requirements of its Act. While its responsibility for advice and planning relates to the whole system the proportion of students attending the designated institutions for which it has financial responsibilities has declined from 78% in 1972 to 62% in 1982. The HEA estimate that this proportion is likely to fall to less than 55% by 1990 unless further designations are made (Hayden, 1983b).

The Regional Technical Colleges are funded by the Department of Education through the Vocational Education Committees (VEC's) set up under the 1930 VEC Act. They are administered by boards of management which operate as sub-committees of the local VEC. Decisions of the boards of management must be ratified by the local VEC. Up to 1976 these boards consisted of seven members including one representative each of agriculture, employer and trade union organisations, the Department of Education, the VEC, together with the chief executive officer of the VEC and the college principal. In 1976 the boards were increased to a total of 12 members to allow for representation of other VEC's within the catchment area of the regional college. The boards of management are responsible for drawing up annual programmes and budgets. They select and appoint staff and sanction expenditure. The principal is responsible for the administration of policy within the college under the direction of the board.

The 1930 VEC Act has been the basis for the development of technical education outside the university system. While it has been the source of many notable achievements in the past, there are growing doubts as to its appropriateness for a modern third level education system. While some argue that the interpretation of the Act rather than the Act itself is at fault, there is growing concern at the inability of the system to cope with modern educational thinking in areas such as staff development,

research and consultancy, the impact of technology on course development, links between education and industry etc. There is also growing unease relating to staff conditions which in some cases seem more appropriate to second than third level education.

At the height of the recession with the increasing need for constraints on public expenditure there was evidence of increasing direct involvement by the Department of Education in the operational details of the system. In the White Paper on Educational Development published in 1980 it stated that . . . "where the Government had identified priority objectives for third-level education, available funds will be applied to meet these priorities. The Government will examine the funding arrangements for third-level education, including the relevant provision of the Higher Education Authority Act, 1971, with a view to ensuring priority of allocation of resources for such identified areas of national development. In the meantime, the Minister for Education will direct the attention of the Higher Education Authority to the need for ensuring that funds made available by the Government for particular projects should be appropriated accordingly".

There is a growing need for the department to adopt a more positive development orientated policy role rather than its present operational one. The confusion in the seventies relating to the NUI, NCEA, HEA and the NIHEs highlighted the absence of any long term strategic planning with clearly articulated policy and principles. Within the context of a stronger broader educational policy framework developed by the Department in consultation with other interested departments and bodies, responsibility for more specific policy and operational functions could be given to a National Higher Education Authority. (In order to cater for specific regional needs consideration could also be given to the establishment of a number of regional authorities which would be closely linked to the national authority).

The new authority would have executive responsibility for the financing of the whole third level system including those colleges at present within the VEC system. It would also have advisory responsibilities relating to the planning of the whole system. The authority would have power to earmark funds or offer contracts to colleges for the provision of courses in priority areas. The colleges themselves would submit programmes and budgets to the authority and would be responsible for staff appointments, promotions, staff development etc. This arrangement would require significant changes in the management structures of the Regional Technical Colleges and in the role of the management boards of the colleges and their relationship with the local Vocational

Educational Committees. Consideration could be given to the appointment of a chief executive for each college (present head of college) together with a management board which would be independent of the VEC system. The board would of course include representatives of the VECs within the region.

This more uniform approach, together with increased emphasis on long term strategic planning, would have a number of advantages in meeting our future requirements for highly skilled manpower. The unified approach would be active rather than reactive, would discourage the ad hoc emergence of multiple centres offering the same courses/expertise in, perhaps, a sub-critical manner and promote the development of a national pattern of strong centres of excellence in teaching and research. We have already indicated that, because of the increasing sophistication of technologies both in terms of equipment and in terms of scientific understanding, the level of facilities and expertise required to meet national needs can only be achieved through increased specialisation and cooperation. It is necessary, therefore, to allocate resources so that viable teams with sophisticated facilities can be developed in relation to technologies which are essential for our future development. Such concentration of resources is necessary to ensure an adequate supply of the highly skilled manpower required for the acquisition, adoption and use of technology.

The uniform approach would also facilitate closer coupling between educational policy and manpower (including training), social and economic policies. It would facilitate improved coordination of the various state agencies involved in manpower, educational, social and industrial planning.

The establishment of a National Higher Education Authority would increase the transferability of students between the RTCs and NIHEs and between the non-university and university sectors. One disadvantage would be the danger of academic escalation within the non-university sector. However this could be overcome by changing the composition of the authority to include a higher proportion on non-university and non-academic members. Representation from outside the education sector should also be increased.

It should be emphasised that the above proposal relates only to the planning and financing of education. The existing system of validation and accreditation would remain unchanged.

## CHAPTER VII

### THE NATIONAL PLACEMENT SERVICE<sup>1</sup>

#### RATIONALE

The main reason for having a national placement or employment service derives from a perception that net benefits accrue to the community by having a system which aids the labour market mechanisms by expediting the filling of vacancies. By providing a medium through which employers and job seekers can make contact, costs are reduced (for both the employer and the job seeker) and there is a net positive contribution to national output since human resources are directed more rapidly into productive capacities than would otherwise be the case. Furthermore, if a national employment service concentrates on placing the unemployed then one can argue that the contribution to increased output is greater as this will create a reduction in labour turnover since a chain reaction of interchanges of jobs between employed persons in the labour force is reduced. From an equity point of view the activities of such a service can also be geared to help disadvantaged groups (such as the long-term unemployed, the handicapped) who would not otherwise be assisted to the same extent. In a more current context, an employment service can also be used to provide a ready and identifiable means of access for the public to State manpower schemes such as training programmes and special employment projects.

Attempts have been made in other countries to quantify the benefits of national placement services in terms of the net contribution to national output. The 1981 Rayner Scrutiny of the UK national placement service<sup>2</sup> contains such estimates which purport to quantify, on the basis of certain assumptions, the benefits which accrue as a result of the placement service, compared with the situation which would

1. The term "National Placement Service" or "National Employment Service" is used throughout the text. The same meaning is implied in each case.

2. The General Employment Service in Great Britain — Report of the ESD Rayner Scrutiny, Manpower Services Commission, 1982.

prevail if the service was abolished. It was possible to estimate some of the obvious benefits (such as faster filling of vacancies, etc.,) as some relevant information was available from surveys of employers carried out by the Manpower Service Commission (of which the UK placement service is part). The report states, however, that the degree of benefit thought to be conferred by the service depends critically on the assumptions made and it concedes that these are very uncertain. One cannot, for example, assume that a delay in filling a vacancy gives rise to a proportionate fall in output since employers may take measures to maintain production by means of overtime working, or by introducing temporary improvements in productivity. In the Rayner exercise, for example, the excess delay in filling vacancies which was estimated would arise in the absence of the National Employment Service was reduced by a factor of one half in order to allow for such effects. The report concludes, however, on the basis of the studies carried out that 'the service is probably worth its costs to the tax payer (over £100 million in 1981) in terms of the benefits which it confers on the national economy'.

### **HISTORICAL BACKGROUND**

Historically the concept of a state placement service goes back quite a long time. The primary function envisaged for the original Labour Exchanges, set up under the 1909 Labour Exchanges Act, was to provide a means by which job seekers and employers could make a contact with one another. However, subsequently, under the terms of the 1911 National Insurance Act, the payment of unemployment benefits, etc., was also entrusted to the new Labour Exchanges and according as this activity expanded it rapidly became the dominant function. Eventually the situation was reached where the placement function was reduced to a relatively minor ancillary activity in the Exchanges, mainly concerned with filling a limited number of unskilled jobs, many of them in the Public sector. An important aspect to remember here, of course, is that the Labour Exchanges were not long in existence when the First World War gave rise to labour market conditions which were obviously exceptional, this was followed by periods of severe and prolonged recession in the 1920s and the 1930s when placement activities could hardly be expected to thrive.

Very little was done in the way of altering the situation until the 1960s when attention was again focused on the question of re-organising the placement service. This arose because of a growing view that greater attention needed to be paid to both training and placement in view of the adaptation required according as industrial structures began to change under the impetus of continuous economic growth. The view

was that measures were needed to expedite the normal clearing mechanisms of the labour market by facilitating the filling of vacancies, minimising mismatches, avoiding skill bottlenecks and shortages etc. This was a period when full employment was a primary objective of economic planning and the re-organisation of placement services was seen as one means of promoting that end.

A review of the placement service was commissioned by the new Department of Labour after it was set up in 1967. It was carried out by the Institute of Public Administration under the guidance of a steering group which contained representatives of the Government departments involved and of the social partners. The group's brief was to investigate the placement service as then operated by the Labour Exchanges and to make recommendations as to how it might be developed to play an effective role in the context of an active manpower policy. The steering group produced a report "The Placement and Guidance Service" — which was published in 1968. Subsequently in 1971 the Government set up a separately constituted national placement service, the National Manpower Service, with its organisation and range of objectives very much along the lines recommended in the IPA report.

### **THE OBJECTIVES ORIGINALLY ENVISAGED FOR THE NATIONAL MANPOWER SERVICE**

Before we comment on the details of the recommendations of the 1968 IPA report it is necessary to recall the economic situation then prevailing and, more importantly, the expectations then held regarding future economic and social development. The late 1960s was, as we have already indicated, a particularly buoyant time in economic terms. Ireland had experienced continuous growth since the beginning of the decade and there was a general expectation that this would continue in the long term. The main thrust of the IPA report was consistent with the then prevailing economic philosophy, which was to facilitate expansion in the first instance in the expectation that this would create the conditions which would make it possible to alleviate other economic and social problems. The views embodied in the report were particularly oriented towards the requirements of employers. It was recommended that the placement service should be operated in such a way as to ensure that vacancies were filled by persons most suited to the posts involved, irrespective of their previous status. The report defined its concept of the placement function, in the context of an active manpower policy, as

"to place in a job an individual who will be successful in that job insofar as this is a function of his personal attributes, and whose

personal resources would be used in that job to the extent that this contributes to the economic welfare of that particular firm and society as a whole."

The report recommended a very forceful role for the new service insofar as it should involve itself actively in the general job-filling sphere in competition with informal and personal means of finding employment, private agencies and so on. However, compulsory registration of vacancies by firms was not recommended. In summary, the service was seen as developing into a high profile entity which would provide a service which employers would find increasingly attractive as a means of filling vacancies. With these objectives in mind the report recommended that the placement service should be constituted as a separate organisation, quite distinct from the existing Labour Exchanges, and the detailed suggestions made in regard to its proposed organisation, staffing, etc., were set out in terms which were consistent with this aim.

Generally speaking the Government accepted the recommendations of the 1968 IPA report and subsequently the National Manpower Service (NMS) was set up in 1971 as a separate functional entity, but within the Department of Labour. All of the other functions which were associated with the Labour Exchanges (principally paying unemployment compensation), for which the Department of Labour assumed responsibility when it was set up in 1966, were transferred back to the Department of Social Welfare<sup>1</sup>.

Some important consequences followed from the approach adopted. Since it was to be a central element of policy to actively participate and expand into the job market in the manner outlined, it inevitably followed that the unemployed could not feature high on the list of priorities. If one of the principal objectives was, as it were, to win a significant percentage of the job filling market by creating an alternative which would be attractive to employers, one obviously had to proceed on the basis that every vacancy would be filled by the most suitable candidate available, irrespective of whether that person was employed, unemployed or not in the labour force. In fact the 1968 report was quite emphatic on this matter and went to great lengths to explain its position in regard to the unemployed and to justify the particular stance recommended. Its view was that the service would never achieve general acceptability in the sense envisaged if it was seen to operate in a context dominated by the unemployed. It was imperative

<sup>1</sup> Since payment of unemployment compensation and related activities constituted the bulk of the work in the exchanges, this required that the administration of the entire network of labour exchanges and sub-offices be transferred back to the Department of Social Welfare.

that the new agency should not be associated with the image of the dole queues and this was the main reason why it should be totally separate (both physically and administratively) from the existing Labour Exchanges. In fact its views went much further in that it recommended a distinctively passive approach of the unemployed in regard to the new service. Compulsory registration of the unemployed with the new agency was not recommended; persons were not even to be encouraged to approach the new agency on joining the Live Register — they were to wait until the NMS approached them. The relegation of the unemployed to such a low point in the order of priority was justified on the grounds that as full employment approached most of those unemployed at any one moment could expect to be in that position for a relatively short period of time, and therefore social attitudes towards unemployment would change accordingly.

### THE PERFORMANCE OF THE NATIONAL MANPOWER SERVICE SINCE 1971

Let us now turn to tracing the progress of the NMS since it was set up in the early 1970s. In accordance with the recommendations relating to organisational structure as laid out in the 1968 IPA report, eight regional offices were set up in 1971 and the system was gradually extended over the years by means of a network of local offices. The total number of offices, both regional and local is now 45. The total number of persons employed in the National Manpower Service is currently over 400, of whom 170 are involved in placement and guidance activities proper (including Regional and Assistant Regional Directors).

Table 7.1 shows the growth of the NMS since 1973 in terms of numbers engaged<sup>1</sup>. Expansion was rapid in the early years after the setting up of the Service in 1971. By 1976 the total staff complement had risen to nearly 200 but it suffered a decline (to 180), in 1977 presumably as a result of a general retrenchment arising from the 1974/76 recession. After 1978 however, the service again grew rapidly; by 1983 the total number engaged had risen to over 430. Table 7.1 also contains figures for expenditure on wages and salaries paid to permanent NMS staff. This expenditure rose from £0.5 million in 1975 to £3.75 million in 1983. These data do not, however, represent total NMS current costs as there are clearly further administrative expenses relating to staff travelling, rent of premises, telephones, etc. It is not possible to isolate these costs specifically in relation to the NMS in the published Estimates for the Public Services as they are included under the different subheads for these expenditures for the Department of Labour as a whole.

<sup>1</sup> It should be noted, however, that these figures cover some Department of Labour Headquarters staff engaged in activities unrelated to the Manpower Service. See note to Table 7.1.

Table 7.1.

## National Manpower Service. Persons Engaged and Expenditure on Wages and Salaries, 1973-1983

Year	Persons engaged <sup>1</sup>				Wages and <sup>2</sup> salaries (£m)
	Regional and assistant regional directors	Occupational guidance counsellors	Placement Officers	Other Staff	
1973	(1)	(2)	(3)	(4)	(6)
1974	7	—	38	n.a.	n.a.
1975	8	—	42	n.a.	n.a.
1976	11	2	52	127	0.531
1977	11	5	59	118	0.681
1978	11	6	61	109	0.713
1979	13	6	94	193	1.208
1980	22	8	108	229	2.009
1981	22	7	123	286	2.257
1982	22	15	129	299	2.904
1983	22	13	133	243	3.256
				269	3.760
				437	

## Notes:

(1) The figures for Placement Staff (including Directors and Guidance Counsellors) have been taken from the annual Directory of State Services. The total staff numbers (col. 5), which have been obtained from the annual Estimates for the Public Services, relate to the Manpower Division of the Department of Labour. These would include all staff employed in the NMS as well as Civil Service personnel engaged in work relating to Industrial Training, the Employment Incentive Scheme and Youth Activities. Therefore the category "other staff", which has been derived as a residual, includes not only Department of Labour headquarters staff administering the placement service, and all NMS clerical staff, but also non-NMS personnel of the kind referred to above.

(2) The figures for Wages and Salaries, which have been taken from the annual Estimates Publications, are consistent with the data shown for total staff numbers (col. 5).

The activities carried out by the Manpower Service have expanded over the years according as the organisation grew and spread into new locations. Table 7.2 shows that the number of vacancies notified to the service rose from 22,000 in 1973 (the first year for which comprehensive figures are available) to over 50,000 in 1979, but the number fell significantly in subsequent years because of the onset of recession; the number of vacancies notified had declined to 33,500 in 1983. The table also shows figures for vacancies filled which rose from 14,000 in 1973 to 31,000 in 1979 and then declined to 28,000 in 1983. The number of job-seekers registering each year with the service also rose substantially during this period, increasing from 38,000 in 1973 to nearly 135,000 in 1983.

Table 7.2

## Details of the Level of NMS Activity, 1973-1983

Year	Number of offices	Vacancies notified during year	Vacancies filled during year	Job seekers registered during year
1973	15	21,900	13,700	38,000
1974	20	24,200	15,700	45,700
1975	23	22,000	15,000	51,000
1976	25	26,100	18,500	59,400
1977	26	28,600	20,000	64,000
1978	30	41,000	26,800	67,300
1979	36	50,400	30,700	73,900
1980	39	41,700	27,400	88,900
1981	41	38,400	27,300	106,200
1982	43	39,400	32,800	120,100
1983	45	33,400	27,700	134,600

Source: National Manpower Service

The fact that a specific costing is not available for the activities of the NMS must be raised as a point of criticism, not only because of the absence of a comprehensive expenditure figure, but also since it renders it impossible to compile any cost efficiency measures. The latter exercise is not, of course, a straightforward matter since it is not feasible to specify measures for all the functions carried out by the NMS, such as counselling or guidance. However, placing job-seekers and filling vacancies has been the core activity of the Service and it is of interest therefore to indicate some broad figures in terms of the cost per vacancy filled using the admittedly incomplete data given in Table 7.1 and 7.2. On this basis it can be shown that the average cost per vacancy filled in 1983 was about £136. The corresponding figure for 1975 (the earliest year for which this calculation is possible) was £35 but if the former average is expressed in 1975 prices (using the GDP deflator) it reduces to £47. It is clear, however, that this average would tend to fluctuate considerably with the economic climate and it is not altogether surprising that the figures indicate an increase in such unit costs in recent years as the number of vacancies filled has fallen sharply.

Similar input cost type information has been published for the UK placement service, but in a more precise form. The 1978 Manpower Services Commission publication "Jobcentres — An Evaluation" con-



tains figures for the cost per placing in respect of a six month period in 1977. The results (expressed in 1976 prices) indicate a cost per vacancy filled of about £31. Interestingly a similar calculation based on the data in Tables 7.1 and 7.2 yields an almost identical result. However, it will be recalled that the Irish figures exclude non-wage costs, even though this is offset to some extent by the inclusion of the wages of some non-NMS personnel (see note to Table 7.1).

The figures for vacancies filled, given in Table 7.2, look quite significant when viewed in absolute terms but the crucial question to ask is what proportion of total placements do they account for. In other words, what degree of penetration has the revamped employment service achieved? There are no comprehensive data available which would enable one to fully answer this question but some partial indicators exist. Work by Sexton, Whelan and Dillon (1983)<sup>1</sup> provides estimates relating to the main means used by young persons in finding their first regular job which indicate that the number of young persons aged less than 25 years who attributed the procurement of this first employment to the National Manpower Service was quite small - only 5 per cent. Figures of a similar order of magnitude in relation to the utilisation of the Service by employers emerged from work by Dineen (1982). This study, which related to employment and unemployment in the mid-West region, indicated that some 6 per cent of employers in the region used the NMS as a main means of actually filling vacancies; however the overall level of notification of vacancies to the NMS was quite substantial, estimated at about one half of all vacancies in the region. A somewhat more optimistic picture of the activities of the placement service is given by the results of the 1983 Labour Force Survey relating to persons seeking work (see Appendix Table A.32). These figures show that over 22 per cent of the 200,000 persons in the labour force who were classified as seeking work indicated that their major means of search was through the NMS. The proportion was higher (25 per cent) for unemployed job seekers, the figure for persons at work who were looking for another job being nearly 15 per cent. A notable feature of the results of both this inquiry and the above mentioned ERSI study of the youth labour force is the high proportion of job search/acquisition activities which is accounted for by personal or informal means. Table A.32 shows that over 36 per cent of respondents in the 1983 Labour Force Survey stated that their principal method of search consisted of either making direct approaches to employers or through personal contacts, while in the 1982 ERSI Survey this proportion (which related to

<sup>1</sup> Based on the 1982 ERSI Survey of Youth Employment and Transition from Education to Working Life.

means of job acquisition as distinct from job search) was very much higher, over 60 per cent.

The 1968 IPA Report contains some information which provides a very rudimentary and approximate means of assessing the performance of the placement service in terms of the proportion of total vacancies which it succeeds in filling. With a view to determining the degree of penetration achieved in the Dublin area by the placement service as previously operated by the Labour Exchanges, the background work for the IPA study involved a special inquiry of the recruitment practices of Dublin employers. The totality of returns obtained (which related to the year 1967) covered enterprises in different sectors with some 16,000 employees, and the related number of annual recruitments in these enterprises was just over 4,000 i.e., a recruitment/stock ratio of about 25 per cent.<sup>1</sup> It is difficult to speculate as to how this ratio may have changed over time. The substantial increase in the size of the Irish work force since the late 1960s, particularly involving a wide range of service activities, would suggest that the abovementioned ratio would have increased. However, against this the current recessionary situation would have tended to dampen recruitment activity, as would the growing incidence of rigidities in the labour market. If we assume that the relative degree of labour turnover has not changed since the late 1960s and apply the abovementioned 25 per cent to the 1983 State total for non-agricultural employees (about 830,000) this suggests an annual level of external recruitment of about 210,000. Comparing this with the 1983 figure in Table 7.2 for vacancies filled by the National Manpower Service (27,700) suggests that an overall penetration rate of about 13 per cent was achieved. Given the very crude nature of these estimates one can but suggest that the current degree of penetration being achieved by the NMS is of the order of 10 to 15 per cent.

The corresponding rate for 1967 for the Dublin area as given in the IPA Report was of the order of 8 per cent. However, special efforts were made in the mid-1960s to augment the placement activities in the Dublin Labour Exchanges with extra staff, so that it is likely that a lower rate of penetration would have prevailed in provincial centres; therefore the national average penetration attributable to State place-

<sup>1</sup> Interestingly, a study in France during this period yielded a similar ratio between aggregate recruitment and the total labour force. In 1965/67 the French labour force was about 20.6 million and it is estimated that there were some 4.0 - 4.5 million job changes annually at that time (see Mukherjee, 1976). More recent work by Benarroch and Espinasse (1982) indicates that the number of recruitments had risen to 6 million by 1980; total employment in France in that year was 21.7 million suggesting a recruitment/stock ratio of 28 per cent. One can estimate on the basis of work by Rudoiph (1984) that the corresponding ratio in the Federal Republic of Germany in the same year was about 25 per cent.

ment activities would have been somewhat less than 8 per cent. Thus the available evidence from various surveys, some of it admittedly tentative, suggests that the degree of penetration achieved by the national employment service is not very substantial and has not increased appreciably over the years, notwithstanding the re-organisation of the service and the allocation of additional resources of a fairly considerable scale.

### **EMPLOYMENT SERVICES IN OTHER COUNTRIES**

It is of interest to consider how the concept of a public employment service has been approached in other countries over the past twenty years or so. This is useful because there are similarities in the approach adopted by different countries and the functions assigned to national employment service has tended to be fairly uniform across countries, thus allowing reasonably meaningful comparisons to be made. This is not necessarily so in relation to other manpower activities, such as training, which can be dealt with in a very different manner from one country to another, depending on the administrative procedures used and the policy stance adopted. State employment services were reorganised in many Western countries during the 1960s and early 1970s. The reasons for this were basically similar in all countries — a rapidly changing economic and social environment and the view that a revitalised employment service had a role to play in facilitating and expediting the labour market mechanisms.

During the early 1970s a re-organisation of the National Employment Service in the United Kingdom was set in train, involving (as in Ireland) an administrative separation of the placement function from the payment of unemployment compensation and other social security benefits. The process of separation was intended to be a gradual one, the objective being to have 1,000 new placement offices (Jobcentres) operational by the early 1980s. By 1979 progress had reached approximately the halfway stage. In 1978 the Manpower Services Commission issued an assessment of the re-organised service as it then stood which indicated a consistent pattern in that the new Jobcentres did appear to have achieved a higher level of penetration *vis-a-vis* the placement efforts of the Employment Exchanges (in terms of vacancies notified, and filled, placement ratios, etc.). Most of the additional activity generated by the new Jobcentres related to non-manual occupations. The report indicates, however, that the overall degree of penetration achieved by the employment service in 1976/77 (in all its forms, both new and old) was not very substantial. The proportion of total recruitments accounted for by the Service was estimated at 18 per cent and this is reckoned to be only a marginal increase on the level of penetration

in 1973 when a similar inquiry was held before the re-organisation of the Service was initiated. In commenting on these figures (in relation to the employment service) the report significantly states that: —

“However its level of acceptability as a method of recruitment and its acknowledged advantages, have not been matched by the use of it by employers.”

However, a further study carried out by the Manpower Services Commission in 1982 indicates that the proportion of recruitments accounted for by the employment service had risen to about 23 per cent. (See Appendix Table A.33).

The UK Government initiated a major review of its national employment service in 1981 as part of the series of scrutinies of Public Service activities carried out under the direction of Sir Derek Rayner. The findings of this review, published in 1982, contain detailed proposals for changes in the staffing and operation of various aspects of the service, which basically involve a contraction in the allocation of staff and other resources and in the range of activities engaged in. In particular it recommended that the employment service should withdraw from high profile activity in expensive main street premises. This change was suggested because of the likelihood of continuing high unemployment and a reduction in demand for services arising from the ending of the condition obliging unemployed persons to register with the employment service in order to qualify for payment of benefits. A start has been made in implementing the Rayner recommendations and in summary it may be said that the new approach represents at least a partial abandonment of the original expansionist strategy as set out in the early 1970s.

One characteristic by which the public employment services in other European countries tend to differ from those in the UK and Ireland is that they often involve an element of compulsion, either in direct or indirect form. In Germany the operation of private employment agencies is forbidden by law even though employers are free to advertise and fill their own vacancies. In France the extent of regulation is brought even further. Labour legislation introduced in 1945 stipulates that all vacancies must be notified to the employment service; while employers are not prohibited from advertising job vacancies, all such announcements must have the prior approval of the employment service. An employer is legally entitled to offer a job to an individual but he is obliged to obtain the approval of the State employment

looking for a job is also obliged to register with the service. In practice, however, the situation has developed where these provisions are not really enforced and are rarely, if ever met (see Mukherjee, 1976).

The French placement service underwent a major reorganisation in 1967 when the new Agence National pour l'Emploi (ANPE) was formed. Even though the restrictive 1945 employment regulations were not changed, this restructuring marked an alteration in policy from one of compulsion to one of making the service more attractive to both employers and job seekers. An aggressive policy of "prospecting for vacancies" was followed, involving a corp of field "prospecteurs - placeurs" (job prospectors) who set out to identify vacancies in firms with a view to filling them from ANPE lists of job seekers. The objective was to achieve a target of ANPE filling one-third of all vacancies by 1975. Some progress was undoubtedly achieved and Mukherjee's study indicates that by 1971 ANPE was filling an estimated 15 per cent of all vacancies compared with about 10 per cent in the mid 1960s. However, it was clear at that stage that it was unlikely to meet its stated objective by 1975. In fact, recent evidence suggests that the level of penetration achieved by ANPE has not increased since 1971. A study by Benarroch and Espinasse (1982), quoting a 1980 survey by ANPE, indicates that placements by ANPE in that year accounted for just under 15 per cent of all vacancies filled.

In the Federal Republic of Germany the employment service is an integral part of the Federal Institute of Labour (Bundesanstalt für Arbeit) and is closely linked to the Institute's other activities in the areas of training, redundancy schemes and employment incentive programmes of different kinds. There is no compulsion on either employers or workers to use the service but access to training and to other manpower programmes is only available through the medium of the employment service. A recent study by Rudolph (1984) provides an interesting trend profile of the performance of the German public employment service over the period since the early 1960s. Appendix Table A.34 shows that the total annual number of external recruitments in the economy as a whole fell gradually from 8.5 million in 1961 to under 5.5 million in 1982. Throughout the 1960s, however, the employment service was achieving an expansion of its relative share of this total placement market; the proportion of total recruitments filled by the service rose from 27 per cent in 1961 to over 34 per cent in 1967. A factor to be kept in mind is the large influx of foreign workers during this period who would have been particularly dependent on the national placement service. This share began to

decline from the beginning of the 1970s, the fall being particularly rapid in recent years; the most recent, 1982, figures indicate a relative penetration of 18.5 per cent. The above mentioned study also indicates that currently the proportion of total vacancies notified to the unemployment service by employers is declining, reflecting a significant change in practice involving greater reliance on the media and on informal methods.

The available evidence, therefore, indicates that the level of performance in terms of market penetration achieved by national employment services in Ireland and in other countries has fallen considerably short of original expectations despite various re-organisation measures undertaken and the allocation of considerable resources. A recent OECD report<sup>1</sup> indicates for many other countries general levels of relative market penetration similar to those quoted above. It is apparent from this study that in only a few countries, such as Sweden and Australia, has the public employment service made significant inroads in capturing a significant proportion of the total placement market. It is worth noting, however, that in the case of Sweden, which has probably invested more than any other country in developing interventionist strategies for the labour market, no official goals are set for a share of the placement market and no data on penetration rates are given.

It must be borne in mind, however, that for much of the period under discussion the prevailing economic climate was not particularly favourable to placement activities and was quite different from that envisaged when the various plans for re-organising these services were being drawn up in the late 1960s and early 1970s. In his conclusions, Mukherjee (1976) acknowledges a waning interest in promoting the activities of employment services, partly arising from the effects of the mid-1970s recession. His view is that a demotion of these functions would be "severely damaging" to the aim of improving the operation of the labour market but he does not indicate specifically how this might happen. In Ireland the degree of penetration achieved by the employment service appears to have been somewhat lower than in other countries and this lends even further support to the argument that the original approach adopted, and the manner in which the extension of the placement service was originally conceived, were inappropriate. This is a matter which is discussed in the next section.

1. The Public Employment Service in a Changing Labour Market, OECD (1984c).

## THE FUTURE OF THE PLACEMENT SERVICE

The crucial question to ask now is what general policy direction should be set out for the placement service to follow in the future, taking into account past experience and likely economic and social developments in the years ahead. In the course of the various consultations which we engaged in as background to this study, some very negative views were expressed about the National Manpower Service, some of which went as far as to recommend its complete abolition. Such views generally derived from a knowledge of the limited progress which the Service had made over the years but also, on occasions, from a rather unrealistic perception of what the service could be expected to achieve. We do not share this rather extreme view of the situation but we do consider that significant changes in approach are required.

It seems fairly clear at this stage that the broad frontal approach adopted by the NMS in attempting to involve itself in the general area of job filling in a competitive manner is no longer justified. Indeed, it is questionable as to whether it was ever justified. When this approach was first considered little attention appears to have been paid to determining whether the existing labour market clearing mechanisms were operating satisfactorily; neither were the implications for the Service of such an in-depth involvement fully appreciated. With regard to the first-mentioned aspect, one can ask whether it was appropriate in a period of increasing media utilisation and expanding communications that the State should actively involve itself in a sphere where long-standing conventional mechanisms were operating — particularly in a small country like Ireland where personal and informal relationships are widespread in all forms of social and economic life. The areas where one would have expected such an approach to yield results would have been in the larger urban centres (such as Dublin) but in these areas the NMS was never developed or expanded to the extent where it could be expected to make a serious impact in the manner envisaged. Indeed even a rudimentary observation of the spatial distribution of the NMS resources indicates that these have not been allocated in a manner consistent with the distribution of the labour force. Appendix Table A.35 shows the number of NMS placement staff and the size of the non-agricultural employee labour force by region in 1981, along with the ratios of the numbers of such staff per 10,000 workers. It will be noted that placement personnel are very thin on the ground in the mainly urban Eastern region for which the above mentioned ratio was lowest, being only one half of the corresponding ratio for some other mainly rural regions.

With regard to the second factor referred to above it is relevant to mention some further findings from the previously mentioned study by Dineen (1982). In analysing the responses of employers in the mid-West Region to the National Manpower Service, this report identified the primary reasons for their dissatisfaction as: (a) the effectiveness of screening or pre-selection methods used, and (b) a lack of specialist staff to deal with firms' particular recruitment problems. One can perhaps accept the first mentioned as representing valid grounds for criticism. If however the NMS were to attempt to satisfy the detailed and specific labour demands of individual firms on a unilateral basis it would require the acquisition of very considerable resources in the form of specialist expertise. The expectation among employers appears to have been that since the NMS existed with a particular brief, it should be in a position to perform certain recruitment functions for them — to a level that was quite clearly impossible to provide. Indeed, if the Service had been able to deliver this degree of assistance it would have represented a bonus or subsidy to employers for activities which they should realistically carry out themselves as part of normal recruitment procedures.

If the NMS is to move away from an approach based on detailed involvement in the placement mechanisms of the labour market, then a new role will have to be defined for the Service. Obviously in current circumstances priority concentration on the unemployed comes immediately to mind, but in view of the present size of this problem and the depressed state of the labour demand, it would be unrealistic to expect the National Manpower Service to make significant progress in finding jobs for the large numbers involved. However, the Service is acquiring an increasingly important role as the administrative or operational focal point in identifying, classifying, and placing persons in the context of the many special programmes now in existence, (see Chapter VIII). We envisage an expansion of this role, not merely within the framework of special projects (such as those designed to counter youth unemployment or aid the long term unemployed) but also encompassing more permanent functions such as access to training and liaison with schools with a view to promoting better and more labour-market oriented career guidance services.

While we do not envisage a policy function for the national placement service, by virtue of its position as an important operational entity, it should exercise a valuable role in advising on the practical feasibility of proposed manpower schemes before they are actually launched. In recent years the very existence of the NMS has been advantageous in that it has provided an operational medium for dealing with the many projects now in progress. However, the practical feasibility and impli-

cations of many of these schemes has not been fully thought out, both in terms of their longer-term effects or in regard to the manner in which these schemes interact on each other or with other programmes, outside the manpower sphere.

In other areas where the National Manpower Service is involved, its position has not been clearly defined, such as in the selection of first year apprentices which is carried out through a number of different channels, including the NMS (see Chapter IV). We anticipate, however, that in the context of the more integrated institutional arrangements recommended for the manpower agencies in Chapter IX, the position of the placement service would be more precisely defined and it would be in a position to play a more effective role in association with the other executive components of the State manpower administration.

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The role envisaged for the National Manpower Service, as outlined above, is similar in many respects to that reflected in the recommendations of the Dail Committee on Public Expenditure in its 1984 Report containing proposals to establish a centralised State agency for persons registering for employment or training. This report saw the NMS becoming the main user point of contact for all manpower services available. Our view is basically similar but, in addition, we see advantages in having the placement service as an integral part of a comprehensive executive semi-State agency responsible for all manpower activities. The Dail Committee on Public Expenditure did not express a view as to how the NMS might be restructured or reconstituted, but it was obviously conscious of the need to reassess its operational status as it suggested that there should be "an urgent independent review of the National Manpower Service to ascertain, in particular, to what extent the Service meets the requirements of the public at a time of high unemployment".

A further important issue concerning the placement service relates to the need to ensure that it possesses an adequate degree of operational

flexibility. Even allowing for the fact that the policy approach adopted over the years may not have been wholly appropriate, the National Manpower Service was inhibited by virtue of its position within the Civil Service. The continuity of administration was affected by changes in the senior headquarters personnel according as these officers came from, and departed to, other divisions in the Department of Labour; in physically expanding the Service it was necessary to utilise the cumbersome Civil Service procedures related to recruitment and the acquisition of premises and related problems; recently the position of the Principal Director of the Service was allowed to remain vacant for nearly two years because the filling of the post became embroiled in problems associated with general Civil Service staff cutbacks.

This question (of operational flexibility) will assume even more importance if the role of the NMS is expanded to cater for an ever increasing range of manpower programmes. The YEA proposals for implementing the Social Guarantee sees the NMS as occupying a key position in its strategy; this document states that at local level special units will have to be established to carry out the required functions and that these "should be built around the identification, assessment and referral functions of the National Manpower Service", suitably assisted by personnel from other manpower agencies such as AnCO. The Social Employment Scheme and the "Alternance" training and placement scheme for the long-term unemployed outlined in the Government planning document "Building on Reality" will clearly require the involvement of the Manpower Service. One must question whether the NMS could adequately carry out such an ever increasing range of tasks without steps being taken to strengthen its functional capabilities and its links with other manpower agencies. Our view is that such a reorganisation is more easily effected in the context of a comprehensive agency embracing all manpower activities (see Chapter IX). It is also clear that an extension of the role of the placement service as envisaged will require extra resources which would have to be specifically allocated, or re-allocated from other areas within the manpower sphere (a transfer which is more easily achieved in the context of an integrated executive structure).

Another aspect of the work of the placement service which should be reconsidered in the light of the strategy now proposed concerns its working relationship with the Department of Social Welfare in regard to persons on the Live Register. Heretofore, because of the "arms length" approach to the unemployed adopted by the placement service the degree of contact between the two services has been minimal. However, if the placement service is to follow a strategy of catering for

targeted groups in the context of special schemes, then it is inevitable that the majority of its clientele will be drawn from among the registered unemployed. It is important, therefore, that the operational links between the two services be strengthened to allow placement staff to have access to the records of the unemployed and to enable them to operate in an environment where they fully appreciate the problems of the group which they are assisting.

The suggestion is made from time to time that the functions of placement and paying unemployment compensation should be completely merged, i.e. within a single organisation. This is the case in some other countries, e.g. the Federal Republic of Germany. It must be recognised, however, that payment of unemployment compensation is only one part of a much larger social security system which involves, *inter alia*, cover against absence from work due to illness (both long and short term), occupational injuries, retirement, etc., none of which are related to placement activities. We do not, therefore, see any pressing case for a merging of organisations but we do see a need for the placement service to maintain a physical presence in employment offices, particularly in the larger ones. It would also be necessary in this context to have specific guidelines setting procedures for co-operation which give placement staff reasonable access to the unemployed and to their records.

It must be borne in mind, that even if the basic operational strategy of the placement service is altered as suggested, it will still have to carry out a substantial volume of "conventional" placement work. Despite the rather low relative penetration which the Service has achieved in the job market, the fact is that, in absolute terms, sizeable numbers of vacancies have been dealt with and most of them have been filled (28,000 in 1983). A very large number of job seekers come to the Service for assistance in finding employment (over 134,000 in 1983). While it is true that not all of those who register with the National Manpower Service are placed in employment, they are given advice and other assistance within the limits of the available resources, even though one cannot put a monetary value on this function.

It must also be borne in mind that Ireland is obliged to maintain a public employment service by virtue of being a signatory to Convention No. 88 of the International Labour Organisation,<sup>1</sup> which was drawn up

<sup>1</sup> ILO Conventions are instruments which, upon ratification, create binding legal obligations. ILO Recommendations are not binding and are meant to provide guidance in the development of policy, legislation and practice.

in 1948. This Convention stipulates that the contracting states should maintain, or ensure the maintenance of, a free public employment service. The text goes on to state that the essential duty of the employment service should be to ensure the best possible organisation of the employment market as an integral part of a national programme for the achievement and maintenance of full employment and the development and use of productive resources. It further states that the employment service should consist of a nationwide system of employment offices under the direction of a national authority. There is also a relevant Recommendation of the International Labour Organisation, No. 83 (1984), which concerns the employment service and which has been accepted by the Irish Government; this stipulates that, *inter alia*, applicants for unemployment benefit should be required to register with the employment service and also refers to developing the efficiency of the employment service so as to obviate the need for private employment agencies, except for those occupations judged to be desirable or essential. The Irish Government has also accepted Article 9 of the European Social Charter, which requires the provision of a free service to deal with problems related to occupational choice and career guidance.

There is also the question of the placement service continuing to maintain a minimum level of activity in relation to conventional placement functions, if there is a change of emphasis to deal mainly with special manpower programmes. If the service substantially reduces its involvement in the conventional labour market, and is seen more as an agency catering for special or disadvantaged groups, then the level of notification of vacancies could gradually decline. However, in view of the economic circumstances, the influx of job seekers is unlikely to decrease and therefore the service could be in the unenviable position of still having to deal with very sizeable numbers of unemployed job seekers and even fewer vacancies to direct them to. This was one of the reasons why the approach adopted in the early 1970s entailed a concentration on filling vacancies from among the most suitable candidates irrespective of status, as it was considered that employers would not otherwise use the Service. Thus, even in the context of a revised strategy as described, one could argue that it would still be necessary to maintain a minimum level of activity in the general area of vacancy filling in order to maintain a reasonable level of contact with the labour market and particularly with employers. On the other hand, greater involvement in State manpower schemes will also involve, in many instances, increased contact with private employers. This would arise, for example, in relation to the Work Experience Programme and the Employment Incentive Scheme, programmes which have been availed of to a much

greater extent in recent years, as described in Chapter VIII. It is also likely that the placement service will enhance its range of contacts in local labour markets arising from its close involvement in the implementation of the Social Guarantee for Youth. Other possibilities may exist in the form of increased involvement, in co-operation with the IDA, in assisting new overseas industrial projects, where a specific knowledge of local labour markets would be advantageous.

The general strategy that we are advocating for the placement service is broadly consistent with the conclusions reached in the previously mentioned 1984(c) OECD review of public employment services. While this report still foresees a significant role for these agencies in the area of conventional placement activities (in view of the changing structure of labour demand) it states that because of "the likely nature of future labour market imbalances, preference should be given to intensified and targeted efforts as distinct from widespread but 'light' information services or simple registration." The report goes on to suggest that the potential of the employment service could be further exploited as a means of initiating manpower and employment activities at local level.

## CHAPTER VIII

### SPECIAL LABOUR MARKET MEASURES

#### INTRODUCTION

In the latter half of the 1970s the economies of most OECD member countries suffered high unemployment and high and deeply entrenched inflation rates. At the same time many countries also experienced high public sector deficits and serious balance of payments constraints. The severe constraints on both monetary and fiscal policies, including the belief that fiscal expansion would worsen inflationary pressures, led many Governments to turn to special employment measures as a means of alleviating unemployment. These measures have ranged from employment subsidies to temporary public sector job creation programmes.

Ireland followed this general trend. In the mid 1970s, after the first oil crisis, a number of schemes were put in place, particularly from 1975 to 1978. These schemes remained in place throughout the course of the subsequent economic cycle. They were then supplemented by a number of other schemes over the two year period 1982-84, partly on the initiative of the YEA, part of whose terms of reference was to coordinate the schemes for the training and employment of young persons. Table A.36 contains a brief summary of the individual schemes. With the setting up of the YEA and the introduction of the youth employ-

Table 8.1  
Estimated average participation on major youth programmes 1981-4

Year	Training	Work experience	Temporary employment	Total
1981	6,400	2,600	400	9,400
1982	8,800	4,300	1,300	14,400
1983	11,300	5,000	2,000	18,300
1984	13,900	4,000	2,400	20,300

Source: Corcoran (1985).



ment levy there was also a significantly increased expansion of many of the existing schemes. Table 8.1 shows the average participation on major youth programmes over the 1981-84 period.

In general, there are two broad objectives of special employment measures: (i) a counter-cyclical one of increasing or protecting aggregate employment during a recession; (ii) a structural one of promoting more equal access to employment opportunities. The counter-cyclical objective is generally characterised by a non-discriminatory promotion of employment, achieved through incentives aimed at altering the behaviour of private sector employers. These incentives generally take the form of redundancy deferring or marginal stock subsidies. However, such subsidies can also be used to achieve structural objectives by targeting the subsidy to workers with special employment problems, e.g. the long-term unemployed. Public sector job creation programmes can also be used to achieve various mixtures of the two objectives. In addition to the two broad objectives identified above, some of the schemes introduced in Ireland had a number of more specific objectives, viz:

- to ease the transition from school to working life;
- to promote community self-help; and
- to make a net contribution to new job creation (partly through the encouragement of self-employment)

Many of the schemes, particularly those initiated in the 1975-78 period, were originally designed as temporary to overcome what was seen as a cyclical increase in total unemployment. However, the increase in unemployment has turned out to be more than cyclical and the special schemes have become a permanent feature of the manpower landscape. The historical evolution of these special schemes tended to be ad hoc, responding to particular difficulties at specific times. The schemes were not developed in the context of an overall manpower policy. At times employment or training opportunities were offered to those whose qualifications and motivations were most attractive for the particular programme or projects rather than to those groups who would otherwise have the greatest difficulty in finding regular employment. In addition the range of allowances made it difficult to co-ordinate the various schemes since any attempts to move particular target groups towards suitable programmes depended on the allowances rather than the suitability of the programme. Finally, the fragmentation of responsibilities (see Table A.36) allowed each of the implementing agencies to pursue its own particular objectives (see OECD (1984a)).

The purpose of this chapter is to place these schemes in an overall policy framework. The first section provides a description and assessment of the individual schemes. Rather than evaluating each individual

programme afresh, assessment will be based on evaluations already undertaken. The next section deals with the priority groups in the labour market. While the first section contains some specific recommendations for the individual schemes, overall conclusions and recommendations are contained in a final section.

## DESCRIPTION AND ASSESSMENT OF SPECIAL SCHEMES

Given the number of schemes and the variety of objectives pursued it is necessary to attempt some grouping. This is done according to the objectives of the various schemes and gives rise to the following categorisation:

- (i) schemes providing temporary employment;
- (ii) schemes providing training;
- (iii) schemes providing work experience;
- (iv) job creation schemes.

Schemes are examined under each of these headings in the remainder of this section. While two of the schemes are dealt with in more detail in the section dealing with priority groups they are adverted to in this section for completeness.

### Temporary Employment

Temporary employment is provided through the Grant Scheme for Youth Employment (now known as Teamwork), the Environmental Improvement Scheme and the Social Employment Scheme. Under *Teamwork*, grants are paid principally to community groups for the employment of young people on projects of value to the community. The scheme is targeted at those aged 17-25 years who have been unemployed for at least six months. A grant of £70 per week is available towards the employment costs of each young person. On average, just under 1,700 young people were employed on projects supported by the scheme in 1984. It has been estimated that 75% of participants have Intermediate/Group/Leaving Certificate while the remainder have no qualifications.

The scheme, prior to some recent changes, involved work which was almost exclusively manual with no formal on or off-the-job training. While case studies indicated that the scheme benefitted those who would otherwise have found it very difficult to get work, no data were kept on the characteristics of the participants or on placement patterns. However, a joint YEA/Department of Labour monitoring committee has reviewed the scheme. One of the recommendations of the Committee was that the range of projects undertaken be extended to enhance the value of participation to the young people and the sponsoring body.

As a result of this review the scheme has ceased to cater for construction projects (which will, in future, be carried out through AnCO's Community Youth Training Programme).

One of the major conclusions of this internal review was that there did not seem to be much regard for the relative needs of various areas when resources were being allocated. For example, Dublin accounts for approximately one third of the youth labour force and youth unemployment, yet it accounts for only 8% of participants on the scheme. By contrast, the West region accounts for 26% of the participants but accounts for only 10% of youth unemployment.

The other scheme designed to provide temporary employment is the *Environmental Improvement Scheme*. Under this scheme levy funds were made available to the Department of the Environment for allocation to local authorities in proportion to the number of young people registered as unemployed in the relevant area. The projects undertaken under this scheme involved work of an unskilled manual labour variety requiring no training. There was no formal training component or any further education input in the scheme. Emphasis within the scheme was on the creation of a quantity of jobs for a given budget with little concern for quality, the relevance of the jobs created or the development of real skills. Some participants did gain permanent jobs in local authorities but the numbers were small compared to the actual number of participants. The scheme was effectively terminated in 1984.

The Government's Plan "Building on Reality" identified the long-term unemployed (over 80% of whom are over 25) as a group meriting special attention and announced the introduction of two further schemes specifically designed for this group. Under the *Social Employment Scheme* part-time work is offered on a half weekly basis for one year to persons who have been unemployed for over a year and are drawing unemployment assistance. A wage of £70 for a half-week is paid. The work is provided through projects satisfying community needs put forward by public sector and voluntary organisations. It was envisaged in the Plan that local authorities would be the single biggest sponsors.

#### **Training**

Under the training umbrella come the Community Youth Training Programme and the Community Training Workshops already referred to in Chapters III and IV. There are, in addition, some AnCO 'adult' courses which come under the aegis of special measures. These, however, are dealt with in Chapter IV in the context of discussing the allocation of resources within AnCO.

The *Community Youth Training Programme* involves the provision of training to young people on projects of value to the community. In 1984 the projects were almost exclusively of a construction related nature. The training is therefore mainly in basic construction skills. In all, 5,230 people were trained on this scheme in 1984, comprised of 630 over 25s and 4,600 under 25s. When the scheme was originally introduced in 1975 particular consideration was given to low achievers in need of career direction or elementary training. In 1983, three in every four of the participants had Intermediate/Group/Leaving Certificate while 16% had no qualifications. While this percentage is similar to the percentage of unqualified school leavers in the annual outflow, one would have expected the percentage to be higher given the objectives of the scheme. The programme is under review at present.

The *Community Training Workshops* were initiated by AnCO in 1977 to cater specifically for the disadvantaged early school leavers in large urban areas. They have been significantly expanded under the direction of a joint YEA/AnCO management committee since 1983. Of the estimated outflow of 47,600 from second level education in 1981, 8,600 had no qualifications (Table 3.3). During 1984, 2,000 young people were trained in workshops. The workshops are managed by representative community committees and combine the provision of basic vocational skills training with opportunities to improve literacy, numeracy and other skills essential for working life.

The *Alternance Scheme*, announced in the Government's Plan, is designed to aid the older long-term unemployed through a combination of formal AnCO training and periods of practical work experience in a work environment. The training ranges from personal development to enterprise training. It is envisaged that the practical work experience will be in both public and private sector organisations (the Plan expects the latter to be generous in the provision of places).

#### **Work Experience**

The Work Experience Programme was launched in 1978 with the objective of assisting young people who had left the educational system and who were experiencing difficulty in obtaining suitable permanent employment. Under the programme young people are provided with a six month placement in work situations with public or private sector employers. During this time they follow a programme of activity agreed in advance between the company and an NMS Placement Officer. Throughput in 1984 was 8,500.

The programme has been subject to a number of evaluations and to a significant degree of comment since it was first introduced. Rees (1980) overall conclusion on the scheme was that "... the range of opportunities and the type of young person being helped ... is very narrow. White collar clerical experience is being made available to well motivated, educationally qualified girls in urban areas". Gallagher (1981), however, concluded that the programme seemed to cater very well for the needs of two groups who do not benefit greatly from other measures: those school leavers (especially young males) with little or no academic qualifications; girls with Intermediate or Leaving Certificate who have difficulty obtaining clerical/secretarial employment. Some caution should be exercised with regard to these conclusions in view of the rather tenuous relationship between the data provided and the conclusions reached.

According to the YEA nearly two thirds of participants had Leaving Certificate or higher qualifications in 1982 and 1983 while less than 10% in each year had no qualifications. Breen (1984) concludes that places were more frequently offered to better qualified school leavers and that school dropouts were poorly served by the programme (see Table A.37). In commenting on the high placement record of participants on the scheme the 1984(a) OECD report observed that the overall demand orientation of the NMS may have influenced the operation of the programme in favour of particularly attractive matches from the point of view of employers thus giving rise to the probability of significant deadweight effects.

In a more general context the 1984(a) OECD report comments that the orientation of NMS towards the demand side of the labour market must "limit its institutional sympathy for Government programmes intended to improve the employment opportunities of the unemployed or the hard-core unemployed. . . ." This has serious implications for programmes like WEP whose client group was originally defined as those who are experiencing difficulty in finding employment. The characteristics of those placed in the early stages of the programme is consistent with this conclusion. Chapter VII, which deals with the NMS in some detail, attempts to explain the reasons underlying the concentration on filling vacancies from among the most suitable candidates.

It is vitally important with all special labour market measures that the target groups be clearly specified. This is one of the welcome features of the YEA's response to the Minister for Labour's request regarding the implementation of the social guarantee for young people. While the guarantee is discussed in more detail elsewhere it is noteworthy that

the WEP is identified as being most appropriate for Group/Intermediate Certificate leavers. An education module has now also been added to the programme. The Social Guarantee document indicates that the programme will also cater for school leavers at Leaving Certificate and higher levels.

The Social Guarantee, which arises from a European Council resolution of July 1983 on Vocational Training Policies, also evoked a response from the education authorities. In particular, as a result of the resolution the Department of Education identified the need for vocational preparation programmes in the educational system. The education authorities identified two broad groups of young people meriting special attention: (i) those who drop out of the education system on completion of compulsory schooling with inadequate or no qualifications; and (ii) those who continue at school but whose programmes of study do not contain adequate vocational preparation.

The Department of Education instituted a new programme of Vocational Preparation (already referred to in Chapter III) targeted at these two groups. The general aim of this programme is to assist in the transition from school to work. The courses have three main components: personal development; work experience; and technical knowledge. While the detailed content of each of these three components does not concern this section it is noteworthy that the work experience component envisages formal experience in work situations in actual industries. The Government's Plan indicated that in the 1984/85 academic year these courses were expected to cater for 19,000 students. Participants on these courses are paid an annual allowance of £300.

The addition of an education module to the WEP by the YEA and the search for work stations by the educational authorities as part of the Vocational Preparation Programme lends further evidence of the need for greater co-ordination in the education/training area, a matter which is discussed in more detail in Chapter IX.

### **Job Creation**

The remainder of the special schemes come under the generic title of job creation. Within this overall category are employment subsidies designed to encourage employers to take on additional employees and schemes to encourage self-employment. Under the former heading would be included the Employment Incentive Scheme while the Youth Self Employment Programme, the Community Enterprise Programme and the Enterprise Allowance Scheme are all designed to encourage self employment.

### Employment Subsidies

Employment subsidies were introduced in the wake of the 1973/74 recession through a Premium Employment Programme introduced in mid-1975. This was replaced by the Employment Incentive Scheme in 1977. It was originally intended to run for a year but is still in operation. There have been many revisions to the scheme since it was first introduced, ranging from changes in the sectors covered to alterations in the premium structure, together with measures designed to improve its effectiveness.

The scheme is presently open to all sectors of the economy with the exception of the public sector and financial institutions. The main changes in the coverage since 1977 relate to the inclusion/exclusion of the building and construction sector, the hotel and catering industries and the services sector generally (see notes to Table 8.2). The number of jobs which an employer may have assisted under the scheme is two and each extra job must be filled for at least twenty four weeks. The premiums are payable in respect of this period if there is a net increase in the overall employment level. Over the last three years the numbers employed under the scheme ranged from five to six thousand (Table 8.2).

To qualify for the premium a person must be:

- (i) a first time entrant to the labour force who has left the educational system thirteen weeks prior to recruitment; or
- (ii) on the Live Register for thirteen weeks immediately preceding recruitment; or
- (iii) 25 years of age or over and have been on the Live Register for fifty-two weeks immediately preceding recruitment; or
- (iv) disabled; or
- (v) undergoing a training or work experience course for the preceding thirteen weeks.

The scheme is financially weighted in favour of category (iii) above where a premium of £60 per week applies. A premium of £30 per week is payable in respect of categories (i) and (ii). The scheme is, primarily, a marginal stock subsidy with a counter-cyclical objective. Appendix V places this type of subsidy in an overall conceptual framework and outlines a framework for assessing such subsidies.

The most recent evaluation of the Employment Incentive Scheme is by O'Mahony (1983). Based on a postal questionnaire and personal interviews the study found that 27% of the jobs subsidised under the scheme

Table 8.2  
Employment Incentive Scheme  
Admissions cross-classified by sector (and by participant type up to 1984)

	1977 (1)		1978		1979		1980 (2)		1981 (3)		1982 (4)		1983 (5)		1984 (6)	
	Adults	School leavers	Adults	School leavers	Adults	School leavers	Adults	School leavers	Adults	School leavers	Adults	School leavers	Adults	School leavers	Adults	School leavers
Manufacturing	1,842	653	3,159	2,126	1,503	1,346	1,018	1,161	619	700	1,687	2,818	2,086	186	96	173
Agriculture	174	29	211	70	71	34	45	37	18	18	96	186	186	186	186	186
Services	-	-	669	1,382	536	1,657	611	2,156	303	678	1,720	1,574	2,487	300	592	713
Construction	-	-	1,147	220	546	199	852	300	748	112	1,065	959	300	300	300	300
Hotel and Catering	-	-	989	437	720	357	397	170	214	36	959	713	219	219	219	219
Total	2,016	2,698	6,175	4,235	3,376	3,593	2,923	3,824	1,902	1,544	5,527	5,870	5,278	5,278	5,278	5,278

Notes: (1) The scheme covered Manufacturing and Agriculture from 28th February, 1977. It was extended to Services, Hotel and Catering and Building and Construction from 12th September, 1977.  
 (2) A temporary supplementary premium of £10 was payable in respect of an eligible employee recruited between 31st December, 1979 and 14th June, 1980. A further £10 was payable where the employee was unemployed for 26 weeks in the previous 12 months.  
 (3) A number of changes were made in certain administrative aspects of the scheme in 1981.  
 (4) From 28th March, 1982 increases in premium rates came into effect.  
 (5) Unemployed, 20 years or over, £20 to £30.  
 (6) Unemployed, less than 20 years, £14 to £25.  
 Period for which claims could be made extended from 24 to 52 weeks.  
 Unemployed, for 26 weeks, over 25, £45, £45.  
 In January, 1983, the scheme was restricted to manufacturing and agriculture. Participation by the excluded sectors as shown in the table is due to delayed payments. The hotel sector was later re-introduced with effect from end May, 1983.  
 (6) At 30th April, 1984, the scheme was extended to all sectors, paid recruitment confined to two per employer per annum and a once-off payment introduced after six months of proven employment. Payment would not have been made until 1985 for some of the post-April, 1984 recruitments which are recorded above.

during 1982 were attributable to the subsidy; of which 7% was due to recruitment being brought forward and 20% due to recruitment which would not have otherwise occurred. This is equivalent to saying that almost three quarters of the firms would have taken on the extra person for whom they were receiving the subsidy in any event. Thus, three out of four of the subsidies paid represent what is called, in economic terms, "dead-weight". The study also found that the degree to which subsidised jobs are created because of the subsidy varies markedly with the size of firm. In all sectors the proportion of jobs attributable to the subsidy is over 40% in the case of firms with less than 10 employees and below 20% in the case of firms with over 50 employees.

The study also finds that the exchequer would break even if 33% of the jobs were attributable to the subsidy (assuming the job survives for the period of the subsidy only). This calculation is based on receipt of European Social Fund support, the social welfare savings and the revenue yield associated with being employed.<sup>1</sup> The actual percentage attributable is 27%. However, the study concludes that in view of the fact that at least 70% of the jobs attributable to the subsidy survive the expiry of the subsidy the exchequer breaks even at significantly below 33%. The implementation of the recommendation in the study that subsidies should be limited to two jobs per annum per employer (which has already been done) should limit somewhat the degree of deadweight or windfall gain.

It is argued in the evaluation by O'Mahony that displacement effects are unlikely to be very significant in the scheme. This argument is based on interviews with employers which indicate that in the case of larger firms the subsidy is not sufficient to result in increased output but that the additional worker may be an alternative to increased overtime or additional expenditure on plant. In addition, interviews suggest that most large firms face international competition, hence, any displacement would be transferred abroad. These arguments are also expected to hold for small firms in addition to which there is the consideration, particularly in agriculture and services, of jobs being used to increase the leisure time for the employer rather than involving increased output.

We have some difficulty in going along with the conclusions on displacement. The drawback of conclusions based on interviews and postal questionnaires are well known. Neither is it necessarily correct

<sup>1</sup>The ESF meets the cost of 55% of up to the first £20 per week of subsidies for the creation of additional jobs for persons under 25 years of age.

to argue that most large firms face international competition. It is possible that those availing of the subsidy are sheltered activities and that consequently the main effect of the subsidy may be on market share. As a first step towards providing better data on which to formulate policy we recommend that the market orientation of firms receiving subsidies should be ascertained. We have similar doubts about displacement with regard to small firms. In general, subsidies should be confined to businesses in the traded sector.

The effectiveness of the scheme in shifting recruitment patterns towards the long-term unemployed is difficult to assess. The recent National Plan stated that the participation rate among the long-term unemployed has increased from 3% to 17% since the introduction of the subsidy at twice the normal rate for older long-term unemployed persons. The figure should be looked at against a background of the long-term unemployed constituting almost 40% of the total unemployed. This increase in participation also coincided with a significant increase in the proportion of long-term unemployed in 1984. In the period of the O'Mahony (1983) survey only 14% of the jobs subsidised were for long-term unemployed. This latter study finds that in choosing recruits many employers would not be aware of whether an individual was long-term unemployed and hence eligible for the higher premium. He therefore concludes that the higher premium for the long-term unemployed is not sufficiently promoted. However, we find it very difficult to conceive of a situation whereby employers would not be aware of the status of a potential recruit given the differences in premia.

There is, however, a wider issue involved here, namely, that conflict between suitability of an employee for the job and eligibility under the programme may affect the response to a programme with employers usually opting for the more suitable employee. This may be relevant in the case of older long-term unemployed where skill obsolescence may have set in. As a result it may be more effective to engage in retraining or job creation rather than the provision of subsidies. Definite conclusions cannot be drawn on this in the absence of more detailed micro-analysis. However, as a first step we agree with O'Mahony that the higher rate for longer-term unemployed should be promoted. In addition, steps should be taken to ensure that an employer can determine rapidly whether participants are eligible for the higher premium.

In summary, employment subsidies are generally regarded as most effective if they are temporary, targeted and incremental. The financial weighting of the Employment Incentive Scheme in favour of the older long-term unemployed suggests that the scheme is moving from being a

counter-cyclical instrument to a structural instrument with the target group being the long-term unemployed. The scheme, therefore, generally satisfies the last two criteria, although in our view, its effectiveness as an instrument for helping the long-term unemployed should be critically evaluated.

The scheme is obviously not temporary, having been in existence since 1977. In general, the longer such subsidies are in operation the weaker their effects. In addition to the three criteria outlined above such subsidies are most effective during a period of improving demand prospects when the risk of output displacement would be relatively small. However, during such a period firms would be likely to increase employment in the absence of the subsidy, giving higher deadweight effects. In this context it is interesting to note that when this scheme was continued in operation through the peak of the economic cycle in 1978/79, the take-up reached its highest ever level.

#### *Schemes to Encourage Self-employment*

The *Community Enterprise Programme* is an attempt to encourage a locally based response to the unemployment situation. It was launched in 1983 and is designed to assist voluntary organisations and local communities to get involved in the creation of sustainable employment for young persons through the provision of products and services. The form of support includes: the provision of advice and information; the provision of investigative grants; grants towards project development costs; grants towards the employment of an enterprise worker; wage subsidies and management grants.

While being broadly in favour of initiatives which encourage entrepreneurship and risk taking it is necessary to be careful that such considerations are not submerged in community based schemes. The Community Enterprise Programme appears to involve a large degree of hand-holding through its various stages. While subsidies and direct aids may appear helpful during a start-up period they should be provided with a view to the eventual survival of the venture without subsidisation. In fact we would go along with OECD (1984b), which deals with community based ventures, that the proper role for Government should be to facilitate access to capital along conventional lines (which is the approach adopted in the Youth Self-Employment Programme) rather than in the provision of direct subsidies or financial incentives.

The *Youth Self-Employment Programme* is a pilot programme, launched in September 1983 and administered by the YEA and the Bank of Ireland. The programme is targeted at unemployed young people who have a business idea but who have difficulty in gaining access to ordinary

bank finance. Applicants must have been unemployed for a minimum of three months, or on an AnCO training course, and under 25 years of age. The maximum loan is £3,000 per person with the YEA guaranteeing 60% of each loan. Since the Programme commenced, over 600 young people have got sanction for loans totalling £1.5m. The scheme is at present under review.

The *Enterprise Allowance Scheme (EAS)* was established in December 1983 to encourage self-employment among unemployed persons. The scheme involves the provision of an allowance of £30-£35 per week (depending on family circumstances) in lieu of unemployment benefit/assistance for a maximum of 22 weeks. In some cases the allowance is payable in the form of a lump sum. A total of 5,000 unemployed persons have participated in the scheme to date, 25% of whom were under 25. Approximately two-thirds of the participants were unemployed for periods ranging from 6 to over 30 months. Almost 75% of the businesses established were in the services sector.

While the general comments on the scheme tend to concentrate on the take-up of the scheme, any assessment of the scheme must concentrate upon the end result. Assessment of this type of scheme must also have regard to deadweight and displacement effects similar to those arising with marginal employment subsidies. No information is available on these aspects. A recent UK evaluation of their Enterprise Allowance Scheme, which is similar to the Irish one, found deadweight to be around 50%, i.e. for every 100 firms set up under the scheme about 50 did so because the scheme was available. Data from studies of similar programmes in the UK suggest that displacement may be around the 50% level also.

In order to minimise the failure rate it is recommended that greater emphasis should be accorded the provision of advice to participants. A possibility here would be to link the advice available under the Community Enterprise Programme to the entrepreneurship exhibited under the EAS. With a view to monitoring the effectiveness of the scheme and providing information on which to base future development it is necessary that information be collected on a systematic basis covering such things as characteristics of the participants including previous work experience, the types and viability of businesses established, etc.

#### **PRIORITY GROUPS IN THE LABOUR MARKET**

The introduction of many of the special measures described in the previous section was either seen as a temporary response to a cyclical increase in unemployment or as a structural effort to assist particular

groups in the labour market. However, with the continued growth in unemployment the potential target groups for such measures have grown significantly. Given the fiscal constraints it is now essential to focus such schemes more narrowly on priority groups. In our view two particular groups merit special attention: (i) the long-term unemployed; and (ii) the early disadvantaged school-leaver with little or no qualification. The position of the former is dealt with in this chapter while the problems confronting the early disadvantaged school leaver have already been addressed in Chapter III.

### Long Term Unemployed

By 1985 two out of every five persons unemployed had been unemployed for over one year (Table A.38) giving an absolute total of over 94,000. While there is a general correlation between changes in total unemployment and changes in long-term unemployment the twelve month period April 1983-April 1984 saw long-term unemployment grow significantly faster while over the previous three year period the reverse situation prevailed. This, however, is explicable in terms of flows onto and off the Live Register. The jump in the proportion of long-term unemployed in the 1983-84 period was inevitable given the rapid inflow into unemployment from mid-1981 and the subsequent slowing down in the rate of outflow.

Table A.39 shows the composition of long-term unemployment. Among the long-term unemployed the share of older workers has fallen while the share of youth has risen considerably with a small increase in the share of prime age adults. Table A.40 shows the percentage share of long-term unemployment within age groups. It is interesting that between 1980 and 1983 the share of long-term unemployment in the youth and prime age groups remained virtually static while the share fell considerably in the older group. However, in 1984 all age groups experienced significant increases in the incidence of long-term unemployment reflecting the overall increase in the proportion of long-term unemployed seen in Table A.38. The table also shows that the incidence of long-term unemployment increases steadily with age.

Long-term unemployment is generally thought of as affecting older workers as structural change gives rise to the displacement of such workers who find it very difficult to regain a foothold in the labour market. However, Table A.39 shows that the general lack of employment opportunities has resulted in members of the prime age adult group now forming over half of the long-term unemployed. Long-term unemployment is best described as a trap from which it is very difficult to escape and the longer one is there, the more difficult it becomes to

escape. This is particularly the case in slack labour markets as those recent arrivals in the ranks of the unemployed go to the front of the hiring queue while the least competitive among the unemployed are pushed into long-term unemployment. The long-term unemployed are sometimes not hired simply because they are long-term unemployed. During a prolonged period without work, skills, work-habits and knowledge deteriorate while motivation tends to be weakened and sometimes even adverse psychological effects can develop. In these circumstances many actually withdraw from the labour market.

Given the observed tendency internationally that lower and lower proportions of those out of work leave unemployment as their unemployment duration lengthens, any upturn in the economy would have to be significant and sustained before it began to reach into the pool of long-term unemployed. In view of the overall employment outlook contained in the Government's Plan the prospects for the long-term unemployed, in the absence of special schemes, are not very encouraging. Intervention through special schemes can be justified on both equity and efficiency grounds. The deterioration in human capital in all the age groups, but particularly in the prime age groups, partly provides the efficiency justification. In addition, labour market segmentation arising from the existence of a permanent and sizeable core of long-term unemployed reduces the overall efficiency of the economy. As the association of this group with the labour market becomes more remote it becomes increasingly difficult to re-integrate them into the labour market in the absence of special measures. In effect, special measures break the vicious circle whereby lack of success in job search reduces motivation and this lack of motivation subsequently reduces even further the chances of finding work. As almost one half of the long-term unemployed have family responsibilities, with an average number of dependants of between three and four, the equity argument is clear.

### The Range of Possible Policy Responses

The OECD (1983) examined the main orientations of policies in favour of the long-term unemployed. It was found that the focus of intervention was beginning to shift within traditional target groups in favour of the long-term unemployed. The OECD classifies the various approaches to the problem of the long-term unemployed into three types:

- (i) an in-depth review of the individuals affected by long-term unemployment and the provision of "tailored" services for them;
- (ii) "massive" intervention in the market by subsidising their employment (up to 100%), mainly but not exclusively in the



provision of public services at the local level or satisfying unmet needs in local communities; and

(iii) transition from long-term unemployment into early retirement.

### The Irish Response

The Irish response has lain virtually entirely in category (ii) above (although the intervention could not be described as massive) together with some minor development in category (iii) through the introduction of a pre-retirement category for long-term unemployed who are in their late fifties. Very little investigation of the long-term unemployed has been undertaken in Ireland. Short (1980) highlighted deficiencies in education and skill levels as factors contributing significantly to long-term unemployment. The Manpower Consultative Committee (1982) recommended better counselling of the long-term unemployed from the State agencies and suggested a possible restructuring of the unemployment compensation system.

The first initiative designed to assist the long-term unemployed was the financial weighting of the Employment Incentive Scheme in favour of the long-term unemployed (a doubling of the basic premium). The response has been disappointing, however, with a participation rate of only 17% identified in the Plan. (Admittedly the participation rate has increased from the miniscule 3% prior to the weighting). In addition, approximately one third of the participants in the Enterprise Allowance Scheme are long-term unemployed (approximately 1,200). The National Plan has introduced two further schemes designed for the long-term unemployed: a Social Employment Scheme and a Training and Placement "Alternance" Scheme.

The objective of the Social Employment Scheme is to achieve a participation level of 10,000 within a year. It is envisaged that the local authorities will be the single biggest sponsors of the scheme. It is noteworthy that the local authorities were also the sponsors of the Environmental Improvement Scheme (catering primarily for young persons) which was terminated in 1984. Evaluations of this scheme indicated that emphasis on the scheme was on the creation of a quantity of jobs for a given budget with little concern for quality, the relevance of the jobs created or the development of real skills. There is no reason to believe that the Social Employment Scheme will be different in any significant respect given the criterion that it should not be in substitution for existing employment.<sup>1</sup> However, the Training and Placement

<sup>1</sup>Under the Environmental Improvement Scheme the projects undertaken were not of a type undertaken by the local authority as part of its regular activities.

Alternance Scheme, with its combination of formal training and practical work experience in a work environment, shows much more sensitivity to the needs of the long-term unemployed and the barriers they face to re-entry to employment. This scheme should help to counteract many of the adverse effects associated with long-term unemployment: depreciation of skills, knowledge and work-habits together with a decline in motivation. However, the size of the programme is quite small with the aim being to give 2,500 persons a six-month programme in the first full year of the scheme.

### Concluding Remarks

In April 1985 the total absolute number of persons in the age group 25-64 who had been unemployed for over one year was 76,000. The schemes are therefore modest in the context of this total. In addition, the schemes have been put in place without attempting to ascertain the characteristics of the long-term unemployed and the handicaps or difficulties which they might have to overcome to re-enter employment. The Alternance Scheme is the kind of response one might expect if this exercise had been undertaken.

Even though it must be remembered that comprehensive training schemes which embrace both remedial aspects and elements of skill training are resource consuming we recommend that the Social Employment Scheme should incorporate at least the more basic elements of the Alternance Scheme, in particular, employment counselling. With regard to the Employment Incentive Scheme the provision of subsidies to employers is unlikely to alter the composition of their recruitment significantly if the characteristics of the target group do not match employers' requirements. In fact the OECD (1983) has recently observed that subsidised employment in the traded sector is sometimes regarded as not suitable for the often cumulative handicaps of the long-term unemployed. The low response to this financial weighting merits examination and in this context the specific characteristics and needs of the long-term unemployed could be identified.

### CONCLUSIONS

Having described and assessed each special labour market scheme individually, it is now necessary to look at them as a whole and in the context of the priority groups in the labour market. The introduction of many of the special schemes described earlier was envisaged originally as a temporary response to a cyclical increase in unemployment. They now, however, have to be seen in the context of significantly higher unemployment, which is unlikely to ease significantly in the near future. In this environment the optimal scale of special measures is difficult to assess.

the net cost to the exchequer of many of the schemes may be significantly lower than the gross cost when account is taken of social welfare savings and taxation receipts. However, it is not certain that this low net cost would continue with further increases in the extent of the schemes. In an overall context it is necessary to compare alternative schemes to determine which is the most effective and to allocate resources across all schemes accordingly. It is also necessary to assess the schemes from a wider perspective than just exchequer costs and benefits. For example, assessments of job creation programmes should also look at the output produced by participants on the scheme, programme operating costs, etc. Work experience and training programmes together with temporary employment schemes must also be examined in the context of the extent to which they enhance the future employability of participants.

In the context of allocating resources across the various schemes we believe there are a number of programmes which require a fundamental re-assessment. In particular, we would place a question mark over continuing further with the Employment Incentive Scheme. We would question its cost effectiveness on the grounds that: (i) the longer such subsidies are in operation the weaker their effects; (ii) the very high deadweight levels (without taking displacement into account).

Not alone has the unemployment environment, in which the special schemes were originally introduced, proved to be more than cyclical it has now begun to affect groups who previously were little affected. For example, in the 1970s youth unemployment was concentrated on those young people who, for a variety of reasons, lacked certain basic skills or attributes needed for finding and holding a job. However, the problem has now begun to affect young people who previously had encountered little difficulty in procuring employment. Similarly, long-term unemployment is now almost as probable for prime-age adults as for other groups.

This growth of unemployment and its spread into previously low risk groups causes some dilemmas regarding the most appropriate response. Special measures by their very nature can only cover a small proportion of the total unemployed. Priorities in the allocation of resources must therefore be decided and certain groups targeted for assistance. In targeting specific groups it is essential that the composition of the groups be carefully identified using an unemployment variable, an education qualification variable and perhaps an age variable. What we are concerned about here is that incentives may exist for those implementing the measures on the ground to behave in a manner contrary

to the objective of the scheme. For example, schemes are frequently assessed on the basis of placement rates. In this case it is likely that placement officers, in the absence of specific guidelines on the targeted group, may choose candidates for special schemes on the basis of subsequent placement possibility. In cases where the target group is disadvantaged job seekers such behaviour is contrary to the objectives of the scheme. In slack labour markets, where targeting it not practised one simply ends up helping certain members of a specific group to compete more effectively against each other for a diminishing number of jobs.

In the context of targeting the introduction of the Social Guarantee is a welcome development. When the YEA was established it was allocated responsibility for co-ordinating schemes for the training and employment of young persons. Notwithstanding the comments on the need for further co-ordination in Chapter IX, a significant degree of co-ordination has now been achieved and a number of the criticisms outlined in the introduction to this chapter have been remedied. The integration/co-ordination of the various programmes through the identification of specific groups with different requirements in the context of an overall social guarantee provides a framework, hitherto absent, for the assessment of these schemes. The guarantee also provides a framework in which groups in the labour market with different priority status can be identified and accommodated. Finally, the guarantee allows for the identification of the necessary components of schemes to help different groups and the tailoring of schemes to the different groups.

For example, programmes for unqualified school leavers (who are accorded first priority in the guarantee) would be expected to pay particular attention to:

- (a) basic skills training, preferably transferable skills;
- (b) experience of work in the training setting as a means of preparation for work outside the training environment;
- (c) exposing the young people to the broadest possible range of working environments and types of work;
- (d) access to remedial aid in literacy and numeracy, to life and social skills training and to support and counselling.

Of the programmes presently in existence the Community Training Workshops are specifically targeted at this group. The Community Youth Training Programme and Work Experience Programme only cover certain parts of (a) to (d) above. These two programmes are more geared to those who leave the education system after Group/

Intermediate Certificate. Some changes will be required in these programmes to make them more orientated towards genuine work experience and vocational preparation.

Despite the co-ordination/integration of the special schemes (some of which, it must be remembered, were introduced in response to shortcomings in the education system) we are concerned lest this lead to lack of co-ordination at a broader policy level, i.e. between the education and manpower areas. We believe that there is scope for further co-operation between the education and manpower authorities. This is discussed further and certain proposals are put forward in Chapter IX.

Returning to the question of targeting it is important to note that the target group itself may be moving. The target population of many of the schemes introduced was those under 25. It is possible to reach this target group, particularly at the lower end of the age spectrum through education and training institutions. This issue and its implications for funding arrangements has been addressed in more detail in other chapters. Suffice here to add further caution regarding the adoption of policies that favour one age group over another.

While we have identified two groups in the labour market for priority treatment this does not preclude providing assistance to other groups. It is useful to think of further interventions in the context of a segmented labour market as described in Chapter II. The priority groups already identified would generally fall into the third segment of the labour market which is characterised by structural unemployment. However, the casual jobs in the secondary labour market tend to have little stability, virtually no social protection or career prospects. Those in that position now are likely to find it difficult to make the transition to better jobs later on. In the interests of efficiency, special measures geared to those to prevent segmentation of the labour market are also justified.

Measures to counteract labour market segmentation are unlikely to be successful through the provision of temporary placements only, with participants subsequently returning to the unemployment register. Measures should, where possible, incorporate a strong training input and provide participants with experience and knowledge which is supportive of their future development and generally raises their competitive advantage. For both of the priority groups identified specialised vocational guidance, counselling and placement efforts are of particular importance. In general, programmes of work experience, temporary employment and training should enhance the possibility of participants

returning to employment. In this context it is essential for the assessment and future development of programmes to track the subsequent paths of those who participate in the schemes.

### **A Voluntary Local Response**

Finally, we wish to note two concerns on the role of the local voluntary sector and the support which it might provide in ensuring the success of the special labour market measures. The YEA has placed particular emphasis on local communities and groups operating within them on the grounds that: (i) they can provide a more flexible and sensitive range of employment and employment related services than is possible through national programmes alone; and (ii) they can help to raise the general level of enterprise among individuals and groups.

The first concern relates to the possibility of overloading the voluntary system. Many of the schemes outlined earlier are totally dependent upon spontaneous local support including:

- (i) the community youth training programme;
- (ii) the grant scheme for youth employment;
- (iii) the community youth enterprise programme.

In addition it is expected that voluntary organisations will submit projects for consideration for the Social Employment Scheme. It must be remembered that there is probably a limited stock of opportunities for voluntary projects and that the design of proposals by voluntary organisations is not costless. Many of the activities are quite time consuming and the demands on voluntary organisations can be substantial. If special community-based schemes continue to be the responsibility of different agencies (for example, AnCO is responsible for some community based programmes for youth while the National Manpower Service is responsible for those for the older long-term unemployed) there is a danger that competition might develop for the limited opportunities. The institutional recommendations which we make in Chapter IX are designed partly to avoid these dangers.

One final issue which arises in the context of the expectation of a spontaneous voluntary response at the local level is the likely geographical variability of the response. It is unlikely that the strength of the local response will always reflect the seriousness of the situation at the local level. For example, the local response may be very strong in some areas but may be weak in areas where the need is greater. This unevenness was

reflected in the grant scheme for youth unemployment. There is, therefore, need for very close monitoring with provision for intervention by a central agency to provide resources on a 'needs basis'.<sup>1</sup>

## CHAPTER IX

### THE INSTITUTIONAL ARRANGEMENTS IN THE MANPOWER AREA

In the course of a brief review of past events in the manpower area given in Chapter I we highlighted a number of problems, foremost amongst which were the lack of an overall guiding strategy, a failure to influence decisions in an overall economic and social context in regard to their impact on manpower issues and problems related to institutional arrangements. In Chapter II we outlined a more comprehensive labour market strategy designed to deal with these and other issues. In this chapter we are concerned principally with the institutional arrangements which we consider are necessary to give effect not only to this overall strategy but to facilitate the implementation of many of our other more detailed proposals relating to individual manpower areas.

It must be emphasised that problems in the manpower area cannot be solved solely by effecting changes in institutional structures. Any amount of improvement of this kind will not necessarily have beneficial effects if the basic policies being applied in different subsectors are inappropriate. It is true, however, that deficiencies in structures can frustrate and impede the implementation of policies and seriously impair their effectiveness. In Ireland, as the overview in Chapter I has illustrated, we appear to have been lacking on both counts, at least for the period since the mid-1970s, as both policies (or the lack of them) and the institutional arrangements have left much to be desired.

It is, however, relatively easy to be critical, particularly with the benefit of hindsight. It is another matter altogether to come forward with practical suggestions as to how the situation might be improved. We propose to deal with the issues involved here under a number of different but inter-related headings. The first of these concerns the role which we see the Department of Labour fulfilling in the context of the broader strategy as outlined. Secondly, we consider the question of

<sup>1</sup> The resources of the Community Programme in the UK, which is the counterpart of the Social Employment Scheme, are allocated broadly according to regional unemployment rates.

having a more coherent and unified approach to deal with specifically manpower issues, and suggest some new practical institutional procedures designed to give effect to these ideas. The third aspect covered (essentially a particular case of the previous issue) relates specifically to measures for dealing with the interface between education and training. The fourth item discussed concerns the question of expanding the resources of the Department of Labour in order that it may exercise a more influential role in the context of the extended range of responsibilities arising from the foregoing. Finally, we set out some recommendations regarding the re-organisation of the executive agencies in the manpower area.

### **THE ROLE OF THE DEPARTMENT OF LABOUR IN A WIDER LABOUR MARKET CONTEXT**

Our view is that the Department of Labour should be principally concerned with the formulation, co-ordination and evaluation of manpower policies. While it should maintain a firm hold, through its work in the policy and legislative areas, over the general direction of the activities of its satellite agencies, it should not become involved in detailed executive matters related to settled policy. This is in broad agreement with the principles set out in the 1968 Devlin Report on the Reorganisation of the Public Service.

In assuming a more dominant role, the Department should furthermore adopt a comprehensive approach to issues in the labour market as a whole and not confine itself to a particular range of manpower policies as traditionally defined. In Chapter II we have attempted to illustrate the desirability of pursuing a comprehensive labour market strategy covering not only areas such as training, placement, and special employment initiatives, but also the labour market implications of general economic and social policy, for example, in the fiscal, social welfare and industrial spheres. The Department of Labour is not, of course, responsible for policies in all of these areas, but we consider it an essential element of its enlarged role that it should achieve a more influential voice in regard to the formulation of policies in other areas which impact on the labour market scene. One of its objectives therefore should be to promote a situation where the direction of key aspects of overall economic and social policy, while fulfilling their own purpose, also embrace a consistent approach to tackling the problems of the labour market. This should be done not only by achieving a strengthening of the Department with a view to obtaining a more influential voice in national policy formulation, but by carrying out, or otherwise promoting, evaluation of relevant issues such as the growing segmentation of the labour market and its consequences, the employment effects of

different forms of public capital and current expenditure, the future pressures likely to be placed on various sectors of education arising from the changing nature of labour demand and so on.

It should be mentioned that in making these suggestions we do not envisage the Department of Labour becoming excessively involved in affairs outside of its own sphere of responsibility. It also follows that unless there is an acceptance in principle of such a broad labour market strategy throughout the Government system generally it would be difficult for the Department to pursue the role envisaged for it. However, we do feel that heretofore the Department has had a much too narrow perception of its position in a manpower context. The result has been that many manpower problems have arisen as residual issues with the Department acting in the role of "sweeper up" to deal with the less desirable consequences of general policies.

### **A MORE COHERENT APPROACH TO ALL MANPOWER ACTIVITIES**

Let us now narrow down the discussion from the broad concept of a labour market strategy to consider the question of achieving a more uniform approach to activities in, or which relate to, the manpower area as we have conventionally known it. In earlier chapters we have illustrated how institutionally fragmented the whole approach to the labour market has become. In the areas of training, vocational education and special employment programmes, different Government departments and State agencies have independently initiated new schemes and expanded or contracted existing programmes. All of this has been done in the absence of anything even resembling an overall policy framework and has contributed significantly to the current difficulties in the manpower area. Basically what we are discussing is the need to achieve a consistent approach to all aspects of the manpower scene in regard to the setting of priorities and the allocation of expenditure not only concerning the area for which the Department of Labour has direct responsibility but also covering manpower related activities in education, industry etc.

It is perhaps appropriate to express these ideas in a somewhat more concrete form in order to illustrate more precisely what we have in mind. Table 9.1 following contains an expenditure profile of the broad manpower and education areas covering the period from 1975 to 1984. The gross financial outlay involved amounted to some £680 million in 1983. On the face of it this appears to represent a quite straightforward presentation. However, the feature which is of interest to observe (by reference to the explanatory notes) is the large number of different sources which had to be used in order to assemble this

material, which in turn illustrates the complex nature of the administration and funding of those expenditures. In recent years, for example, vocational education has been partially funded from the Youth Employment Levy (to the extent of some £15 million in both 1983 and 1984) and in fact if one were to exclude this transfer the total outlay on vocational education would have remained static in nominal terms over this period. As we have already illustrated in Chapter IV, training within firms embraces the Levy/Grant system and IDA-funded New Industry and Domestic Industry grant programmes. The category "Youth Schemes" (Col. 14) involved, at various times, projects run by the Department of Labour, the Department of the Environment and the Department of Education; this category as defined in the table does not, however, include expenditure on similar AnCO sponsored programmes (i.e. the CYTP and Community Training Workshops) for which a historical series of expenditure figures is not available. The cost of these programmes in 1983 amounted to £14 million and therefore the total expenditure on all special youth projects in that year was £37 million, nearly one third of the total current outlay on vocational education. In our view, a consideration of manpower activities and their associated costs in this broad context (both in cross-sectional terms and over time) would lead to a more balanced and unified approach to policy formulation and help to avoid a situation where individual subsectors expand in isolation, possibly to the detriment of others.

It is, however, necessary to stress that the content of Table 9.1 is illustrative rather than definitive, even though we consider that it does give a reasonably valid, if broad, picture of the expenditure patterns involved. A proper representation, to be really useful for analysis and policy formulation, would have to be more detailed, would necessitate further conceptual work in deciding on the content of the various categories and would require more precise methods of subdividing the expenditures involved. One could argue for example that only the *post compulsory* component of second level education should be included since this relates more closely to the labour market and involves a certain amount of discretion relating to the manner in which it is organised and funded (both in terms of its nature and extent). One might also hold that the data do not give a complete picture of manpower related expenditures as they should include, for example, certain aspects of social welfare. Expenditure on unemployment compensation would be of particular relevance here, since, if funds for direct training were curtailed, it might not involve a significant exchequer saving as the outlay on the payment of unemployment benefits would be likely to rise instead.

Notes:

Year	2nd Level Education		3rd Level		Training		Other Manpower Activities	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975	28.0	49.5	10.7	88.2	21.1	4.0	1.1	3.8
1976	35.9	63.0	11.4	110.3	26.7	5.5	2.2	4.4
1977	40.2	70.9	11.8	122.9	29.5	6.3	2.2	6.4
1978	46.2	85.4	13.6	145.2	33.9	7.8	2.6	21.1
1979	59.6	105.6	16.5	181.7	43.9	9.6	3.1	26.6
1980	61.8	125.6	20.4	207.8	53.1	28.3	3.3	30.2
1981	78.3	168.2	25.2	271.7	68.5	34.3	3.4	365.9
1982	95.2	194.5	28.1	317.8	77.3	43.1	5.5	449
1983	113.8	221.3	27.8	362.9	83.3	45.9	8.5	678.1
1984	114.3	243.7	28.9	386.9	84.6	51.6	11.0	49.2
Total	(18)	(17)	(16)	(15)	(14)	(13)	(12)	(11)
Overall Total	(19)	(18)	(17)	(16)	(15)	(14)	(13)	(12)

(1) Vocational Education (Col. 2) includes voted funds forwarded to VEC's plus, in 1983 and 1984, amounts allocated from the Youth Employment Levy (some £15 million in each year).  
(2) Other Third Level Education (Col. 7) includes expenditures on Regional Colleges of Technology (DIT) and other third level institutions under the auspices of VECs. For the years prior to 1980, however, this category does not include the DIT - it is covered under the Vocational Education heading (Col. 2).  
(3) The expenditures on education (Cols 2-9) do not include the costs of central administration (e.g. Dept. of Education Staff Salaries, etc.) as it is not possible to subdivide these according to the headings used in the table.  
(4) Direct Training (Col. 10) includes all AnCO direct training, total expenditure by CERT, the grant-in-aid and ESF allocation to the IMI.  
(5) In-Firm Training (Col. 11) includes gross outlay on grants paid under the Levy/Grant scheme and IDA gross expenditure on New Industry and Domestic Industry Grants.  
(6) Youth Schemes (Col. 14) cover the Work Experience Programme, the Environmental Improvements Scheme (Dept. of the Environment), Grant Schemes for Youth Employment Workshops) are not included under this heading - these are covered under Direct Training (Col. 10); the total expenditure on these programmes was £14 million in 1983 and £17.4 million in 1984.  
(7) The NMS Expenditures (Col. 15) cover only staff wages and salaries.  
(8) Subsidies to Aid Employment (Col. 16) cover, for various periods, the Employment Incentive Scheme (and its forerunner the Premium Employment Programme), the Employment Maintenance Scheme, Resettlement Allowances, Enterprise Allowance Scheme.  
(9) Other Current Manpower Expenditures (Col. 17) include other expenditures under the Department of Labour vote, other than those covered by the other headings in the table.  
Sources: Annual Estimates for the Public Services (various issues), AnCO, IDA, IMI, CERT, City of Dublin VEC.

Table 9.1

Gross State Current Expenditure on Education and Manpower Activities, 1975-84

Furthermore, if the optimum benefit is to be derived from such an approach, it would be necessary to distinguish certain sub-routines of the overall system in a more detailed fashion. For example, to assess in particular the problems associated with the transition from school to work, it would be appropriate to distinguish not only expenditures on post-compulsory education and all special youth schemes, but also, the segment of the cost of direct training attributable to young people (or more particularly those aged 15 to 19 years). The more detailed profile of training expenditures given in Table 4.4 in Chapter IV is a further example of such a subroutine.

As far as we are aware, an expenditure profile of the kind set out in Table 9.1 is not compiled.<sup>1</sup> Even if it were compiled its existence would not achieve much if there was not an associated institutionalised mechanism for appraising the situation and acting on it. The present position is that nearly all major expenditure decisions converge on the Cabinet table. Given the multitude of pressing issues to be considered, and the speed at which they are to be dealt with, this final and hard-pressed court of appeal could not possibly constitute a suitable environment for making a considered and sufficiently detailed judgement on all the aspects which come before it. It is not, however, a simple matter to suggest arrangements to deal with such problems and we realise that in touching on the question of the administration of Government we are stepping somewhat outside our brief. However, when considering the manpower, education and related areas the entire scene has become so complex and there are now so many actors on the stage, that one cannot avoid being drawn into a consideration of such issues.

One possibility would be to have a system of Cabinet sub-committees, with the necessary administrative support, to deal with broad but related areas of public expenditure, one of which would cover the manpower, education, etc. sphere. We envisage the sub-committees as having a *formal* status and possessing significant statutory powers in relation to activities in the areas concerned. It would be a bureaucratic nonsense and create administrative waste if these were to exercise merely advisory or consultative powers and the entire range of issues was again discussed at full Cabinet level. With regard to the area under discussion in this Report, the whole point of such an exercise would be to provide a means to have a comprehensive and full assessment of all

<sup>1</sup>The Department of Finance does now, however issue a new annual comprehensive publication on Public Expenditure programmes. This document certainly represents a major advance in the provision of information, not only in regard to the level of detail shown, but in that it gives a wider coverage including relevant activities of semi-state agencies. However, it covers only two years and does not yet fully draw together related expenditures from different Departments and Agencies.

manpower, education or related matters leading to a broad measure of agreement on the determination of priorities and on funding different programmes, sectors etc., within overall predetermined expenditure limits. With such an approach there should be a strong concentration on multi-annual planning but we leave open the question as to whether such sub-committees should become involved in detailed annual assessments once a strategy covering a number of years has been drawn up.

Clearly in the context of such an arrangement, the Department of Labour would play a central role. Other countries have developed systems of Government administration similar to that outlined above, notably Canada and France.

### THE RELATIONSHIP BETWEEN EDUCATION AND TRAINING AND OTHER YOUTH MANPOWER PROGRAMMES

Let us now narrow down the discussion even further and deal in more detail with one specific and important aspect, namely the relationship between education and youth manpower activities. This has become an area of some controversy in recent years with problems involving lack of co-ordination and repeated claims of overlapping activities between training and vocational education (with all of the associated friction that this inevitably causes). We do not wish to act as arbitrator in this contentious area but we consider it appropriate to comment on some factors which we consider are contributing to the problem.

A large measure of the difficulty stems from the exceptional labour market circumstances which have prevailed in recent years arising from the severe recessionary situation and from changes in the structure of labour demand. The spectre of unemployment has now begun to hit all classes, and the attainment of high educational standards (even at third level) no longer guarantees secure employment, as it generally did in the past. This has caused the spotlight to be focussed on many aspects of the educational system and this in turn has given rise to a series of different ad hoc measures designed primarily to correct for perceived deficiencies in the system. Some of these emerged inside the educational system (such as Pre-Employment Courses and more recently the Vocational Preparation Programme) and others in the training area such as AnCO's Career Development courses for young people, Community Training Workshops, etc. With the emergence of independent responses of this kind it is not surprising that problems of co-ordination and demarcation have arisen. The difficulties have been further complicated by the payment of allowances involving different amounts to various groups, both inside the training system and as between those in training activities and in certain vocational education programmes.



Many of these problems could have been avoided if there had been an overall strategy covering the interface between education and training. In our view the development of such a broad strategy would be facilitated by the existence of a formal Cabinet sub-committee dealing with manpower, education and related issues as suggested earlier in this chapter. However, one should not understate the problems involved in achieving a rational system which will bring about an adequate degree of co-ordination or integration in this difficult area. While there may be aspects of common interest in the spheres of education and training, there are also differing requirements which cannot be easily reconciled. Nor is it easy to decide on a new operational system designed to achieve a coherent approach to vocational education and youth manpower programmes without engaging in excessive integration or imposing further bureaucratic structures on systems which are already quite complex.

One overtly pragmatic view in this context is that the manpower authorities should be given primary responsibilities for post-compulsory vocational education (i.e. relating to young persons aged 15 years or over) in view of the need to have close links with the labour market. Such an approach would be consistent with the thinking in the EEC Commission where there is a growing tendency to consider vocational education and training as one entity. Recent developments in the United Kingdom appear to have moved the centre of gravity of the vocational education/youth training system very much into the manpower sphere. Significant funds for certain vocational education programmes<sup>1</sup> are now channelled through the Manpower Services Commission (MSC); the Youth Training Scheme is to be extended to cover a second year and is envisaged as becoming a permanent feature of the transition stage; the recent White Paper on Education and Training for Young People signalled the United Kingdom Government's intention to ask the MSC (not the educational sector) to take the initiative in reviewing the structure of vocational qualifications with a view to achieving a more coherent and consistent system to allow for certification of education, training and work experience within an integrated system.

We are not convinced, however, that this would be an appropriate path to follow here. It is likely that the content of vocational education programmes would become much too narrow and evolve into forms of skill instruction. One might see the downgrading of essential elements of general education such as language and mathematics, which are necessary to improve powers of communication and to convey that

<sup>1</sup> The Technical and Vocational Education Initiative (TVEI).

flexibility which is essential in later life in facilitating the transfer between different forms of employment and occupations. It is true that such general components of vocational education tend to be rather unpopular with participants (such as the general studies component in Pre-Employment Courses); there is an understandable desire among young people in these circumstances to want to get on with the business of skill acquisition, with the singular view of obtaining employment. However, this is an area where we are of the view that the accumulated wisdom of experience must prevail in the interests of the individual. One would also have to consider the general attitudes which would prevail consequent on such a significant change in emphasis. The great majority of those involved in operating the system would be from the educational sphere and it would hardly be conducive to a smooth running of the system if their belief was that their entire ethos had been disregarded in the process of change.

There are other views on these particular institutional issues which go even further than those set out above. The idea of achieving a complete merging of the administrative and political functions of education and training in the form of a joint department or ministry (i.e. a Department of Human Resources) has been aired from time to time. With this approach one would expect to gradually achieve a situation where education and training programmes complemented one another to a significant degree and in which an optimal allocation of priorities in terms of expenditure and investment was attained. However, it is difficult to assess the full political and administrative ramifications of such a fundamental step and certain issues come to mind which cause one to have reservations. The sheer size and complexity of such a large department would be a problem and it is very likely that it would be too unwieldy from an organisational and administrative point of view. It might improve the prospects for better co-ordination but it could also be excessively slow moving, which would be a major disadvantage in view of the need to react in a timely fashion to changes in the labour market and in society generally. There would also be a danger with such a unified approach, that the whole training effort would be drawn away from the labour market towards the much larger educational sector, which would not be a desirable outcome. It must be remembered that many aspects of training, such as adult courses and in-company training have little, if any, relationship with the educational system and these aspects are likely to become more important in the years ahead as the general direction of training is altered to meet the needs of an older labour force. Thus while the proposal in question has some merit, on balance, we consider that it would constitute a sizeable leap into the unknown, and in so far as we can identify them, the disadvantages out-

weigh the benefits. It may well be, however, that as time progresses the situation may change. The degree of common ground between education and training is growing. In time, with changing attitudes and a different social and economic environment, such a merger might appear to be a more logical step to take.

Since the forms of integration described above are not considered appropriate to the education and training area it follows that some other kind of co-ordinating mechanism is called for. One possibility would be to set up a Joint Education and Training Council with effective powers to co-ordinate activities in the areas of vocational education and youth training in order to achieve a coherent system. Such a body should also be in a position to express views on aspects of general education, but in this regard we would consider its function should be mainly consultative.

Such a Council, while working closely with interests in each of the areas concerned should report ultimately to the Cabinet sub-committee on education, manpower etc. which would, in this context, provide a medium for resolving major differences. We have some reservations about the idea of imposing a further body on those which exist already. However, we cannot see an alternative other than a general approach of this kind, without imposing an undesirable degree of rigidity or uniformity on either the educational or training sectors. We can only indicate broad directions which might be followed in setting up such a body, as we are clearly not in a position to set out detailed recommendations concerning areas of work which should be tackled. One of the principal tasks would be to re-assess the present position with a view to achieving a coherent and mutually consistent framework of programmes. We certainly consider that a system of the kind proposed would bring to an end the situation where institutions feel obliged to rush schemes or proposals into existence in order to pre-empt others. We do not see the proposed Council as actually running courses — this would continue to be the responsibility of the relevant institutions whether in the educational or manpower spheres. However, in the event of a review or substantial alteration of a programme, then clearly the Council would have to be involved. In our view the existence of such a body, working in association with the proposed State Manpower Agency described later in this chapter, would greatly facilitate the implementation of initiatives such as the Youth Guarantee and the COMTECS and help to ensure the availability of a wider and more integrated range of options, both in the manpower area and within the educational system.

We can, also, point to other areas where work needs to be done in the interests of achieving better co-ordination. One relates to the use of ESF funds for youth activities in order to formulate a more unified approach to attain the optimum benefit from this source; a central feature of such a development should be that all applications to the Fund seeking support for youth programmes should be channelled through the new Council. Another aspect which warrants a review is the question of existing legislation in both the manpower and vocational education areas. Currently both sets of legislation (the 1930 Vocational Education Act and the 1967 Industrial Training Act) convey extensive and, what would be described as, overlapping powers.

One would also expect that with a formal mechanism for dealing jointly with vocational education and training, the form of representation on various executive and consultative boards in each area would take on a more balanced appearance. Committees in the manpower area tend to be dominated by employers and trade union representatives, with only a token presence from the educational sector. On the other hand, in the educational sphere, the recently constituted Curriculum Advisory Board contains but one representative (out of twenty) from the manpower area — despite all the noises that have been made in recent years regarding the need to render the educational system more attuned to the world of work. It is difficult to see how an atmosphere of co-operation can thrive in the operational sphere if the chasm is perceived to exist from the top down.

One specific aspect on which we are prepared to comment in more detail (and one which the proposed Council should also consider) relates to the question of *the payment of allowances to young participants in manpower programmes and in certain vocational education courses*. It is already clear from earlier chapters that the current position, involving different forms of allowances with varying amounts, is most unsatisfactory and in effect really characterises the confusion and fragmentation which exists overall. Initially one can look at this problem from extreme positions. One could contemplate abolishing all such allowances, at least up to a certain age. Such an approach could hardly be justified, however, as it would bear most heavily on the underprivileged and would create serious problems of equity. Alternatively, one could suggest paying substantial allowances to all young persons in manpower programmes and in vocational education or indeed in all post-compulsory education — a proposition which is equally unacceptable if only on cost grounds and because of the anomalies it would create vis-a-vis other forms of child support (children's allowances, child tax allowances, etc.).

It will be recalled that we have already expressed some misgivings about paying allowances to persons in education, even if the programmes concerned are specifically employment related. However, a basic element of our strategy for the vocational education/youth training area is to achieve a mutually consistent set of programmes within a coherent framework. With this situation the question of paying allowances begins to make more sense, as with such an integrated system one cannot deny allowances to persons on one programme and pay them to those on others. Basically within this context the main purpose in having such payments at all would be as an incentive to retain young people within the vocational education/youth training sector in order to impart a higher level of skill and knowledge of the working environment before they finally enter the labour market.

In order to rationalise the position regarding allowances across all programmes what we would suggest is that consideration be given to having a uniform system of vocational education and training "entitlements" or "vouchers" to which very young persons aged 15 years and over would be entitled. These could cover the equivalent of one year's full-time instruction and could be drawn down at any time when the young person undertakes a recognised programme of vocational education or training. All persons aged under 21 years of age should be eligible, but the allowances should be graduated according to age. They could be quite modest for persons aged 15 years, somewhat greater for 16 and 17 year olds and broadly equivalent to the standard rate of Unemployment Assistance in the case of persons aged 18 years and over. Depending on age the amount of these allowances would be the same irrespective of which programme is taken, and where it is delivered (in an educational institution, training centre, etc.). We would envisage that the allowances paid to first year apprentices should form part of this system.

Apart from imposing uniformity on the system in so far as allowances are concerned, there are a number of other advantages which would flow from this proposal. In the first place, since programmes in both the educational and manpower sectors would be put on an equal footing, there should be a gradual movement whereby the educational sector would become responsible for a much greater proportion of early teenage training, a pattern which would be consistent with our earlier views given in Chapter III. Since it is our intention that at the lower end of the eligible age band the allowances should not be substantial, this should help to minimise any distortion which could emerge within the educational sector as a whole. Furthermore, since the entitlements could be drawn down at any time up to age 20 years, this should help to

provide a second chance to acquire training for those who left school at an early stage. However, if such an approach is to work to full advantage, more flexible arrangements would be required in regard to entry into training programmes, and barriers such as age limits would have to be discontinued.

We recognise that a payments scheme of the kind proposed is likely to give rise to concern on cost or expenditure grounds. However, a closer examination of the details of what we are proposing will indicate that the additional outlay could be minimal when compared with the cost of existing youth schemes, and may in fact involve savings. In the first place, the proposed system to which the new allowances would apply could encompass all existing programmes for young people. It can be roughly estimated that currently the total number of persons aged 16 to 20 years involved in these schemes at any one time is about 30,000 (including the Vocational Preparation Programme). For some of the groups involved, particularly those outside of education, the allowances paid under the new system *would be less than they are now* (e.g. for first-year apprentices and AnCO trainees aged 16 to 17 years). It is highly unlikely therefore that those already outside of education would be enticed into programmes in greater numbers under the proposed system.

The crucial issue therefore, from a cost point of view, is how many additional persons in the higher cycle of vocational education would qualify for allowances. Table 3.1 in Chapter III showed that the total number of full-time students in the Vocational sector in 1981/82 was about 35,000. The number would be somewhat higher now but up to 20,000 of these would be covered by the Vocational Preparation Programme since that scheme has subsumed existing programmes such as Pre-Employment Courses or clerical, office skills courses, etc. Not all of the remainder would be eligible for allowances under the proposed scheme as some would be pursuing non-vocational Leaving Certificate courses. Even if substantially greater numbers of young people were induced to remain in the educational system to follow vocational type courses, it is possible that many of them, if they left school, would be receiving State payments in the form of unemployment compensation or training allowances. On balance therefore, given the offsetting effects, the net additional cost to the exchequer arising from our proposals would not be excessive, particularly if the allowances paid to young persons at the lower end of the eligible age band are modest.

## STRENGTHENING THE RESOURCES OF THE DEPARTMENT OF LABOUR

We have already been critical of the fact that the Department of Labour has not become sufficiently involved in policy formulation even within the rather narrow approach to manpower issues which has prevailed up to now. However, the role now envisaged for the Department, embracing the concept of a labour market policy and involvement in manpower issues in a much broader context, represents a considerable extension of its functions. To adequately fulfil this role the Department will have to be provided with the appropriate resources. In this regard the principal requirement would be for staff with analytical and interpretive skills. Whether this can be achieved without a net addition to overall Departmental resources would depend on a critical assessment of staff levels throughout the Department as a whole — a matter on which we are not competent to comment.

The deficiency to which we refer was noted quite a number of years ago. In a 1974 Report on Manpower Policy in Ireland an OECD Study Team, in commenting on the resources available within the Department of Labour, stated that:

“(the) Department has few staff qualified to interpret economic information, to contribute to the design of active manpower policies, to complement short term economic strategy; or to forecast developments in the manpower field and examine policy options for possible application in the future.”

The report also expressed the view that the Department was not effectively involved in macroeconomic policy or in the budgetary decision-making process and that consequently it was responsible for manpower policies without participating in the decisions which affect the economic environment in which these policies operate.

It should be mentioned that the resource problems to which we refer are not unique to the Department of Labour. Similar problems exist in many other areas of Government. They derive to a large extent from the excessively rigid nature of the Civil Service staff structure which makes it very difficult to assemble a multi-disciplinary nucleus of staff with special skills and expertise. Within the system there is a low level of mobility and virtually no mobility at all between those engaged in administrative and professional or technical functions. While there has been some degree of outflow to the semi-state agencies, up to recently there was no possibility of a reverse movement. In virtually all Departments outside of those involved in central policy matters (e.g., Finance, Public Service and the Taoiseach) most of the senior

staff do not have any technical or professional background despite the fact that they have to grapple with problems in an increasingly complex world.

If the Department is to quickly assume a much wider range of responsibilities in the manner outlined then exceptional measures are called for. Even with the changes recently introduced by the Government relating to the promotion of senior personnel, if current procedures are adhered to it would be virtually impossible to assemble the required personnel at all levels. Consideration should therefore be given to the setting up of a special unit in the Department of Labour in order to provide the additional resources so that it can play a more effective role. The necessary personnel with the required experience could be drawn from inside the Department of Labour, from other Departments, from the executive agencies and, if necessary from outside of the State sphere altogether. Apart from knowledge and experience of individual manpower areas (such as training, etc.) the aim of the group should be to embrace, in a collective sense, expertise on the general operation of labour markets and the manner in which various policies in different areas (e.g., social welfare, taxation, education) interact; it would also require expertise in the interpretation of economic and social information, the further development of information systems (in association with the CSO and other agencies), forecasting and so on.

It is envisaged that such a special group would consist of persons with proven ability and experience who would operate at a high level. Over the years there have been several half-hearted attempts to provide individual Government departments with economic, statistical and other professional expertise by recruiting individual staff members with the required qualifications. These persons were invariably taken on at basic recruitment levels and, therefore, their impact (through no fault of theirs) on overall policy matters was minimal. What we are suggesting however involves more than the acquisition of extra specialist staff — it entails the assembly of a special planning type unit which should be headed by a person of Assistant Secretary rank and should contain sufficient numbers of persons in other senior grades in order to adequately cope with the range of problems involved. Gradually, however, over time, the whole concept of such a unit having a “special” status should no longer be necessary, according as its initial work is completed, and the planning and policy formulation process becomes more firmly entrenched as part of the ongoing work of the Department.

The measures suggested in the preceding paragraph are consistent with the stated intention in the Government planning document “Building

on Reality" to implement "an immediate strengthening of the role of the Department of Labour". Such measures would almost certainly require an exemption from the present Public Service staff policy involving an embargo on the filling of two out of every three vacancies. This process cannot be carried on indefinitely and we consider that a strengthening of the Department of Labour's role is one area where a start can be made in adopting a more strategic approach to determining Public Service staff numbers.

The implication should not be taken from the foregoing comments that special blame is being put on civil servants for inaction in the manpower policy area. Many of the problems to which we refer derive from the rigid administrative environment in which they are obliged to operate. We have commented on these issues only in relation to staff matters, but in fact they apply to virtually every aspect of civil service administration arising from the detailed procedures designed to control expenditure and staff numbers. This is, of course, a difficult area and one must recognise that a balance has to be struck between allowing greater operational or functional flexibility and the constraints necessary to meet the requirements of Parliamentary control of expenditure. Nevertheless, it is an aspect which should be borne in mind in assessing the capacity of the Public Service (or of the individuals charged with operating it) to meet the changing requirements in the labour market or in other areas. It is to be hoped that such issues will be dealt with in the forthcoming White Paper on Reform of the Civil Service.

There is also a political element to be considered in this context. Apart from the initial impetus in the late 1960s, successive governments have not perceived the importance of the need of a comprehensive approach to manpower matters. As we have already indicated, the initiatives which have been taken in recent years have tended to be of an ad hoc nature, designed to meet pressures as they arose. Full Government support and commitment is obviously a vital requirement if manpower issues are to be brought to the centre of the stage in the context of economic policies. There must also be, at the end of the day when all assessments have been completed, a willingness to take decisive action which may not meet with the approval of all parties. The staffing and other resource arrangements which we have proposed will be to little avail if this is not forthcoming.

A further aspect to consider in the context of the Department of Labour's powers is the question of manpower legislation in so far as it affects the State agencies. In common with much Irish legislation governing the activities of State bodies, the legislation in the man-

power area is very specific and detailed in relation to financial provisions, but completely ignores the question as to how the Minister or the Department of Labour might influence the activities of these bodies in the context of overall policy. The 1967 Industrial Training Act for example, apart from its financial provisions, gives AnCO more or less uninhibited powers in regard to the provision of training. There is no element in the legislation which sets out, even in very broad terms, how the Minister or the Department might direct the authority in regard to general issues of a policy nature. This is not the case in the UK, for example, where the 1974 Employment and Industrial Training Act contains a specific provision which enables the Secretary of State to issue a statutory instruction to the Manpower Services Commission, the State body responsible for executive functions in regard to training and other manpower matters. This particular provision has never been invoked — but such provisions rarely need to be used — their mere existence is enough to bring about a meeting of minds when fundamental differences arise between the Government and its executive agencies.

Some will argue that Government or Departmental control of funds is sufficient to ensure compliance with general policy, in the sense that there is always a healthy respect for the institution which controls the purse strings. We do not accept, however, that the application of pressure in the form of actual or threatened cutbacks is the proper way to exercise authority in regard to ensuring the implementation of Government policy. The funding of manpower activities should be organised in a planned manner as part of an overall logical strategy determined by the Government. Use of the above-mentioned means (e.g. curtailment of funds) in order to exert influence would adversely affect the planning process and create unnecessary friction between the Department and its agencies. Thus in the interest of assisting the Department of Labour to exercise a more influential role, in any review of existing manpower legislation the above-mentioned possibility should be seriously considered.

### THE STATE AGENCIES IN THE MANPOWER AREA

Finally, let us turn to consider the question of the satellite agencies in the manpower area. At present these consist of AnCO, the Youth Employment Agency, the National Manpower Service (even though this is an executive division within the Department of Labour) and a number of smaller bodies such as CERT<sup>1</sup> and the Employment Equality Agency. It will have become clear at this stage from some of our earlier com-

<sup>1</sup> Council for Education, Training and Recruitment in the Hotel and Catering Industry.

ments that we do not consider the existing agency structure in the manpower area to be altogether appropriate. The functions of formulating and executing policy have become intermingled both within the Department and in some of the agencies and this has led to some confusion of roles which has made it all the more difficult to articulate an overall strategy.

There are many possible variations in the way in which one can approach this difficult problem. We will confine our attention to three options which broadly reflect the spread of possibilities which range from a highly integrative approach to a more loosely knit collection of separate bodies. The particular options which we will consider are:

- (a) drawing the whole system (including all agencies) back into the Civil Service system with a view to achieving better co-ordination and integration;
- (b) effecting minimum changes in the existing agency structure;
- (c) creating a single executive agency embracing all existing bodies in the manpower area.

In order to clarify the position at the outset, our view is that the last-mentioned option (i.e. one agency) is the most appropriate structure to adopt. It is, however, desirable to consider all three approaches in some detail, as in so doing, the reasons for choosing the more unified single executive agency option becomes clearer. It should be mentioned that none of these options obviates the necessity to strengthen the policy responsibilities of the Department of Labour in the manner as set out earlier in this Chapter. This remains, in our view, a central requirement of any restructuring of the institutional arrangements.

With regard to the first proposal, *i.e. to integrate the whole range of manpower agencies into the Civil Service*, in reality this is hardly a practical proposition but we will consider it, if only to set out reasons why we think it is inappropriate. Since, in our view, the Department of Labour has not really fulfilled its intended role in regard to formulating and reviewing manpower policy one would hardly expect to achieve an improvement, if, in addition to its present functions, the Department were to become directly responsible for a very considerable range of executive functions. We have also expressed the view that the rigidities of the Civil Service have militated against the exercise of an effective policy function — a feature that would present even more difficulties in attempting to deal with a detailed range of executive activities, which in many respects are more akin to commercial operations. This is not to imply that Civil Service practices generally are inappropriate. As we have already stated, the democratic and parliamentary process imposes

necessary financial and other constraints, and limits freedom of action. It is difficult, if not impossible, to sub-divide the Civil Service system into different components some of which may be within and others outside the ambit of these limitations. As we have indicated in Chapter VII, this has been an inhibiting factor which has affected the National Manpower Service since its inception.

If this integrative approach were adopted it would also run counter to our already stated view that there should be a separation of policy formulation and execution. Furthermore, there would be a very real danger that the formidable array of problems to be dealt with in the executive area would deflect resources from the important work to be done in the policy area. Executive functions in the public domain are best dealt with by separate flexible bodies with a sufficient degree of delegated responsibility *but subject to adequate control and guidance in the context of an overall strategy*. This is a consideration which applies not only to the manpower area but to any sphere of government responsibility. There are strong reasons, therefore, based on past experience and the very rigid structural nature of the Civil Service system, for rejecting the suggestion that the solution to our institutional problems in the manpower area lies in integrating the whole system into the direct Government sphere.

When one considers the second option, *i.e., to alter the existing agency structure as little as possible*, an immediate contradiction arises *vis-a-vis* our earlier proposal for strengthening the policy formulation functions of the Department of Labour. This is because, on the one hand, the Department is involved in certain executive activities, but more importantly, because one of its satellite bodies, the Youth Employment Agency, by virtue of its constitution, has policy responsibilities. Thus if one accepts that the Department's brief should cover all policy matters it follows that the position regarding the executive agencies has to undergo some change.

It would be more logical to divest the Department of Labour of as many executive functions as possible in order to allow it to concentrate on policy and related issues. In this regard it would be more appropriate if the National Manpower Service were separated off as a semi-State body which would also allow it more freedom in pursuing its assigned functions.

If, on the other hand, the Department of Labour is to assume a dominant role in the area of manpower policy formulation and co-ordination, it is wholly inconsistent to have the Youth Employment Agency attempt-



ing to fill a similar role for the youth sector. It is, in any case, highly questionable as to whether the role of the Agency and the manner in which it was constituted are appropriate. It is not really possible in practice for a semi-State body to impose co-ordination, or a particular policy direction, on Government Departments or on other quasi-independent State agencies who are themselves individually responsible to their own boards and to the Minister for Labour or to another Minister. Such functions are, and should always be, the prerogative of Government. There are, rather predictably, indications that problems of this kind have already arisen. In referring to the question of inter-agency co-operation, the Youth Employment Agency policy document — "A Policy Framework for the Eighties" states that:

AnCO and CERT have their own distinct terms of reference and boards, policy priorities, plans and programmes. They are separately responsible to the Minister for Labour for their activities... In 1982 proceeds from the Youth Employment Levy were allocated to both organisations in the course of the budget process, on the basis of the proportion of their "clients" under 25 years of age.

... Clearly if age is the only criterion for the provision of funding, and given the continuing development plans of both organisations, the element of Levy proceeds over which the Agency has discretion would be progressively eroded and in theory at any rate, could be totally eliminated over time."

The factual position is that, as already indicated in earlier chapters, a small and apparently diminishing proportion of the total levy funds has been allocated directly to the YEA. In 1983 this amounted to £5.7 million out of a total £77 million and in 1984 £5 million out of £84 million.

The complete transfer of all policy formulation and co-ordination functions to the Department of Labour, coupled with the fact that we consider the Youth Employment Levy should be discontinued (see Chapter IV) essentially calls into question the *raison d'être* for the very existence of the Agency. With this approach to the institutional arrangements, the YEA would be left with responsibilities for a limited range of special projects. In these circumstances it would be more logical to transfer these functions to the National Manpower Service, reconstituted as a semi-State body and with the form of brief as set out in Chapter VII.

It is important to stress that the adoption of such new institutional arrangements does not imply that a lower value should be placed on current activities designed to assist young people in the labour market.

With the revised system, these activities would still have to be maintained in the form of a special youth programme, but which would become an integral part of a broader range of manpower initiatives. This new approach would, however, involve more flexibility and the emphasis placed on support for youth could be altered as circumstances change.

In essence, therefore, it is not logical to leave the existing agency structure unaltered if one accepts the premise that the Department of Labour should be responsible for all aspects of manpower policy. In our view the concentration of this policy function in the Department is essential not only because it constitutes the most appropriate allocation of responsibilities, but it also ensures an adequate degree of accountability to the Oireachtas.

Let us now consider the last of the three options mentioned, namely the proposal to merge the activities of the existing executive bodies in the manpower area into one comprehensive agency, i.e., a State Manpower Agency.<sup>1</sup> This is, as we have already indicated, the approach which we consider to be the most appropriate in meeting the requirements in the manpower sphere at executive level. It should be mentioned again that in this context the necessity to strengthen the role of the Department of Labour is as important as it would be under any other arrangement. Even though we see the functions of this larger agency as purely executive in nature, clearly the scope for problems would be considerable if such a very large body developed a policy momentum of its own.

A notable feature of the existing manpower situation is the growing multiplicity of schemes which have given rise to the need for a very large degree of inter-agency contact. This has been amply illustrated earlier in this report, particularly in Chapters IV and VIII. Access to AnCO training courses is partly, but not exclusively, through NMS channels; AnCO and the NMS are involved in placing trainees who have completed training programmes; many youth schemes involve employment, training and remedial elements which necessitate co-operation between the agencies involved; the YEA is involved in dispensing the proceeds of the Youth Employment Levy over which it has discretion to fund projects carried out by many other bodies; the implementation of the Social Guarantee for Young People for which the YEA has delegated responsibility, will of necessity involve close co-operation

<sup>1</sup> The term "State" rather than "National" is used to avoid confusion with the National Manpower Service.



between all manpower bodies and the educational authorities as will the broader COMTEC proposals for the local integration of manpower services for youth. The more recently announced proposals to introduce an "Alternance" programme for long-term unemployed adults involving both training and periods of employment should necessitate a close degree of co-operation and periods of employment should necessitate Vocational Preparation Programme run by the educational authorities requires contacts in the labour market to ensure the provision of an adequate number of "work stations" in order to fulfil the conditions relating to work experience. In operational terms the whole manpower area has become a complex minefield of inter-related and criss-crossing functions without a proper sense of direction and there is now an urgent need for a new mechanism for ensuring real co-ordination. The present position constitutes a most confusing situation for young persons entering the labour market.

The existence of separate organisations has given rise to all kinds of liaison committees while in fact the inter-related functions could be better carried out as part of the normal co-operative procedures in different divisions of the one organisation. Not that larger organisations necessarily function to perfection: they also suffer from problems of co-ordination. However, at least in these circumstances, there is an internal mechanism for making final decisions at executive level when different views prevail and one does not have the problem where different groups feel unduly obliged to uphold the interests of their own organisation. Very often in such circumstances the end result is a compromise which does not come to grips with the problem involved. These remarks are not intended to imply any particular criticism of individual institutions — developments of the kind described are inevitable when so many different independent bodies are involved in related activities in the same sphere.

Another issue of relevance in the context of institutional arrangements is the question of the organisation of local labour markets. Events are beginning to materialise on this front in Ireland. As part of the administrative arrangements for implementing the Youth Social Guarantee the YEA has proposed the setting up of "local units" centred on NMS offices comprising representatives of the manpower agencies. The main purpose of these units would be to identify young people in the designated target groups and assign them to appropriate programmes. It is also envisaged that this system should involve a set of regional monitoring groups, representative not only of the manpower agencies but also of the social partners, the education authorities and youth organisations. Then there is the exploratory YEA "COMTECS" programme (Com-

munity Training and Employment Consortia) referred to earlier and which is described in some detail in Appendix VI. Basically the principle involved here is similar to that underlying the "local units" described above but the extent of community representation is greater and the range of initiatives envisaged extends beyond the scope of existing manpower schemes to include activities such as the promotion of new ventures designed to meet unfulfilled needs in local labour markets. Our view is that such local initiatives will function more effectively within an overall institutional framework which involves an adequate degree of co-ordination at national level, both within the manpower sphere and between manpower activities and education. In short, in our opinion co-ordination must exist at the top if it is to apply throughout the system. Such a requirement is represented in our proposals in the form of the integrated State Manpower Agency and the Joint Education and Training Council. If this does not exist in the overall institutional arrangements then the differences and divisions inherent in the system as a whole will be reflected locally and hinder community based initiatives.

Returning to the question of the State Manpower Agency, while we do not wish to spell out in detail how such a body should be structured, we see it as basically involving two operational divisions — one covering training activities and the other dealing with placement and special employment programmes. The former division we see as encompassing all training activities currently carried out by AnCO, except for community based initiatives such as the Community Youth Training Programme and the Community Training Workshops. It is considered that these activities should be dealt with in the context of a more integrated approach to all special youth employment and training programmes. One might consider it appropriate to have within the new organisation a separate (third) Placement or Public Employment Service division (as in the Manpower Services Commission in the UK). However, the new role envisaged for the NMS as outlined in Chapter VII suggests that the functions of placement and special manpower schemes should be handled in the context of one operational unit. Thus the latter division to which we refer, in addition to dealing with placement activities in the conventional sense, would also have responsibility for all special schemes, such as the Social Employment Scheme, the Enterprise Allowance Scheme, etc., as well as running a comprehensive programme to aid youth (in the context of initiatives such as the Youth Guarantee). The new Agency would also have to have a central secretariat headed by a Director-General with overall directional and co-ordination responsibilities, as well as those covering relations with the Department of Labour, Research, Planning etc.

Even though the brief of the proposed State Manpower Agency would be mainly executive, clearly such a comprehensive body would have to have an advisory role in relation to the formulation of policy. Indeed, it is likely that many recommendations regarding the introduction of specific new measures would originate in the agency in view of its close operational involvement with manpower activities on the ground.

Another advantageous feature of having one executive agency is that it would facilitate the redeployment of resources within the entire manpower area. For example, our overall package of proposals entails a new and enlarged role for what now constitutes the National Manpower Service; it is not unreasonable to expect that at least some of the additional resources required could be obtained by a re-allocation from within the overall manpower sphere. This would be clearly impossible in a situation involving separate bodies.

The board of the proposed agency should contain representatives of employers, trade unions and the educational sector (in equal numbers) as well as a number of other independent members. While it is clearly not desirable that the board should be too large in terms of numbers, it is essential that it be structured in such a manner as to enable it to be decisive in regard to the issues which come before it. A perennial problem with representative committees in the manpower area has been an inability to evolve effective solutions to problems, because of entrenched positions being taken which often relate more to current problems rather than to a more long-term perception of national manpower requirements. This often leads to a stalemate which is eventually resolved by means of an unsatisfactory compromise arrangement. Our suggestion regarding the composition of the board of the proposed agency is made in the expectation that this would help to avoid such log jams in decision making, while at the same time giving adequate representation to all of the interests involved.

Finally, we wish to emphasise that in recommending integration of the existing executive agencies we really mean it to be a real amalgamation. We do not envisage something marginally more than a mere change of name with a largely ineffectual higher management tier with operational components consisting largely of the existing agencies. Our proposals involve abolishing all existing bodies and re-organising them within a more coherent and efficient framework. Nor are we under any illusion about the difficulties involved in doing so. It is only understandable that sectional interests will have built up over time and there would be problems in the staff relations and other areas in achieving a rationalisation of functions and grades. However, the depth and multi-

plicity of problems that we now face in the manpower area require decisive action and unless this is forthcoming the difficulties will worsen immeasurably.

## LIST OF MAIN RECOMMENDATIONS

### Overall Manpower Policy (Chapter II)

1. The traditional concept of manpower policy should be widened to that of a labour market policy.

### Second Level Education (Chapter III)

2. There is a need to introduce a greater degree of flexibility into the system which opens the way to a wider range of career options. This applies particularly to those in the large "general" or traditional secondary school stream who do not have any opportunity to change to a more technical or vocational range of subjects.
3. The educational system should do more to promote an attitude of self reliance.
4. The higher cycle of second level vocational education should be properly and systematically developed within the context of a coherent framework covering both vocational education and early youth training.
5. The main thrust of dealing with the problem of early school leavers should come from inside the educational system. This will require new and radical approaches.

### Vocational Training (Chapter IV)

6. The first (off-the-job) year of apprenticeship should be organised jointly by the Educational Authorities and AnCO and should form part of the comprehensive vocational education/youth training system as referred to in (4) above.
7. The subsequent stages of apprenticeship should be made more flexible in regard to duration and content. More adequate means of assessment and a proper system of certification should be introduced.
8. The current intake of apprentices should be reviewed on the basis of a comprehensive re-assessment of needs across all relevant sectors.
9. There should be an agreed uniform method for dealing with applications for apprenticeships.
10. All of the foregoing will necessitate that the interests involved in apprenticeship takes a more flexible and long-term view of the requirements.

11. The balance of resources allocated to non-apprentice (adult) training needs to be altered to cater more for older persons (aged 25 years and over). The inflexibilities caused by the Youth Employment Levy and the nature of the regulations governing aid from the European Social Fund are a particular problem here.
12. The 'social' (i.e. non skill) element in AnCO adult training programmes has become very substantial and should be reviewed in the context of providing an adequate level of skill training to meet the needs of economic growth.
13. It is recognised, however, that what we describe as 'social' training fulfils an important function in the current economic circumstances, particularly, for example, in re-motivating young people or the long-term unemployed in order to aid their re-integration into employment.
14. While we agree in principle with the concept of contract training by AnCO (external training), particularly in the context of responding to changing labour market requirements, some aspects of it should be reviewed in order to restrict it to training activities which the labour market would not otherwise provide.
15. With regard to promoting training within firms we are of the view that the Levy/Grant Scheme and the IDA funded programmes of New Industry and Domestic Industry training grants should be replaced by an integrated system based on strategic training needs. The new system should be funded and operated by AnCO, with, of course, an appropriate measure of consultation with the IDA and the Industrial Training Boards. It is our view that these grants should not be total, i.e. the participating enterprises should bear a proportion of the costs.
16. The domestic element of the funding of training and other manpower activities should come from general taxation. This implies that the Youth Employment Levy and the Levy/Grant payroll levy (as referred to in 15) should be discontinued.
17. There is a need for a more concerted approach to European Social Fund funding. There are indications that it has induced a significant degree of fragmentation in our approach to manpower issues and the long-term or individual relevance of some of the funded programmes is questionable. One cannot dispute the benefits which Ireland has derived from the European Social Fund but some concern must now be expressed at the high proportion of manpower funds attributable to this source in view of the uncertain atmosphere surrounding the future level of support which we can expect.

### Technology Employment and Skills (Chapter V)

18. In order to maximise the potential of technology for employment and skill creation it will be necessary to develop well defined positive policies both to encourage innovation and to facilitate labour market adjustment.
19. Serious attempts must be made to monitor the development of new technologies, the relevance of these developments for all sectors of the Irish economy and the factors affecting their speed of transfer and diffusion.
20. In view of the pace of change of technology and its implications for occupations and skills, it is essential that the education and training sectors place greater emphasis on the development of adaptable skills, on increasing the relevance of first time education and training at all levels, and on increasing the emphasis on continuing education and re-training. (Detailed recommendations are provided under the relevant section headings).
21. Training programmes should be introduced to develop the management skills necessary for the acquisition and development of new technologies by Irish firms. Greater emphasis should be placed on corporate manpower planning so that firms can better identify their own future manpower and training requirements and thereby offer a more stable pattern of demand and improved career prospects for present and potential employees.
22. Improved communications between technologists, social scientists and other social groupings should be developed together with fundamental research studies to increase awareness of the social implications of innovation and technological development.
23. In order to facilitate the introduction of new technology at firm level, management and employees should adopt a more cooperative approach giving employees a share in the decisions related to the introduction of technology.
24. Employers and unions should accept more widespread use of 'new technology agreements' in the creation of an industrial relations climate which is more sympathetic to the introduction of new technologies.
25. The introduction of new technologies will impact particularly on certain sections of the workforce. While these groups of workers are largely catered for by the recommendations set out in other sections of this report, the situation should be continuously monitored and reviewed to see if additional measures are required to increase their occupational and geographical mobility.

### Highly Skilled Manpower (Chapter VI)

26. Steps must be taken to maintain the growth of highly skilled manpower at a level commensurate with the targets embodied in government policy. The achievement of this objective will require the introduction of a co-ordinated programme aimed at providing experience and stimulating demand for highly skilled manpower in all sectors of the economy. Measures aimed at bridging the experience gap for new graduates and other new entrants to the workforce will be required.
27. The expansion programme for the higher education sector up to 1990 should continue to give priority to the provision of first time and continuing education opportunities for scientists and technologists.
28. Increased emphasis should be placed in the third level sector on the development of innovative and entrepreneurial skills. Efforts should be made to ensure that some element of business or industrial experience is included in all degree or technician level courses for scientists and technologists.
29. The National Council for Education Awards, the National Institutes for Higher Education and the Regional Technical Colleges, should adopt more positive policies towards the transfer of students and qualifications between institutions. The Regional Technical Colleges should concentrate on the provision of courses at certificate and diploma level. Within these colleges four year ab initio degree programmes should only be offered in special cases where a specific national need has been identified.
30. While much progress has been made in recent years, continued emphasis must be placed on the development of closer co-operation between industry and education in relation to curriculum development, staff and student mobility and research and consultancy.
31. It is recommended that a manpower research unit be established in, or adjacent to, a third level college or research institute.
32. In responding to the need for highly skilled manpower, strengthened mechanisms for planning and financing of third level education must also be introduced. Long-term multi-annual planning is essential together with increased flexibility in overcoming short-term shortages and surpluses. Serious consideration should be given to the establishment of a single national higher education authority which would provide the uniform approach necessary for the success of the above strategy.

### Placement Service (Chapter VII)

33. The basic rationale which was set out for the Service when it was set up — to “win over” a significant part of the general placement and job filling activities — is no longer appropriate. It is doubtful whether this approach was ever appropriate and experiences here and in other countries indicate that the degree of penetration achieved has been very limited, even allowing for the effects of recessionary periods. The main thrust of the activities of the National Manpower Service should now be directed at special groups who experience particular difficulties in the labour market such as young people, the long-term unemployed etc., even though a certain measure of general placement work will still have to be engaged in.
34. It followed from recommendation 33 that the National Manpower Service (in the context of the more integrated institutional arrangements suggested in 44 below) should assume responsibility for, and become the co-ordinating focus for, all special manpower schemes.
35. The new role envisaged for the National Manpower Service will involve a much wider range of activities which will require extra resources.
36. **Special Labour Market Measures (Chapter VIII)**  
We recommend that within the total numbers unemployed two groups merit special attention: (i) the long-term unemployed; (ii) the early disadvantaged school-leaver with little or no qualifications.
37. Special measures should, where possible, incorporate a strong training input and provide participants with experience and skills which is supportive of their future development. (Specific recommendations are made on individual schemes in the chapter.)
38. With regard to a local voluntary response care should be taken not to overload the voluntary system. In the context of a local based response to special schemes there may be a need for intervention by a central agency to provide resources on a ‘needs’ basis.
39. **Institutional Arrangements (Chapter IX)**  
The Department of Labour should be principally concerned with the formulation, co-ordination and evaluation of manpower policies. The adoption of a broader labour market strategy implies a considerably enlarged role for the Department extending beyond the sphere of conventional manpower activities.

## RECOMMENDATION OF THE OECD COUNCIL ON MANPOWER POLICY AS A MEANS FOR THE PROMOTION OF ECONOMIC GROWTH

(Adopted by the OECD Council in 1964)

The specific measures which the OECD recommended should form part of an active manpower policy are as follows:

### (a) Policy-making and Administration

A central policy body or adequate co-ordination between different existing agencies is essential to formulate overall policy, to determine general directives, to identify strategic activities in the light of changing needs, and to initiate and develop new programmes and services. The Manpower authorities should strive to ensure that the objectives of the national manpower programmes are fully recognised by all relevant sectors of government and that the employment objectives everywhere are given the high priority they deserve from the point of view of economic, political and human interests.

### (b) Co-ordination of Manpower and Other Economic Policies

Different types of measures should be predominant depending on whether the period is one of inflationary pressures or one when a business recession or restrictive policies for maintaining the balance of payments and price stability tend to reduce employment and hamper growth. The manpower authorities should constantly be prepared for rapid and timely action according to circumstances. During slack periods, if timing and other factors support their effectiveness, public works and the provision of socially-needed public services should be used, possibly as part of a policy to increase the general level of demand. Such works, as well as local or general arrangements to influence employment in private enterprise must be prepared in advance, so that they can be utilised at the right moment.

### (c) Human Resource Development, Including Vocational Training and Retraining

One important element of an active manpower policy is to see to it that human resources are developed to such an extent that the achievement of desired rates of technological change will not be impeded through lack of workers with suitable skills. To a great extent, training opportunities are provided by employers, but public authorities must see to it that total training capacity is adequate for the economy as a whole. Adult training and retraining facilities should be provided on an

40. The adoption of such an enlarged role for the Department would necessitate the acquisition of special staff resources, particularly involving more senior personnel with analytical and interpretive skills.

41. There is a need to bring a much greater degree of coherence and co-ordination to the broad manpower sphere which now extends across the areas of responsibility of a number of Government Departments. We consider that this is best achieved by means of a system of formal Cabinet Subcommittees one of which should cover manpower and related activities.

42. In the specific area of the interface between vocational education and youth training serious problems of co-ordination have arisen. It is recommended that a Joint Education and Training Council be set up with a view to dealing with these problems.

43. A particular problem arises in relation to the payment of different allowances to participants on various programmes. In order to rationalise the position we suggest a system of training "vouchers" or "entitlements" to which every young person aged between 15 and 20 years would be entitled. These should be graduated according to age and would be the same irrespective as to which (approved) programme is involved or where it is conducted.

44. The present position regarding the executive agencies in the manpower area is most unsatisfactory. The problems relate not only to issues of co-ordination and defining spheres of responsibility but also an intermingling of the policy function between the Department of Labour and the executive agencies. We recommend that all the existing agencies be reconstituted into one executive body — a State Manpower Agency — and that all policy activities previously exercised by these bodies be taken over by the Department of Labour.

increasing scale, both within private industries and in educational institutions, in order to promote the necessary shifts and adjustments. Everybody needing and wishing to acquire new skills should be given the opportunity to qualify for the new and better jobs. It should be realised that the best preparation for later occupational shifts is a good basic education and technical training for the young, which takes account of the needs of modern technology.

**(d) The Employment Service**

This should be an institution promoting the effective functioning of the labour market as a whole in respect of all categories of workers. It must be given sufficient resources to gain the confidence of all sectors and classes of employees and employers. It should be capable of providing vocational guidance and occupational counselling services, and inter-regional clearing of vacancies. It should also be able to administer special programmes designed to encourage geographical and occupational mobility and social adjustment.

**(e) Financial Provisions for Readjustments**

Adequate unemployment benefits and compensation in case of redundancy as well as the special allowances for persons undertaking resettlement, retraining, rehabilitation, and other readjustments, are recommended as facilitating economic change. They would promote rational placement in new jobs and positive attitudes to progressive changes and should therefore be regarded as valuable not only for the individual but for the economy as a whole.

**(f) Geographical Mobility**

Geographical mobility would be promoted by better information to workers about job openings. The employment services should be authorised to provide travel and resettlement allowances to offset hindrances to mobility. Co-operation with housing authorities and special efforts for solving housing problems in expensive areas will often be appropriate. Measures should be taken to facilitate the social adjustment and integration of people settling in a new area.

**(g) Regional Development**

A well-rounded manpower programme requires adequate measures to bring jobs to workers. Programmes for encouraging employment in depressed and underdeveloped areas should be established, with due regard to sound principles of economic development.

**(h) Employment of Marginal Groups**

Many groups intermittently or permanently outside the labour force can be helped to participate in useful employment through such aids

as rehabilitation, retraining, special job arrangements and efforts to reduce prejudice against their employment. Such measures can be particularly efficient when shortages of labour exist or are impending.

**(i) Participation of Employers' and Workers' Organisations**

Employers and workers, through the development of manpower programmes on a plant, establishment, or industry basis, can make an important contribution to the promotion of economic growth. Such programmes can frequently be stimulated through appropriate labour-management-government consultation and co-operation. To be effective, such consultation must spring from an appreciation of the role employers and workers and their organisations can play in promoting economic growth and improvement in standards of all people.

**(j) Special Problems of Developing Countries**

A solution of the employment problems of Member countries in process of development must depend to a great extent upon the possibilities of achieving the accumulation of capital necessary for the creation of new industries and adequate public investments. Any development plan, however, must contain an appreciation, based upon an analysis of demographic and other internal conditions of the various manpower requirements which such a plan involves and the ways and means through which the population of underdeveloped regions can be adapted to modern life.



## RECOMMENDATION OF THE OECD COUNCIL ON A GENERAL EMPLOYMENT AND MANPOWER POLICY

(Adopted by the OECD Council in 1976)

The Council recommends that Member countries periodically examine ... their general employment and manpower policy so as to attain the objective of full employment, in particular by:

- (a) continuing implementation of the principles of an active manpower policy contained in the Recommendation of the Council of 1964, reinforced by a general and positive strategy for creating and maintaining employment and improved conditions of working life for all those who are able and want to work, with the support of relevant economic, employment, manpower and social policies;
- (b) the close linking of employment and manpower policy and general economic policy, with the aim of achieving full employment objectives and improved quality of working life in the context of social and economic progress;
- (c) systematic use and evaluation as appropriate of selective employment and manpower measures, with the objective of achieving and maintaining high levels of employment and balance between the supply and demand of labour in ways which contribute as much as possible to the struggle against inflation;
- (d) special assistance to disadvantaged groups to enter, remain in or return to employment, thereby promoting more equity in the distribution of employment opportunities and income;
- (e) balanced development of income maintenance, and of positive manpower utilisation measures which ensure the earliest possible return to employment, on the basis that it is preferable to spend money on activities which contribute to the expansion of employment;
- (f) international co-operation in order that national employment and manpower policies and free international trade and investment are mutually consistent, so as to minimise the social costs of adjusting workers to structural changes which result from changing patterns of international trade;
- (g) implementation between the OECD countries concerned of the guiding principles for facilitating the orientation of migration policies and their concertation at international level;

- (h) organisational arrangements within national administrations for the co-ordination of all elements of policy affecting employment and manpower, in particular so that manpower authorities may help to ensure that the various elements of an employment strategy are taken into account in all fields of social and economic life;
- (i) continuing co-operation and involvement of workers, employers and their representatives as an important aspect of total manpower and employment policy.

## ACQUISITION AND DEVELOPMENT OF TECHNOLOGY

In this appendix we examine briefly a number of factors affecting the rate of transfer and diffusion of technology to Irish industry and their skill implications. One such factor which is particularly relevant to skill development is the mechanism used for transferring technology from overseas.

**Mechanisms for Transfer and Diffusion of Technology**

Technology transfer involves the application of new technology in either products or processes. In a small economy like Ireland's the transfer of technology to industry from overseas is accomplished through:

- purchase of plant and equipment;
- establishment of foreign subsidiaries involving new plant and skills;
- joint ventures/licensing of new products, processes and know-how from abroad.

The skills associated with technology in Irish industry will depend to some extent on the mechanisms used for transferring the technology to Ireland. To date, technology transfer to Ireland has been achieved mainly through the first two of the above mechanisms. Until quite recently our industrial strategy, which has concentrated on the attraction of foreign investment, has been partially successful in raising Irish skill levels (see Chapter VI). The performance of multinational firms locating in Ireland in terms of output and exports has been impressive and they have done much to raise the level of the technical and production skills of the Irish workforce. With a few exceptions, this performance was based on marketing, research and development carried out in the parent company. However, it appears from the increased level of R&D activity that greater success is now being achieved in the attraction of firms willing to set up these highly skilled functions in Ireland (NBST, 1984). It is likely that the increased levels of technology and skills in these firms will in time transfer to indigenous companies and the supporting infrastructure and services.

The third form of technology transfer, which is often called disembodied or intellectual property, consists mainly of transfer through licensing and joint ventures. It may involve know-how and training agreements which can significantly increase the skill levels of the licensee. These agreements are particularly important since they facilitate the direct transfer of technology and skills to indigenous industry. Some indications of the use of licensing as a means of technology transfer to Irish

companies can be found from the results of the NBST survey of R&D relating to 1982 (NBST, 1984). In the 1,300 technology based firms covered in the survey, 16 new licences were granted in 1982 in addition to the 59 already in existence. Examples of successful licensing arrangements include that of an Irish firm which obtained a licence from a German company to manufacture instrumentation. It has made a number of improvements to the technology and has succeeded in licensing back many of these to the licensor. Another licensing agreement has enabled a firm to achieve success in servicing the plastic component requirements of the Irish and European based electronics industry. In this case the technology is licensed from a medium-sized Japanese company.

While there have been a few spectacular Irish successes with licensed products and processes, Irish firms are generally constrained from becoming involved by their size and by the absence of the technical, management, marketing and financial capability necessary for success in the export market. It is likely, however that our future industrial strategy will place increasing emphasis and incentives on the development of these mechanisms of technology transfer thus ensuring an increasing rate of technology transfer from overseas. This trend is evidenced by the establishment of a separate unit within the IDA with responsibility for technology transfer. The Authority has placed a number of executives in overseas offices with specific responsibility for seeking out technological opportunities suitable for implanting in Irish firms through licensing agreements. Assistance is also being given to Irish companies seeking opportunities to licence technology from overseas companies.

**Factors Affecting the Transfer and Diffusion of Technology**

The transfer and diffusion of technology to Irish industry is dependent on a number of other factors in addition to the transfer mechanism used. These include the level of technology and skills in Irish industry, the size of Irish firms and the initial cost of adopting the technology, the link between technology and competitiveness, the assistance provided by the supporting infrastructure and the social attitudes to technology.

**(i) Level of Technology in Irish Industry**

The level of technology in Irish industry is dependent on various forms of technological innovation including research and development. A study of innovation in small manufacturing firms (NBST, 1981a) found that the level of innovation in these firms was low with little difference being observed between indigenous and foreign owned firms.

Traditionally, expenditures on R&D have been used as an indicator of technological levels within companies. The role of research and development in technology transfer should not be underestimated since highly qualified personnel working at the forefront of their fields can provide an early recognition of new and changing technologies, an effective assessment of their impact or opportunities for Ireland and, as appropriate, their rapid acquisition, adaptation and use. The level of research and development carried out by Irish industry is low when compared with other OECD countries, 0.5% of domestic product of industry in 1982 compared to 1.6% in Japan, 1.3% in Netherlands and 0.8% in Denmark in 1979 (NBST, 1984). While the NBST report indicates a considerable increase in expenditure on R&D (Table A.41) the level of technology, thus measured, is still low by international standards.

Industrial policy as enunciated in the White Paper emphasises the need to increase expenditure on R&D in Irish industry. Priority is to be given to the attraction of foreign firms willing to locate highly skilled functions such as marketing and R&D in Ireland. By 1988, 10% of total IDA capital spending is to go on R&D projects. It must be recognised, however, that a number of factors militate against the location by multinational companies of R&D functions in Ireland. It is in the interest of these companies to have R&D expenses offset against tax liability in countries where higher corporation tax rates apply. Also the R&D functions of multinational companies are often located in a small number of units not separately located with the individual subsidiaries.

#### (ii) Level of Skills

The availability of appropriate skills, particularly key management and technical skills, is an essential prerequisite for a firm to absorb and utilise new technologies. While the output of engineering graduates and technicians has increased rapidly over the past decade, it is still low by international standards (see Chapter VI). Pattern of employment statistics show that only a small proportion of scientific and technological graduates find their first employment in manufacturing industry. Even in the electronics sector, skill levels are lower than in other industrialised countries (Table A.25) (O'Brien, 1985). A recent sectoral development committee report on The Technological Capacity of Irish Industry" (SDC, 1985) indicated that there were serious skill deficiencies in indigenous industry particularly in the strategic technology areas — engineering, information technologies and biotechnology. Skill deficiencies observed in a number of sectors included product development, design, quality control and

assurance and a knowledge of materials. The report recommended a number of placement and training measures aimed at overcoming these deficiencies. An increase in skill levels in Irish firms would greatly facilitate the adoption and application of technology.

#### (iii) Size of Firm

Most Irish firms are very small by European standards. Small firms particularly may benefit from the application of technology because of its flexibility and appropriateness for small batch production. However, because of their size, many of these firms have difficulty in achieving the high level of investment required for the acquisition and application of new technology. They also lack the experience and the skills both to identify their needs and to assess the return on investment in new technology. For firms which adopt the required technology, these shortcomings often result in underutilisation of capacity in the initial stages. Small firms also face particular problems in retraining and reallocating staff whose skills are made obsolete by the introduction of technology. However, growing skills and experience of the technology increase the capacity utilisation and the potential for technical innovation. At national level this is very important since the increase in potential for technical innovation is likely to raise awareness of the potential of technical change and to demonstrate that it is not simply a labour saving device.

#### (iv) Initial Investment

In relation to automation the cost of the initial investment required is being reduced by the fall in price of automated equipment with the development of the mini computer and microprocessor. However, it must be remembered that the electronic element is often a relatively small proportion of the total cost of the system. The diffusion of the technology is also being aided by the growing awareness of its ability to perform more complex tasks, to slow down technological obsolescence, to improve product quality, to diversify production and to meet customer demands in terms of quality and quantity.

#### (v) Technology and Competitiveness

Many factors affect the competitiveness of Irish firms. However, there is growing recognition of the link between technology and competitiveness particularly for indigenous firms. This link is probably the most important factor accentuating the rate of technological change. A slowing of the rate of growth of consumption due to market saturation in many products is resulting in increasing international competition. Increasing competition for Irish industry is leading to a loss of external market share and to an increasing penetration by foreign competitors

share of the home market declined from 70.8% to 62.3% (NBST, unpublished). The European Management Forum annual survey of international competitiveness placed Ireland 16th of the 22 developed and less developed countries (European Management Forum, 1982). There is evidence that competition from other countries is a critical factor in inducing industry into, in the first instance, job displacing, labour saving technical change (Soete and Dosi, 1983). However, it is generally agreed that non-price factors also play an important role in the competitive performance of firms involved in the production of capital goods and sophisticated consumer goods. Factors such as product design, reliability, quality in terms of technical performance and service, distribution and marketing, play an important role in determining the level of competitiveness of these firms. These factors in turn depend on a number of complex factors including technological skills, research and development, infrastructural support, innovation rate, etc. In the engineering sector, these technology variables play an important role in explaining inter-country export performance in a great majority of countries (Soete, 1981). It has also been shown from German, US and UK studies that consumers switch to foreign suppliers mainly because of technological factors (e.g. Kravis and Lipsey, 1971; Rothwell, 1979).

#### (vi) Supporting Infrastructure

A major factor affecting the transfer and diffusion of technology is the strength of the supporting infrastructure. In Ireland, the mix and focus of the S&T institutions is not greatly different from other small European countries. They have four main functions:

- to assess changes in technology and their relevance to national needs;
- to undertake applied research for firms and assist technology transfer to them;
- to ensure that research results and other pertinent information both from national and international sources is made available to industry;
- to ensure that the necessary skills are available to industry.

The long term aim must be to build up strong companies which are less reliant on the supporting infrastructure. However, given the size and other deficiencies of many Irish companies, the supporting infrastructure can, if adequately skilled, and appropriately organised, play a vital role in raising their technological capacity and skill levels.

#### (vii) Social Attitudes to Technology

The development of technology based industry depends on the existence of positive attitudes among the general population towards technology. At business level, a fundamental factor in the introduction of technology is the attitudes of both management and employees. A full understanding of both the social and technological implications is required to achieve the flexibility of attitudes which are an essential prerequisite for the successful introduction of technology.

Increased research, training and dialogue is required to achieve a better understanding of the many issues involved including the possible impact of the technology on the work content and skill requirements, changes in ergonomic design and the organisation of work, the reorganisation of tasks, control and management procedures, decentralisation of work, variations in working hours, access to leisure time and the changes in services to be provided. At management level, there is a shortage of strategic management skills in relation to the introduction of technology. Social and psychological skills relating to job design and the organisation of work are also important.

## DEVELOPMENT OF THIRD LEVEL SECTOR 1965-1983

## INTRODUCTION

Since the mid-sixties a number of initiatives have been undertaken within the higher education sector. While the traditional objectives of education have not been forgotten, there is evidence in these initiatives of a growing recognition of the potential role of higher education in economic and industrial development. The sector is now a major producer of highly skilled manpower and is making an increasing contribution to technological innovation.

While the restructuring of the higher education sector has been mainly due to the developments within the non-university sector, considerable change has also taken place within the universities themselves. New planning and award giving bodies have also been established. In view of the implications of these developments for the education of highly skilled manpower and the provision of employment opportunities through technological innovation, it is important to examine them in some detail. Of particular importance is the rationale behind the initiatives which were undertaken, the institutions which have evolved and their roles in the production of highly skilled manpower.

## THE UNIVERSITY SECTOR

In the sixties the higher education sector consisted mainly of the university colleges. The Commission on Higher Education was established in 1960 to enquire and make recommendations in relation to university, professional, technological and higher education in general. The report of the Commission which was published in 1967, was severely critical of a number of aspects of higher education and made wide-ranging recommendations aimed at improving co-ordination and planning, achieving higher participation rates, raising academic standards and increasing emphasis on technological, scientific and commercial studies (Stationery Office, 1967).

Reaction to the recommendations of the Commission varied considerably and resulted in notable initiatives being undertaken in areas such as improvement of entry standards, provision of grants for students and expansion of the Dublin Colleges of Technology. A major proposal which has been the subject of much debate and the cause of much uncertainty within the sector relates to the devolution of the National University of Ireland (NUI). The NUI is one of the two autonomous universities in Ireland, the other being Dublin University. It has three con-

stituent colleges UCD, UCC and UCG and six recognised colleges — St. Patrick's College, Maynooth, St. Patrick's College of Education, Dublin, Mary Immaculate College of Education, Limerick, the Royal College of Surgeons, Dublin, and St. Angela's College, Sligo. The NUI has a number of functions in relation to the constituent colleges including appointment of lecturers and professors, maintaining standards, conducting entry and degree examinations, and awarding degrees and diplomas. The recognised colleges plan their own programmes and examinations with the advice of the constituent colleges.

Despite the numerous alternatives put forward by successive Governments, the Higher Education Authority and academic groups, little progress has been made towards agreement on an appropriate structure for the university sector of the future. This is evident from the recently published "Programme for Action in Education 1984-1987" (Department of Education, 1984) which simply stated that "the question as to whether it is now appropriate to bring forward legislation regarding the future status of the universities will be discussed with the relevant authorities". This statement is perhaps surprising following almost twenty years of uncertainty and debate.

In the twenty year period some major developments have been implemented within the university sector, particularly the transfer of many of the faculties of UCD to the new campus at Belfield and the construction of new buildings at TCD, UCD, UCC and Maynooth. Major expansions have taken place in the faculties of science at UCD, dairy science at UCC and agricultural science at UCD. The Manpower programmes initiated by the Manpower Consultative Committee in the late seventies have resulted in major expansions of engineering faculties particularly in UCD and TCD. Increasing emphasis has been placed on post graduate research. Many of the infrastructural initiatives within the University sector have been aimed at increasing the direct contribution of the research expertise and facilities within the sector to industrial development. The overall implications of these developments have been a change in emphasis towards science, engineering and business studies (see Table A.28).

Other major developments within the period include the introduction of the points system and the establishment of the Central Applications Office. As many faculties are over-subscribed, the points system has been introduced to discriminate between matriculated applicants. Applications to the universities, the NIHEs, Thomond College and the degree programmes of DIT are now processed through a Central Applications Office.

## THE HIGHER EDUCATION AUTHORITY

The Commission on Higher Education also recommended that a body be established for the purpose of planning and financing higher education. In response to this recommendation the Higher Education Authority (HEA) was established on an ad hoc basis in 1968 and as a statutory body in 1971.

As a planning authority the HEA has advisory powers ranging over the whole third level sector which includes 38 institutions. However, in relation to its executive functions the HEA is the funding agency only for the universities and the other designated institutions, which include the Royal College of Surgeons, National Council for Education Awards, National Institutes for Higher Education at Limerick and Dublin, National College of Art and Design, Royal Irish Academy and Thomond College of Education. These different areas of responsibility in relation to its executive and advisory functions are presenting growing difficulties for the HEA (see Chapter VI).

## THE NON-UNIVERSITY SECTOR

While major developments have been initiated in the university sector, the most radical change has taken place in the non-university sector and has been aimed mainly at correcting the inadequacies of technological and technician education. Such inadequacies were identified in a number of studies including an OECD report on Training of Technicians in Ireland (OECD, 1964), the Investment in Education report (Stationery Office, 1966), and the report of the Commission on Higher Education (Stationery Office, 1967). Major developments include the establishment and subsequent expansion of the Regional Technical Colleges and the National Institutes for Higher Education, and the establishment of the National Council for Educational Awards.

## The Regional Technical Colleges

In 1963 the Government announced its intention to establish regional technical colleges and in 1966 a steering committee on technical education was established "to advise the Minister generally on technical education and, in particular, on behalf of the Minister, to provide the Department of Education's building consortium with a brief for the technical colleges". The committee submitted a preliminary report to the Department in January, 1967 and its final report was published in May, 1969 (Stationery Office, 1969). This report was to have far-reaching consequences for second level education and the non-university third level education.

The report recommended that the Government proceed with the implementation of its decision to construct eight regional colleges.

The first five regional colleges were opened in September 1969 at Carlow, Dundalk, Waterford, Sligo and Athlone. The RTC in Letterkenny opened in 1971, despite the recommendation in the report that it should remain a local technical college pending expansion when it might be raised to regional status. Galway and Cork RTCs were opened in 1972 and 1974 respectively. Tralee Technical College was given regional status in 1978.

The courses which the committee recommended should be provided in the RTCs covered a wide range, including senior cycle post primary, apprenticeship, technician and adult education courses in technical, commercial, scientific, catering and other fields of specialisation. It was envisaged that a small number of colleges should offer full-professional courses.

The admission of pupils for senior cycle post-primary courses leading to leaving certificates was important at the start up stages of the RTCs as they provided a much needed expansion, thus ensuring the economic viability of student numbers in colleges in their early years. These courses were also intended to have an exemplary influence on similar courses in other schools, to introduce an integrated educational structure at post-compulsory level, to promote a desirable socio-educational environment and to increase the number of girls taking S&T subjects. While many of their objectives were achieved it must be emphasised that little progress was made towards the development of a technical leaving certificate course as envisaged by the committee. The existing leaving certificate programme was offered for a few years after which it was phased out due to the increasing requirements for apprenticeship and technician courses.

The main emphasis of the RTCs has been on the provision of apprenticeship and technician courses. The steering committee recognised that the demand for technicians would be low in the initial years of the RTCs. However, they argued that "the need for certain kinds of education and training must be distinguished from demand" and that "if the demand for needed skills does not arise naturally, it must be stimulated artificially". They suggested that one way of stimulating demand would be the establishment of a National Council for Educational Awards to give due recognition to the awards to be obtained in the Regional Colleges. They emphasised that educational and economic planning is not realistic without a continuing system of manpower supply and demand forecasting. However, they estimated that approximately 1,260 technicians would be required annually in order to eliminate shortages by 1980. In recent years the supply of technicians from the

RTCs has far exceeded this figure and the upward trend in output is continuing (see Table A.27).

The report also recommended that provision should be made for professional education both for holders of technician qualifications and for a separate path to professional education in certain fields. They proposed however that courses in the RTCs should concentrate mainly on technician and craft apprentice education together with senior cycle second-level. The recent Programme for Action in Education emphasised the need for "provision in the RTCs of certificate and diploma courses, designed as such, rather than degree courses".

The steering committee felt strongly that the Regional Colleges should be seen as a new concept operating under new institutional arrangements. They recommended the establishment of a Regional Educational Council having accountability in as much as possible for all levels of education in each of the regions. This proposal for a comprehensive system was examined by the Departmental Committee on the Organisation of Higher Education but was not implemented. Instead the RTCs were placed under the control of management boards, which were, in effect, sub-committees of the Vocational Education Committees.

#### **The National Council for Educational Awards**

The proposal of the steering committee on technical education for the establishment of a National Council for Educational Awards was supported by the Higher Education Authority in 1969. The Council was established on an ad hoc basis in 1972. It was reconstituted in 1976 and became a statutory body with the passing of the NCEA Act in 1979.

Under the Act the functions of the Council are "generally to encourage, facilitate, promote, coordinate and develop technical, industrial, scientific, technological and commercial education, and education in art and design, provided outside the universities, whether professional, vocational or technical, and to encourage and promote liberal education". In particular, the Council may confer degrees, diplomas, certificates and other educational awards to persons who successfully complete approved courses, approve and recognise courses, co-ordinate course development within and between institutions, advise the Minister for Education in relation to the cost of providing courses, promote the Council's awards, assist in the transfer of students from one institute to another and assess standards of courses approved by the Council from time to time. The Council consists of representatives of the whole third level sector as well as representatives of industrial, commercial and agricultural sectors. The Council is advised by a number of committees, boards of studies and advisory panels.

Under the 1979 Act the range of designated institutes was significantly expanded. There are now 28 designated institutions including the NIHEs, RTCs, DIT, etc. The scale of expansion of the NCEA and its designated institutions is evidenced by the growth in awards conferred. In 1972 a total of 93 awards was conferred, all at National Certificate level. In 1983 almost 4,100 awards were conferred by the NCEA including 345 one year certificates, 2,151 national certificates, 1,054 national diplomas, 485 primary degrees, 60 graduate diplomas and 4 masters degrees. The total number of awards granted since 1972 is 22,405.

Despite the impressive increase in annual awards the Council has experienced some difficulties in its early years. Government uncertainty in the 70s regarding the NCEA's degree awarding and co-ordinating and planning role caused confusion between the NCEA, its designated institutions, the HEA and the university sector. Further initial problems related to the need for the NCEA to equate standards and satisfy the needs of the newly established colleges and the more traditional colleges. Some of these problems seem to be receding since the passing of the 1979 Act and the resulting clarification of the role of the NCEA.

Non-NCEA awards are still provided for many non-university third-level courses, particularly within the DIT system. Some DIT colleges offer joint degree programmes in association with TCD, and degrees for these courses are awarded by TCD. At non-degree level the colleges of DIT established their own award system for technicians in the 1960s and they continue to make these awards. While some courses are eligible for both NCEA and DIT awards others have not sought or received NCEA recognition. A number of other awarding agencies operate through the third level colleges including the City and Guilds of London Institute, the Department of Education and a number of professional and technician bodies which set their own qualifying examinations. The number of these awards is significant, particularly at technician level. Many of these technicians have a craft background and acquire their qualifications through part-time study. Data in relation to this area is sparse. However, it was estimated that in 1980 the output from these awards was approximately 100 (O'Donnell, 1982). While the value of these awards, which existed before the establishment of the NCEA, must continue to be recognised, it would appear appropriate that the validation and awarding powers for non-university third level courses should rest with the NCEA probably through a dual award system.



### The National Institutes for Higher Education

In 1969 the HEA recommended the establishment of a College of Higher Education in Limerick. The courses to be provided by the institute should accord to the HEA "be based primarily on a technological content, but with a significant element of the humanities". The Institute received its first students in 1972 and became a statutory body in 1980. Under the 1980 Act the Institute has the following functions:

- to provide degree, diploma and certificate level courses and with the approval of the Minister for education, such other courses in education as may seem appropriate to the governing body;
- to engage in research in such areas as may seem appropriate to the governing body.

There are two National Institutes for Higher Education, one in Limerick and the other in Dublin. NIHE Limerick is situated on the Plassey Technological Park together with over twenty other state and private organisations. It consists of three departments, Engineering & Science, Business and Humanities. It offers degree programmes in Applied Mathematics, Business Studies, Computer Systems, Electronics Engineering, European Studies, Industrial Chemistry, Industry Design, Materials Engineering, Mechanical Engineering, Production Engineering, Public Administration and Regional Studies.

In 1983/84 the Institute had almost 2,000 full-time students and 1,000 part-time students. The Institute sees itself as a technological university with the vast majority of full-time students (95%) attending degree programmes. On completion of its second phase of development, which is at present under way, it plans to offer places to over 3000 students.

With the increasing demand for third level places in the Dublin area and the growing inadequacy of the facilities provided in the late sixties by the Dublin Colleges of Technology, the Dublin VEC prepared plans for a new technological/commercial college at Ballymun. The new college was to cater for the third level courses which were being undertaken at the College of Commerce, Rathmines, and at the College of Technology, Bolton Street and some of the third level courses at the College of Technology, Kevin Street.

The proposal was supported by the HEA in 1970 and the NIHE in Dublin was set up in 1975. The Institute is an independent college, not under the control of the VEC. It admitted its first students in November 1980. It is intended that the Institute will provide courses with an

orientation towards the more practical aspects of education for industrial, commercial and technological vocations. The courses will be provided at certificate, diploma, degree, professional and post-graduate level through full-time or part-time study. The Institute had grown from 200 to 1,500 students in its first three years. On completion of phase 2 of its development the Institute plans to cater for an additional 2,000 students.

As in the case of NIHE Limerick, the majority of students attending NIHE Dublin are taking degree programmes with a small number of diploma programmes being offered. The Institute has six faculties covering Business and Professional Studies, Computing and Mathematical Sciences, Engineering and Design, Science and Paramedical Studies, Communications and Human Studies and Educational Studies. The Institute has taken a novel initiative in establishing Curriculum Development, Educational Technology and Staff Development Units in the faculty of Educational Studies to support the work of Course Development Boards. Courses are packaged to meet the needs of the market rather than being offered as modules. The degree course in Languages and International Marketing includes one year's study in an overseas university. It has also placed great emphasis on providing courses of study for persons in employment. Of particular interest is the emphasis being placed on Distance Education Programmes. The first of these programmes in 1982 was an outstanding success with 1,700 enrolments.

Two features of particular importance in relation to the NIHE programmes are co-operative education and vertical integration. These are discussed in Chapter VI.

### OTHER DEVELOPMENTS IN THIRD LEVEL SECTOR

Much has been done and achieved over the past twenty years to develop the technological sector of higher education. While the discussion has concentrated on the new colleges, the major role played by the six Dublin VEC higher level colleges, which were reorganised in 1978 as the Dublin Institute of Technology, must be acknowledged as must the National College of Art and Design and the Limerick Technical College. The DIT system caters for over 5,000 whole-time third level students and almost 18,000 part-time third level students and craft apprentices. It is due to undergo a major reorganisation involving the Bolton Street and Kevin Street Colleges of Technology, the College of Marketing and Design and the College of Commerce, Rathmines.

In 1979 a report commissioned by the HEA recommended that four new colleges be established in the Dublin area (Clancy & Benson,

1979). It recommended that the proposed colleges be based broadly on the RTC model. The report recognised the growing inadequacy of third level facilities in the Dublin area where the population has grown by 66.5% between 1971 and 1979. It was recommended that these colleges should educate for trade and industry, over a broad spectrum of occupations, ranging from craft to professional level, notably in engineering and science but also in commercial, linguistic and other specialities. The colleges would make specific provision for recurrent education.

## APPENDIX V

### CONCEPTUAL FRAMEWORK FOR ASSESSING EMPLOYMENT SUBSIDIES

The most pervasive type of employment subsidies are marginal employment subsidies whereby a subsidy is paid on increments to the employment level of the firm or on newly hired workers. Conceptually one can distinguish two employment objectives of these subsidies: a counter-cyclical one of increasing or protecting employment in a recession; a structural one designed to promote employment opportunities for certain labour market groups. In practice many schemes represent a combination of both.

OECD (1982a) identifies three types of marginal employment subsidies: (i) marginal stock subsidies; (ii) subsidies to avert redundancies; and (iii) targeted employment subsidies. Marginal stock subsidies, also known as incremental employment subsidies, provide support for an increase in the stock of employment above a certain specified base level. Subsidies to avert redundancies are paid when a firm indicates its intention of reducing its workforce or when certain sectors are identified as facing particularly difficult trading conditions. These two types of subsidy are of the counter-cyclical variety identified in the previous paragraph. A targeted employment subsidy is usually designed to achieve a structural objective, i.e. to alter the mix of employment in a firm rather than increase its level over a specified base. However, targeted schemes usually only operate at the margin in that only newly hired workers qualify for subsidy. The Employment Maintenance Scheme for the Clothing and Textiles industries which was terminated in 1980, was of type (ii) above. The Employment Incentive Scheme (EIS) embraces aspects of both (i) and (ii).

In assessing employment subsidies it is not correct to take the total number of jobs which have been subsidised as an indicator of the schemes' success. This is because of *displacement effects* which cause the net employment effects of the scheme to differ from the gross employment effects. In the case of a marginal stock subsidy, displacement effects within the firm are ruled out through the specification of the base employment level over which employment must increase if it is to be eligible for a subsidy.

However, displacement effects can arise outside of the firm in a number of ways. To examine how this might occur it is necessary to examine how an employment subsidy influences a firm's employment level.

There are two ways in which an employment subsidy can contribute to an increase in the net employment of a firm: a substitution effect; and an output effect. The former occurs through an alteration of factor inputs as factor prices change, i.e. labour becomes cheaper relative to capital and is therefore substituted for capital. For this to occur, however, a number of conditions must be satisfied. It must be technically possible to substitute and the employer must expect the change in factor prices to be relatively long lasting. The output effect, as the title indicates, involves increasing output as a result of hiring more labour. The net effect of this output increase, however, depends crucially upon the general macro-economic context and the market orientation of the firm's competitors. In a period of slack demand and if the firm has domestic competitors the increased output may be achieved at the expense of a non-subsidised competitor who may be forced to reduce employment levels. On the other hand the reduced costs of production occasioned by the subsidy may enable domestic producers to compete more effectively against international competitors such that domestic displacement does not occur. In the latter case the subsidy effectively becomes a net export subsidy. In summary, therefore, displacement outside the firm is likely when demand conditions are weak and when the subsidy is taken up by firms trading on the domestic market.

Displacement may also occur with a targeted employment subsidy with target workers being recruited and non-target workers being dismissed simultaneously. However, the main objective of the programme would still be achieved, i.e. a tilt in the distribution of jobs in favour of the target groups. A variant of the marginal stock subsidy is a recruitment subsidy in which the subsidy is paid for new workers hired rather than for an increment to total employment. A possible effect of this type of subsidy is known as the "churning effect" whereby employers can maximise the subsidy by increasing labour turnover within the firm and collecting the subsidy on each new person hired.

"*Windfall gain effects*" to the firm are very much related to displacement effects. These arise when the subsidy is availed of to increase employment which would have occurred even in the absence of the subsidy. In fact they are sometimes referred to as financial displacement, since employers may use the subsidy to finance hiring which they would otherwise have financed by their own means. This type of effect is also referred to as "deadweight". While it is very difficult to ensure that only those employment increases which the subsidy calls forth benefit from the subsidy the economic conditions under which the subsidy is introduced can make it more or less probable.

## APPENDIX VI<sup>1</sup>

### COMTECS — COMMUNITY TRAINING AND EMPLOYMENT CONSORTIA

The main basis underlying the formation of COMTECS is that if the various manpower and other schemes designed for youth be coordinated and their potential fully developed, then this should take place at local level. A COMTEC typically comprises representatives of the manpower agencies, employers, trade unions, local educational bodies, the local authority and representatives of young people. Currently, the programme is being tested on a pilot basis in eight locations.<sup>2</sup>

Each COMTEC will be required to proceed through the following stages:

- (a) Collation of information on such aspects as school leaving patterns, youth unemployment in the locality, existing provision by manpower services and school based education and training facilities, the identification of local labour market needs and the matching of manpower and educational provision to meet this need, etc;
- (b) The identification of disadvantaged groups and areas within the locality, gaps in the linkages between schools and the manpower services and the provision of services for particular categories of young people;
- (c) An assessment of the appropriateness of the scale and nature of current provision for the locality, of the extent of the actual and potential involvement of individual community managed projects, and of the need for additional manpower or educational provision whether nationally or locally delivered;
- (d) The formulation of a *Two Year Plan* for approval by the Youth Employment Agency, based on the findings of the above-mentioned earlier stages.

The operational responsibilities for the implementation of the Plan will lie with the existing programme providers in the manpower and educational fields, etc. Each COMTEC will be responsible for monitoring the implementation of this plan and recommending any subsequent changes which are seen to be necessary.

<sup>1</sup>The material in this Appendix has been taken mainly from the YEA document "Arrangements for the Commissioning of Eight Pilot Community Training and Employment Consortia".

<sup>2</sup>Cork City, Kerry, Laois/Offaly, Monaghan, Sligo, Waterford and in Dublin in the areas of Donaghmede/Artane and Tallaght.

It is the intention that the COMTECS should play an increased role in the allocation of Youth Levy generated resources to programmes at local level. The main factors determining the pace at which such a process can be proceeded with are:

- (i) The need for each COMTEC to gain a thorough understanding of its labour force and market and their requirements;
- (ii) The realignment of planning and management systems in major provider organisations to accommodate a more localised approach;
- (iii) The establishment of planning and operational linkages with relevant providers outside of the manpower services area;
- (iv) The development of a system at national level for collating and reconciling local plans.

Table A.1

The Irish Labour Force, 1961-1984

Year (mid-April)	Labour Force	Numbers at Work		Unemployment Rate %
		'000	Unemployed	
1961	1,076	1,017	59	5.5
1971	1,110	1,049	61	5.5
1972	1,121	1,052	69	6.2
1973	1,131	1,067	64	5.7
1974	1,143	1,082	61	5.3
1975	1,157	1,073	84	7.3
1976	1,169	1,064	105	9.0
1977	1,188	1,083	105	8.8
1978	1,209	1,110	99	8.2
1979	1,233	1,145	88	7.1
1980	1,247	1,156	91	7.3
1981	1,272	1,146	126	9.9
1982	1,296	1,148	148	11.4
1983	1,309	1,125	184	14.1
1984	1,314	1,110	204	15.5

Notes: (1) All of the estimates included in this table and in Tables A.2(i) and A.2(ii) following are given on a Labour Force Survey basis. For the years prior to 1975 this involved transformations of certain aspects of Census-based data. While the figures from 1971 onwards can be regarded as reasonable consistent, some caution should be exercised in comparing these later estimates with those for 1961 in view of the longer retrospective period involved.

(2) The unemployment estimates include first job seekers.  
Source: Central Statistics Office, Dublin; Sexton (1983).

Table A.2(i)

## Labour Force by Broad Sector, 1961-1983

Sector	1961*	1971	1979	1981	1983
			(000)		
Agriculture	360	272	221	196	189
Manufacturing	194	236	264	245	245
Building	58	84	101	101	86
Services	405	457	559	587	605
Public Sector*	118	150	215	237	240
Other Services	288	307	344	350	365
Total at Work	1,018	1,049	1,145	1,146	1,125
Unemployed	59	61	88	126	184
Labour Force	1,076	1,110	1,233	1,272	1,309

Table A.2(ii)

## Annual Average Changes in the Numbers at Work by Sector, 1961/71, 1971/79 and 1979/83

Sector	1961/71	1971/79	1979/83
		(000)	
Agriculture	-8.8	-6.4	-8.0
Manufacturing	+4.2	+3.5	-4.8
Building	+2.6	+2.1	-3.8
Services	+5.2	+12.8	+11.5
Public Sector*	+3.2	+8.1	+6.3
Other Services	+1.9	+4.6	+5.3
Total at Work	+3.4	+12.0	-5.0

*Note:* \* The Public Sector includes not only employees in Public Administration and Defence but also in other non-commercial activities such as Education and Health. The Post Office is also included under the heading (later reconstituted as An Post and An Bord Telecom). For a more detailed description of this classification, see Sexton (1982).

*Sources:* Tables A.2(i) and A.2(ii): Central Statistics Office, *Annual Labour Force Estimates* (supplemented by special Labour Force Survey tabulations kindly provided by CSO); *Employment and Unemployment Policy for Ireland* (eds. D. Conniffe and K.A. Kennedy), Dublin: Economic and Social Research Institute (1983).

Table A.3

## The Irish Labour Force by Age in 1971 and 1981, with Projections for 1986 and 1991

Age	1971	1981	1986	1991
			(000)	
15-24	310	366	361	353
25-44	390	540	633	719
45-64	344	317	320	333
65 and over	67	49	39	30
Total	1,110	1,272	1,352	1,436

*Note:* The projections for 1986 and 1991 are based on the "low migration" assumptions as used in the Report referred to below. This involves a net outflow of 5,000 per year in 1981-86 followed by a net outflow of 7,500 per year in 1986-91.

*Source:* Central Statistics Office (1985) - "Population and Labour Force Projections 1986-1991".

Table A.4

## Estimated Annual Outflow from Second Level Education, 1978-81, Classified by Stage Completed

Level	1978	1979	1980	1981
Group Cert. not completed	4,000	4,900	4,400	4,500
Inter Cert. not completed	5,200	5,200	3,000	4,100
Group Certificate	5,700	7,000	5,800	5,300
Inter Certificate	14,200	13,800	13,900	12,500
Leaving Certificate	19,200	20,200	18,300	21,200
Total	48,300	51,100	45,400	47,600

*Note:* The figures relate to persons aged 15 to 24 who were resident in private households in the State in late Spring 1982.

*Source:* 1982 ESRI Survey of Youth Employment and Transition from Education to Working Life.

Table A.5

Percentage Frequency Distribution of Candidates Taking Sciences, Technical and Commerce Subjects at Leaving Certificate 1981

Subject Group	Number of Subjects Taken at Leaving Certificate			Total	
	0	1	2+		
Sciences	Males	23.0	47.3	29.7	100.0
	Females	36.4	50.2	13.4	100.0
	All	30.2	48.8	21.1	100.0
Commerce	Males	47.6	33.7	18.7	100.0
	Females	44.1	44.0	11.9	100.0
	All	45.7	39.2	15.1	100.0
Technical	Males	80.3	6.4	13.3	100.0
	Females	99.8	0.1	0.1	100.0
	All	90.7	3.0	6.3	100.0

Note: Subject Areas:

Sciences: Higher Mathematics, Biology, Physics, Chemistry, Applied Mathematics, Physics and Chemistry

Commerce: Accounting, Business Organisation, Economics

Technical: Technical Drawing, Building Construction, Engineering Workshop

Source: Breen (1984), "Irish Educational Policy: Past Performance and Future Prospects" in *Public Social Expenditure - Value for Money?* ESRI Conference, 20 November 1984.

Table A.6  
NESC-Appendix Tables- 3

Youth Population in 1982 (Excluding those in full-time education) in different occupations classified by training received

Occupation	Males		Females		Total (N)
	Training in Progress	Completed Others	Training in Progress	Completed Others	
Agricultural Workers	0.6	19.1	80.3	100.0	2.6
Electrical, Electronics, etc. Workers	43.6	33.6	22.7	100.0	4.4
Engineering	25.3	27.3	47.3	100.0	8.8
Other Producers	25.3	27.3	47.3	100.0	8.8
Building etc., Workers	32.2	25.4	42.5	100.0	11.1
Unskilled Workers	2.3	7.9	89.9	100.0	18.5
Transport Communication Workers	1.8	18.8	79.4	100.0	10.9
Clerical Workers	9.0	10.9	80.1	100.0	3.2
Commerce, Insurance etc. Workers	21.7	17.3	61.1	100.0	4.3
Professional, Technical Workers	43.1	20.5	36.3	100.0	30.8
Service Workers	12.8	15.5	71.8	100.0	17.4
Other Workers	11.9	11.1	77.1	100.0	27.7
Total	20.3	21.3	58.5	100.0	8.0

\*This table relates to all those who ever had an occupation, including those not in the labour force when the survey was taken. Source: Sexton, Whehan and Dillon (1983). *Survey of Youth Employment and the Transition from Education to Working Life*. Final Report to the EEC Commission, ESRI, 1983.

Table A.7

Youth Population Outside of Full-Time Education, 1982. Persons Who Had Completed Training Programmes Classified by Broad Sector of Training, and by Sponsoring Institution (000)

Sector of Training	Provided Directly by AnCO	Non-AnCO	Total
General	1.9	0.5	2.4
Construction	3.1	1.1	4.2
Woodwork	2.6	2.1	4.7
Engineering (incl. Electrical)	13.5	3.1	16.6
Textiles	1.5	1.8	3.3
Other Industry	1.8	6.4	8.2
Clerical, Administrative	4.6	35.9	40.5
Distribution	0.5	4.0	4.5
Miscellaneous	0.9	8.2	9.1
Total	30.4	63.1	93.5

Note: It is likely that the AnCO training levels are understated since in some cases it was difficult to determine who was funding or organising the training. In many cases for example AnCO arranges for training to be provided by outside agencies on contract and some respondents may not have been fully aware of AnCO's involvement. In other instances, where training programmes involved a combination of on-the-job experience and course work, there were indications that some respondents considered themselves to be totally in employment and not in training (this is, of course, a classification problem that would apply to all training, whether AnCO sponsored or not).

Source: ESRI Survey of Youth Employment and Transition from Education to Working Life.

Table A.8(i) Total Population of AnCO Apprentices by Trade Group, 1973-83

Trade Group	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Furniture	447	410	376	363	368	414	451	505	451	503	491
Printing	563	493	403	330	271	241	267	336	350	320	259
Electrical	2,455	2,767	2,790	2,634	2,761	2,853	2,846	3,568	3,435	3,661	3,479
Motor	3,730	3,484	3,333	3,323	3,480	3,924	4,092	4,339	3,546	3,236	2,842
Engineering	2,761	3,163	2,348	3,612	4,032	4,381	4,685	5,559	4,721	4,898	4,549
Construction	4,499	5,030	5,137	5,309	5,594	6,127	6,351	7,156	6,964	7,091	6,996
Dental	n.a.	n.a.	25	29	36	34	39	35	24	28	33
Total	14,455	15,347	14,412	15,599	16,542	17,974	18,731	21,498	19,491	19,737	18,649

Table A.8(!!!) First Year Apprentices by Trade Group, 1973-83

Trade Group	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Furniture	42	28	35	46	50	97	97	71	66	105	103
Printing	83	18	27	14	27	110	110	94	52	31	41
Electrical	247	483	379	344	457	593	616	827	776	816	694
Motor	466	334	301	450	652	866	749	564	590	657	545
Engineering	415	552	459	585	824	982	1,131	1,326	940	1,180	921
Construction	581	701	541	787	1,057	1,346	1,509	1,173	1,460	1,422	1,321
Dental	n.a.	n.a.	1	9	9	2	6	4	7	8	8
Total	1,834	2,183	1,734	2,235	3,076	3,945	4,218	4,059	3,891	4,219	3,633

Note to Tables: The reference data for the aggregate shown is 3 December of each year, except 1973 for which it is 21 March. Source: AnCO A.8(i) and A.8(!!!)



Number of Adults (Non-Apprentices) Trained by AnCO in 1983, by Sector of Training

Sector of Training	In Centres*	By External Agencies	Total
Basic Training Courses	2,577	—	2,577
Construction	218	287	505
Electrical, Electronics	717	—	717
Engineering, Metal Fabrication, Machinery, etc.	4,029	279	4,308
Motor Trade, etc.	486	236	722
Clothing and Footwear	1,214	1,654	2,868
Other industry (incl. light skills development etc.)	1,559	195	1,754
Office Procedures/Clerical	—	768	768
Data Processing	215	1,993	2,208
Sales, Business, Finance, Marketing	308	—	308
Hairdressing	—	4,831	4,831
Career Development Programmes, Equal Opportunities etc.	546	618	1,164
Other Courses	4,799	—	4,799
Community Youth Training Programme	1,889	—	1,889
Community Training Workshops	—	—	—
Total	18,557	10,861	29,418

Note: \*The total shown under the heading for Centres includes the throughput from the CYTP and Community Training Workshops. Persons in these schemes do not attend at Training Centres but the programmes are organised through the regional network of centres.

Source: AnCO.

Table A.10

Financial Details of the Levy/Grant Scheme for the Year Ended 31st December 1982

	Receipts	Payments	Grants to Employers	Payments to AnCO for	Costs of Administration and Training	Advisory Service	Bank Charges	Legal Fees	Other Payments	Total Payments:	Total Receipts:	Levy Receipts	Interest Earned	Other Receipts	Total Receipts:	Excess (or Deficit) of Receipts over Payments	Balances Forward from Previous Years	Excess To Date Forward to Balance Sheet	
Textiles Industry Account	221,327	338,805	266,955	135,035	59,480	67,923	1	136	—	194,652	259,587	IR£	1	38,259	259,587	64,935	238,273	303,208	
Clothing & Footwear Industry Account	275,195	221,171	2,433,611	3,703,535	286,458	286,458	—	1,287	—	2,631,398	2,974,368	IR£	2	221,171	2,974,368	(219,005)	1,488,473	1,236,675	
Food Drink & Tobacco Industry Account	3,682,783	250,103	3,703,535	1,127,896	432,595	432,595	431	15,402	—	4,141,963	3,932,968	IR£	72	250,103	3,932,968	494,609	1,488,473	1,269,468	
Construction Industry Account	1,661,262	62,585	1,127,896	1,127,896	342,112	342,112	3	11,512	3	1,481,526	1,723,864	IR£	17	62,585	1,723,864	242,338	736,947	736,947	
Engineering Industry Account	434,446	59,474	465,596	465,596	84,672	84,672	4	455	—	550,727	493,969	IR£	49	59,474	493,969	(56,758)	489,355	432,597	
Printing & Paper Industry Account	1,724,730	210,267	1,138,165	1,138,165	205,749	205,749	6	195	—	1,344,115	1,934,998	IR£	1	210,267	1,934,998	590,883	1,572,679	2,163,562	
Chemical & Allied Products Industry Account	10,816,548	880,515	9,180,793	9,180,793	1,478,989	1,478,989	477	30,531	3	10,690,793	11,697,210	IR£	147	880,515	11,697,210	1,006,417	5,354,652	6,361,069	
Total	18,557	10,861	29,418	29,418	2,208	2,208	1,889	1,889	—	18,557	10,861	—	—	—	10,861	18,557	—	—	—

Source: AnCO Annual Report for 1982.

Table A.11

Non-Capital Annual Unit Costs in Education  
(£s current)

	1980	1981	1982	(Estimate) 1983
Primary Schools	339	440	470	553
Secondary Schools	589	748	870	919
Technical Schools and Community Colleges	704	922	1,020	1,139
Community and Comprehensive Schools	653	809	925	1,008
Second Level (Composite)	651	798	915	990
Colleges of Education	2,118	2,302	2,857	3,111
Regional Technical Colleges	1,511	1,592	1,952	2,403
Colleges of Technology	1,569	1,952	2,344	
University Colleges:				
UCD	1,701	2,183	2,431	2,567
UCC	1,703	1,975	2,235	2,457
UCG	1,767	2,076	2,334	2,491
TCD	1,786	2,204	2,369	2,567
NIHE Limerick	1,708	1,890	2,109	2,284
NIHE Dublin	—	5,400	3,792	2,360
Thomond College	5,334	5,164	5,532	4,981
NCAD	2,290	3,046	3,865	4,730
Third Level (Composite)	1,694	2,112	2,306	2,508

Source: National Planning Board (1984) — "Proposals for Plans 1984-87".

Table A.12

## Scientific and Technological Qualifications, 1971/1981

Field of Qualification	1971			1981			
	Graduate	Technician	Total	Graduate	Technician	Unspecified	Total
Agricultural Science	2,747	1,196	3,943	3,663	2,083	1,145	6,891
Engineering & Technology	6,030	164	6,194	9,580	5,612	4,229	19,421
Medical & Related Sciences	n/a	n/a	7,490	8,038	1,614	1,301	10,953
Natural Sciences	3,954	193	4,147	8,593	1,326	1,005	10,934
Other	n/a	n/a	112	554	380	612	1,546
Total	n/a	n/a	21,886	30,428	11,015	8,292	49,735

Source: Central Statistics Office, 1971 Census of Population;  
Central Statistics Office, 1981 Census of Population — Preliminary Results.

Table A.13

## Persons Employed as Engineers and Scientists 1971/81

Occupation	1971			1981		
	Graduate	Technician	Total	Graduate	Technician	Total
Engineer	3,985	8,500	12,485	7,332	17,708	25,040
Scientist	2,194	4,000	6,194	3,516	5,707	9,223
Total	6,179	12,500	18,679	10,848	23,415	34,263

Note: Technician occupations include telephone installers and repairers, radio and television mechanics, draftsmen and other technical and related workers.

Source: Central Statistics Office, 1971 Census of Population;

Central Statistics Office, Census of Population — Preliminary Results.

Table A.14

## Scientists and Engineers in R&amp;D (FTE) 1971/1981

Sector	1971			1981		
	Researcher	Technician	Total	Researcher	Technician	Total
Business Enterprise	460	326	786	600	490	1,090
Government	554	595	1,149	639	716	1,355
Private Non- Profit	17	13	30	21	2	23
Higher Education	607	148	755	873	190	1,063
Total	1,638	1,082	2,720	2,133	1,398	3,531

Source: NBST: National R&D Survey 1984 (unpublished);  
National Science Council: Research and Development in Ireland, 1973.

Table A.16

Persons with Scientific and Technological Qualifications at Work as a Percentage of Total Persons at Work Classified by Industrial Group, 1971, 1981

Industrial Group	Year	
	1971 %	1981 %
Agriculture, Forestry & Fishing	0.2	0.8
Mining, Quarrying & Turf Production	1.6	3.5
Manufacturing Industries	1.2	3.3
Food, Beverage & Tobacco	2.2	3.1
Textiles, Clothing, Footwear & Leather	0.2	0.8
Chemical, Rubber & Plastic Products	3.7	7.1
Glass, Pottery & Cement	0.9	2.0
Metal, Metal Products & Machinery	1.3	5.8
Transport Equipment	0.8	3.7
Other Manufacturing Industries	0.5	0.8
Building and Construction	1.5	3.5
Electricity, Gas & Water Supply	4.6	8.4
Commerce (including Pharmacies)	1.0	1.9
Insurance, Finance & Business Services	0.8	2.5
Transport Communication & Storage	0.7	1.9
Public Administration and Defence	4.1	5.3
Professional Services	8.3	11.2
Education	6.2	9.7
Hospitals and Other Medicine	9.8	10.8
Dentistry	42.5	40.3
Consultant Engineering	33.9	50.5
Veterinary Surgery	59.4	58.5
Other Professional Services	2.7	5.2
Other Industries/incl. Personal and Recreational Services/or Industry Not Stated	0.25	1.0
Total at Work	1.8	3.7

Source: See Table A.15

Table A.17

Scientists and Engineers in Selected Countries

Country	Year	Scientists and Engineers per 10,000 Population	
		1975	1981
France	1975	237	88
Denmark	1980	163	88
Germany	1980	299	144
Japan	1975	370	144
Netherlands	1977	102	144
Norway	1980	230	144
Poland	1978	307	144
Sweden	1979	404	144
Switzerland	1975	396	144
Ireland	1981	88	144

Source: UNESCO, Statistical Yearbook 1982 (Irish data calculated from Table A.12).

Table A.15

Persons with Scientific and Technological Qualifications at Work Classified by Industrial Group and by Main Branch in which Qualification is Held, 1971, 1981

Branch of Science and Technology in which Qualification is Held, 1971, 1981	1971		1981		Total
	1971	% increase	1981	% increase	
Agricultural	404	1.133	180	1.18	165
Science	7	27	286	2.32	131
Industrial Group	838	1.043	24	985	200
Agriculture, Forestry & Fishing	404	1.133	180	1.18	165
Mining, Quarrying & Turf Production	7	27	286	2.32	131
Manufacturing Industries	838	1.043	24	985	200
Food, Beverage and Tobacco	748	874	17	135	61
Textiles, Clothing, Footwear & Leather	3	8	167	50	210
Chemical, Rubber & Plastic Products	56	87	145	145	321
Glass, Pottery & Cement	4	12	108	232	102
Metal, Metal Products & Machinery	11	12	145	222	145
Transport Equipment	2	3	362	682	127
Other Manufacturing Industries	14	32	129	100	666
Building and Construction	9	48	433	1,255	330
Electricity, Gas & Water Supply	3	7	433	3,387	330
Commerce (including Pharmacies)	101	293	190	421	174
Insurance, Finance & Business Services	31	143	361	87	76
Transport Communication & Storage	4	17	325	1,137	174
Public Administration & Defence	1,158	1,702	47	1,137	174
Professional Services	1,130	1,542	36	1,407	174
Education	354	410	16	264	102
Hospitals & Other Medicine	6	23	283	11	82
Dentistry	-	-	-	-	201
Consultant Engineering	7	5	-29	939	410
Veterinary Surgery	579	802	39	2,626	410
Other Professional Services	184	302	64	234	201
Other Industries/incl. Personal and Recreational Services/or Industry Not Stated	26	106	308	79	146
Total at Work	3,711	6,061	63	5,694	341

Source: \*Zero in 1971 and 1981  
 \*\*Zero in 1971 and 1981  
 \*\*\*Zero in 1971 and 1981

Table A.18

## Engineering Output as Percentage of Age Cohort

Country	Year	Output as % of Age Cohort
UK	1978	1.7
Sweden	1977	1.6
France	1977	1.3
USA	1978	1.6
Germany	1977	2.3
Japan	1978	4.2
Ireland	1978	0.8

Source: HMSO, Engineering our Future, 1980.

Table A.19

## Total R&amp;D Personnel (FTE) per 1,000 Workforce

Country	Researchers	Technicians	Other	Total
Germany	4.68	4.22	4.67	13.56
Japan	6.9	1.5	3.0	11.4
France	3.68	—	—	10.72
Netherlands	3.59	—	—	10.06
Sweden	3.85	—	—	9.95
Norway	3.80	—	—	7.53
Canada	2.49	1.61	1.41	5.52
Italy	2.25	1.27	0.93	4.45
Ireland	2.16	0.99	1.09	4.25
Portugal	0.61	0.66	0.50	1.78

Note: FTE = Full Time Employment

Source: OECD, International Survey of the Resources devoted to R &amp; D by OECD Member Countries, 1984.

Table A.20  
Pattern of Graduate Employment, 1976-1984  
(Primary Degree Graduates - January after Graduation)

Year of Graduation	Employed					Total Number of Graduates
	Ireland	Overseas	Seeking Employment	Not Available for Employment	Research (1) and Further Education	
1976	29.8	8.6	6.2	0.7	12.1	42.6
1977	33.6	7.2	5.7	0.8	11.4	41.3
1978	36.8	5.5	3.5	1.0	12.1	41.1
1979	39.2	6.2	2.9	1.1	12.7	37.8
1980	36.8	5.7	4.7	1.3	13.7	38.0
1981	36.2	4.9	6.4	1.4	14.5	36.2
1982	35.2	5.3	7.4	0.8	15.3	32.0
1983	35.8	6.5	9.6	1.3	16.7	34.0(4)
1984(2)(3)	34.5	11.4	6.1	—	—	—
1976	55.1	20.7	12.1	—	12.1	—
1977	61.3	19.0	7.3	1.0	12.1	—
1978	70.4	15.8	3.4	1.0	12.1	—
1979	74.7	15.8	1.7	0.5	7.4	—
1980	66.2	16.0	1.7	0.5	7.4	—
1981	56.4	9.5	12.2	0.7	11.5	2.3
1982	53.9	13.1	12.6	0.2	14.7	4.4
1983	49.6	12.4	14.9	0.2	18.0	4.9
1984(2)(3)	43.2	26.9	8.0	—	17.3	4.6(4)
1976	21.2	5.5	4.4	1.0	29.7	38.2
1977	27.1	5.5	6.8	1.3	30.6	28.8
1978	23.2	4.4	4.7	1.1	30.0	28.8
1979	23.9	2.1	1.8	1.6	32.2	36.1
1980	21.0	2.7	5.3	1.9	32.5	36.6
1981	23.9	2.9	4.6	1.5	32.4	34.8
1982	20.3	3.1	7.5	1.3	33.7	34.1
1983	20.7	3.9	7.7	1.0	35.4	31.2
1984(2)(3)	24.4	7.1	5.3	0.5	34.8	27.8(4)

Notes: (1) Includes Ireland and Overseas

(2) Includes graduates of colleges of Dublin Institute of Technology

(3) Data relates to April after graduation

(4) Includes graduates on work experience programmes previously classified so employed

Sources: Annual Pattern of Graduate Employment Statistics (1976-1981), published by Association of Careers and Appointment Services and First Destination of Award Recipients in Higher Education (1982-1984), published by the HEA.

Table A.23

## Pattern of Employment of Graduates and Technicians 1984

	Percentage					Total Respondents (Number)
	Employed	Seeking Employment	Further Studies	Further Training or Work Experience	Others	
One-Year Certificate	13.4	3.3	76.2	6.3	0.8	239
National Certificate	36.1	10.4	41.8	11.1	0.6	1,956
National Diploma	60.0	10.2	20.7	8.4	0.7	788
Primary Degree	45.9	6.1	34.5(1)	12.2	1.3	4,952
Higher Degree	81.2	3.4	8.7(1)	2.9	2.7	756
Higher Dip. in Education	84.1	7.6	7.6	1	0.7	974

Note: (1) Includes Teacher Training

Source: HEA, First Destination of Award Recipients in Higher Education, 1984.

Pattern of Industrial Recruitment by Academic Discipline  
Industrial Recruitment as Percentage of Total Graduate(1) Recruitment in Ireland

Year	Discipline				All Graduates
	Engineering	Commerce & Business Studies	Science	Other	
1976	42.9	15.2	28.0	4.3	15.5
1977	36.4	12.5	17.7	5.4	13.0
1978	35.6	17.5	23.3	5.5	15.6
1979	40.5	17.7	31.0	5.7	17.5
1980	34.9	11.7	32.5	4.5	14.2
1981	40.2	16.0	20.6	5.5	15.1
1982	51.8	20.6	27.8	5.1	18.4
1983	63.8	22.0	32.3	4.9	21.5
1984(2)	64.6	29.7	37.9	8.9	27.0

Notes: (1) Primary and Higher Degrees.

(2) See notes on Table A.20.

Source: Annual Pattern of Graduate Employment Statistics (1976-81) published by Association of Careers and Appointments Services and First Destination of Award Recipients in Higher Education (1982-1984) published by the HEA.

Table A.22

Industrial Recruitments of Graduates<sup>(1)</sup> and Technicians

Discipline	1982		1983		1984(2)		Increase 1982/83	Increase 1983/84
	No	%	No	%	No	%		
Engineering	319	47.3	395	50.4	432	43.6	23.8	9.4
Business Studies	134	19.9	159	20.3	253	25.6	18.6	59.1
Science	125	18.6	180	23.0	220	22.2	44.0	22.2
All Other Disciplines	96	14.2	49	6.3	85	8.6	-48.9	73.5
Total Industrial Recruitment	674	100.0	783	100.0	990	100.0	16.2	26.4

Notes: (1) Primary and Higher Degrees are included.

(2) See notes on Table A.20.

Source: First Destination of Award Recipients in Higher Education (1982-1984) published by the HEA.

Table A.24

## Pattern of Employment of NCEA Sub-Degree Award Recipients, 1979-1984

	Employed		Seeking Employment	Further Studies	Other	Total
	F. T.	P. T.				
<i>All</i>						
<i>Technicians</i>						
1979	56.3	5.5	5.8	31.0	1.4	1,480
1980	50.2	7.3	11.4	30.6	0.5	2,024
1981	47.2	6.7	13.5	31.9	0.7	2,358
1982	35.7	6.6	16.2	36.9	0.5	2,510
1983	33.6	2.3	17.8	35.3	1.3	2,790
1984	38.3	2.2	9.8	39.0	0.7	2,983
<i>Engineers</i>						
1982	33.6	6.1	19.0	37.2	0.4	1,080
1983	35.0	2.1	20.6	30.9	0.8	1,193
1984	39.0	1.8	11.1	38.1	0.6	1,122
<i>Business Studies</i>						
1982	52.3	6.3	10.3	26.4	—	618
1983	38.1	2.8	13.7	32.5	1.6	745
1984	46.6	2.5	9.2	29.7	0.8	889
<i>Science</i>						
1982	36.0	9.5	22.0	25.1	0.4	486
1983	34.5	2.1	23.9	28.7	1.6	519
1984	37.8	2.2	11.0	36.3	0.3	590

Note: \*Work Experience

Source: NCEA.

Table A.25

## Skill Profile of the Electronics Industry in Ireland and Selected Other Countries

	Singapore	Ireland	Scotland	UK	USA	Denmark
Managerial	N.A.	23	35*	34	24	
Administrative, Clerical, Supervisors						29
Engineers/Professional		5	9	10	17	
Technical Technicians	6					
Craftworkers		9	13	14	11	32
		3	8	8	10	
Non-craft production workers		57	35	31	32	
Other workers		90-95				39
Total	100	100	100	100	100	100

Notes: (1) Data on Hong Kong indicates a skill profile broadly similar to Singapore; the categories were not strictly compatible with those in the table so they have not been included here. *Report of the Advisory Committee on Diversification, 1979, Hong Kong, 1979, p.62.*

(2) For Scotland, "Other Workers" is included with "Managerial" etc.

(3) N.A. = Not Available.

Source: "Technology and Industrial Development: The Irish Electronics Industry in an International Context" by Ronan O'Brien, Science Policy Research Centre, U.C.D. Published in J. Fitzpatrick and J. Kelly (eds.), *Perspectives on Irish Industry*, Dublin, Irish Management Institute, 1984.

Table A.26

## Number of Full-Time Students in Higher Education, 1965-1984

Type of Institution	1965/66	1970/71	1975/76	1980/81	1981/82	1982/83	1983/84
Vocational Technological	1,007	2,128	3,097	4,945	5,348	5,855	6,459
RTCs	—	194	3,234	5,965	7,119	8,493	9,107
NIHES	—	—	680	1,785	2,204	2,758	3,205
Universities	16,007	20,429	22,136	24,005	24,705	25,352	26,040
Teacher Training	1,435	1,744	2,386	3,278	3,269	3,263	3,068
Other	2,249	1,723	1,615	1,969	1,860	1,887	1,993
				(431*)	(446*)		
Total	20,698	26,218	33,148	41,516	44,095	47,608	49,872

Note: \*Students registered at more than one institution

Source: Higher Education Authority, HEA Accounts and Students Statistics 1981/82, 1982/83 and 1983/84.

Table A.28

Numbers of Students by Field in University Sector, 1970/71 to 1983/84

Field of Study	Year					
	1970/71	1975/76	1980/81	1981/82	1982/83	1983/84
Arts/Education/Social Science/ Communications	9,134	9,309	9,349	9,549	9,705	9,895
Economic and Social Studies	625	726	816	829	820	828
Commerce	1,563	1,617	1,880	1,988	2,056	2,168
Law	608	1,122	907	931	890	875
Sub-total	11,930	12,774	12,952	13,297	13,471	13,766
Science	2,258	2,888	3,943	4,071	4,275	4,542
Engineering	1,423	1,749	2,336	2,578	2,779	2,946
Architecture	177	230	216	200	218	205
Sub-total	3,858	4,867	6,495	6,849	7,272	7,693
Medicine	3,046	3,528	3,185	3,157	3,106	3,079
Dentistry	265	281	354	347	359	371
Veterinary Medicine	418	327	334	330	324	315
Agricultural Science	497	462	513	527	566	593
Dairy Science	100	123	185	209	204	224
Sub-total	4,326	4,721	4,571	4,570	4,559	4,582
TOTAL	20,114	22,362	24,018	24,716	25,302	26,041

*N.B.* Includes doubled-counted students under each field of study for which they are registered: this is a very small number.

*Source:* J. Hayden, "The Change of Balance between disciplines and fields of Study", 1983; HEA Accounts and Student Statistics 1981/82, 1982/83 and 1983/84 published by HEA.

Table A.29

Distribution of Full-Time Enrolments in Higher Education

Field of Study	1980/81		1990/91	
	%	%	%	%
Humanities	17.1	17.1	14.7	14.7
Science	13.5	13.5	14.7	14.7
Technology	17.8	17.8	22.4	22.4
Education	13.2	13.2	9.2	9.2
Commerce	12.4	12.4	19.9	19.9
Medical Sciences	8.3	8.3	6.1	6.1
Art and Design	3.1	3.1	3.6	3.6
Others*	14.6	14.6	9.4	9.4
Total Full-time Places	41,516		67,000	

*Note:* \* Others includes Agriculture disciplines, Social Sciences, Law.

*Source:* Hayden, Retrospect and Prospect: the view of the HEA, 1984.

Total NCEA Awards by Discipline, 1972-1983 Inclusive

Discipline Areas	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Art/Design Studies	-	-	-	-	159	174	222	251	286	342	417	455
Business/Social Studies	25	84	235	254	303	535	686	562	599	634	800	1,020
Science/Paramedical Studies	26	98	135	182	256	386	508	403	487	487	550	696
Engineering/Construction Studies	42	304	460	524	608	783	761	789	935	1,133	1,304	1,623
Education/General Studies	-	-	10	75	21	17	88	67	77	92	130	305
Total	93	486	840	1,035	1,347	1,895	2,265	2,072	2,384	2,688	3,201	4,099

*Source:* NCEA Annual Report, 1982/1983.

Table A.27



Table A.30

## Engineering Graduate Output: 1980-82 (actual) and 1983-90 (projected)

Type of Course	Year										
	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90
Civil Engineering	198	173	177	172	207	222	229	230	230	230	230
Electrical and Electronic Engineering	163	213	203	283	341	330	360	391	391	396	391
Manufacturing/Production Engineering	49	87	46	62	72	107	105	158	153	157	166
Mechanical/Industrial Engineering	97	105	84	168	187	200	218	237	253	255	259
Agricultural Engineering	7	12	10	15	7	11	15	15	15	15	15
Chemical Engineering	22	41	38	22	35	38	36	36	36	36	36
Other	1	6	4	4	6	—	15	95	93	93	133
Total	537	637	562	726	855	908	978	1,162	1,171	1,182	1,230

Source: Higher Education Authority (table provided to authors).

Table A.31

## Level of R&amp;D Manpower and Expenditure on R&amp;D in the H.E. Sector in Selected OECD Countries

Country	Year	Expenditure as % of GDP	Total R&D Manpower (FTE)	Researchers as % of		Higher Education R&D (FTE) per 10,000 HE Labour Force
				Total R&D Manpower in Higher Education R&D	Total R&D	
Belgium	1979	0.29	10,023	65.4	—	24.21
Denmark	1979	0.25	3,773	63.6	—	14.13
France	1979	0.28	45,922	51.8	—	19.90
Germany	1981	0.42	73,134	41.4	—	26.69
Italy	1981	0.15	32,125	77.1	—	13.85
Japan	1981	0.58	214,077	76.3	—	37.5
Netherlands	1981	0.43	13,060	46.9	—	24.12
Norway	1981	0.37	4,939	58.7	—	25.05
Sweden	1981	0.69	14,300	49.0	—	33.01
United Kingdom	1978	0.25	—	—	—	—
United States	1979	0.35	—	—	—	—
Ireland	1981	0.11	1,578	85.5	—	12.29

Source: NBST: Science Budget 1982.

Persons in the Labour Force in 1983 who were looking for work, classified by Principal Means of Search

Main Method Used to Look for Work in the Last Four Weeks	With a Job		Without a Job		Total
	Male	Female	Male	Female	
Answering advertisement in newspapers	24.1	43.2	31.0	24.2	26.9
Applying directly to employers	17.6	17.0	17.4	21.4	20.1
Personal contacts	22.8	5.8	18.0	8.8	16.6
Studying newspaper advertisements	10.8	17.6	11.4	6.2	5.9
Registration with National Manpower Service	17.0	9.4	14.5	24.7	24.8
Other means (including not stated)	7.7	6.9	7.7	5.2	7.3
Total	100.0	100.0	100.0	100.0	100.0

Source: 1983 Labour Force Survey. (Special tabulations kindly provided by CSO.)

Table A.32

Table A.34

Total Placements\* in the Federal Republic of Germany 1961-82 distinguishing those attributable to the Public Employment Service

Year	Total Placements	Placements by the Employment Service	Proportion of Placements by the Employment Service %
1961	8,484	2,278	26.9
1962	8,212	2,164	26.4
1963	8,143	2,059	25.3
1964	7,995	2,057	25.7
1965	7,823	1,980	25.3
1966	6,864	1,960	28.6
1967	5,906	2,025	34.3
1968	6,609	2,038	30.8
1969	7,015	1,982	28.3
1970	6,956	1,989	28.6
1971	6,477	1,857	28.7
1972	6,491	1,763	27.2
1973	7,697	1,800	23.4
1974	5,925	1,508	25.5
1975	5,441	1,506	27.7
1976	5,994	1,623	27.1
1977	6,086	1,567	25.7
1978	6,219	1,476	23.7
1979	6,665	1,424	21.4
1980	6,526	1,292	19.8
1981	6,269	1,127	18.0
1982	5,470	1,010	18.5

Note: \*Including persons placed in training programmes for by the UK Employment Service was about 23%.

Source: Rudolph (1984) — Die Entwicklung der Vermittlungen in Arbeit, Institut für Arbeitsmarkt und Berufsforschung der Bundesanstalt für Arbeit, Nürnberg.

Table A.33 Estimated Distribution of Total Placements in the UK in 1973, 1976/77 and 1982, Classified by Means

Means of Recruitment	Manual Occupations		Non-Manual Occupations		Total
	1973	1976/77	1973	1976/77	
Public Employment Service	20	22	11	15	18
Local Newspapers	32	20	26	34	25
Private Employment Agencies	1	—	12	7	5
Informal Contacts	43	51	23	31	40
Other	4	7	22	21	12
Total	100	100	100	100	n.a.

Notes: (1) The 1973 results are not strictly comparable with the later data because of differences in the survey methods.

(2) The 1982 results are provisional. Combined results for manual and non-manual occupations were not available at the time of issue of the Rayner Report. However the commentary in the Rayner Report indicates that in 1982 the proportion of all recruitments accounted for by the UK Employment Service was about 23%.

Source: The General Employment Service in Great Britain — Report of the ESD Rayner Scrutiny, 1982.

Table A.35

The Numbers of Placement Staff\* in the National Manpower Service in 1981 in relation to the size of the Non-Agricultural Labour Force, by Region

Region	Non-Agricultural Labour Force	Number of* Placement Staff	Placement Staff per 10,000 of the Non-Agricultural Labour Force
East	474,400	55	1.16
South-West	151,500	18	1.19
South-East	102,500	15	1.46
North-East	55,400	12	2.17
Mid-West	86,100	15	1.74
Midlands	66,100	12	1.82
West	70,100	15	2.14
North-West and Donegal	53,500	10	1.87
Total	1,059,600	152	1.43

Note: \* Including Regional and Assistant Regional Directors.

Sources: Central Statistics Office Census of Population 1981; National Manpower Service.

Table A.36

Special Measures in the Labour Market

Scheme	Introduced in	Present Objective	Targeted to	Administered by	Allowance	Nos. participating	Expenditure
Work Experience (WEP) Programme	1978	To ensure that young people get an early opportunity of practising their skills in a working environment	Unemployed school leavers	NMS	£34.50/wk	4,000 (8,500)	£6.0m (1984)
Community Youth Training Programme (CYTP)	1975	To provide basic training coupled with work experience (through community associations). Mainly construction type projects	Unskilled young job seekers	AnCO	Standard	2,150 (5,230)	£12.0m (1984)
Teamwork (previously known as Grant Scheme for Youth Employment (GSYE))	1977	To provide temporary employment through the provision of community amenities	Persons aged 17-25	Dept. of Labour	£70/wk	1,700 (2,500)	£6.0m (1984)
Environmental Improvement Scheme (EIS)	1976	To provide employment through environmental projects (local authorities) (terminated in 1984)	75% of the participants on any scheme to be under 25	Dept. of Environment	Local Union Rates	[1,050]	£4.0m (1984)
Community Enterprise Programme	1983	To achieve economically sustainable employment at local level (through voluntary organisations)	Young people	YEA	-	-	-
Youth Self-Employment Programme	1983	To encourage self-employment	Persons under 25 years	YEA	-	-	-
Community Training Workshops	1977	To provide basic skills together with literacy and numeracy difficulties	Young people facing particular difficulties	AnCO	Standard	[2,900]	-
Employment Incentive Scheme	1977	To increase the level of employment in existing firms	Unemployed persons but financially weighted to older long-term unemployed	NMS	£30/60/wk	5,500 (1984)	£4.0m (1984)(e)
Enterprise Allowance Scheme	1983	To encourage self-employment	Unemployed	NMS	-	5,000 (1984)	£6.0m (1984)
Social Employment Scheme	1985	To provide temporary employment on projects of benefit to the community	Long-term unemployed over 25 years	NMS	£70/half wk	5,000 (1985)	£7.0m (1985)
Alternance Scheme	1985	To provide alternating periods of AnCO training and periods of Long-term unemployed over 25 years practical work experience in a work environment	Long-term unemployed over 25 years	AnCO	Standard	2,500 (objective)	Not specified

( ) = throughput

Nos. participating = average participation

Source: Department of Labour and relevant agencies. e = estimated

Table A.37

Percentage of School Leavers in the Labour Market at the Time of the Survey who had been Offered a WEP Place, According to the Educational Level, 1981, 1982, 1983

	Leaving Cert.	Inter Cert.	Group Cert.	None
1981	13.9	12.7	17.5	2.7
1982	14.7	13.0	8.3	4.5
1983	25.6	16.4	15.0	9.0

Source: Breen, 1984, Irish Educational Policy: Past Performance and Future Prospects.

Table A.38

Proportion of Long-Term Unemployed (12 Months, and over) in Total Unemployment, 1980-1985

	%	No.
1980	34.8	32,180
1981	30.5	38,543
1982	31.8	47,495
1983	31.0	55,529
1984	39.1	83,693
1985	41.2	94,489

Notes: (1) Date refers to April of each year.

(2) An age-by-duration analysis of the Live Register was first undertaken for April 1980

Source: Central Statistics Office: Age-by-Duration Analysis of the Live Register.

Table A.39

Composition of Long-Term Unemployment

	Youth	Prime-Age Adults	Older Workers
1980	11.9	47.6	40.5
1981	13.6	49.9	36.5
1982	15.2	49.2	33.6
1983	17.5	31.0	32.4
1984	19.4	51.5	29.1
1985	19.8	51.6	28.5

Notes: (1) Youth are those aged under 24 years

(2) Prime-age adults are 25-44 years

(3) Older workers are 45-64 years

Source: Central Statistics Office: Age-by-Duration Analysis of the Live Register.

Table A.40

Percentage Share of Long-term Unemployment within Age Groups

	Youth	Prime-Age Adults	Other Workers
1980	18.5	33.9	48.5
1981	15.9	31.9	42.3
1982	17.2	33.1	46.0
1983	18.4	33.1	42.6
1984	24.8	42.7	51.2
1985	27.5	44.2	52.4

Notes: See Notes on Tables A.38 and A.39.

(Interpretation: of total unemployment in the older age group in 1984, 51.2% had been unemployed for over one year).

Source: Central Statistics Office: Age-by-Duration Analysis of the Live Register.

Table A.41

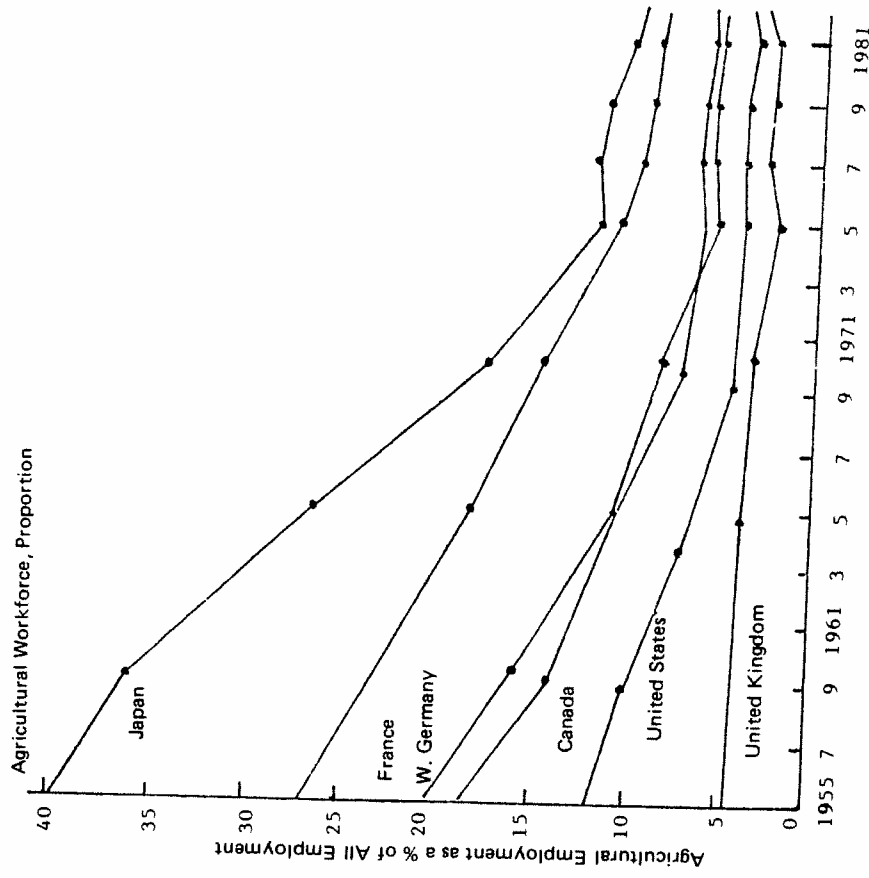
R&D Profile of Manufacturing Firms in Ireland

	Foreign Owned		Irish Owned		Total	
	1982	1979	1982	1979	1982	1979
Number of Firms	811	700	4,652	4,000	5,463	4,700
Number Performing R&D	137	53	231	175	368	228
% Total Number of Firms	16.9	7.5	5.0	4.3	6.7	4.8
Number with Formal R&D Departments	82	33	74	57	156	90
R&D Expenditure (IR£m)	22.3	9.0	15.6	8.2	37.9	17.2
Total Employment (000)	82	82	147	162	229	244
R&D Expenditure/Employee (IRE)	272	110	106	51	166	70
R&D Expenditure/Net Output (%)	—	—	—	—	1.1	0.72

Source: NBST: Irish S & T Indicators, 1981c.

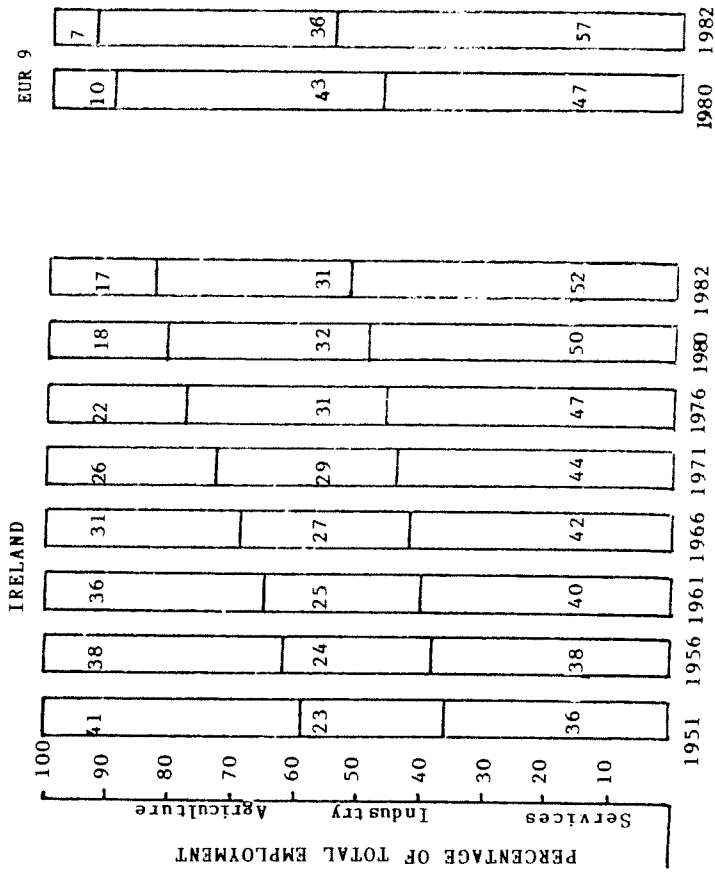
Figure 1

Employment in the Agricultural, Industrial and Services Sectors

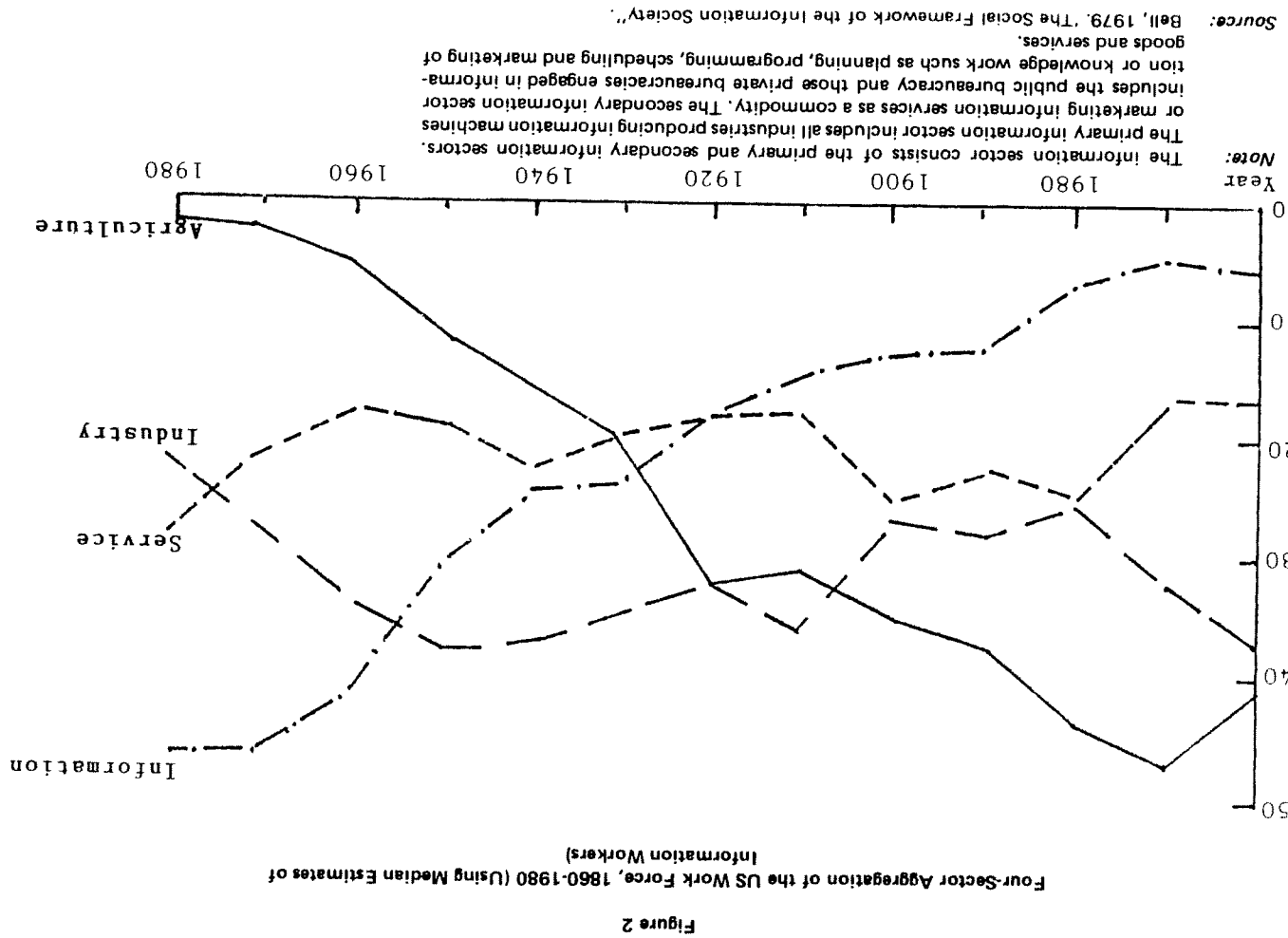


Source: Gershuny, Futures, February, 1979, International Labour Office 1983, Yearbook of Labour Statistics.

FIGURE 3  
SECTORAL EMPLOYMENT 1951-1982

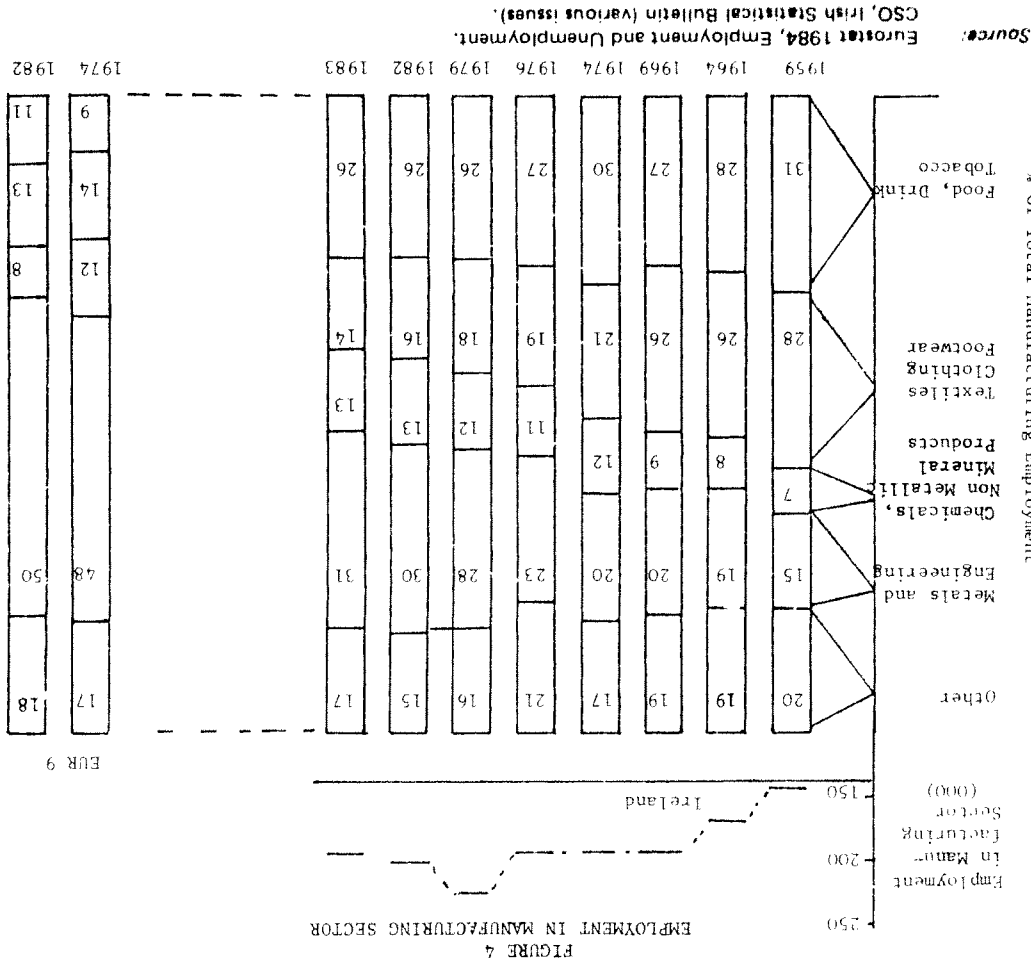


Source: Eurostat 1984, Employment and Unemployment. CSO, Census of Population and Labour Force Surveys (various issues).



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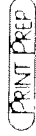
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