



Office of the Comptroller and Auditor General
Report on Value for Money Examination

Regional Development Measures

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Report of the Comptroller and Auditor General

Regional Development Measures

I have, in accordance with the provisions of Section 9 of the Comptroller and Auditor General (Amendment) Act, 1993, carried out a value for money examination on regional development measures.

I hereby submit my report of the above examination for presentation to Dáil Éireann pursuant to Section 11 of the said Act.

A handwritten signature in black ink, appearing to read 'John Purcell', with a large, stylized loop at the beginning and a long, sweeping tail.

John Purcell
Comptroller and Auditor General

22 December 1995

Table of Contents

| | Page |
|---|------|
| Glossary | ii |
| Summary of Findings | iii |
| Chapter 1: Introduction and Overview | 1 |
| Chapter 2: Transport | 9 |
| Chapter 3: Science and Technology | 21 |
| Chapter 4: Tourism | 29 |
| Chapter 5: Small and Medium Industry | 39 |
| Chapter 6: Marketing | 49 |
| Chapter 7: Water and Sanitary Services | 57 |
| Chapter 8: Pre-1989 Projects | 67 |
| Appendices | |
| A European Funding | |
| B Examination Methodology | |
| C Transport - Administration and Evaluation | |
| D Science and Technology - Administration and Evaluation | |
| E Tourism - Administration and Evaluation | |
| F Small and Medium Industry - Administration and Evaluation | |
| G Marketing - Administration and Evaluation | |
| H Water and Sanitary Services - Administration and Evaluation | |

Glossary

| | |
|--------|--|
| ABT | An Bord Tráchtála |
| BIC | Business Innovation Centre |
| BOD | Biochemical oxygen demand |
| CDP | Company Development Programme |
| CSF | Community Support Framework |
| CSO | Central Statistics Office |
| CTT | Córas Tráchtála |
| EDP | Enterprise Development Programme |
| EPA | Environmental Protection Agency |
| ERDF | European Regional Development Fund |
| ERU | Environmental Research Unit |
| ESF | European Social Fund |
| ESRI | Economic and Social Research Institute |
| EU | European Union |
| FEOGA | Fonds Européens d'Orientation et de Garantie Agricole - European Agricultural Guarantee and Guidance Fund |
| GDP | Gross domestic product |
| GNP | Gross national product |
| HEIC | Higher Education/Industry Co-operation Scheme |
| HERMES | The ESRI macroeconomic model |
| IBEC | Irish Business and Employers Confederation |
| IDA | Industrial Development Authority |
| IGC | Irish Goods Council |
| IPC | Irish Productivity Centre |
| MCA | Multi-criteria analysis |
| NMRC | National Microelectronic Research Centre |
| NSD | National Software Directorate |
| OECD | Organisation for Economic Co-operation and Development |
| OPW | Office of Public Works |
| PAT | Programme in Advanced Technology |
| R&D | Research and development |
| RTC | Regional Technical College |
| S&T | Science and technology |
| SERTEC | South East Regional Technology Pilot Programme |
| SFADCo | Shannon Free Airport Development Company Ltd. |
| SMEs | Small and medium-sized enterprises |
| TEU | Tonne equivalent unit |
| TMC | Targeted Marketing Consultancy |
| TMS | Targets Monitoring System |
| UCC | University College, Cork |
| UCD | University College, Dublin |

Summary of Findings

Background

The scale of expenditure on regional development measures, jointly funded by the State, the European Union (EU) and the private sector, has been enormous by Irish standards. It is, therefore, of paramount importance that these funds be used to best effect and in a way that will contribute to the achievement of key national economic objectives.

For that reason the examination sought to establish the extent to which the effectiveness of the measures under the Community Support Framework (CSF) 1989-1993 was evaluated so that the findings could be applied to the management of current and future programmes in the area of regional development.

A number of programmes within the framework were selected for specific examination. It was also decided to review the overall position on European Regional Development Fund (ERDF) allocations for pre-1989 projects.

CSF 1989-1993

The measures under the CSF 1989-1993 were administered on a programme basis. This approach worked reasonably well. However, in a small number of cases there was a tension between the short-term budgetary requirements of the State and the desirability of ensuring a smooth implementation of the five-year programmes.

Generally we found that

- the combined thrust of the measures examined was consistent with the overall objectives of the CSF 1989-1993
- measurement of achievement was not always possible since in some cases objectives were not set in quantified terms
- output targets, where set, were usually achieved
- in most cases the impact of the measures was not isolated and considerable difficulty was experienced in determining the extent to which sectoral results were attributable to investment under the measures.

In addition, a lack of baseline data and deficiencies in on-going data collection hampered effectiveness evaluation.

The Department of Finance has made efforts to rectify evaluation deficiencies in relation to the CSF 1994-1999.

Economic Impact

A study by the Economic and Social Research Institute (ESRI) in 1993 concluded that the CSF 1989-1993 expenditures should make a significant and lasting difference to living standards in Ireland. The supply side effects of the EU funding should raise the levels of GDP and GNP by 0.8 per cent and 1.1 per cent respectively by the year 2000. The demand side effects of the EU element would raise GDP by 2.5 per cent and GNP by 3.5 per cent by 1993 according to the study. The real rate of return on the investment of the EU resources was estimated at between 7 and 8 per cent.

Specific Measures

Transport

£861m was applied to transport measures aimed at reducing the impact of Ireland's peripheral location. The bulk of the money (£668m) was invested in roads.

One of the transport programme's main objectives was to reduce the transport cost differential for Irish exporters to Europe by a quarter, by 1995. Transport costs had been estimated at 9 per cent of total export costs. In retrospect, considerable doubt has been cast on the validity of this estimate with recent studies suggesting a level of around 4 per cent.

The economic impact of the investment was examined in 1992 by the ESRI and it was estimated that it would add 0.4 per cent to GDP by the end of the decade and impact on employment to the extent of 9,000 jobs.

However, the impact of the programme on transport has not been determined, largely because evaluation techniques are not well developed in this area.

The Department of the Environment has sponsored two initiatives which if successful will assist in the future evaluation of transport investments. These involve the construction and validation of models to effect

- route transit time monitoring
- export transport cost monitoring.

In regard to specific measures it was noted that

- Progress on road construction measures was good, with targets generally being met.

- Although investment in facilities at State airports had to be scaled back in 1991 significant increases in passenger throughput occurred.
- Passenger numbers at regional airports, where capital investment totalling £20.85m was undertaken, fell far below the levels envisaged declining by 43 per cent over the life of the programme. In 1991, external evaluators concluded that what was required in this sector was marketing assistance rather than infrastructural investment. They particularly questioned the need for a jet runway at Farranfore.
- The targets set for commercial port measures were achieved with the exception of lift on/lift off freight which only reached 62 per cent of the target set. In relation to local ports the increase in freight was well in excess of target.
- Passenger numbers exceeded the level projected following the upgrading of rail services between Connolly Station, Dublin and Maynooth. However, up to 1995, passenger numbers for the Arrow train service had fallen short of target with the stations closer to Dublin particularly failing to meet their targets.

Science and Technology

£209m was applied to six measures designed to enhance the technological capacity of industry.

The measures were focused largely on providing testing infrastructure, promoting linkages with third level institutions, and developing and transferring leading-edge technologies.

The approach was largely supply driven but a change of emphasis began with the adoption in 1993 of a measure to assist companies carrying out large research and development work. The subsequent operational programme has taken this further and the emphasis is now on individual and applied research and development.

No aggregate targets were set for the measures making it difficult to form judgments on achievement. However, research and development expenditure by indigenous industry almost doubled during the life of the programme and it appears that Ireland's investment in terms of GDP has been increasing, having moved from 0.87 per cent in 1987 to 1.04 per cent by 1991.

Evaluation of the science and technology measures found that Ireland had successfully offered a range of technology services to industry. However, in a number of cases individual actions were criticised

- research in the areas of metal processing, ceramics technology and polymers was conducted as part of a programme that was too big, too complex and in parts too future-orientated
- centres conducting software engineering research operated under a confusing and conflicting set of guidelines and overlapped with other initiatives
- research in the area of optoelectronics had largely failed to address the opportunities for application of that technology in mainstream manufacturing
- the marketing and strategy used in the development of advanced manufacturing technology was below the quality required to address the needs of Irish industry
- achievement in the area of academic-industrial transfer seemed less than envisaged.

The Department of Enterprise and Employment has informed us that the Programmes in Advanced Technology which constituted the principal measure to develop and transfer leading edge technologies have since been redesigned and rationalised to make them more accessible and attractive to industry.

Tourism

An estimated £182m in public funds was applied to develop Irish tourism with the greater portion of the investment being channelled into public sector initiatives.

Although only 46 per cent of the targeted increase in tourist numbers was achieved the revenue increase projected was exceeded. It is now clear that the original targets for visitors and revenue were not consistent. Employment targets were largely achieved. However, a 1994 study estimated that 50% of the jobs claimed would have been created without any assistance.

No overall evaluation of the impact of the spending has as yet been undertaken. Monitoring of the programme has not been satisfactory. There has been a delay in finalising progress reports and the drawdown of ERDF moneys has also been delayed. At August 1995 some £7.2m had not been drawn down from the EU.

Evaluation is particularly important in view of the risk that some assisted projects might have proceeded even in the absence of State aid. Given the time-lag between construction and marketing of assisted facilities, evaluation might be best carried out in 1996. It would, in addition, be more cost-effective if the contribution of all public sector inputs, including those under the programme, were assessed together.

An evaluation carried out on a private sector marketing measure on which £16.5m of public funds was spent concluded that while the measure was a significant contributing factor in the success of Ireland's overall tourism performance, serious questions arose on the effectiveness of some of the grants.

Small and Medium Industry

Public expenditure of £149m was applied to a series of measures aimed at creating 55,000 jobs over the five years of the programme. This target was exceeded. However, net job creation was quite low, at around 1,500 jobs.

The overall programme was subject to external evaluation and late in the programme (1993) an Evaluation Unit was established in the Department of Enterprise and Employment. A 1994 evaluation concluded that the programme was fairly well directed.

Little evaluation was done on individual measures and actions. The Department of Enterprise and Employment has acknowledged this and sees the new Evaluation Unit as filling this role.

During the period of the programme a particular deficiency was the lack of information on the impact of the measures. Indicators focused largely on inputs or activities. The external evaluator reported that the lack of such information was a recurring problem when attempting to make value for money evaluations of specific measures.

The Department of Enterprise and Employment has assured us that it is addressing this deficiency and that a range of performance indicators have been adopted for the subsequent programme and related data are being collected.

A particular need, at this point, is to derive value from the information being compiled in that department's industrial database by identifying statistical techniques which can be used to analyse the relationships between the performance of supported firms and the assistance they have received.

Marketing

Public funds totalling £113m were applied in a set of measures designed to improve the marketing capabilities of small and medium enterprises. The main aim was to increase exports by these firms from the 1988 level of £2.5bn to £4.5bn by the mid-1990s. The money was used by An Bord Tráchtála (ABT) to assist marketing activities of firms, provide advice and information services and organise export promotions. The overall export target was achieved. However, the exact impact of

the programme on that achievement is not clear. An external evaluation concluded that since overall physical targets were being met it was reasonable to conclude that value for money was being achieved. It did, nonetheless, recommend more detailed evaluation of specific measures.

Matters which need to be addressed include

- tracking performance of assisted firms
- relating that performance to State interventions using statistical techniques
- monitoring user perceptions of the measures
- tracking the evaluation of independent marketing capacity in firms assisted.

The final incorporation of client data from ABT into the industrial database of the Department of Enterprise and Employment is important, as it would facilitate analysis which could assist in evaluation and the focusing of marketing initiatives.

ABT costs of administering the measures were reasonable although there may be scope for boosting cost recovery from older and more established measures with a view to reducing reliance on State funding.

Water and Sanitary Services

Over 100 water and sanitary services projects, assisted under the programme to the extent of £222m, have been estimated by external evaluators to have increased the capacity of existing services by

- 386,000 m³/day in the case of water supplies
- 451,500 m³/day in waste water collection.

Project selection criteria proposed by consultants engaged by the EU were received too late (December 1990) to influence the assignment of projects to the programme. The programme was, accordingly, drawn from existing projects proposed by local authorities to the Department of the Environment.

Targets were set and output recorded in terms of physical infrastructure using measures such as pipeline length and numbers of treatment plants. While these measures of output are not susceptible to aggregation, since each project has a different specification, the figures reported appear to indicate underachievement which should be investigated by the Department. It would be preferable to account for output on the basis of capacity at standard rates of operation.

Difficulties were also encountered in gauging the impact of the projects and the Department of the Environment had to abandon its initial attempt in this respect in 1992.

Our review of projects included in the programme indicated

- a tendency for a cost drift to occur between design, tender and completion stages
- a need to consider more cost-effective ways of undertaking projects such as 'design and build' arrangements
- inadequacies in expenditure reporting by local authorities
- problems due to ground conditions not being as expected and records of existing works being deficient.

Pre-1989 Measures

Up to July 1988 ERDF assistance for individual projects could be reallocated if the original project did not proceed as planned. However, following EU reforms in 1988 this facility was removed. In all, Ireland's allocation from the ERDF reduced by £51m, some of which could have been avoided had the process of project substitution been more efficient. The lack of co-ordination between Departments was responsible for a significant proportion of EU allocations decommitted.

In particular, the administrative practices in the Department of the Environment led to delays in submitting completion reports which were critical to the claiming of EU aid. The administrative deficiencies in the Department have since been addressed.

Cohesion Funds are currently administered on a project basis. In order to maximise funding allocations there should be close liaison between Departments and spending bodies, as well as a central claim control function to effect on-going independent reconciliations.

Chapter 1 : Introduction and Overview

Regional Development Funding

- 1.1 Since 1975, approximately £2.2bn has been received on foot of European Regional Development Fund (ERDF) allocations in respect of periods up to December 1993.
- 1.2 This funding was made available as follows
 - in the period to 31 December 1988, funds were mainly provided to assist specific projects
 - thereafter, moneys were allocated to programmes which allowed for flexible management of the funding.

The Community Support Framework 1989-1993

- 1.3 The Community Support Framework (CSF) combined the regional development and other measures to be assisted by the European Union (EU) and the Irish Exchequer in a set of programmes. In addition, a further set of measures (Community Initiatives) were jointly undertaken by the State and the EU. Since the structural reforms at EU level in 1988, moneys¹ from the ERDF, the European Social Fund (ESF) and the European Agricultural Guarantee and Guidance Fund (FEOGA) are combined to address five objectives
 - promoting the development and structural adjustment of regions whose development is lagging behind
 - converting regions seriously affected by industrial decline
 - combatting long-term unemployment
 - facilitating the occupational integration of young people
 - speeding up adjustment of agricultural structures and promoting the development of agricultural areas.

¹ *These moneys are generally referred to as Structural Funds.*

- 1.4 The framework agreed between the Government and the EU identified four priority areas

- Agriculture, fisheries, forestry, tourism and rural development
- Industry and services
- Measures to offset the effects of peripherality
- Human resources.

Overall CSF Objectives

- 1.5 The overall objectives of the measures comprising the CSF and included in the National Development Plan 1989-1993 were summarised by the Department of Finance (Finance) as follows

'... to advance the national and community aspirations towards greater economic and social cohesion. To this end, the plan sought to prepare the economy to compete successfully in the European internal market and to promote economic development and the structural adjustment of the Irish economy through a balanced programme of investments in

- productive infrastructure such as roads, ports and sanitary services, to help reduce transport and other costs to business
- industry and services, tourism and agriculture in order to create jobs
- human resources, to enhance education and skills of the existing and potential workforce'.

A particular objective of the investment programmes was to increase the annual rate of job creation from 29,000 to 35,000.

- 1.6 Joint EU - national measures were administered through the following mechanisms

- Operational Programmes
- Community Initiatives
- Community Programmes.

Appendix A sets out the details of each of these mechanisms and the role of the ERDF.

- 1.7 Virtually all the spending under EU assisted measures during the period 1989-1993 was administered on a programme basis. The outturn was as set out in Table 1.1.

Table 1.1
Outturn on 1989-1993 measures^a

| Category | Total | National expenditure | ERDF funding | Other EU funding | Estimated private funding |
|------------------------|--------------------|----------------------|--------------|------------------|---------------------------|
| | £m | £m | £m | £m | £m |
| Operational Programmes | 7,176 | 1,987 | 1,330 | 1,827 | 2,032 |
| Community Initiatives | 454 | 210 | 151 | 37 | 56 |
| Community Programmes | 106 | 47 | 52 | - | 7 |
| Other Minor Funding | 12 | 6 | 6 | - | - |
| Totals | 7,748 ^b | 2,250 | 1,539 | 1,864 | 2,095 |

Notes: ^a Outturn as at 31 August 1995 (excludes INTERREG, RETEX, Article 10 projects and Perifra I and II).

^b This figure includes all expenditure on foot of 1989-1993 measures including an estimated £382.67m applied in 1994 and 1995.

Source: Department of Finance CSF Monitoring Committee financial tables.

The National Development Plan 1994-1999

- 1.8 The control and management of regional development aid for the 1994-1999 period is basically the same as for the 1989-1993 period. A further Community Support Framework has been drawn up and investments are administered on a programme basis. An additional feature of the 1994-1999 plan is the availability of moneys from the EU Cohesion Fund.² Like pre-1989 ERDF assistance, Cohesion Fund moneys are allocated by the EU on a project basis.

Purpose and Scope of the Examination

- 1.9 The CSF 1989-1993 comprised significant expenditure programmes. As most commitments under the CSF had been discharged by the end of 1994³ and a new agreement covering the 1994-1999 period was ratified in that year, it was considered

² These funds are targeted at major projects to aid Ireland's economic and social cohesion with Europe.

³ A small amount of expenditure was carried forward to 1995.

an opportune time to review the outturn on 1989-1993 measures and to identify any lessons that may be applicable to the management of subsequent programmes. The extent to which claims relating to pre-1989 projects had been finalised was also reviewed.

1.10 The programmes selected for specific examination were

- Transport⁴
- Science and Technology
- Tourism
- Small and Medium Industry
- Marketing
- Water and Sanitary Services.

Expenditure under these programmes represented £2.54bn of a total expenditure of £7.75bn under the CSF 1989-1993 (33 per cent).

The methodology used in the examination is set out in Appendix B.

Control and Management of Regional Development Measures

1.11 Administration was through existing structures, with expenditure being channelled through the relevant department or State body with responsibility for the administration of related national funds. However, this day-to-day administration occurred alongside a parallel arrangement under which the measures were coordinated on a programme basis.

1.12 Each programme had a Government department designated to take responsibility for

- policy development and on-going monitoring
- providing expenditure returns to Finance
- overseeing the activities of implementing agencies.

1.13 An overall CSF monitoring committee⁵ was responsible for the framework as a whole. Its main functions were

⁴ *Transport measures were included in the Operational Programme for Peripherality 1989-1993.*

⁵ *Membership of this committee comprised Government Departments, the EU Commission, the European Investment Bank and implementing agencies.*

- ensuring efficient implementation of the CSF
- authorising the transfer of allocations between programmes
- considering reports from monitoring committees.

1.14 Each programme was, in turn, overseen by a monitoring committee⁶ whose functions typically included

- ensuring the efficient implementation of the programme
- authorising adjustments to the programme's financial plan
- informing the CSF Monitoring Committee of progress in implementing the programme
- recommending appropriate impact indicators to evaluate programme performance.

1.15 This approach to administering the measures worked reasonably well. The programme basis provided a framework within which

- objectives and targets could be specified
- conscious readjustment could occur in the light of progress monitoring
- evaluation of achievement could be addressed.

1.16 However, since funding continued to be voted in annual tranches there was, in a small number of cases, a tension between the short-term budgetary requirements of the State and the desirability of ensuring smooth implementation of the five-year programme. This occurred for instance in the area of marketing⁷ where expenditure in the later years was below forecast due mainly to Exchequer constraints.

1.17 In many cases, the funds administered under a programme constituted only an element of State assistance in respect of an activity. This raises questions about the value of attempts to gauge the effectiveness of selected State interventions to the exclusion of other similar assistance. In order to ensure that full value is derived from money applied to evaluation there may be merit in taking an integrated approach in such cases. In particular, this appeared to be applicable in the areas of tourism and assistance for industrial development.

⁶ *Each monitoring committee included members from the responsible department, the Department of Finance, other interested departments, the implementing agencies, the social partners and the EU Commission.*

⁷ *These measures were included in the Operational Programme for Industrial Development 1989-1993.*

Role of the Department of Finance

- 1.18 Finance is responsible for claiming ERDF funds from the EU on the basis of expenditure information provided to it by the various departments responsible for implementing programmes and initiatives. It had representatives on the overall CSF monitoring committee and on each of the committees which monitored the Operational Programmes.

Impact of the CSF

- 1.19 Macroeconomic reviews have been completed by the ESRI in 1990 and 1993. The later review examined the impact of CSF expenditure by comparing the economic result that would be achieved with and without the investment.⁸ The 'without' scenario reduced each programme which received support from the EU between 1989 and 1993 by the exact amount of the EU funding. The study assumed that all expenditure funded by the CSF 1989-1993 would not have taken place without the CSF and that all other spending and taxation parameters would have remained unchanged.
- 1.20 The 1993 study concluded that the CSF 1989-1993 expenditures should make a significant and lasting difference to living standards in Ireland. The long-run (supply side) effects of the EU element will build up over a period and will raise the level of GDP by 0.8 per cent and GNP by 1.1 per cent by the year 2000. The short-term (demand side) effects of the resources made available by the EU would raise GDP by 2.5 per cent and GNP by 3.5 per cent in 1993. The ESRI estimated that this represented a real rate of return between 7 per cent and 8 per cent on the investment of the EU resources. The employment effects of the EU aid included in the CSF were estimated to give a demand side effect of 30,000 jobs in 1993 and to lead to a long-term supply side benefit which would raise average employment by 10,000. These results compare favourably with the findings for other regions according to the EU Commission's mid-term review of the implementation of the Structural Funds 1989-1993.
- 1.21 The ESRI study had little difficulty in assessing the initial impact that infrastructural investment had on the economy through increased demand for building services. However, they noted that it is in the long-term that this infrastructural development can be expected to have an impact, but they pointed out that this is where the greatest uncertainty arises and is the most difficult to accurately assess.

⁸ *The study was an attempt to quantify the full macroeconomic benefits from a particular programme of investment initiatives.*

- 1.22 While such analysis tends to point to the macroeconomic benefits of a portion of the total package (the EU element) in promoting economic cohesion, an assessment of the effectiveness of the total spending in promoting economic development and the structural adjustment of the economy can best be made by evaluating the economic impact of the individual programmes.
- 1.23 In 1992, the EU Commission initiated a quantification exercise under which common statistical indicators will be developed. This should allow for comparison of the effects of Structural Fund investment throughout the EU.

Outturn of the Programmes

- 1.24 Our examination reviewed whether appropriate systems, procedures and practices had been put in place to evaluate the outturn of the programmes in terms of their objectives.

General Findings

- 1.25 Our general findings were
- the combined thrust of all programmes and initiatives was consistent with the overall objectives of the framework
 - measurement of progress or achievement was not always possible because the objectives adopted at the overall framework level and at programme level were not always set in quantified terms
 - while in most cases measures of programme output were generated, effectiveness evaluation was not well developed and there was insufficient assessment of impact
 - in cases where output targets were set for particular programmes, these were in general achieved.
- 1.26 A number of problems were noted during the course of the examination in relation to output measurement. These included
- targets not being set
 - targets set being inappropriate or inconsistent
 - output not being fully reliable due to omissions and the influence of non-programme expenditure.

- 1.27 The institution of appropriate effectiveness reviews is dependent on three main factors which we found were generally absent
- clear objectives incorporating measurable targets or appropriate indicators
 - on-going collection of data to facilitate analysis of progress and assist in the generation of measures and indicators
 - the existence of baseline data.
- 1.28 The absence of these components makes evaluation particularly difficult. The benefit from public money provided for evaluations of the programmes will not be obtained unless basic data is available to allow evaluators to assess achievement. As a result, a number of examinations carried out by evaluators did not amount to reviews of effectiveness but concentrated largely on implementation and output statistics.
- 1.29 Finance has informed us that, due largely to time constraints, quantified objectives and indicators were not included in the CSF 1989-1993. They have assured us that this situation has been rectified in the CSF 1994-1999 where a set of specific quantified objectives at both macro and sectoral level have been identified. The baseline position together with a quantified forecast for 1999 has been established in these cases. This should improve the assessment of the new CSF.
- 1.30 The following chapters set out our specific findings in relation to the measures under the CSF 1989-1993 selected for examination and the overall position on ERDF allocations for pre-1989 projects.

Chapter 2 : Transport

Background

- 2.1 The Operational Programme on Peripherality 1989-1993 (the programme) provided for investment in roads, airports, seaports and public transport designed to tackle two of the identified weaknesses in the economy

- high access costs resulting from Ireland's peripheral location
- a poorly developed transport infrastructure hindering development and adding to costs.

The programme was divided into two sets of measures concerned with addressing these weaknesses.

Objectives

- 2.2 The overall objective of the measures was to reduce the impact on economic activity of Ireland's peripheral location and in particular to reduce the cost of internal and access transport by

- supporting economic development through improving the internal and access infrastructures and services
- reducing the transport cost differential for Irish exporters to mainland Europe and the UK by about a quarter by 1995 (as compared with the cost to mainland European countries of trading with each other or with the UK)
- supporting industrial development by improving access to industrial production facilities and indigenous raw materials (including food and forest products)
- supporting the development of the tourism industry by improving access to tourism centres and developing the transport infrastructure and services within tourism areas.

Transport Cost Differential

- 2.3 Before analysing the results of the measures by sector it is appropriate to consider in more detail the objective of reducing the transport cost differential which has an impact on most, if not all, of the sectors.
- 2.4 The objective was interpreted as reducing the proportion of export costs which was accounted for by transport and which had been estimated at 9 per cent. According

to the programme this percentage was considered to be 'twice that incurred by other countries of the EU trading with one another on the mainland'.

2.5 Two difficulties arise with this target

- the accuracy of the 9 per cent figure
- the appropriateness of such an export cost measure.

2.6 The 9 per cent figure was derived from two unpublished studies. Whether the data used were representative must be questioned in light of further studies undertaken by the ESRI and the Transport Research Group at the University of Ulster. The ESRI study⁹ established, by means of a survey of 154 manufacturers, that foreign transport costs as a proportion of foreign sales revenue amounted to no more than 3.8 per cent of foreign sales revenue. The University of Ulster Study¹⁰ established that firms in the Republic faced an average transport cost of 4.2 per cent, as compared with figures of 3.0 per cent to 3.2 per cent for German, Scottish and Northern Irish companies. These studies cast considerable doubt on the validity of the contention that the transport cost component of export sales was as high as 9 per cent and up to twice that prevailing in competitor countries.

2.7 In retrospect, this is not a surprising finding. If the transport cost of exporting is higher in Ireland than elsewhere, then it might be expected that

- firms which face heavy transport costs would not set up in Ireland
- firms would be unable to compete in relatively remote markets for which transport costs are high.

2.8 In fact, it appears that the transport cost proportion may remain relatively low, despite the high cost of moving goods, because the structure of Irish exports will tend towards those goods that are less transport intensive.

2.9 This serves to illustrate the point that a more appropriate objective for the programme might have been that of reducing unit transport costs facing the Irish export trade. This objective would require that the cost per tonne-kilometre of moving goods to continental destinations be reduced. The advantage of this criterion

⁹ *Irish Manufacturers' Transport costs: Results of Two Surveys, in the Role of the Structural Funds: Analysis of the Consequences for Ireland in the context of 1992, ESRI Paper 13, Policy Research Series, 1992.*

¹⁰ *European peripherality: States of mind. Proceedings of a conference held on the 9th February, 1994, at the University of Ulster at Jordanstown.*

is that it is independent of the actions which firms themselves take to alter their production structure to minimise the impact of high transport costs.

Expenditure

- 2.10 £861m was spent on measures under the programme. Table 2.1 sets out the planned expenditure and the outturn on the programme.

Table 2.1
Programme expenditure - transport

| Sector | Forecast | Outturn |
|----------------------------|---------------|---------------------------|
| | £m | £m |
| Roads | 679.83 | 668.41 |
| State Airports | 82.39 | 44.26 |
| Regional Airports | 23.52 | 20.86 |
| Commercial Seaports | 63.78 | 63.88 |
| Local Seaports | 9.10 | 8.77 |
| Rail Freight | 1.60 | 3.24 |
| Mainline Rail ^a | - | 23.72 |
| Regional Public Transport | 38.58 | 21.24 |
| Technical Assistance | 6.96 | 6.52 |
| Total | 905.76 | 860.90^b |

Notes: ^a This measure was introduced after the mid-term review.

^b This expenditure attracted ERDF aid of £558.74m at aid rates varying from 40 per cent to 75 per cent.

Source: Operational Programme Final Report.

Included in the outturn figures are sums totalling £49.56m which were carried over to 1994 and 1995.

- 2.11 Over three-quarters of the investment under the programme was spent on roads with major improvements to national primary roads accounting for over half the total.

Adjustments to the Planned Programme

- 2.12 Comparison of the outturn against the planned expenditure should take account of the fact that
- available EU funds increased as a result of the 1993 currency realignment
 - the programme was scaled back somewhat with the associated EU funding being transferred to other programmes as a result of
 - the deferral of a number of projects
 - the downward revision of planned expenditure on other projects.
- 2.13 The Department of the Environment (the Department) stated that the expenditure shortfall on road projects was entirely due to the devaluation of the Irish pound, as additional Exchequer funding was not available to match the increased ERDF provision.
- 2.14 In addition, certain projects were transferred from the programme in 1993 to avail of Cohesion Fund assistance but were replaced with others. This led in part to the carryover of expenditure into 1994 and 1995.

Programme Output

- 2.15 The programme output per sector was as follows

Roads

- 2.16 With the exception of major improvements to national primary roads and some bridge works the programme targets were met. Achievement in respect of road measures is set out in Table 2.2

Table 2.2
Target and achievement - roads

| Category | Target | Programme achievement |
|------------------------------------|-----------------------|-----------------------|
| National Primary Roads | | |
| - Major Improvements | | |
| Completed | 29 projects - 150 kms | 28 projects - 137 kms |
| Commenced ^a | 28 projects - 200 kms | 22 projects - 163 kms |
| - Other Improvements | 50 - 55 kms | 75 kms ^b |
| - Road Pavement Improvements | 75 - 80 kms | 95 kms ^b |
| - Bridge Works | About 200 bridges | 161 bridges |
| Industrial Road Improvement | | |
| - Road | 60 to 80 kms | 65 kms ^b |
| - Pavement | 800 to 1000 kms | 810 kms ^b |
| - Bridge Works | 85 to 100 bridges | 79 bridges |
| Tourism Road Improvements | | |
| - Road | 40 to 50 kms | 60 kms ^b |
| - Pavement | 500 to 600 kms | 565 kms ^b |
| - Bridge Works | 55 to 60 bridges | 58 bridges |

Notes: ^a These projects were started using programme finance but not finalised by 1994.

^b Estimated achievement. (The Department stated that exact figures were not available due to the large number of road projects and because some projects would continue in the post programme period.)

Source: Department of the Environment.

State Airports

- 2.17 The programme envisaged that passenger traffic at the three State airports (Dublin, Shannon and Cork) would grow from 7.2 million in 1989 to 8.96 million in 1993, an increase of 24 per cent. Investment of £82.4m was planned on that basis.
- 2.18 However, in 1991, passenger numbers declined due to the Gulf War and the recessions in the US and UK. At the mid-term review of the programme the projected passenger traffic growth was reduced from 24 per cent to 9 per cent with 7.87 million passengers expected in 1993.

- 2.19 Due to these revised forecasts in air passenger traffic the emphasis was changed from investment in airside¹¹ facilities and priority was given to landside¹² facilities. Final expenditure on State airports amounted to £44.26m.
- 2.20 In the event, actual passenger numbers at the State airports increased substantially after 1991. Aer Rianta recorded passenger traffic of 8.37 million at the three airports in 1993.

Regional Airports

- 2.21 A target of increasing passenger traffic at the six regional airports from 400,000 in 1989 to 800,000 in 1993 was included in the programme.
- 2.22 By 1991 there was a reduction of over 28 per cent in passenger traffic carried at the regional airports, again due to the Gulf War and the recessions in the US and UK.
- 2.23 The expenditure forecast of £23.52m on regional airports was accordingly adjusted downwards to £21m. The actual programme expenditure by each regional airport is detailed in Table 2.3 below.

Table 2.3
Programme expenditure - regional airports

| Airport | Expenditure £m |
|------------------------------|---------------------------|
| Carrickfin Airport (Donegal) | 3.42 |
| Carnmore Airport (Galway) | 1.18 |
| Sligo Airport | 0.40 |
| Waterford Airport | 2.80 |
| Connaught Airport (Mayo) | 0.43 |
| Farranfore Airport (Kerry) | 12.62 |
| Total | 20.85 |

Source: Operational Programme draft Final Report.

¹¹ *These included improved runways, taxiways and aprons.*

¹² *These were mainly car parking facilities.*

- 2.24 Figures for passenger numbers at the regional airports over the programme's lifetime detailed in Table 2.4 show that numbers, after an initial increase, declined to 57 per cent of the 1989 level.

Table 2.4
Passengers at regional airports 1989-1993

| Year | Passenger numbers |
|------|-------------------|
| 1989 | 413,000 |
| 1990 | 483,900 |
| 1991 | 371,000 |
| 1992 | 272,700 |
| 1993 | 235,700 |

Source: Department of Transport, Energy and Communications.

- 2.25 During the programme the external evaluators¹³ expressed the view that at the 1991 levels of air traffic there was no foreseeable need for jet runways at any of the new regional airports and in their opinion a jet runway at Kerry (which was completed in May 1994) was not a priority. They concluded that what regional airports needed was a series of measures which would promote traffic rather than further capital development.
- 2.26 In 1993 the Government approved a proposal to introduce an 'Essential Air Services' programme to guarantee a minimum level of service at regional airports. Following consultation with the EU Commission it was agreed to proceed with four routes connecting Dublin to Kerry, Galway, Sligo and Donegal.
- 2.27 Contracts were awarded in respect of the first two routes and the services have been operational since January 1995. Tenders are under consideration at present for the two remaining routes.

Commercial Seaports

- 2.28 In relation to the four commercial seaports selected (Dublin, Rosslare, Waterford and Cork) the programme placed emphasis on the provision of appropriate port capacity and quality port infrastructure.
- 2.29 The development of these ports, which handle over 80 per cent of total seaport trade, was designed to ensure that the services and facilities available to Irish exporters were upgraded so that exporters would not suffer any further competitive disadvantage in relation to their European counterparts.

¹³ *A consortium led by DKM Economic Consultants.*

- 2.30 The programme envisaged improving berthing and handling facilities so that aggregate throughput for the four ports up to 1993 would increase under the various freight categories. Table 2.5 sets out the target and actual increase in this regard.

Table 2.5
Targets and achievement - port throughput

| Freight Category | Target Increase | Increase 1993 | Increase 1994 ^a |
|--------------------------------------|-----------------|---------------|----------------------------|
| Roll on/Roll off (units) | 60,000 | 42,145 | 65,337 |
| Lift On/Lift Off (TEUs) ^b | 150,000 | 33,564 | 93,514 |
| Bulk freight (million tonnes) | 1.00 | 1.20 | 1.97 |

Notes: ^a The 1994 increase is quoted since 13 per cent of spending was carried over to that year.

^b Tonne Equivalent Units.

Source: Department of the Marine.

- 2.31 The overall programme target for tonnage handling set at 17.9m was achieved to the extent of 17.7m by 31 December 1994.

Local Ports

- 2.32 The programme stipulated that the investment in local ports would be primarily influenced by the ability of the ports to contribute to sub-regional economic development. The aim of the investment was to increase freight capacity of local ports by 250,000 tonnes by 1993 and to increase ship handling capacity at the ports of Drogheda, Dundalk, Foynes, Galway and Kinsale.
- 2.33 Department of the Marine returns show that over the life of the programme the increase in freight was 1.3 million tonnes which greatly exceeded the original target.

Rail Freight

- 2.34 The programme provided for a rail freight project involving the development of a rail link to a lift on/lift off terminal at the North Wall of Dublin Port. In 1991 the shipping company involved terminated its activities at the North Wall and as a result the monitoring committee reallocated the proposed funding to two projects, one a rail link and the other a rail by-pass.
- 2.35 The objective of the rail link project was to provide a direct freight transport rail link to the port of Belview in Waterford. The project has been completed. The only measurable target set was in relation to traffic throughput. This declined in 1995 due mainly to a change by a shipping company in its shipping movements.

- 2.36 The objective of the rail by-pass project was to allow trains to operate between Waterford and Kildare without locomotive shunting in Kilkenny. This will also facilitate passenger traffic. Due to the late approval of this project and planning difficulties work is not expected to be finalised until late in 1995.

Mainline Rail

- 2.37 This measure was introduced following the mid-term review. Projects under the measure upgraded the Dublin - Belfast, Dublin - Cork and Dublin - Waterford railway routes.
- 2.38 Work done under the programme represented the first phase of the upgrading of the mainline rail infrastructure along the three routes. This work included the replacement of track and in the case of the Dublin - Belfast route there was also investment in the signalling system and rolling stock.
- 2.39 The overall objectives of the three projects include
- an increase in operating speeds (including the removal of severe speed reductions)
 - improvement in service in terms of reliability, dependability and quality
 - reduction in journey times
 - reduction in maintenance costs.
- 2.40 No specific interim targets were set in relation to the investment during the programme.
- 2.41 £23.72m was spent from the programme on these projects. Project completion will take place up to 1999 using assistance from the Cohesion Fund and the Transport Operational Programme 1994-1999.

Regional Public Transport

- 2.42 Originally the programme included a rail project for West Dublin. However, following socio-economic analysis of the project an alternative less costly commuter service - Heuston Station to Kildare (Arrow) - was approved. The Arrow service came into operation in May 1994. Traffic levels have grown steadily since its introduction and by 1995 Arrow passenger numbers reached 1,400 per day compared to a target figure of 2,300 per day. The stations closer to Dublin (Clondalkin and Cherry Orchard) have particularly failed to meet the targets projected.
- 2.43 Other projects undertaken included the replacement of freight gantries at key locations and the upgrading of the mainline rail route between Connolly Station,

Dublin and Maynooth where daily passenger numbers have increased to 2,700 by 1995 which is ahead of projection.

External Evaluation

- 2.44 The programme made specific provision for the appointment of an external evaluator. The external evaluator also had a role in monitoring the progress of the programme and in particular could make proposals for adjustments to measures in light of problems encountered during implementation. The evaluator reported to the monitoring committee.
- 2.45 During the course of the programme the evaluator prepared more than 50 reports, attended monitoring committee meetings and provided support to the EU Commission and the Irish authorities in implementing the programme.
- 2.46 Among the reports of the evaluator were papers on
- proposed modifications to measures
 - the development of a road transit monitoring system
 - the financial position of measures
 - monitoring, evaluation and ex-post appraisal
 - perceived effects of peripherality and investments under the programme
 - Irish vehicle ownership and traffic forecasts
 - cost benefit analysis parameter values and application rules
 - the macro-economic effect of the programme.
- 2.47 The role of the external evaluator appears to have concentrated on the pre-implementation stage, addressing deficiencies in the programme and providing expert advice on the development of monitoring and evaluation systems which will aid future evaluation of transport initiatives.

Programme Impact

- 2.48 The programme could be expected to have two main impacts which are related to each other
- a set of specific transport impacts
 - an overall economic impact.

Transport Impacts

- 2.49 Transport impacts under the programme could be expected to include
- reduction in the cost of transport for existing users
 - reductions in journey times and improvements in their predictability
 - opportunities for new trip making by existing and new users (generated traffic).
- 2.50 No overall evaluation of these effects was attempted. Attention focused mainly on how impact might be gauged. This was largely because evaluation techniques are not well developed in this area.
- 2.51 The Department received advice from two sources¹⁴ on evaluating the effectiveness of the programme in terms of its impact on transport costs and route transit times. Work is still on-going in both of these areas and the Department has sponsored the following initiatives
- the piloting by An Bord Tráchtála of an export transport cost monitoring system
 - the development of a computer simulation model by the Environmental Research Unit for route transit time monitoring which would assess reductions in transit time and transit time variance resulting from road improvements on key routes.

These initiatives are further outlined in Appendix C.

- 2.52 The EU Commission supported the Department's initiatives to develop transport cost and transit time monitoring systems since such systems could have application across the EU. In this regard work undertaken on transport impacts was regarded by the Department as experimental.

Economic Impact

- 2.53 The economic impact of total programme expenditure was the subject of an evaluation by the ESRI in June 1992.¹⁵

¹⁴ *Dr James Crowley and Jennings Consultancy.*

¹⁵ *This was done using the ESRI Medium Term Model (HERMES). The ESRI estimated the contribution of the total programme expenditure (including both EU and Exchequer funding) up to the year 2000.*

- 2.54 While the results of that assessment are necessarily tentative it provides the only available assessment of the programme's likely overall economic effects.¹⁶
- 2.55 The model predicts a contribution to gross domestic product rising to a level of over 0.4 per cent by the end of the decade and an employment increase of 9,000.
- 2.56 No assessment has been made on the actual or potential impact of the programme on export performance.

¹⁶ *The projected economic impacts are dependent upon the accuracy of the assumptions used in the course of the economic modelling exercise. Some of the inputs, for example, reduction in transport costs, are based on planning assumptions rather than actual outturns.*

Chapter 3 : Science and Technology

Background

- 3.1 Six measures designed to enhance the technological capacity of Irish industry were included in the Operational Programme for Industrial Development 1989-1993 (the programme).
- 3.2 The overall objective of the measures was stated to be 'to develop in Ireland the level of technological capability necessary to underpin the competitiveness and more rapid development of industry'. The measures were aimed at all sectors of Irish industry with particular emphasis on indigenous firms.

Expenditure

- 3.3 Expenditure under the measures was £208.89m which was invested as shown in Table 3.1.

Table 3.1
Programme expenditure - science and technology 1989-1993

| Measure | £m |
|---|--------|
| 1 Programmes in Advanced Technology (PATs) | 59.61 |
| 2 Higher Education/Industry Linkages and Innovation | 36.93 |
| 3 Technology Services to Industry - Services | 25.99 |
| 4 Technology Services to Industry - Infrastructure | 9.57 |
| 5 Regional Infrastructure | 29.96 |
| 6 Industry Research and Development Initiative | 46.83 |
| Total | 208.89 |

Source: Department of Enterprise and Employment.

- 3.4 In addition, a further £1.25m was spent on monitoring and management bringing the total spending to £210.14m. Public expenditure amounted to £142.71m, of which £110.30m was provided by the ERDF. It is estimated that £67.43m of the total was spent by the private sector. The measures are outlined in Appendix D.

Focus of the Measures

- 3.5 While the programme did not set an explicit strategy for the achievement of the stated objective, the individual measures suggest that the strategy had the following components

- to develop and transfer leading-edge technologies
 - to promote and facilitate linkages between the third level education sector and industry
 - to improve product and process development within industry
 - to provide an information service on science and technology issues
 - to support the provision of infrastructure for testing services.
- 3.6 In regard to the focus of the measures, research¹⁷ has suggested that the capacity of firms to absorb new technology is related to the extent of their existing research and development (R&D) investment. In addition, technology transfer is facilitated if there is a good level of technical skilling within firms.
- There would, therefore, appear to be merit in evaluating the targeting and likely effectiveness of interventions on the basis of these two trends.
- 3.7 It is of note that prior to the introduction in 1993 of the Industry R&D measure, there was a very low level of direct support for in-firm R&D. It is also of concern that this measure was partly introduced to absorb underspending on other measures. In regard to skilling, few resources appear to have been directed towards the upgrading of technical skills within industry.
- 3.8 The Department of Enterprise and Employment (the Department) has informed us that, as a result of experiences gained in the course of the programme and from its evaluation, the focus of activities for the period 1994-1999 has been considerably revised and there is now a particular emphasis on individual and applied R&D.

Achievement

- 3.9 There were no aggregate targets set for the measures against which their effectiveness could be gauged. Consequently, it is difficult to conclude on their achievement. It is recommended that in future such targets be set and the increased emphasis on performance measures and targets in the 1994-1999 programme is welcomed.
- 3.10 It was stated in the programme that the measures would 'significantly raise the levels of R&D in indigenous industry'. The degree to which this was achieved could be taken as a measure of success. Table 3.2 shows that while R&D expenditure by indigenous industry almost doubled during the period of the programme it remained at about one-third relative to overall investment by industry in R&D.

¹⁷ *Technology and the Economy - The Key Relationships*. OECD, 1992.

Table 3.2
R&D expenditure by indigenous industry 1982-1993^a

| Year | Expenditure £m | Percentage of total industry R&D |
|-------------------|-------------------|-------------------------------------|
| 1982 | 14.7 | 35 |
| 1984 | 21.6 | 35 |
| 1986 | 32.8 | 36 |
| 1988 | 46.1 | 44 |
| 1990 | 44.5 | 31 |
| 1991 | 60.2 | 34 |
| 1993 ^b | 90.0 | 33 |

Notes: ^a This figure is not compiled for every year.

^b Approximate.

Source: Forfás.

- 3.11 Ireland's investment in terms of GDP has been increasing, having moved from 0.87 per cent in 1987 to 1.04 per cent by 1991.

Evaluation of the Science and Technology Measures

- 3.12 There were two evaluations relating to the entire range of science and technology (S&T) measures
- an assessment of the impact of CSF assistance on Irish R&D¹⁸ (the Tsipouri Report)
 - the Evaluation of the Industry Operational Programme¹⁹ (the External Evaluation).

In addition, evaluations were carried out on most measures or actions. Our detailed review of the evaluations is at Appendix D.

- 3.13 While evaluation reports recognised that S&T initiatives in Ireland had been well ahead of other less favoured regions in the EU in terms of timing, coherence and

¹⁸ *Assessment of the Impact of the Community Support Framework on Research and Technological Development in Ireland, Tsipouri Report - 1993.*

¹⁹ *Deloitte and Touche.*

variety and that, in general, Ireland had been successful in offering technology services to industry, they were less positive when it came to evaluation of some specific measures.

Programmes in Advanced Technology (PATs)

- 3.14 The aim of the PATs measure was to develop and transfer technologies to industry in eight selected areas. The PATs operated within a departmental framework which set various funding targets to be achieved within a specified period. Our examination found that the PATs would have difficulty meeting these targets.
- 3.15 An evaluation²⁰ of the overall PATs measure concluded that
- PATs were more driven by the supply side (universities) than led by industrial demand
 - there was more good will than achievement by the PATs in the area of academic-industrial technology transfer.
- 3.16 The Department has informed us that these schemes have now been redesigned and subsumed into a new and more rationalised measure in the 1994-1999 programme and operate under the control of a board drawn from industry, the third level education sector and the State. The aim of the revisions was to make them more accessible and attractive to small and medium enterprises.
- 3.17 Evaluations²¹ of the individual PATs were often critical of their effectiveness. Examples of such criticism included
- Marketing and strategy functions for the AMT Ireland PAT were below the required quality to take advantage of the needs of industry in Ireland.
 - The Materials Ireland programme was too big, too complex and in parts too future-orientated to do its industrial development job as well as was desirable.
 - The Optronics Ireland PAT would be unable to meet funding targets without major reorganisation allied to refocusing of its programmes. It had largely failed to address the opportunities for application of the technology in mainstream manufacturing and its response to the needs of Irish companies was very low.

²⁰ *Tsipouri Report 1993.*

²¹ *Evaluations were conducted by various consultants. Full details are contained in Appendix D.*

- Centres established under the Software PAT operated under a confusing and conflicting set of guidelines and its objectives overlapped with other PATs.

Other Measures

Other key findings from the overall evaluations included

- The initiatives under the Higher Education/Industry Linkages and Innovation measure were driven by the supply sector rather than being led by industrial demand. The achievement in the area of academic-industrial transfer seemed less than that envisaged.
- The Regional Infrastructure measure had been treated as a 'catch all' category with a variety of useful individual initiatives but without any clear overall coherence. There was a need to balance the investment in technology acquisition with a significant increase in support for technology transfer.

Improving Evaluation of Measures

- 3.18 While evaluation findings are discussed with the agencies, there appeared to be a need for a more formal system to consider, analyse and where appropriate ensure implementation of the evaluation recommendations.
- 3.19 Much of the evaluation of the programme to date has centred on the focus of the measures and on progress in implementation rather than on their effectiveness. Performance indicators were not set for all measures and many of the indicators used focused on outputs rather than impacts.
- 3.20 The Department has assured us that by the end of 1995 most measures with the exception of the Industry R&D measure will have been the subject of evaluation. This measure which operated on a pilot basis until 1993 and was revamped before its relaunch in 1995, should be evaluated at an early date to determine whether it is an effective approach because
- it is a key element in the CSF 1994-1999
 - it is important to conclude, at least tentatively, on the extent to which the risk of 'deadweight'²² is outweighed by the increased productivity gained by aiding firms with the capacity to absorb technological know-how.

²² *Assisting firms with activities which they may have undertaken in any event.*

- 3.21 Since it is very difficult to capture the wider impact of S&T investment on wealth creation, it is suggested that evaluation at the measure level could be assisted by the establishment and use of intermediate indicators of impact.
- 3.22 The development of intermediate indicators is best done at the level of individual actions within each measure. The Department has assured us that this work is in hand in terms of the following
- the improvement of indicators has been addressed in the context of the 1994-1999 measures
 - additional indicators are being finalised by its Evaluation Unit
 - work being undertaken at OECD level is being monitored to extract guidance on how best to capture the benefits of S&T investment.
- 3.23 In view of the scarcity of guidance on the effectiveness of S&T interventions it is important that the drive to develop and implement the best available indicators of S&T impact be continued.
- 3.24 Attention should focus on determining achievement to the extent possible in terms of final outcomes such as
- new companies established
 - new products or processes generated
 - improvements to products and processes.
- Where possible these should be supplemented by employment and profitability indicators.
- 3.25 Evaluations are only likely to be effective if the underlying information upon which they are based is collected systematically. Key indicators based on such information should be compiled on a regular basis in order to allow for on-going review of the measures. It is essential that information requirements be specified early in the 1994-1999 programme in order to ensure that the necessary information is available at the evaluation stage.
- 3.26 On-going review would be facilitated if performance information was captured in the Department's industrial database. The recording of S&T grants and the performance of assisted firms would be of particular use in this regard. This database could then be subject to analysis in order to ascertain which measures are most effective in achieving their aims.

- 3.27 Our detailed findings on the administration and monitoring of the measures are set out in Appendix D.

Chapter 4 : Tourism

Background

- 4.1 The objective of tourism strategy over the period 1989-1993 was to accelerate and facilitate tourism growth by developing the sector through
- the provision of high quality marketable amenities and facilities
 - an increased and expanded training provision
 - better marketing
 - improved competitiveness
 - a better distribution network.
- 4.2 The Tourism Operational Programme 1989-1993 (the programme) was seen as a key element of the strategy.

Expenditure

- 4.3 An estimated £331m, comprising both public and private funding, was spent under the programme on regional development measures up to 31 December 1994. This expenditure was applied as set out in Table 4.1.

Table 4.1
Programme expenditure - tourism

| Type of measure | Total investment £m | EU £m | Exchequer £m | Private £m |
|----------------------------|------------------------|----------|-----------------|---------------|
| Public sector ^a | 128.5 | 82.4 | 46.1 | - |
| Private sector | 201.8 | 54.3 | - | 147.5 |
| Technical Assistance | 0.6 | 0.5 | 0.1 | - |
| Total | 330.9 | 137.2 | 46.2 | 147.5 |

Note: ^a Includes some measures not administered by public bodies.

Source: Department of Tourism and Trade.

Measures

- 4.4 The amount of investment on measures²³ included in the programme is shown by type in Tables 4.2 and 4.3. The measures are outlined in Appendix E.

²³ These measures consist only of the public and private regional development measures under the programme.

Table 4.2
Public sector measures - tourism

| Measure | | £m |
|---------|--|-------|
| 1 | Inland waterways | 25.9 |
| 2 | Outdoor specialist, sports facilities | 2.1 |
| 3 | Walking, cycling, touring and equestrian | 4.4 |
| 4 | Culture and heritage | 75.4 |
| 5 | Leisure and health | 11.7 |
| 6 | Caravan parks | - |
| 7 | Coastal marinas | 6.6 |
| 8 | Marketing | 2.4 |
| Total | | 128.5 |

Source: Department of Tourism and Trade.

Table 4.3
Private sector measures - tourism

| Measure | | £m |
|---------|-----------------------------|-------|
| 1 | Specific interest - active | 77.6 |
| 2 | Specific interest - passive | 2.4 |
| 3 | Culture and heritage | 19.1 |
| 4 | Leisure and health | 32.6 |
| 5 | Conferences | 24.1 |
| 6 | Marketing support | 46.0 |
| Total | | 201.8 |

Source: Department of Tourism and Trade.

- 4.5 A further set of training measures, costing £52.1m, was also carried out under the programme to meet the manpower requirements of an expanded tourism sector. However, as these measures were co-financed by the ESF, they are not examined in this report.
- 4.6 The programme covered the period 1989-1993. However, there was a facility whereby eligible expenditure in 1994 could be included in the programme provided it was committed to projects before the end of 1993. Some £23.1m of 1994 expenditure was included in the programme.

Targets

- 4.7 The main targets²⁴ for tourism over the period 1988-1993 were as follows
- an increase of 2.16 million (90 per cent) in the number of overseas visitors by 1993
 - an increase in revenue from visitors to Ireland of £500m (59 per cent) by the end of the programme²⁵
 - the creation of 25,000 net jobs sustained by tourism (37 per cent increase).
- 4.8 The targeted increase in the number of overseas visitors (90 per cent) was substantially higher than the targeted increase in overseas revenue (59 per cent). These targets have been proved not to have been consistent. Targets and results are set out in Table 4.4.

Table 4.4
Targets and achievement - tourism 1988-1993

| | 1988 Actual | Target increase by 1993 | Actual increase by 1993 | Target achievement % |
|---|----------------|----------------------------|-------------------------------|----------------------------|
| Number of overseas visitors ^a | 2.345m | 2.16m | 0.985m | 46 |
| Overseas tourist revenue | £841m | £500m | £526m | 105 |
| Employment sustained by tourism | 67,600 | 25,000 | 24,300 | 97 |

Note: ^a Slightly different baseline figures were specified in the original programme. The differences are not material.

Source: Operational Programme for Tourism 1994-1999, page 1 and The Economic Effect of Tourism in Ireland, Tansey Webster 1995.

- 4.9 Ireland's share of most European markets increased substantially but our share of American tourist traffic to Europe declined.²⁶
- 4.10 An additional sub-target established in the programme related to growth in different categories of overseas visitors. The growth achieved is set out in Table 4.5.

²⁴ Targets were also set for regions and tourist categories. Such targets included overseas visitor numbers, revenue and employment.

²⁵ Total revenue included projected spending by visitors from Northern Ireland.

²⁶ Irish Operational Programme for Tourism 1994-1999, Prior Appraisal, Fitzpatrick and Associates, 1994.

Table 4.5
Overseas visitors 1988-1993

| Categories | Visitors 1988 | Target ^a increase % | Actual increase % |
|--------------------|------------------|-----------------------------------|----------------------|
| Tourist | 810,000 | 147 | 100 |
| Visit to relatives | 919,000 | 59 | 7 |
| Business | 438,000 | 53 | 13 |
| Other reasons | 178,000 | 78 | 31 |
| Overall | 2,345,000 | 90 | 42 |

Note: ^a This target was based on the information available when the programme was being compiled.

Source: *Tourism and Travel 1994, Central Statistics Office and Operational Programme for Tourism 1989-1993.*

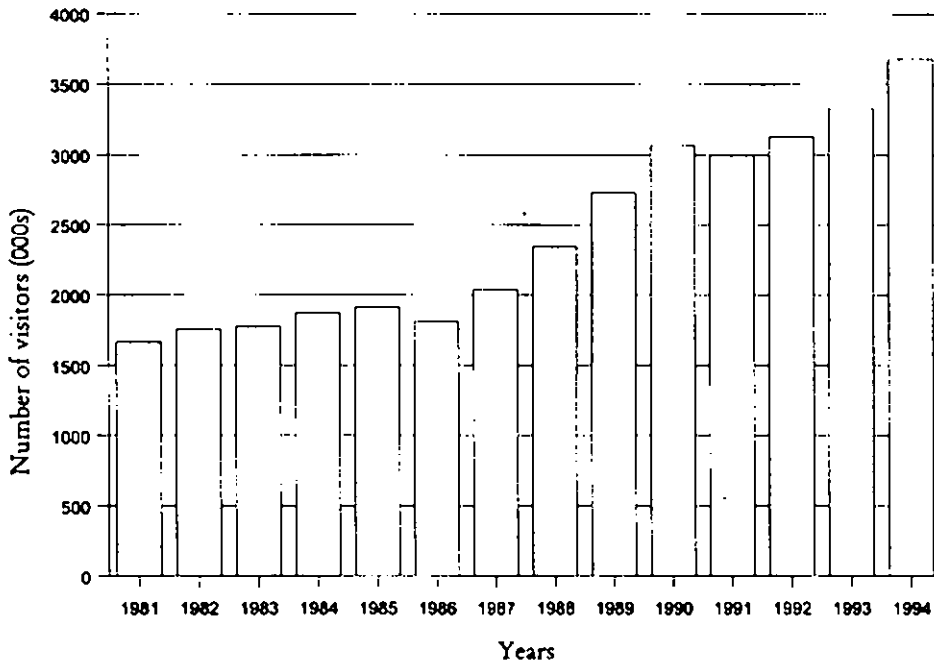
- 4.11 The growth in all categories of overseas visitors was below target. The largest increase was in those who cited 'tourist' as the reason for their journey. While in 1988 this category accounted for fewer visitors than the 'visit to relatives' category, by 1993 it accounted for some 1.6 million visitors or 66 per cent more than the category 'visit to relatives'.
- 4.12 The importance of 'tourist' as compared with other overseas visitors is that they spend substantially more money in Ireland than other visitors. In 1993 their average expenditure was 50 per cent more than that of the 'visit to relatives' category.²⁷
- 4.13 Programme expenditure and the number of overseas visitors to the regions and their expenditure were monitored by Bord Fáilte. Expenditure by overseas visitors increased in all regions by between 23 and 71 per cent.

Overseas Visitors

- 4.14 Overseas visitor numbers showed little growth from 1981 to 1986. A substantial growth in tourism began in 1987, experienced a slight reverse in 1991 in the aftermath of the Gulf War and continued to 1994. The increase in tourist numbers between 1991 and 1994 was only two thirds of that recorded in the period 1987 to 1990. CSO data on the historical trend in visitor numbers is set out in Figure 4.1.

²⁷ *Tourism and Travel 1994, Central Statistics Office.*

Figure 4.1
Overseas visitors 1981-1994



Contribution of Tourism to the Economy

4.15 The economic contribution of tourism is reflected mainly in its impact on

- Gross National Product
- Balance of payments
- Employment.

These have been quantified as set out in Table 4.6.²⁸

²⁸ Impacts on GNP and employment are estimated using Input-Output analysis. Direct and indirect spending, induced expenditure for international tourism and some assumed government recycling of Exchequer revenue is included. For a description, see *The Economic Impact of Tourism*, Deane and Henry, *Irish Banking Review*, Winter 1993.

Table 4.6
Economic impact of tourism 1988-1993

| | 1988 | 1993 |
|--|--------|--------|
| Tourism's contribution to GNP | 5.4% | 7.0% |
| Tourism surplus in balance of payments | £210m | £533m |
| Employment sustained | 67,600 | 91,900 |

Sources: *Tourism in Focus (Preliminary Tourism Statistics 1994)*, Bord Fáilte; *Tourism and Travel 1994*, CSO; *The Economic Impact of Tourism*, Deane and Henry, *Irish Banking Review*, Winter 1993; and *The Economic Effect of Tourism in Ireland*, Tansey Webster, 1995.

Attributability

4.16 Taking visitor numbers as a key indicator, it can be seen that attributing changes in performance during the period of the programme to the investments carried out under the programme, would not be sustainable for the following reasons

- The programme was agreed at the end of 1989 and provided for some retrospective funding (in 1990) of expenditure incurred in 1989 on the public sector measures. In addition, investment in private sector measures commenced in 1990 and was very slow to get off the ground. It is clear then that the programme could not have played an important role in the substantial increase in overseas numbers from 1987 to 1990 inclusive.
- Almost 70 per cent of aid was directed towards capital projects, many of which did not open until late in the programme. Consequently, the impact of these investments would be more likely to occur over the 1994-1999 period and beyond.
- A particular difficulty in assessing the impact of the programme is that not all of the public funds applied to tourism development were channelled through the programme. In 1993, public funding applied to programme measures amounted to £44.6m. In the same year Bord Fáilte spent £31.6m on tourism development outside the programme.²⁹
- Further tourism spending was undertaken by the Office of Public Works (OPW) and Shannon Development. Tourism related spending also occurred under the LEADER programme and the Operational Programme for Rural Development.

²⁹ Including £1.3m under the INTERREG Community Initiative.

- In addition tourism growth in the period is likely to have been influenced by
 - the devaluation of the Irish pound in 1986
 - liberalisation of air transport and subsequent impact on ferry services
 - containment of price inflation
 - promotion activities outside the programme.

4.17 These multiple influences and delayed effects suggest that comprehensive evaluation might best be approached by attempting to gauge the effect of aggregate State interventions. Such an evaluation might best be undertaken in early 1996 when all projects have been in operation for some time and their impacts may be realistically assessed. This evaluation would also contribute to the mid-term review of the new tourism operational programme.

Results of Evaluations

4.18 While no formal evaluation was carried out, the programme was reviewed in order to inform the choice of measures for inclusion in the 1994-1999 programme. These reviews¹⁰ concluded that

- at a general level, there was significant growth in both tourism volumes and tourism revenues during the period 1989-1993 but
- it was not possible from the information available to assess the extent to which these developments were due to measures undertaken under the programme or would have occurred anyway.

4.19 There was no specific evaluation of individual measures under the programme with the exception of assistance towards private sector marketing to which £16.5m of public funds was applied.

Evaluation of the Marketing Measure

4.20 The evaluation of the private sector marketing measure¹¹ concluded that it was a significant contributing factor in the success of Ireland's overall tourism performance. However, a number of points were made about the focus of the measure including

¹⁰ *The CSF: Evaluation and Recommendations for the 1994-1999 Framework, ESRI/DKM, 1993, and Irish Operational Programme for Tourism 1994-1999, Prior Appraisal, Fitzpatrick and Associates, 1994.*

¹¹ *The Operational Programme for Tourism 1989-1993: The Marketing Measure - Review and Recommendations, Tourism and Leisure Partners, 1994.*

- An apparent shortcoming was the absence of a clearly defined set of criteria of eligibility in respect of defined activities and levels of assistance. This 'lack of definition led to confusion and was adversely commented upon by many within the industry.'
- Since 36 per cent of grantees received cumulative grants of less than £1,000 this begged the question as to
 - the extent to which this level of assistance was necessary in order to secure the marketing activity and/or the additional expenditure
 - the overall impact on effectiveness of disparate marginal additional expenditure
 - the cost of evaluating, administering and processing grant payments of this level.
- Recipients of larger grants were generally carriers and charter and tour operators, 'which had resources and capability to effectively undertake marketing activities of a scale where one could justifiably anticipate a cost-efficient return on additional marketing investment.'

4.21 In regard to administration, the consultants noted that full powers of decision on the detailed approval of funds (within an agreed overall budget allocation at the start of the year) were delegated to a group of senior managers in the head office of Bord Fáilte and to the managers of the overseas markets. There appeared to be no limit on amounts approved per activity or per applicant organisation which would require recourse to a supervisory committee or top management at head office.

Information Requirements

4.22 Information is vital in underpinning evaluations and focusing measures. While monitoring of programme activity and progress was good, a particular deficiency noted in the course of the examination was a lack of information on the performance of supported facilities and the results of marketing investments. Key information in this regard would be

- the number of visitors availing of supported facilities
- the financial performance of such facilities
- employment created or sustained by them.

4.23 The Department of Tourism and Trade (the Department) considers that the cost-effective capture of such information would rule out a comprehensive collection of

performance data from all assisted projects. However, it recognises that there is merit in sampling tourist products in order to assess their performance, contribution and level of dependence on other key tourist attractions.

- 4.24 In the case of marketing investments, the establishment of a mechanism to enable bookings and enquiries by potential tourists to be sourced back to marketing investments would also greatly facilitate evaluation. The Department has informed us that this is being pursued in a number of current marketing campaigns.
- 4.25 While visitor perceptions are being addressed, matters which need to be followed up include
- gauging the perception of tourism professionals
 - establishing the factors which determine the decisions of tourists in choosing holiday destinations.

Other Findings

- 4.26 The number of Departmental staff devoted to the programme appears to have been insufficient to administer a programme of this size and complexity. Currently only four staff are responsible for administration of the Tourism Operational Programme 1994-1999.
- 4.27 While early in the life of the programme progress reports were produced every six months, subsequently production of these reports lapsed. At August 1995, the latest available progress report covered the period to December 1992. Associated with the delay in finalising progress reports, the drawdown of ERDF funds for 1993/94 was also delayed. At August 1995 some £7.2m had not yet been claimed from the EU.
- 4.28 The examination found the post implementation monitoring of projects by Bord Fáilte was not adequate and its payment approval procedures were criticised in an independent study of the private sector marketing measure.
- 4.29 A particularly important issue that arises is the extent to which private sector projects, assisted under the programme, would have gone ahead in any event. No attempt was made to gauge this 'deadweight' effect for the programme.
- 4.30 However, an independent survey of over 130 tourism enterprises which had received grant aid in the period 1988-1993 (including Business Expansion Scheme and International Fund for Ireland projects) was carried out by the University of Ulster.³²

³² *A Regional Analysis of Tourism Growth in Ireland, K. Hannigan, Regional Studies 28(2), 1994.*

- 4.31 The findings indicated that the 'deadweight' effect varied greatly with the size of firm. Some 80 per cent of medium-sized firms, defined as those employing 6-20 employees (in terms of full-time equivalents), indicated that investment would not have gone ahead without the grant-aid, while 30 per cent of smaller firms and 38 per cent of larger firms thought the grant-aid was crucial. With regard to employment creation, the study indicated that the proportion of jobs achieved amounted to 88 per cent of those forecast. However, given the 'deadweight' factor, many of these jobs would have been created in any event. The study estimated that 50 per cent of the jobs claimed would have been created without any assistance.
- 4.32 All the issues raised in this section are dealt with in greater detail in Appendix E.

Chapter 5 : Small and Medium Industry

Background

- 5.1 A series of measures to assist small and medium-sized enterprises was included in the Operational Programme for Industrial Development 1989-1993 (the programme).
- 5.2 The measures were designed to contribute to the overall objectives of the programme which set out to create 20,000 gross job gains³³ per year over its life.

General Objectives of the Measures

- 5.3 The main objectives of these measures were

Small Industry Measures

- the development of small firms with a proven track record and high growth potential into substantial companies capable of competing internationally
- the promotion of a high rate of formation of new firms and expansions of existing firms in order to provide sustainable jobs at a reasonable cost to the State in different regions of the country
- the creation of 5,400 gross jobs per year.

Medium-sized Industry Measures

- the stimulation of an increased flow of investment
- the generation of an increased number of significant export-orientated development initiatives from existing Irish industry and emerging Irish growth companies
- the strengthening of the management and key business functions in firms to enable them to compete internationally
- the creation of 5,600 gross jobs per year.

- 5.4 Appendix F outlines the administrative arrangements.

³³ Gross job gains are all job gains, on a company basis, arising in an Annual Employment Survey year and above the company's employment level in the previous year.

Expenditure

Small Industry Investment

- 5.5 An estimated £60.4m was spent on measures designed to assist Irish-owned small business. The total public expenditure amounted to £22.5m including £17m sourced from the ERDF and was invested as set out in Table 5.1.

Table 5.1
Public expenditure - small industry 1989-1993

| Measure | Forecast £m | Actual £m |
|-------------------------------|----------------|--------------|
| 1 Enterprise Development | 10.32 | 9.48 |
| 2 Mentor | 0.52 | 0.64 |
| 3 Software Support | 1.13 | 1.01 |
| 4 Irish Productivity Centre | 3.21 | 2.70 |
| 5 Business Innovation Centres | 1.70 | 2.71 |
| 6 Niche Studies | 0.86 | 0.57 |
| 7 International Services | 9.46 | 5.39 |
| Total | 27.20 | 22.50 |

Source: *Operational Programme for Industry 1989-1993, Final Report, Department of Enterprise and Employment.*

- 5.6 A further £37.9m is estimated to have been spent by the private sector.

Medium-sized Industry Investment

- 5.7 An estimated £546m was spent on measures aimed at assisting Irish owned medium-sized enterprises. Public expenditure of £127m, including £86m sourced from the ERDF, was incurred on the measures set out in Table 5.2.

Table 5.2
Public expenditure - medium-sized industry 1989-1993

| Measure | Forecast £m | Actual £m |
|--------------------------------|----------------|--------------|
| 1 Advisory Support | 8.06 | 7.67 |
| 2 Investment in New Facilities | 85.11 | 72.97 |
| 3 Technology Acquisition | 9.33 | 1.56 |
| 4 In-Company R&D | 21.54 | 25.12 |
| 5 Equity | - | 19.11 |
| 6 Analyses/Studies | 0.84 | 0.51 |
| Total | 124.88 | 126.94 |

Source: Operational Programme for Industry 1989-1993, Final Report, Department of Enterprise and Employment.

- 5.8 A further £418.8m is estimated to have been spent by the private sector.
- 5.9 The background, objectives, outturn and evaluation of each measure to support small and medium-sized industry is set out in Appendix F.

Focus of the Measures

- 5.10 The aim of the measures could be summarised as follows
- increasing the number of business start-ups
 - increasing the average size of firms
 - increasing the penetration of indigenous firms in the traded sector
 - raising investment levels
 - creating employment at national and regional level.
- 5.11 The features of the strategy adopted appeared to be
- a selective approach, concentrating resources on the development of firms with growth potential
 - an integrated approach to company development, which focused on the overall strategic development plans of companies, rather than on individual development initiatives.

- 5.12 All the objectives of the measures appeared consistent with the overall objectives of the programme. In general, the quantifiable objectives of measures were met. The Technology Acquisition measure (medium-sized industry) was an exception as there was a poor uptake on this measure.

Achievement

- 5.13 The achievement in terms of job creation for each set of measures is set out in Tables 5.3 and 5.4.

Table 5.3
Job creation - small industry 1989-1993

| | 1989 | 1990 | 1991 | 1992 | 1993 | Total |
|---------------------|-------|-------|-------|---------|-------|--------|
| Gross jobs targeted | 5,400 | 5,400 | 5,400 | 5,400 | 5,400 | 27,000 |
| Gross jobs created | 8,110 | 6,803 | 5,778 | 5,169 | 6,015 | 31,875 |
| Gross job losses | 5,744 | 7,425 | 6,711 | 6,499 | 5,560 | 31,939 |
| Net jobs created | 2,366 | (622) | (933) | (1,330) | 455 | (64) |

Source: Department of Enterprise and Employment

Table 5.4
Job creation - medium-sized industry 1989-1993

| | 1989 | 1990 | 1991 | 1992 | 1993 | Total |
|---------------------|-------|-------|-------|-------|---------|--------|
| Gross jobs targeted | 5,600 | 5,600 | 5,600 | 5,600 | 5,600 | 28,000 |
| Gross jobs created | 5,381 | 6,707 | 5,642 | 6,260 | 4,759 | 28,749 |
| Gross job losses | 5,673 | 3,179 | 5,682 | 6,712 | 5,858 | 27,104 |
| Net jobs created | (292) | 3,528 | (40) | (452) | (1,099) | 1,645 |

Source: Department of Enterprise and Employment.

- 5.14 The overall gross job creation target for small industry was well exceeded and the target for medium-sized industry was also achieved. However, net job gains were negligible for these two sectors over the life of the programme.

Evaluation Process

- 5.15 An external evaluator³⁴ produced two extensive reports, in 1991 and 1994, on all sub-programmes and measures. The Department of Enterprise and Employment (the Department) produced a mid-term review in 1992 and a final report in 1994.³⁵
- 5.16 The Department set up two key units to oversee and evaluate the programme
- the EU Structural Funds Co-ordination Unit
 - the Industry Evaluation Unit.

Appendix F briefly outlines the work of these units.

Evaluation Outcome

- 5.17 Apart from evaluations carried out on the programme by the external evaluator and a review of the Enterprise Development Programme by the Department in 1991, few evaluations were done on individual measures (see Appendix F for further details). The establishment of the Industry Evaluation Unit in March 1993 has gone some way towards addressing the evaluation deficiency at measure level and is seen by the Department as a key instrument in such evaluation.
- 5.18 Subject to the principle of proportionality (relating evaluation activity to the materiality of the expenditure) it is desirable that on-going evaluation of measures be performed on a regular basis to ensure that resources are targeted in the most cost-effective manner.
- 5.19 The Department considers that evaluation will be adequately provided for in future by
- external evaluation of the programme
 - studies by the Industry Evaluation Unit
 - an on-going study programme by Forfás.

External Evaluation

- 5.20 In their first report, which was completed in December 1991, the external evaluators found that the measures included in the programme were, generally, working as

³⁴ *Deloitte and Touche.*

³⁵ *The Department also reviewed the performance of Irish-owned industry over the period 1980-1990 and the effectiveness of grant support. Details are contained in Appendix F.*

intended. The evaluators were of the view that major changes were not required in the structure of the programme. However, they did feel that greater attention should be given to monitoring the effectiveness of the measures. In summary, the evaluators concluded that

- programme development and refinement should be focused so that resources are not over diluted and that both short and long term costs and benefits are reflected
- the monitoring and evaluation should reflect the aggregate levels of support received.

5.21 The second report of the evaluators, in March 1994, concluded that the two sets of measures were fairly well directed

- In relation to small industry the external evaluator noted that employment targets were generally met but there was a problem with job retention. The employment creation target of 5,400 per annum was exceeded in all years except 1992.
- In relation to medium-sized industry the external evaluator noted that the gross annual employment creation target of 5,600 had proved difficult to attain.³⁶

Management Information

5.22 Information on progress, achievement and the status of companies is available from the following sources

- an industrial database
- annual employment surveys
- surveys of Irish economy expenditures
- a targets monitoring system.

These are considered in detail in Appendix F.

Evaluation Deficiencies

5.23 The type and extent of effectiveness/impact indicators employed throughout the course of the programme to chart the progress of individual measures were largely inadequate to facilitate evaluation. The external evaluators stated that the lack of adequate information was a recurring problem when making value for money

³⁶ *The provisional figures available to the evaluators on job creation have subsequently been substantially adjusted and over the life of the programme the target for medium-sized industry has in fact been exceeded (see Table 5.4).*

evaluations on specific measures. Many of the indicators used throughout the life of the programme described inputs and activities rather than outputs or impacts. The Industry Evaluation Unit reported that, while 71 per cent of the indicators described inputs and activities, only 27 per cent related to outputs.

- 5.24 In their final 1994 evaluation the external evaluators suggested the compilation of statistics necessary for a detailed evaluation of each measure. They suggested that evaluation of impact on assisted firms be based on a small number of performance indicators and on survival rates. Performance indicators suggested included

- sales
- return on sales
- profit levels
- return on capital employed
- value added
- employment
- average remuneration levels.

Response to Evaluation Deficiencies

- 5.25 According to the Operational Programme for Industrial Development 1994-1999 detailed performance indicators will be established for each measure and action.
- 5.26 The Department has considered the question of impact indicators, in consultation with the EU Commission, and has recently informed us that it has adopted a range of performance indicators and is collecting related data.

Impact of Industrial Support

- 5.27 The impact of individual measures at firm level will vary but can, to some extent, be gauged by the following means
- analysis of the actions taken by companies on foot of State support in terms of
 - the number of start-ups
 - the number of firms expanding and rate of expansion
 - the number of business linkages established between firms

- analysis of final outcomes (including their duration) in the key areas of
 - employment
 - sales
 - profitability
 - a survey of attitudes of targeted firms to elicit their perception of the assistance.
- 5.28 One of the main problems which arises in assessing the effectiveness of any measure is determining the extent to which any particular impact or outcome can be attributed to a specific measure or intervention. Where a firm availed of a range of support services under various measures, it is difficult in practice to attribute an outcome, for example an increase in export sales, to any particular measure.
- 5.29 The gathering of information on the achievement of assisted firms is, however, a necessary first step to enable a deeper analysis of the causes of the outcomes observed. Since firms could avail of a number of measures, it is necessary to take account of the impact of all assistance availed of in gauging the effectiveness of industrial supports.
- 5.30 In order to assess such effectiveness the following information would need to be available, preferably on a central database
- industrial development support to individual firms from all agencies
 - the progress of assisted firms in terms of profitability, employment and sales over time
 - comparable data in respect of non-assisted firms.
- Statistical techniques could then be used to relate the firms' progress to the number and level of supports availed of and their interaction.
- 5.31 The compilation of an industrial database by the Department will assist in this analysis. However, there is a need to improve the Department's capacity to evaluate by
- including all assistance on the database
 - carrying out a statistical analysis of the relationship between the assistance and the performance of the supported firms.
-

Sectoral Impact

- 5.32 In regard to sectoral impact, the external evaluator noted that, within indigenous industry, resources were targeted on the electronics, engineering, pharmaceutical, natural resources and international service sectors. However, no evidence was presented on the relative performance of these sectors, except to mention that

'.... over the period 1989-92, 60 per cent of job losses on both the indigenous and overseas side occurred in food, metals and engineering, clothing, footwear and leather sectors, and these sectors (excluding food and engineering) do not receive explicit recognition in the target groups.'³⁷

³⁷ *An Evaluation of the Sub-Programme for Small and Medium Sized Irish-Owned Industry 89-93, Deloitte and Touche.*

Chapter 6 : Marketing

Background

- 6.1 A set of marketing measures (the measures) was included in the Operational Programme for Industrial Development 1989-1993 (the programme).
- 6.2 The main aim of the measures was to improve the overseas marketing capability of Irish small and medium-sized enterprises (SMEs) in order to overcome the marketing constraints imposed by a small under-developed domestic market, with per capita incomes of two-thirds of the EU average and located on the geographical periphery of Europe. It was also intended to assist Irish firms selling on the domestic market to overcome their marketing deficiencies and compete effectively in the single market.
- 6.3 The main target of the measures, taken together, was to help increase output and employment in Irish industry by increasing the exports of Irish SMEs from £2.5bn in 1988 to £4.5bn by the mid 1990s.

Activities

- 6.4 A wide range of services was provided by An Bord Tráchtála (ABT) to Irish industry under the measures. These services included
- supplying market information
 - advising firms
 - organising promotional events
 - providing finance for marketing activities.

Appendix G outlines the measures and the administrative arrangements.

- 6.5 In general the maximum assistance received by firms was 50 per cent of eligible costs. However, assistance for Targeted Marketing Consultancy was given in the form of both grants and loans subject to an overriding assistance limit of two-thirds of eligible expenditure.

Expenditure

- 6.6 An estimated £313m was spent on the measures. Of this, private spending amounted to an estimated £199m.³⁸ 75 per cent (£85m) of the total public expenditure of £114m was provided from the ERDF. Public expenditure under the programme is set out in Table 6.1.

³⁸ *Private spending figures are estimates, based on the application of a factor of 1.75 to eligible expenditure. This factor was estimated by ABT in 1988 and is currently under review.*

Table 6.1
Public expenditure - marketing measures 1989-1993

| Measure | Forecast ^a £m | Outturn £m |
|-----------------------------------|-----------------------------|---------------|
| 1 Market Development ^b | 23.7 | 31.0 |
| 2 Marketplace Services | 10.5 | 8.9 |
| 3 Market Information/Research | 12.9 | 15.6 |
| 4 Design and Product Development | 3.1 | 3.5 |
| 5 Promotions | 16.8 | 16.4 |
| 6 Regional Markets/International | 33.9 | 16.6 |
| 7 Targeted Marketing Consultancy | 28.2 | 21.8 |
| Total | 129.1 | 113.8 |

Notes: ^a Original Operational Programme forecast adjusted for exchange rates/inflation.

^b Four further measures administered by the former Irish Goods Council to assist firms in the domestic market were amalgamated with Measure 1 from January 1992 and are included under Measure 1.

Source: Operational Programme for Industry final report, June 1994.

- 6.7 It had been anticipated that eligible annual spending on marketing measures would more than double between 1989 and 1993.³⁹ The increase was somewhat less than expected with £29m being spent in 1993 against an original projection of £40m.⁴⁰ ABT has pointed out that this reduction was the result of Exchequer funding constraints rather than any lack of demand for its services.

Export Achievement

- 6.8 ABT concentrated its assistance on companies whose marketing, financial and management functions were deeply rooted in Ireland. While it is generally recognised that the performance of indigenous industry is particularly important for economic development, no single definition of 'indigenous' is entirely satisfactory.
- 6.9 The export outturn of the firms, surveyed by ABT during the period 1988 to 1994, is set out in Table 6.2.

³⁹ Operational Programme for Industrial Development, 1989-1993.

⁴⁰ Operational Programme for Industrial Development, Annual Report 1993, Annex 1, Department of Enterprise and Employment, 1994.

Table 6.2
Export outturn^a - indigenous firms 1988-1994

| Year | Exports £bn |
|------|------------------|
| 1988 | 2.7 ^b |
| 1989 | 3.0 |
| 1990 | 3.2 |
| 1991 | 3.4 |
| 1992 | 3.7 |
| 1993 | 4.0 |
| 1994 | 4.6 |

Notes: ^a The figures include certain services sector exports and certain food exports with a value of some £1bn per annum (responsibility for the latter passed to An Bord Bia from 1 December 1994).

^b Revised outturn.

Source: An Bord Tráchtála.

6.10 ABT further analyses these figures by sector and market. However, aggregated performance measures such as those quoted in Table 6.2 can, at best, give a general indication of achievement. They cannot readily be related to expenditure under the measures since

- other factors impact on export performance including other Government supports
- the aggregated performance measures include some firms which received no assistance.

6.11 The Department of Tourism and Trade is currently examining the definition of 'indigenous' and the figures for export achievement in Table 6.2 in order to refine them so that they measure more accurately the exports of ABT clients.

Evaluation of Outturn

External Evaluation

- 6.12 The external evaluator⁴¹ produced reports in 1991 and 1994. The Department of Enterprise and Employment produced a mid-term review in 1992 and a final report in 1994.
- 6.13 The overall conclusions of the external evaluator on the marketing measures were
- Much was accomplished in regard to improving the marketing capability of Irish SMEs with indigenous exports of £3.7bn in 1992 being achieved in the face of adverse economic conditions. The EU is our main market with Great Britain's share of our exports declining in recent times.
 - There was no significant duplication between marketing and other industry measures.
 - Since physical targets were met within budget, it was reasonable to conclude that value for money was achieved.
- 6.14 In general, the external evaluator recommended
- more detailed external evaluation of specific measures as they found ABT's internal evaluations to be more statements of affairs than critiques
 - a greater emphasis on
 - in-company marketing training
 - development of specific supports for the internationally traded services sector and new start-ups
 - expansion of ABT support for logistics and market access.
- 6.15 The external evaluation concluded that, if Ireland is to continue the process of strengthening the export market orientation and capability of its indigenous SMEs, the investment in these measures must be maintained.

⁴¹ *Deloitte and Touche, who evaluated the entire Operational Programme for Industrial Development.*

Evaluation at Measure Level

- 6.16 In addition, specific evaluations were carried out on certain measures. These evaluations noted two key information deficiencies, identifying
- the need to survey users of the services
 - the need to track the performance of firms which benefitted from the measures.

Details of evaluation findings in respect of individual measures are contained in Appendix G.

Departmental Evaluation

- 6.17 An Industry Evaluation Unit was established in the Department of Enterprise and Employment in 1993. This Unit is carrying out an analysis of the effectiveness of ABT supports to industry.

Possible Approaches to Future Evaluation

- 6.18 The impact of assistance to firms towards their marketing activities could be measured by the examination of a number of key indicators such as
- export performance
 - user perceptions
 - independent marketing capacity.⁴²
- 6.19 The quantification of export performance is a fundamental prerequisite to enable evaluation to occur. However, an even more informative analysis can be achieved if other quantitative information is either gathered or derived. Consideration should be given to the compilation of the following indicators
- export propensity
 - export diversification
 - market share
 - profitability.

These indicators are outlined in detail at Appendix G.

⁴² *Firms developing marketing capacity which is not dependent on further State support.*

- 6.20 The final incorporation of data from ABT into the industrial database of the Department of Enterprise and Employment is important, as it will provide information which will underpin future evaluation.
- 6.21 Establishment of the impact of the measures on the export performance of assisted firms is a necessary first step to the evaluation of the overall effectiveness of marketing interventions by the State.
- 6.22 The direct employment effect associated with this export impact could be gauged from output-employment relativities derived for each sector. Other economic effects, including the impact on GNP, could be assessed using techniques such as Input-Output analysis.

Other Issues

Administrative Performance

- 6.23 There was a sizeable increase in marketing expenditure and a relatively small increase in ABT's administrative costs, accompanied by a reduction in staff numbers. Full-time staff numbers decreased from 286 in 1988 to 238 in 1993, a reduction of 17 per cent. In constant prices (derived by applying the Consumer Price Index) gross spending increased by 53 per cent and administrative costs increased by 12 per cent between 1988 and 1993. This tends to indicate satisfactory administrative performance by ABT over the period.

Cost Recovery

- 6.24 ABT supplied many services to firms under the measures, including information, advice, finance and introductions, for which it recovered some of its outlay.
- 6.25 Overall there was little change in cost recovery over the period. However, an analysis by measure indicates that variation occurred during the period with the percentage recovery on older more established measures reducing from 13.6 per cent of annual gross expenditure in 1989 to 9.3 per cent in 1993.⁴²
- 6.26 New measures⁴³ accounted for £3.1m of ABT receipts in 1993. This is practically all of the increase in cost recoveries over the period of the programme.

⁴² *Full details of cost recoveries in 1993 are contained in Appendix G.*

⁴³ *Measures 6 and 7 and part of Measure 1 - the Sales Performance Incentive Scheme.*

- 6.27 If the cost recovery rate for older measures had remained at 13.6 per cent for 1993, receipts from these measures would have been of the order of £4.1m instead of the £2.8m that was achieved. This would have reduced ABT's reliance on public funds in 1993 by some £1.3m.
- 6.28 It is recognised that the opportunity to effect recoveries in the case of some of the older, traditional services may not exist to the same degree as in the case of the recent innovative measures, some of which have inbuilt recovery elements (including loan arrangements). There would, however, appear to be merit in reassessing the extent of cost recovery under the various measures, in view of the decline in the rate of recovery for older measures.

Chapter 7 : Water and Sanitary Services

Background

- 7.1 A set of measures costing £222m was included in the Operational Programme for Water, Sanitary Services and Other Local Services (the programme). The EU provided 50 per cent of the funding.
- 7.2 The objectives of the programme were to facilitate development in the main sectors of the economy and to protect public health and the environment.

Expenditure

- 7.3 The financial outturn of the programme is set out at Table 7.1.

Table 7.1
Programme expenditure - water and sanitary services 1989-1993

| | Forecast ^a £m | Outturn £m |
|----------------------------|-----------------------------|---------------|
| Sewerage | | |
| Urban development | 51.76 | 52.14 |
| Environmental protection | 26.52 | 26.52 |
| Multi-purpose ^b | 52.62 | 52.94 |
| Water | | |
| Rural development | 35.82 | 35.20 |
| Urban development | 29.60 | 29.46 |
| Multi-purpose ^b | 23.38 | 23.56 |
| Other local services | 2.00 | 2.00 |
| Technical assistance | 0.14 | 0.06 |
| Total | 221.84 | 221.88 |

Notes: ^a This is the revised forecast.

^b Schemes designed to impact on a number of sectors of the economy.

Source: Operational Programme Annual Report 1993.

Programme Control

- 7.4 Considerable difficulty was experienced in introducing a suitable system to manage and control the programme. The EU Commission sought to have concrete or measurable criteria to assist in project selection and measurement of physical progress. It appointed consultants⁴⁴ in 1990 to make recommendations in this regard.

⁴⁴ UCD Environmental Institute.

Measurement of Progress

- 7.5 Following discussion between the Department of the Environment (the Department) and the consultants, measures were identified and targets were established. Targets were set on the basis of the minimum progress expected over the life of the programme.

Project Selection

- 7.6 The recommendations of the consultants on project selection criteria came too late to influence the decisions on project selection. The consultants reported in December 1990 which was two years into the programme.

Programme Content

- 7.7 The set of projects comprising the programme constituted only part of the overall water and sanitary services programme of the Department. Programme elements changed from year to year with substitution of schemes for those originally selected. Schemes were included in the programme on the basis of selection from

- a list of projects which commenced in 1988 and 1989
- an indicative list of projects scheduled for 1990-1993.

- 7.8 In the Department's view, adopting a fixed programme was not a viable approach and was not desirable since it was necessary to allow flexibility for

- changing priorities in the choice of projects over time
- adapting to the rate of progress of schemes at both the planning and construction stages.

- 7.9 For purposes of the operational programme, targets determined with the assistance of the consultants were adopted. While initial physical targets were set in relation to 115 schemes, the final report of the programme was prepared on the basis of 101 schemes classified as follows

- completed 88
- at construction⁴⁵ 13.

⁴⁵ £45m of reported programme expenditure is attributable to these projects. Most of the projects are being completed using co-financed funding from the Operational Programme for Environmental Services 1994-1999 although the remaining works on some of these may be met from the Exchequer. In 1994 a total of £36.12m was spent on these projects and it is estimated that a further £4m will be required in 1995 to finalise them.

Programme Outturn

- 7.10 For the purpose of the programme, targets were set and output was measured in terms of physical infrastructure such as the length of pipeline constructed, the number of treatment works or the number of pumping stations. Since each project can have a different specification, accounting for output on the basis of construction in nominal terms is unsatisfactory. It is suggested that consideration be given to measuring output for each type of project in terms of capacity at standard rates of functioning.
- 7.11 In the course of our examination it proved impossible to relate programme output to targets for the following reasons
- the mix of projects originally envisaged when the targets were set continually altered in the course of the programme
 - the outputs reported did not capture the true programme outturn
 - outputs reported were measured in terms which were not susceptible to aggregation.
- 7.12 The programme output reported is not fully reliable being distorted by the following
- Some projects which were included at the end of the programme were partly financed outside the programme. However, physical progress was, in these cases, reported for the entire works carried out.
 - Projects removed from the programme but which were partly funded from it, were not reported as outputs.
- 7.13 The targets and outturn reported by the Department for the water supply measures are detailed in Tables 7.2 and 7.3 below, while Tables 7.4 and 7.5 set out targets and results for the sewerage measures. While it would be misleading to compare these aggregate targets and outturns for the reasons set out in paragraphs 7.10 to 7.12, there is an apparent general underachievement which ought to be investigated by the Department.

Table 7.2
Programme targets - water

| Indicator | Targets |
|--------------------------------------|---------|
| Trunk mains provided (metres) | 400,000 |
| Distribution mains provided (metres) | 115,000 |
| Number of intakes | 28 |
| Number of pumping stations | 29 |
| Number of treatment works | 14 |
| Number of reservoirs | 44 |
| Number of water towers | 11 |

Source: Revised Technical Sheets agreed by the Department and UCD Environmental Institute.

Table 7.3
Programme output - water

| Indicator | Projected outturn |
|--------------------------------------|-------------------|
| Trunk mains provided (metres) | 166,458 |
| Distribution mains provided (metres) | 76,417 |
| Number of intakes | 13 |
| Number of pumping stations | 19 |
| Number of treatment works | 13 |
| Number of reservoirs | 32 |
| Number of water towers | 9 |

Source: Operational Programme Annual Report 1993.

Table 7.4
Programme targets - sewerage

| Indicator | | | Targets |
|----------------------------|-----------|----|---------|
| Sewers provided (metres) | | | 305,500 |
| Number of pumping stations | | | 61 |
| Number of treatment works | primary | 3 | 36 |
| | secondary | 30 | |
| | tertiary | 3 | |

Source: Revised Technical Sheets agreed by the Department and UCD Environmental Institute.

Table 7.5
Programme output - sewerage

| Indicator | | | Projected outturn |
|----------------------------|-----------|----|-------------------|
| Sewers provided (metres) | | | 250,362 |
| Number of pumping stations | | | 53 |
| Number of treatment works | primary | 2 | 28 |
| | secondary | 19 | |
| | tertiary | 7 | |

Source: Operational Programme Annual Report 1993.

Measurement of Impact

- 7.14 Impact indicators had also been specified by the consultants appointed by the EU. The Department prepared reports on the impact of the individual measures for a mid-term review in June 1991 and for a progress report of June 1992.
- 7.15 Impact was monitored largely on the basis of
- the number of schemes which contributed to
 - upgraded infrastructure
 - removal of development constraints
 - advanced provision of services
 - sewage pollution elimination in internal waters
 - increased protection of fishery river catchments.

- the volume of
 - water storage capacity
 - sewage treatment capacity.

7.16 However, after June 1992 these impact indicators were not compiled. Accordingly, a comparison of the expected impacts of the programme with actual performance cannot be made.

7.17 The Department stated that the compilation of impact/utilisation indicators was discontinued because the results were not useful in the format in which they had been produced and because the inordinate amount of time devoted to compiling them could not be justified. The Department had anticipated that relevant indicators would be compiled as part of an evaluation of the programme. However, due to time constraints, the evaluators⁴⁶ adopted a selective approach and did not compile the indicators.

Programme Evaluation

7.18 The main findings from an evaluation⁴⁷ on investment in water and sanitary services were

- while the programme contributed to economic growth, its precise contribution to employment growth, industrial development and tourism could not be isolated
- projects funded increased⁴⁸ water and sanitary services capacity by
 - 386,000m³/day in the case of water supplies
 - 451,500m³/day in waste water collection
- the programme contributed to satisfactory water quality and to the improvement of beach quality

⁴⁶ *Fitzpatrick Associates.*

⁴⁷ *Economic Consultancy on Environmental Programmes, Water/Sanitary Services and ENVIREG - Fitzpatrick Associates, December 1993.*

⁴⁸ *No comparison was made with the capacity increases which the investment could have been expected to achieve.*

- while expenditure for the first four years of the programme had been over budget the type of records maintained by the Department was inadequate to allow the causes of the overspending to be isolated.⁴⁹

7.19 The evaluators highlighted deficiencies in data collection and assimilation and stressed the need for more research on the environmental and economic impact of water and sanitary services investment.

Appendix H sets out the evaluation findings in greater detail.

Adequacy of Evaluation

7.20 Evaluation of water services investment is difficult since projects have multiple aims including

- removing capacity deficiencies
- bringing services up to minimum quality levels
- positioning areas for future development.

7.21 Accordingly, future evaluation may have to be based on intermediate indicators of impact including

- capacity increases
- improvements in water quality and service reliability
- changes in the quality of receiving waters in the case of sewage treatment.

Such evaluation issues are considered in greater detail in Appendix H.

Project Review

7.22 As part of our examination 11 project files were reviewed, 9 of which were carried out under contract while 2 were completed by local authority labour.

7.23 The projects concerned were planned and designed before the drafting of the programme. As a result, there was very little documentation on the project files relating the specific projects to the programme's objectives.

⁴⁹ *The Department stated that this resulted at least in part from the fact that final accounts on schemes are not normally available until 2 or 3 years after the scheme has been substantially completed.*

Costs

- 7.24 The review indicated that there were large cost variations at the different stages of project completion. Generally, cost estimations at the preliminary report stage differed substantially from design stage costings, which in turn tended to increase at the tendering stage. In some cases cost at design stage became irrelevant because the schemes were delayed for considerable periods of time. In general, final costs of the projects were in excess of the agreed contract costings. Table 7.6 below details the cost estimates of schemes at the different stages of construction.

Table 7.6
Selected water and sanitary services project estimates and expenditure

| Scheme | Design Stage £m | Tender £m | Final/Last Report ^a £m |
|---|-----------------------|--------------|---|
| Kells/Oldcastle Water Supply | 1.750 | 1.824 | 2.100 |
| North Cathedral/Commons Rd Watermain ^b | 0.538 | - | 0.531 |
| Ballina Main Drainage (Stage 1) ^b | 0.144 | - | 0.144 |
| Mountshannon Sewerage Scheme | 0.440 | 0.718 | 0.828 |
| Rosses Regional Water Supply | 0.400 | 0.425 | 0.619 |
| Loughrea Regional Water Supply | 0.744 | 1.248 | 1.288 |
| Carrigaline Water Supply | 0.680 | 0.790 | 0.819 |
| Bailieborough Sewerage Improvement | 0.601 | 0.905 | 1.093 |
| Bandon Sewerage Scheme | 2.023 | 2.244 | 2.768 |
| Longford Main Drainage | 4.704 | 5.026 | 6.731 |
| Castleisland Sewerage Scheme | 2.743 | 3.436 | 4.296 |

Notes: ^a It is not possible to give the final cost in all cases as final accounts can take two to three years to produce.

^b No tender amount. Work done by local authority labour.

- 7.25 Price variations for labour and materials which had already occurred were not taken into account in the original grant allocations made by the Department to local authorities. Consequently, allocations tended to be understated.
- 7.26 In view of this cost drift and the fact that consultant engineers' fees are based on a percentage of the contract value, which does not act as an incentive to control costs, there may be merit in considering other options such as 'design and build' arrangements.

- 7.27 In the Department's view, the prime objective of the present contract system is to get competitive and value for money tendering. Accordingly, the onus is put on contractors to claim for cost increases as opposed to building in contingency sums to deal with risk and uncertainty. It recognised that this poses a problem in terms of profiling of expenditure for programmes where projects can be at various stages of planning and subject to variation in estimation of cost. The Department does not dispute that, in individual cases, the system entails cost increases due to contractor claims, but overall it is still considered the most effective procurement method. The Department, however, is considering the use of 'design and build' which it feels may be applicable in certain circumstances.

Reporting of Expenditure

- 7.28 Reporting of expenditure on projects by local authorities appeared inadequate. In some cases there were inconsistencies in the amounts reported for different components over time. The reporting of expenditure by local authorities did not include an analysis of contracts on the basis of their main elements or report on percentages completed.
- 7.29 There were no reporting requirements which compelled local authorities to report expenditure at a particular point in time, rather the local authority applied for a grant drawdown when substantial expenditure was incurred.
- 7.30 While the Department monitored contract costs closely, items such as resident engineers' salaries, administration and miscellaneous costs appeared to be responsible for substantial increases. In some cases additional cost classifications were introduced without explanations. In the cases examined it appeared that local authorities were usually slow or failed to break down expenditure under general headings.
- 7.31 Local authorities generally failed to alert the Department where the total final cost of schemes was expected to be in excess of the amount predicted at the tendering stage, until the initial grant allocation had been absorbed. It was noted that revised cost estimates at this stage could also be understated.
- 7.32 On the schemes which were carried out by direct local authority labour, there seemed to be less emphasis placed on securing cost estimates of project elements and with the reporting of final expenditure. However, both of the projects carried out by direct labour came in on budget.
- 7.33 In 1995 local authorities were notified of revised financial and monitoring arrangements for schemes and these are now in place. The monitoring of all schemes is being brought into line with the monitoring requirements for Cohesion Fund

schemes which require local authorities to give a detailed breakdown of expenditure and of the extent of project completions under a number of headings.

Tendering

- 7.34 The tendering procedure as operated by the local authorities generally worked well with contracts being awarded on the basis of the lowest tender or an assessment of the most appropriate tender submission.

Physical Conditions

- 7.35 Ground conditions varied from those expected from preliminary investigations. This resulted in increased costs due to additional works and materials being required, and additional claims from contractors, based on adverse ground conditions not identified during site investigations. By their nature such investigations can only examine a limited but representative sample of the proposed site and so cannot reveal all potential problems.
- 7.36 In addition, there was evidence that the records of old schemes were incorrect and evidence of previous works not being as expected when the latest project was being carried out. In one case an existing watermain diameter was 75mm and not 100mm as expected, while in another, existing stopcocks and chambers were found to be defective. In a further case a sewer laid in earlier works was too deep and had to be re-laid. These problems led to cost increases.

Final Accounts

- 7.37 Final accounts were not on file for two contracts apparently because the outturn costs of the contracts were less than the tender amounts. The Department, therefore, had no documentary evidence of what output was received for the £230,000 involved and how it compared to the original Bill of Quantities.
- 7.38 The Department stated that it is normal practice to require final accounts for all contracts completed including those within budget. In the case mentioned final accounts are now being sought for the two contracts.

Chapter 8 : Pre-1989 Projects

Background

- 8.1 Assistance from the ERDF was mainly administered on a project basis⁵⁰ prior to the adoption of the CSF for the period 1989-1993. Table 8.1 sets out the present position in respect of such allocations according to the records of the Department of Finance (Finance).

Table 8.1
ERDF allocations 1975-1988^a

| | £m | £m |
|--|---------|---------------------|
| Original allocation | | 775.26 |
| Net allocations decommitted to date ^b | (35.67) | |
| Expected future decommitments | (15.20) | |
| Total decommitments | | (50.87) |
| Net allocations extant | | 724.39 ^c |

Notes: ^a Includes all project-based allocations prior to the adoption of the CSF 1989-1993.

^b Decommitments are made after notification by a member state that a project is being withdrawn usually due to its failure to proceed as planned.

^c Finance estimate that £3.08m of this allocation remains to be collected.

Source: Department of Finance.

Allocations Decommitted

- 8.2 Prior to July 1988 funds allocated to projects which were not progressing could be reallocated to other eligible projects. A total of £80.58m was decommitted and replaced with other allocations to the extent of £44.91m. After financial reforms at EU level in 1988 the facility to substitute new commitments where projects had failed or were withdrawn was removed. The consequence of this was that ERDF allocations totalling £35.67m were not recredited to the State.
- 8.3 Of the £35.67m, Finance has informed us that a request was made to the EU Commission in December 1988 to decommit ERDF allocations of £12.37m as the associated projects were not proceeding. Finance's view is that Ireland should have been allowed substitute other projects to absorb this allocation. While this has been expressed in writing to the EU, the Commission has stated that the matter is covered by a governing Financial Regulation effective from July 1988 and that recrediting is not applicable. It has refused to concede that any further balance is due to Ireland. However, Finance has assured us that it intends to pursue the matter further.

⁵⁰ This means each individual project was separately assisted by the EU.

- 8.4 The remaining £23.30m of ERDF allocations decommitted were mainly due to project failures which only came to Finance's notice after 1988.

Further Decommitments

- 8.5 Finance estimate that a further £15.2m ERDF will be decommitted and not reallocated to Ireland due to other projects not proceeding as planned. These projects mainly relate to water services and industrial development.

Cause of Decommitments

- 8.6 Projects which led to the decommitments included those which either
- failed to start
 - failed prior to submission of completion reports to the EU
 - were transferred to Operational Programmes.
- 8.7 We examined the two main sectors which gave rise to the decommitments.

Industrial Development

- 8.8 In the case of industrial development projects, delays had occurred in claiming aid mainly due to the investment programmes of grant-aided firms proceeding slower than planned. A review, in 1994, of outstanding projects to which £12.4m had been committed indicated that many had been scaled back with qualifying expenditures reducing by £9.8m and ERDF aid by an estimated £4.9m.

Water Services

- 8.9 A similar situation was found to pertain in the case of water and sanitary services projects. The finalisation situation was complicated by the differing administrative practices of the Department of the Environment (Environment) and the EU.
- The EU administered aid on the basis of claims which were annual and could refer to a number of projects or phases of projects.
 - Environment monitored schemes on the basis of discrete phases of projects.
- 8.10 In order to claim aid, documentation was required in the form of either
- a completion report covering the project or phase of the project finalised
 - a statement of expenditure incurred in relation to the allocation.

- 8.11 It appears that a communication problem occurred in that in all cases, until recently, Finance was requesting completion reports in order to process EU claims.
- 8.12 At the time of our examination Finance's records indicated that 12 ERDF claims in respect of water and sanitary schemes were not finalised due to the non-receipt of completion reports. The ERDF commitment on these claims amounted to £14.55m. ERDF aid of £8.88m had been drawn down and a balance of £5.67m remained outstanding. Investigation of the 12 claims showed that in total the outstanding claims comprised applications in respect of 73 individual phases of water and sanitary services projects.
- 8.13 While Environment assured us that reports for all completed schemes had been submitted or that Finance had been informed of cases which did not proceed, Finance maintain that some of the documentation received from Environment was insufficient to ground claims on the ERDF for a variety of reasons including
- lack of reference numbers to allow association of claims with approved schemes
 - inability to associate works, the subject of the claim document, with works approved.
- 8.14 Environment maintained that completion reports could only be given for schemes as a whole, not the annual element which was the subject of an EU allocation. The passage of time and their filing systems made it difficult to retrieve information to answer queries from Finance on specific deficiencies in the claim documentation.
- 8.15 In 27 of the 73 outstanding cases Environment could not locate the missing details at the time of our examination. Our review of the remaining cases where information was available indicated that
- The time scale between projects being completed by the local authority and the submission of completion reports to Environment ranged from 4 months to 14 years. The average time taken was just over 5 years.
 - Environment took 8 months on average to transmit completion reports to Finance, with the period taken ranging from 1 day to 5 years. However, in 4 cases Environment could not confirm the date it sent a completion report to Finance.

Current Position

- 8.16 Claims outstanding in 1995 are in respect of ERDF commitments which are at least 6 years old. There was a deadline of March 1995 for submitting final claims to the EU in respect of these old projects. In cases where no completion report was received Finance has now forwarded the latest statement of expenditure made available to it.
- 8.17 In the case of both industrial and water services projects the exposure of the State to decommitments was largely eliminated with the move to a programme basis of administration from 1989. However, the efficiency of the administrative procedures in this regard is still relevant since the new Cohesion funding is administered on a project basis.
- 8.18 Environment has assured us that the administrative deficiencies which gave rise to the pre-1989 problems have since been addressed and in particular
- Steering groups have been put in place for all major projects. These groups include representation from the Department, local authorities and consultants. Local authorities are informed at the commencement of a project of the source of its funding and any EU requirements.
 - Quarterly monitoring returns are required from local authorities in respect of all projects.
 - Additional staffing resources were made available for the purpose of managing the 1989-1993 operational programme and a separate EU monitoring and financial control unit was established in 1994.

Environment have stated that the fact that full payment of the grant does not occur until all paperwork is finalised is, for most local authorities, an incentive to comply with accounting and monitoring requirements.

Administration of Project-related Assistance

- 8.19 A considerable amount of energy is invested by the State in securing allocations from the EU. Where the assistance is administered on a project basis it is particularly important to match that effort with administrative procedures which are adequate to guarantee that drawdowns on foot of allocations are maximised. Particular matters which need to be addressed include

- closer liaison with spending agencies in order to draw down allocations efficiently
- the risk of dysfunctional behaviour, since organisations receiving funds by way of voted moneys have no compelling incentive to complete the paperwork which would allow Finance to claim EU funds due to the Exchequer
- overall central control, in the form of a separate claim control function to account for and effect reconciliations on an on-going basis.

Appendices

Appendix A

European Funding

Features of EU Assistance

Partnership

Structural measures are intended to be planned and executed by the national authorities in close involvement with regional and local bodies. The broad aim is that on the basis of the CSF, all the parties concerned in this partnership develop programmes and projects which will convert the priorities identified in the framework into actions on the ground.

Additionality

Structural Funds are designed to augment national spending and not replace it. This 'additionality' effect was calculated for the framework of programmes as a whole using 1988 figures indexed to current year prices. The criterion is met where the spending on structural measures funded by Irish public authorities is, at least, maintained at the same level as in the base period. There is a legal requirement to furnish an additionality return to the EU Commission on an annual basis. This has been complied with for all years.

Administration

Funding from EU sources is matched with national moneys and administered through

- Operational Programmes
- Community Initiatives
- Community Programmes.

Operational Programmes

Each Operational Programme consisted of a set of measures implemented with the aid of one or more of the Structural Funds. Operational Programmes were drawn up by the Government and agreed with the EU Commission to achieve the priorities identified in the CSF. Seven such programmes drew funds from the ERDF.

Community Initiatives

The eleven specific measures outlined beneath, were introduced at the initiative of the EU and agreed with the Government. These are referred to as Community Initiatives.

LEADER

This assists rural communities to implement multi-sectoral businesses in accordance with their own priorities.

ENVIREG

This is aimed mainly at eliminating untreated sewage discharges from coastal towns of fewer than 100,000 inhabitants.

TELEMATIQUE

This is a continuation of the STAR Community Programme aimed at using advanced telecommunications infrastructure.

REGEN

This assisted the construction of the Ireland/UK Gas interconnector.

STRIDE

This assists the development of research, technology and innovation, especially in natural resources sectors.

PRISMA

This assists development in four highly specialised fields - metrology, third party testing, EU public procurement markets and support for previously protected sectors.

NOW

This is a human resource initiative aimed at promoting equal opportunity for women.

HORIZON

This is a human resource initiative aimed at assisting the disabled and disadvantaged integrate into the labour market.

EUROFORM

This is a human resource initiative assisting the development of new skills and opportunities in the context of the completion of the internal market and technological change.

RETEX

This assists the diversification of economic activity in those regions which have a heavy reliance on the clothing and textiles sector.

INTERREG

This assists the development of border regions.

Community Programmes

Four Community Programmes drawing funds from the ERDF existed prior to the commencement of the CSF and were continued in the 1989-1993 period. These programmes were

STAR

This assisted infrastructural investment in telecommunications co-funded by Telecom Éireann.

VALOREN

This assisted the exploitation of indigenous energy potential.

NON QUOTA BORDER AREAS

This was largely concerned with tourism measures but also provided for operations relating to the supply of natural gas.

TEXTILE AREAS

This programme focused on environmental improvement and aid to small and medium enterprises.

European Regional Development Fund

Regional development assistance provided from the European Regional Development Fund (ERDF) is intended to help redress the principal regional imbalances in the EU through participating in the development and structural adjustment of regions whose development is lagging behind and in the conversion of declining industrial regions.

In this context the ERDF provides help to strengthen the economic potential of the regions, support structural adjustment and growth and create permanent jobs. In order to achieve these objectives it contributes to the financing of productive investment, infrastructural investment and measures designed to develop the indigenous potential of the regions (their business environment and exploitation of local resources).

Appendix B

Examination Methodology

The examination was conducted by staff of the Office of the Comptroller and Auditor General with the assistance of consultants (Coopers & Lybrand and Goodbody Economic Consultants).

The administration of programmes by departments was reviewed in the course of the examination.

The departments reviewed were

- the Department of Finance
- the Department of the Environment
- the Department of Tourism and Trade
- the Department of Enterprise and Employment
- the Department of Transport, Energy and Communications
- the Department of the Marine.

The fieldwork consisted of interviews of relevant personnel and examination of the departmental and agency records. The examination also reviewed minutes of monitoring committee meetings, annual reports, progress reports, mid-term reviews and evaluations of the programmes and individual measures.

Appendix C

Transport Administration and Evaluation

Programme Administration

The Department of the Environment had responsibility for the co-ordination of the programme and direct responsibility for roads investment. It liaised with other departments who monitored investment in airports, seaports and railways.¹

A monitoring committee was established to oversee the implementation of the programme. Its responsibilities included reviewing progress made in implementing the programme and proposing, and where appropriate deciding on, any necessary adjustments.

The Department of the Environment established a monitoring unit which assembled information on the implementation of the programme in physical and financial terms.

Progress on non-roads measures was assembled from reports provided by the other departments and comprised mainly financial information on expenditure by measure and/or project as well as descriptions of the status of individual projects.

Evaluation

Technical Assistance

Included in the programme was a technical assistance measure under which funds of £6.5m were made available to meet the cost of external evaluation and other transport initiatives.

The following work was completed using this allocation

- a project selection tool was developed and implemented in respect of projects costing in excess of £2.5m
- development work was undertaken on a computerised national roads database (covering capacity, physical conditions, traffic and safety data)
- a consultancy project was completed which reviewed and updated parameter values for the cost benefit analysis of transport projects

¹ *The Department of Transport, Energy and Communications for airports, railways and Rosslare Port and the Department of the Marine for other ports.*

- a review of vehicle ownership and traffic forecasts was completed
- preliminary analysis of the macroeconomic effects of the programme using the ESRI (HERMES) macroeconomic model was carried out.

A number of other studies were also financed from this allocation. Among the most important were the Dublin Transportation Initiative, the Access Transport Study (which examined the adequacy of Ireland's transport infrastructure and services), the Dublin-Belfast Railway Study, the Dublin Port Relocation Study and the Review of the Cork Land Use/Transportation Study.

Evaluation Approaches

The Crowley Report

Dr. James Crowley was retained to recommend on procedures for project selection, monitoring and evaluations. He reported in December 1990.

Recommendations of the Crowley Report

Crowley addressed evaluation in the context of the central objectives of the programme

- to reduce the transport cost differential for Irish exporters to mainland Europe and the UK as compared to the costs experienced by other member states
- to improve market access through an efficient primary transport network.

Cost Differentials

The programme had estimated the transport costs for Irish exporters at over 9 per cent of export sales value and at approximately twice that incurred by other EU countries trading with each other. It established a target of reducing this cost differential for Irish exporters by about a quarter by 1995.

Crowley recommended that the impact of the programme be assessed on the basis of the transport costs of a 'shopping basket' of export consignments monitored at periodic intervals as the programme progressed.

His recommendation was that the 9 per cent benchmark be broken down into the main constituent commodities and destinations and that individual components should be monitored over the life of the programme.

Market Access

Crowley considered that a primary indicator of progress against this objective was the time it takes for freight vehicles to travel on the transport network. He recommended that benchmark transit times should be measured at the outset of the programme on the key national primary routes from designated cities to and through designated ports and airports and that achievement under the programme should be gauged by repeating these measurements periodically.

Jennings Report

In March 1992 Jennings Consultancy reported on foot of an assignment to

- assess the feasibility of developing a transport cost monitoring system which would monitor progress in reducing transport cost differentials as between Ireland and other EU member states
- develop specified proposals for such a system
- assess the monitoring system originally proposed.

In regard to the evaluation of the impact of the programme on transport costs Jennings concluded

- the impact of the programme on transport costs can be isolated by means of a modelling approach only
- speed flow and operating costs are a necessary input to this process and such models can be calibrated by adapting American and British research results
- while not all the cost impacts of the programme can be measured comprehensively, two principal cost components - fuel and wages - are fully susceptible to measurement.

Jennings recommended an approach to the monitoring of transport costs which was an index to track movements in transport prices over time. While this cannot assess the impact of the programme it is an indicator of the trend in Irish export transport prices.

Follow-up Actions

Neither set of recommendations has yet been implemented. However, arising out of the work of Crowley and Jennings the Department of the Environment has sponsored the construction and validation of models to effect

- export transport cost monitoring
- route transit time monitoring.

An Bord Tráchtála (ABT) is piloting the export transport cost monitoring system and a pilot model for route transit time monitoring has been developed by the Environmental Research Unit.

Export Transport Cost Monitoring

ABT's latest report in May 1995 details movements in an index of the national average cost per tonne-kilometre from the base period, the third quarter of 1993 to the third quarter of 1994. The results to date do not show a consistent movement in the index as illustrated by Table C.2.

Table C.2
Index of national average cost per tonne-kilometre

| Quarter | National Average Cost Index |
|---------------------|-----------------------------|
| Third Quarter 1993 | 100 |
| Fourth Quarter 1993 | 107 |
| First Quarter 1994 | 92 |
| Second Quarter 1994 | 107 |
| Third Quarter 1994 | 105 |

Source: Transport Monitoring Report - An Bord Tráchtála, May 1995.

As results from the initial period of operation have fluctuated it has been decided to continue the project for another 12 months under the new transport operational programme. The Department of the Environment stated that at the end of this period there will be a fundamental review of the project.

Route Transit Time Monitoring

An initial version of such a model has been developed and used to simulate the Dublin-Killarney route. However, the Department of the Environment advised that this version still requires fine tuning and they would be seeking technical assistance funding in the Operational Programme for Transport 1994-1999 to extend the project to enable its completion and the simulation of the full road network.

Economic Modelling

Work is continuing in refining the ESRI modelling method and on collecting data with a view to improving the measurement of the economic effects of the investments as follows

- A project is underway which will provide more accurate information on the direct and indirect induced employment and material demand impact of major road improvement schemes which account for a high proportion of total programme expenditure. The results of this project will be used to adjust the model estimates of the immediate (demand-side) effects of the programme spending.
- The implementation of computer simulation in connection with road transit time monitoring will provide a better basis for estimating the impact of the programme on transport costs. As data from these and other studies become available this will be used in future applications of the model.

Appendix D

Science and Technology Administration and Evaluation

Administration

The Department of Enterprise and Employment had responsibility for science and technology (S&T) policy and for overseeing the programme. Eolas (now part of Forbairt) was the main agency responsible for implementing the measures. However, aspects of certain measures were directly administered by the Department while Measure 6 (introduced in 1993) was administered, until 1995, by a firm of management consultants.

The measures were overseen and monitored by

- a monitoring unit in Eolas (now part of Forfás)
- an evaluation unit in Eolas (now part of Forbairt)
- an evaluation unit in the Department of Enterprise and Employment (Industry Evaluation Unit).

Monitoring Unit in Forfás

The unit was specifically set up in 1991 to monitor schemes administered by Eolas which were eligible for ERDF funding. It produced reports on physical outputs, spending and progress on such schemes.

Evaluation Unit in Forbairt

This unit has the following functions

- collection of statistical data
- commissioning external evaluations
- conducting evaluations itself.

It is responsible for evaluation of all former Eolas schemes including ERDF funded measures.

Industry Evaluation Unit

This unit was established late in the life of the programme (1993). It undertakes analysis of particular measures under the programme, assesses the effectiveness and efficiency of these interventions and recommends changes in approach as appropriate.

Control and Monitoring

In general the control and monitoring of the measures worked well. The financial procedures as operated by the administrators of the programme were found to be in order.

Evaluation

Evaluation of the S&T Measures

There were two evaluations relating to the entire range of S&T measures

- an assessment of the impact of CSF assistance on Irish R&D¹ (the Tsipouri Report)
- the Evaluation of the Industry Operational Programme² (the External Evaluation).

Tsipouri Report

The key findings of the Tsipouri Report in 1993, which was prepared for the EU Commission, were

- While Ireland continued to be a less favoured region within the EU, its S&T initiatives have been well ahead of other such regions in terms of timing, coherence and variety.
- Ireland has been successful in offering technology services to industry.
- The major challenge in the future will be
 - to balance the need for research infrastructure, including buildings and equipment, with the need to increase capacity utilisation
 - to transform the existing pool of knowledge into innovative performance and thereby increase the competitiveness of the productive sector.

¹ *Assessment of the Impact of the Community Support Framework on Research and Technological Development in Ireland, Tsipouri Report - 1993.*

² *Deloitte and Touche.*

- S&T was assisted from a variety of sources including other measures under the programme and the STRIDE Community Initiative. This diversity, which followed historical rather than rational lines, inhibited a global approach to S&T development.
- Though all the schemes were aimed at directly or indirectly benefiting industry, the supply sector (Public Service, Universities etc.) remained the main beneficiaries. There is a need to strengthen the demand side (industry) in practical terms.

External Evaluation

The key findings of the external evaluator were

- the investment in S&T is justifiable and necessary if the competitive performance of indigenous industry in international markets is to be enhanced
- there was no evidence to suggest that Irish investment in S&T is out of line with peer countries. If anything, it is below that of Ireland's European competitors.

Background to Evaluation

Technology is seen as a crucial element in explaining inter-country differences in economic growth, having the capacity to raise permanently the growth path of individual economies.³

There is an increasing body of empirical evidence which suggests that R&D has a strong positive impact on productivity and growth. Studies suggest that this is especially true of privately funded or commercial R&D.⁴

There has been, in recent times, a recognition that

- technology is embedded in organisational structures making its transfer difficult and costly
- technological knowledge is cumulative in nature with each idea building on the last.

³ *Technology and International Differences in Growth Rates, Jan Fagerberg, Journal of Economic Literature, Vol. xxxii, No. 3, 1994.*

⁴ *As reported in : Endogenous Innovation and the Theory of Growth, The Journal of Economic Perspectives, Vol. 8, No. 1, 1994.*

However, technological change also gives rise to spillovers, in that other firms may benefit from R&D knowledge gained by an individual firm. These also enhance the productivity impact of technological change.

Accordingly, the rationale for government intervention in the area of S&T is largely based on the following premises

- the lack of resources and capacity to develop or acquire technological know-how on the part of smaller firms
- the evidence of under-investment in technology in the economy as a whole.

Evaluation Approach

In practice, it is difficult to capture the full impact of S&T investment due to

- the progressive and cumulative nature of such impacts
- the tendency for its impact to spill over from target firms and sectors to the wider economy
- its qualitative benefits not being susceptible to measurement.

This does not mean, of course, that evaluation is futile. The application of technology by targeted firms and sectors is a necessary condition for the existence of spillovers, and the extent of that application can be measured. Also, some spillover effects can be measured by widening the focus of evaluation from the firm to the sector as a whole.

Consideration of the spillover nature of the benefits from S&T suggests that a comprehensive evaluation of the impact of the measures would not be confined solely to firms which receive support. That is, there may be substantial benefits not captured at the measure level alone.

Fundamental considerations in gauging the effectiveness of the spending are

- the rate of progress in the application of technology in sectors which have been in receipt of substantial support under the measures
- the impact of the measures on R&D activity in the third level education sector
- the identification of the size distribution of firms in receipt of support to ensure that those most in need of assistance are being reached.

Application of Technology

While S&T spending is, to some degree, a long term investment providing for the development of future skills and technologies, it is nonetheless essential that the rate of progress in the application of technology in sectors which have been in receipt of substantial support under the measures be assessed. This could be accomplished by analysing the results from a sample of firms over time using a baseline and an ex-post sample survey of firms which would establish changes in

- their spend on R&D
- firm profitability and employment
- the level of awareness and knowledge of management in relation to technological matters
- the level of in-firm technical skilling
- the extent to which the firm falls short of 'best practice' in the application of technology.

While such an assessment could not be carried out on a comprehensive basis, its implementation in a small number of key areas would provide valuable insights into the rate of progress towards the objectives of the measures.

Contribution of the Third Level Education Sector to Applied Research

A major objective of the measures was to ensure that the third level education sector contributed to the development of the technological capacity of firms, through an increased emphasis on applied research and technology transfer.

There is a clear need, therefore, to assess the overall impact of the measures on applied R&D activity by third level institutions. The Department of Enterprise and Employment has assured us that a range of detailed performance indicators are being finalised including details of industry beneficiaries by size and sector.

Targeting the Assistance

It is apparent that small and medium firms face the greatest problems in acquiring and applying technological know-how.

Evaluation should, therefore, extend to identification of the size distribution of firms in receipt of support.

Review of Individual Measures

Measure 1 - Programmes in Advanced Technology (PATs)

Scope of the Measure

This measure was aimed at developing the application of new technologies, in certain selected niches, where it was considered feasible for Irish industry to be internationally competitive. After the development phase the aim is to transfer the technologies to industry through the provision of contract research and services. At the end of 1993 the eight PATs in existence were as follows

| PAT | Purpose |
|---------------------|---|
| AMT Ireland | Advanced manufacturing technology |
| Bioresearch Ireland | Biotechnology research |
| Materials Ireland | Research in the areas of metal processing, ceramics technology and polymers |
| Optronics Ireland | Integrated semi-conductor optoelectronics technology |
| Power Electronics | Research and technological development in power electronics |
| Software | Software engineering research |
| Teltec Ireland | Research into advanced telecommunications technologies |
| NMRC ⁵ | Research in the microelectronics area. |

The eight PATs are required to operate under a Department of Enterprise and Employment policy statement. The policy statement sets out the following criteria for determining whether the PAT is achieving its objective

- After five years the level of Exchequer funding for the PAT should have fallen to a maximum of 50 per cent of total expenditure. After seven years this should have reduced further to 20 per cent of total expenditure. Exchequer funds should be increasingly related to specific strategic activities.

⁵ *National Microelectronic Research Centre - an independent unit within UCC.*

- The level of income from industry should be at least 50 per cent of total income (including Exchequer funding) at the end of the seven years.
- After five years of operation there should be a clear indication of support from industry in Ireland. At least 50 per cent of the income from industry at this stage should be from companies located in Ireland.
- The level of EU funding should not exceed 30 per cent of total income (including Exchequer funding) at the end of the seven years.

None of the PATs appear set to meet these targets.

Evaluation of the Measure

The evaluation by Tsipouri concluded that

- while there was substantial merit in the basic idea of the PATs, more effort was needed to improve their implementation
- there was more good will than achievement by the PATs in the area of academic - industrial technology transfer
- PATs attempted to serve opposing interests but were in fact more driven by the supply side (universities) than led by industrial demand.

The external evaluator noted that the investment in PATs constituted about 33 per cent of the total S&T spend. They noted that there is significant risk involved in the investment which is compounded by the fact that its impact will not be measurable for some time to come.

AMT Ireland

Evaluation by Technopolis in 1992 and 1993 found that

- marketing and strategy functions were below the required quality to take advantage of the needs of industry in Ireland
- its break-even goal may have to be abandoned and an explicit decision taken about what parts of the activity should be fully funded by the State, what should be subsidised and what should be self-funding
- AMT should be reorganised in the form of a limited company operating as a subsidiary of Forbairt

- AMT's role in the overall system of State supports to manufacturing industry needed to be resolved.

Bioresearch Ireland

An evaluation by Quotec in 1992 concluded

- a strategic research fund should be set up to assist the long-term competitiveness of Irish companies which need the benefits of relevant research on biotechnology but are unable or unwilling to fund such research
- the Bioresearch PAT should be restructured as a limited company with a dual remit to manage the strategic research fund and to conduct contract research and provide other biotechnology services to industry.

Materials Ireland

An evaluation by Technopolis and Quotec in 1994 concluded

- Materials problems are hard to identify and classify. The evaluators were not aware of any programme which had successfully offered a materials R&D service while covering the bulk of its costs.
- The programme was too big, too complex and in parts too future-orientated to do its industrial development job as well as was desirable. It should be smaller and more closely focused on the needs of Irish-based industry.

Optronics Ireland

An evaluation by CIRCA Group in 1993 concluded

- Optronics would be unable to respond to the 'PATs policy' without major reorganisation allied to refocusing of its programmes. Optronics should be restructured on a more commercial and autonomous basis. The refocused programme would involve the discontinuation of a number of major projects and the rationalisation of others.
- It had largely failed to address the opportunities for application of the technology in mainstream manufacturing.
- Optronics' response to the needs of Irish companies was very low.

Software

The Industry Evaluation Unit in a 1995 review found that

- The centres operated under a confusing and conflicting set of guidelines and objectives. This had reduced their technical impact and gave rise to conflict with host universities in some instances.
- The results from the small number of technical projects completed for clients indicated that they were relevant and could have a direct, positive impact on companies assisted.
- All of the centres played a vital role as an information resource for the industry.
- Financial self-sufficiency averaged 30% (target was 100%).
- There appeared to be some overlap with other PATs, especially the telecommunications PAT, Teltec.

Other PATs

A detailed evaluation of the NMRC PAT is currently ongoing. There has been no specific evaluation yet of the Power Electronics and Teltec Ireland PATs.

Measure 2 - Higher Education/Industry Linkages and Innovation

Scope of the Measure

This measure was designed to encourage third level colleges to undertake product and process research projects on behalf of industry with a view to developing in the college a good practical understanding of the needs of industry and ultimately reflecting this understanding in college courses. The measure also aimed to increase the level of technology skills in companies by supporting the placement of high quality science and technology graduates.

The measure was pursued through four specific actions

- The Higher Education/Industry Co-operation Scheme (HEIC) which aimed to encourage linkages between third level colleges and industry, through support for collaborative research and development projects.
- The Graduate Placement Programme which encouraged selected companies to employ technically qualified graduates. Placement was for one year with Eolas covering 50 per cent of the salary costs up to a maximum of £5,000.
- Scholarships in applied research to enable graduates in engineering and science to do applied research leading to a masters degree. The scholarships were of two years duration with £3,500 payable at the end of each year.
- The Industrial Liaison Officers Programme which was designed to place a full-time industrial liaison officer in each college. (ERDF funding for industrial liaison officers was not provided in 1993.)

Evaluation of the Measure

Tsipouri found that these initiatives like the PATs were driven by the supply sector (universities) rather than being demand sector (industry) led and the achievement in the area of academic-industrial transfer seemed less than that envisaged.

The external evaluator concluded that the measure was performing well but

- the profile of participants in the HEIC scheme should be broadened and re-balanced in favour of smaller firms
- other components of the measure should be expanded.

Higher Education/Industry Co-operation Scheme

An evaluation by Fitzpatrick Associates in 1993 concluded that while the overall assessment of the scheme was positive

- there was a need to redefine and refocus its activities in recognition of a changing environment, including awareness of the dangers of over-emphasis on the 'supply side'
- in the short-term the scheme should have a sharper focus on promoting co-operation between new partners and either partner should be eligible to formally apply to the scheme

- in the medium-term the various schemes for assistance to industrial orientated R&D should be brought closer together in a more co-ordinated framework.

Graduate Placement and Technology Management Programme

An evaluation by CIRCA in 1993 concluded that there were

- clear positive industrial impacts to the participating companies from this measure including increased sales, development of new/improved products/processes, new systems, new markets and cost reductions
- positive employment impacts including an increase in total employment in participating companies through placement, retention and additional or spin off jobs.

Other Programmes

No detailed evaluation was carried out on the Scholarship Programme and the Industrial Liaison Officers Programme.

Measure 3 - Technology Services to Industry - Services

Scope of the Measure

These services were aimed at raising the quality and competitiveness of Irish industry through the supply of a broad range of engineering advisory and information services. This was to be achieved through four main programmes

- Technology Audits
- Engineering Advisory Services
- Engineering Services
- Information Services.

Evaluation of the Measure

Tsipouri found that the measure could play a crucial role in the survival of SMEs and the provision of personnel sensitive to technological change.

The external evaluator found that the measure was performing well but that

- marketing and management of the services could be improved
- technology audits needed to maintain a focus on technology and avoid a drift into other areas.

Technology Audits

Technology audits are conducted in two phases. The first phase is general in scope. Evaluation of this phase by Fitzpatrick Associates (1993) found that the companies participating in the programme generally perceived it to be a useful and beneficial exercise.

Evaluation of Phase II audits by the former Eolas Evaluation Unit found that it was an important and appropriate mechanism for assisting the development of small firms.

Other Programmes

There were no specific evaluations of the Engineering Advisory Services, Engineering Services and Information Services programmes.

Measure 4 - Technology Services to Industry - Infrastructure

Scope of the Measure

The objective of this measure was to strengthen test facilities and laboratories in Eolas in support of industry by improving facilities at the National Metrology Laboratory (including the building of a new laboratory) and the National Electronics Test Centre as well as improving material, timber and environmental testing facilities.

Evaluation of the Measure

The external evaluator found that this was a necessary investment in capital equipment which had enabled Eolas to supply lasting services to industry. However, they expressed concern at the lack of detailed evaluation of this measure.⁶

Measure 5 - Regional Infrastructure

Scope of the Measure

The focus of this measure was to address the technological needs of each region with an emphasis on developing a supportive environment for R&D activities rather than supporting individual firms. This was carried out by developing the campus infrastructure of the various universities and RTCs and through a number of projects

⁶ See paragraph 47 of the Report of the Comptroller and Auditor General on the Appropriation Accounts 1994 which deals with financial and regularity issues arising out of upgrading metrology services.

which took advantage of particular regional strengths or opportunities. The measure comprised seven individual programmes which were

- South East Region Technology Pilot Programme (SERTEC)
- Technology Transfer Programme
- Polymer Development Centre
- RTC Campus Infrastructure Centres
- University Campus Infrastructure Programme
- National Microelectronics Applications Centre
- Peat Research Centre.

The first four programmes were administered by Eolas and the other three by the Department of Enterprise and Employment.

Evaluation of the Measure

Tsipouri found that

- this measure had been treated as a 'catch all' category with a variety of useful individual initiatives but without any clear overall coherence
- with the exception of SERTEC and the Campus Infrastructure programmes the regional dimension of the measure was not clearly evident.

The external evaluator found that there was a need to balance the investment in technology acquisition with a significant increase in support for technology transfer.

SERTEC

An evaluation by the Eolas Evaluation Unit (1992) found that SERTEC had played a useful role in enabling new initiatives to be tried out on a pilot basis. It was, however, recommended that SERTEC be reduced in scale. The Department of Enterprise and Employment has informed us that SERTEC has been discontinued but that parts of it have been absorbed into other measures.

Peat Research Centre

An evaluation by the Eolas Evaluation Unit (1993) found that the centre had in practice become an integral part of Bord na Mona and as such it should no longer be eligible for direct funding.

Other Evaluations

A detailed evaluation of the Polymer Development Centre has recently been finalised. Evaluations of the Technology Transfer and the Campus Infrastructure programmes have been scheduled for late 1995. Following these the National Microelectronics Applications Centre will be the only programme under this measure which has not had a detailed evaluation. The Department of Enterprise and Employment has informed us that its operation and future are being examined at present.

Measure 6 - Industry Research and Development Initiative

Scope of the Measure

This additional measure was introduced in 1993. Its purpose was to assist companies carrying out large R&D projects by way of 50 per cent grants.

The objective of Measure 6 was to enhance both the number and size of product and process development projects undertaken by industry. The projects had to be significant and vital to establishing or maintaining a company's competitive advantage.

Evaluation of the Measure

The Tsipouri Report welcomed the initiative. It was concluded that it was too early (1993) to do an impact assessment or evaluation of Measure 6.

The external evaluator stated that the scheme had been a success to date with over £23m ERDF aid allocated to separate industry led R&D projects in 66 companies.

Appendix E

Tourism Administration and Evaluation

Overall Responsibility

The Department of Tourism and Trade was responsible for tourism policy and overseeing the programme. It chaired and provided the secretariat for the Tourism Monitoring Committee which monitored progress under the programme.

Bord Fáilte and Shannon Development were involved in the administration of all the measures. However, public sector measures 1 and 4 were administered mainly by the Office of Public Works (OPW).

Administration Approach

The main features of the approach adopted by the Department of Tourism and Trade were

- monitoring performance on an ongoing basis using the data collection and analysis services of Bord Fáilte
- the ongoing review of outturn and the reorientation of the programme as appropriate, based on the results of monitoring and other feedback.

Departmental Resources

At the inception of the programme there were very few civil servants with tourism responsibilities. However, following the establishment of the Department of Tourism and Trade in 1993, the number of civil servants with general tourism responsibilities increased from 12 to 27 by 1995.

The number of Departmental staff devoted to the programme appears to have been insufficient to administer a programme of this size and complexity. Currently only four staff are responsible for administration of the Tourism Operational Programme 1994-1999.

Visitor Centres

Under the programme OPW had responsibility for the development of visitor centres at three locations, the Burren, Luggala and the Boyne Valley. These centres were the subject of planning and environmental difficulties which have been reported to Dáil Éireann in the Comptroller and Auditor General's Report on the Appropriation Accounts for the year ended 31 December 1992.

Co-ordination of Activity

A co-ordination committee was established. It was chaired by the Department of Tourism and Trade and included representatives from OPW, Bord Fáilte and Shannon Development. The tasks of the committee were

- to ensure that assistance was confined to eligible activities
- to provide maximum integration of the measures
- to ensure standard application of assessment procedures for projects.

The three main spending agencies - OPW, Bord Fáilte and Shannon Development - submitted monthly reports of expenditure to the Department of Tourism and Trade. These reports were discussed every month at meetings of the co-ordination committee and they enabled the Department of Tourism and Trade and the Department of Finance to initiate appropriate drawdowns of ERDF funds.

The Department of Tourism and Trade delegated the function of collecting data on progress to Bord Fáilte. These data, which were collected monthly, formed the basis of periodic reports on the programme.

Monitoring of Progress

Progress reports were produced by the Department of Tourism and Trade based on information collated by Bord Fáilte which liaised with other implementing agencies. These reports were considered by the monitoring committee.

The monitoring committee took initiatives to adapt the programme to changing circumstances. For example

- the eligibility criteria for certain private sector investments (including golf) were eased¹

¹ *Subsequently, limitations were set on the number of golf course facilities to be aided under the programme because it was considered that capacity was adequate.*

- a special marketing initiative was launched in 1991 to offset the adverse impact of the Gulf War.

Some difficulties were apparent in the system of monitoring and reporting

- While early in the life of the programme progress reports were produced every six months, subsequently production of these reports lapsed. These reports included details on the performance of the tourism industry, financial and physical indicators for each measure together with commentary and regional information. At August 1995, the latest available progress report covered the period to December 1992.
- Financial information was delayed also. In October 1993 financial outturns were circulated to the members of the monitoring committee, covering the period up to June 1993. At August 1995 the final financial outturn for the programme had not been circulated to members. However, financial figures were submitted regularly to the monitoring committee for the Community Support Framework. The Department of Tourism and Trade expects that the financial information to be included in the final progress report will not differ from these to any great extent.
- Associated with the delay in finalising progress reports, the drawdown of ERDF funds was also delayed. At August 1995 some £7.2m had not yet been claimed from the EU.
- The monitoring committee was due to meet every six months. The last meeting held in the life of the programme was in April 1993. At that meeting it was decided that there was no need to meet until April 1994 as almost all the ERDF funds had been committed. However, this April 1994 meeting did not take place and no further meetings of the monitoring committee had been held up to August 1995.

The Department of Tourism and Trade has explained that the meeting in 1994 was deferred with the agreement of the EU Commission and this deferment was necessary to ensure that preparatory work for the subsequent operational programme was done.

The Department stated that much of the grants under the new operational programme are in respect of private sector projects, therefore, it was essential, in its view, that the new investment programme commence on time and be administered smoothly.

The pressure on staff resources may have been a contributory factor in the deficiencies noted in programme monitoring.

Financial Control

Payment approval procedures in Bord Fáilte were criticised in an independent study of the private sector marketing measure. With regard to the payment of marketing grants to approved applicants, the consultant found that

'The basis of evidence of actual payment of costs of marketing activity by recipients was weak. We could find no evidence that the invoices on file were actually paid. It seems that this is an assumption made by the current design and interpretation of the administrative system. This approach has certain fundamental weaknesses.'²

Similar findings were made in an internal audit carried out within Bord Fáilte.

'Grant payments were made in respect of eight cases in the audit sample. In four of these cases total project expenditure was vouched or substantially so; in one case 12.5 per cent was vouched and in three cases no vouchers were on file.'³

The Department of Tourism and Trade has indicated that these control procedures have been improved.

Payment Delays

There were many complaints regarding delays in paying grants in respect of private sector developments and some public sector projects. One of the main reasons for delay was the mechanism used to transfer the EU funds component. In such cases, the ERDF assistance was paid directly into bank accounts held by Bord Fáilte and Shannon Development. Consequently, the payment of grant assistance depended on the timing of the receipt of such funds. The Department of Tourism and Trade introduced special arrangements to ease the cash flow difficulties of developers. Such difficulties did not occur in the case of those public sector projects where finance was voted annually by Dáil Éireann.

² *The Operational Programme for Tourism 1989-1993: The Marketing Measure, Review and Recommendations (for the Department of Tourism and Trade), Tourism and Leisure Partners, 1993*

³ *Administration Audit: ERDF grants, Internal Audit, Bord Fáilte, 1993.*

Post Payment Review

The post implementation monitoring of projects by Bord Fáilte was not adequate. Such follow-up is important in order to

- ensure compliance with the terms of the scheme, for example, to ensure that a golf course remains available to tourists
- gauge the extent to which expected benefits were realised in terms of results such as the number of overseas customers, the number of off-peak tourists, profitability and employment.

Follow-up activity was informal. The regional tourism organisations carried out some informal post-payment monitoring and Bord Fáilte got involved on an exception basis. The Department of Tourism and Trade has indicated that, while some improvements in post implementation monitoring have occurred, further improvements would require additional resources which are unavailable.

Shannon Development has informed us that it requested accounts data for all assisted projects after they had traded for a period. In addition, it carried out surveys of employment levels achieved for grant-aided projects.

Evaluation

No overall evaluation of the effectiveness of the programme was completed. Only one measure was the subject of a formal evaluation - Private Sector Marketing Support.

Approaches to Assessing Effectiveness

There are two broad approaches which could be used to assess the extent to which tourism development may be attributed to State interventions

- a bottom-up approach which assesses the impact of assistance to individual projects and then establishes overall impacts by aggregation
- a top-down approach, under which the overall impact of the investment on the total tourism market or the major market segments is assessed.

Both approaches have a contribution to make to overall impact assessment.

Assessing the Impact of Assistance to Projects

For investment in product development to have an impact on visitor numbers, the individual projects themselves must be successful. The economic impact of projects may be measured by their employment effects and revenue earned.

In 1992, Bord Fáilte undertook a postal survey to measure operational employment arising from tourism investment projects. A response rate of approximately 33 per cent was achieved. While this response rate is not unusually low for postal surveys, Bord Fáilte regarded it as disappointing in view of the fact that many of those surveyed would have been in receipt of grant-aid. In the final analysis, Bord Fáilte felt that they could not rely on the survey results for estimation of employment impacts because of its lack of representativeness.

Bord Fáilte subsequently commissioned consultants to advise on how the employment impacts of grant-aided projects could be accurately measured.⁴ The consultants recommended that

- impact evaluation procedures be built into the process of project sanctioning and monitoring
- the evaluation of employment effects in respect of individual projects should not take place until sufficient time had elapsed to allow employment effects to show through
- an interview survey approach would be appropriate in order to ensure that employment effects are fully and accurately measured.

A particularly important issue that arises is the extent to which private sector projects, assisted under the programme, would have gone ahead in any event. No attempt was made to gauge this 'deadweight' effect for the programme.

However, an independent survey of over 130 tourism enterprises which had received grant aid in the period 1988-1993 (including Business Expansion Scheme and International Fund for Ireland projects) was carried out by the University of Ulster.⁵ This was broadly along the lines recommended by the consultants but was a postal rather than an interview survey.

⁴ *Measuring the Employment Impact in Tourism Projects*, Goodbody Economic Consultants, 1994.

⁵ *A Regional Analysis of Tourism Growth in Ireland*, K Hannigan, *Regional Studies* 28(2), 1994.

Respondents were asked to compare the number of jobs actually created to the number forecast in the plan submitted when applying for the grant. Respondents were also asked whether the project would have gone ahead in the absence of a grant (deadweight) and the number of jobs which would have been created if no grants had been obtained.

The findings indicated that the deadweight effect varied depending on the size of firm. Some 80 per cent of medium-sized firms, defined as those with 6-20 employees (in terms of full-time equivalents), indicated that investment would not have gone ahead without the grant-aid, while 30 per cent of smaller firms and 38 per cent of larger firms thought the grant-aid was crucial. With regard to employment creation, the study indicated that the proportion of jobs actually achieved amounted to 88 per cent of those forecast. However, given the deadweight factor, many of these jobs would have been created in any event. The study estimated that 50 per cent of the jobs claimed would have been created without assistance.

In assessing the impact of projects the degree of displacement⁶ involved is a consideration. The product development strategy of the programme, which was to focus on tourism facilities which were acknowledged to be lacking, could help to minimise this effect. In addition, the Department of Tourism and Trade is satisfied that every effort is made to eliminate possible displacement effects at project approval stage. However, the success of such efforts needs to be assessed and should be built into any further evaluation of tourism interventions by the State.

Perception of the Customer

The quality and attractiveness of the tourism product is influenced by more than direct tourism spending. In particular, general Government policies on prices and infrastructure have substantial effects.

The perception of visitors is a key factor. Visitor perceptions on a wide range of 'quality' factors were monitored every five years on behalf of Bord Fáilte.⁷ Under the Operational Programme for Tourism 1994-1999 quality indicators are being refined and it is intended to carry out visitor attitude surveys more frequently.

Of relevance also in assuring the quality of the tourism product would be the views of tourism professionals (for example tour operators and carriers) who had a

⁶ *'Displacement' refers to the situation where a new facility merely diverts tourist expenditure, for example, from one heritage centre to another.*

⁷ *We've been to Ireland: A report on the 1988 Post-Visit Survey, Bord Fáilte, 1989 and Visitor Attitudes Survey, Bord Fáilte, 1993.*

knowledge of Ireland and operated in the target tourist markets. In addition, the views of those who do not operate in the Irish tourist market could also be important.

Establishing Determinants of Tourist Decisions

Another approach to effective management and targeting of tourism investment involves establishing the causes of tourist flows. The construction of econometric models of tourism demand holds out some prospect of success in this area.

Such models are constructed on the basis of a range of factors which are thought to influence the tourist's decision to undertake a foreign trip and the subsequent choice of destination. These include

- per capita income levels in the origin country
- the price competitiveness of the destination country relative to others
- prevailing exchange rates
- access transport costs
- marketing spend of destination country.

At least three such studies were undertaken some time ago in respect of inward tourist flows to Ireland and a model has been developed recently in the University of Limerick.

The use of such modelling could help establish the relative impact of factors such as price competitiveness and access transport costs on tourist numbers. The precision with which this can be done is obviously dependent on the degree of success of the process. At the very least, however, the modelling process could substantially expand our knowledge of the underlying causes of changes in tourist numbers. Bord Fáilte agrees that such a model is required and have recently informed us that it is intended to construct one.

Review of Tourism Measures

Targets and outturns referred to in considering the individual measures below are general in nature and relate to tourist categories rather than specific measures. They are influenced, therefore, by more than the measure under consideration and are accordingly indicative of general achievement in the tourism segment. Consequently, the outturn indicated should not be considered attributable to the measure alone.

Public Sector Measures

Measure 1 : Inland Waterways

The objective of this measure was to facilitate development of cruising holidays on inland waterways. It was intended that the number of overseas tourists availing of cruising holidays would double from 16,000 in 1988 to 32,000 by 1992. £25.9m was spent on the development and reopening of the Shannon-Erne canal and on improvements to other canals.

It has been estimated that the number of 'specialist' overseas visitors availing of cruising holidays actually increased to 19,000 by 1993. 'Specialist' means that for these visitors cruising was an important reason for choosing Ireland as a holiday destination.

Measure 2 : Outdoor Specialist, Sports Facilities

The objective of the £2.1m spent on this measure was to assist the development of certain special interest activity holidays in the areas of angling and water, field and adventure sports. It was intended that the number of 'specialist' overseas tourists who came to Ireland for angling would increase from 52,000 in 1988 to 110,000 by 1993.

Surprisingly there were no targets set for physical outputs. However, achievement was monitored. The main work undertaken in the angling area was the provision of 739 signposts, improving 213 access points and erecting 643 fishing stands.

It has been estimated that the number of overseas 'specialist' anglers increased to 81,000 in 1993.

It has been estimated by Bord Fáilte that the number of overseas holidaymakers who engaged in some angling increased from 108,000 in 1988 to 180,000 in 1993.

Measure 3 : Walking, Cycling, Touring and Equestrian

The objective of this measure was to facilitate the spread of tourists to all regions through the provision of better information and touring facilities for visitors.

£4.4m was spent on improving 29 tourist centres, 3 signpostings to facilitate cycling, improvement of 1,500 kms of walking routes and providing a new equestrian trail. These numbers were well short of target.

It has been estimated by Bord Fáilte that the number of 'specialist' overseas holidaymakers who engaged in walking, cycling and equestrian activities increased as follows

Table E.1
Growth in certain specialist tourist numbers

| | 1988 | Target 1993 | Outturn 1993 |
|------------|--------|-------------|--------------|
| Walking | 10,000 | 35,000 | 53,000 |
| Cycling | 14,000 | 40,000 | 35,000 |
| Equestrian | 12,000 | 28,000 | 18,000 |

Measure 4 : Culture and Heritage

The objectives of this measure were to provide a small number of 'major cultural magnets' and a range of other interesting cultural experiences which would appeal to the general tourist. A countrywide genealogy network was to be provided also.

£75m was spent on the development of historical centres, other visitor and interpretative facilities, theme towns, national parks, literary museums and a genealogy network.

The expenditure assisted 16 theme town projects, 73 historical and cultural projects including interpretative projects, 7 national parks, 7 wildlife reserves and linked 13 local genealogy centres through a network.

In the course of the programme surveys of tourist attractions were carried out⁸ to ascertain visitor numbers. However, coverage of these surveys was incomplete and assisted facilities were not identified.

Measure 5 : Leisure and Health

The objective of the measure was to provide a range of all-weather facilities which would help to extend the tourist season in key locations and allow Ireland tap into the growing activity and health conscious market. £11.7m was spent in assisting five projects.

⁸ Visit to Tourist Attractions 1993, Bord Fáilte.

Measure 6 : Caravan Parks

The objective of the measure was to improve conditions for motoring tourists with caravans, by providing new caravan parks at certain strategic locations in regions that were deficient in this respect.

There was no recorded activity under the measure. It had been a priority to develop caravan facilities in the Dublin area but this did not proceed in the lifetime of the programme due to planning difficulties.

Measure 7 : Coastal Marinas

£6.6m was applied under this measure. The main project supported was the Kilrush Creek marina (see paragraph 46 of the Report of the Comptroller and Auditor General on the Appropriation Accounts 1991). Other smaller investments in facilities for pleasure boats were supported also.

Measure 8 : Marketing

This measure was introduced with the agreement of the monitoring committee in October 1992. From the report of the monitoring committee meeting and associated documentation it would appear that the objective of the measure was to combat the effects of seasonality through a targeted and focused campaign in 1993, concentrating on the UK, France, Germany and North America. Expenditure amounted to £2.4m.

Private Sector Measures

Measure 1 : Specific Interest - Active

The objective of the measure was to assist the development of special interest activity holidays in the areas of sailing, cruising, angling, golfing and equestrian, together with field and adventure holidays.

Public expenditure of £17m was applied to assist in the provision of cruising fleet, improved moorings at 11 centres, angling improvements at 11 locations, 23 non-club golf courses, 19 equestrian facilities and 21 sporting facilities.

The outturn in specialist visitor numbers was estimated as follows

Table E.2
Specialist visitor target and outturn

| | 1988 Level | 1993 Target | 1993 Outturn |
|------------|---------------|----------------|-----------------|
| Sailing | 2,000 | 8,000 | 9,000 |
| Cruising | 16,000 | 32,000 | 19,000 |
| Angling | 52,000 | 110,000 | 81,000 |
| Golf | 14,000 | 60,000 | 38,000 |
| Equestrian | 12,000 | 28,000 | 18,000 |

In 1991 a consultant's report⁹ proposed that criteria for some of these activities should be widened as spending was lagging at that point. Accordingly, the monitoring committee agreed that the following would be eligible

- development of sea angling bases/centres
- branded golf course development (belonging to golf clubs but marketed by Bord Fáilte), subject to safeguards that the course would be available to tourists and not saturated by local membership
- equestrian centres with upwards of 20 mounts (instead of 30).

Measure 2 : Specific Interest - Passive

The objective of the measure was to help put in place facilities which would enable promoters of language and traditional craft learning holidays to exploit identified market potential in Europe and the Middle East.

£0.7m was applied to the supported activities, including the development of 8 language and craft schools and the enhancement of facilities in 5 existing schools.

The number of visitors had been targeted to increase substantially from 50,000 in 1988 to 130,000 by 1993. The outturn in 1993 was below target at 82,000.

⁹ *Report for European Commission : Advice on a multifund Integrated Operational Programme concerning Tourism, (Ireland), Indecon Consultants, 1991.*

Data was not collected, however, regarding the extent to which assisted centres contributed to this growth.

Measure 3 : Culture and Heritage

The objective of the measure was to provide a small number of 'major cultural magnets' and a range of other interesting cultural experiences which would appeal to the general tourist.

Public expenditure of £8m was applied to assist development of 4 theme towns, 2 theme parks and 22 day visitor attractions, including, historic houses, castles and interpretative centres.

The success of the assisted centres in attracting overseas visitors was not monitored.

Measure 4 : Leisure and Health

The objective of the measure was to assist the development of a range of top quality all-weather facilities which would extend the tourist season, increase hotel occupancy and afford Ireland access to the growing health and leisure market in Europe.

Public expenditure of £6.9m was concentrated on 38 hotels offering leisure facilities and 3 new standalone facilities.

In 1991 a consultant's report¹⁰ recommended that the accommodation limit on eligibility for assistance for leisure facilities in hotels be reduced from 45 to 35 bedrooms and this change was approved by the monitoring committee.

The extent to which overseas visitors availed of the facilities provided under the measure was not monitored.

Measure 5 : Conferences

The objective of the measure was to develop international standard conference facilities of varying sizes at strategic locations. It was intended to increase the number of visitors coming to Ireland for conferences by 85 per cent to 120,000 by the end of 1993.

¹⁰ *Report for European Commission : Advice on a multifund Integrated Operational Programme concerning Tourism, (Ireland), Indecon Consultants, 1991.*

Public expenditure of £5.2m was made available to assist 12 new facilities and improve 8 others. The visitor number outturn for 1993 has been estimated by Bord Fáilte at 85,000.

Measure 6 : Marketing Support

The objective of the measure was to increase private sector participation in market research, cooperative marketing with Bord Fáilte and development of new markets.

The £16.5m of public funds applied under the measure were targeted mainly at new tourist operators and new products, firms selling Irish holiday packages and carriers. In the wake of the Gulf War a provision of £1.25m was approved by the monitoring committee to counter an expected downturn in tourism.

A specific evaluation was carried out on the measure.¹¹ In general, it concluded that the measure was a significant contributing factor in the success of Ireland's overall tourism performance. The consultants, however, questioned the focus of the measure (see paragraph 4.20).

¹¹ *The Operational Programme for Tourism 1989-1993 : The Marketing Measure - Review and Recommendations, Tourism and Leisure Partners, 1994.*

Appendix F

Small and Medium Industry Administration and Evaluation

Administration

The Department of Enterprise and Employment which had responsibility for industrial policy was responsible for the programme. It chaired and provided the secretariat for an industry monitoring committee which monitored progress under the programme and could agree to certain changes being introduced into the programme.

The main agencies responsible for implementing these measures were the IDA (now IDA Ireland and Forbairt) and Shannon Development.

EU Structural Funds Co-ordination Unit

This unit, established within the Department of Enterprise and Employment, was responsible for overseeing implementation and providing information to the Industry Monitoring Committee as well as supplying financial information to the Department of Finance to enable EU funds to be drawn down.

Industry Evaluation Unit

An Industry Evaluation Unit was established in 1993. It could not, however, be considered a key evaluation instrument in the context of the programme which ended that year. It will contribute to future evaluation under its remit to analyse particular measures, assess the effectiveness and efficiency of such interventions and recommend changes in approach.

Management Information

Department's Industrial Database

An industrial database was established in 1989 by the Department of Enterprise and Employment. The database, which is a centralised information source, holds information¹ on the performance of individual firms, which includes data on jobs, exports and turnover, and also grants approved and paid.

Certain data have not yet been integrated into the system. These include marketing expenditure and export performance data from An Bord Tráchtála, certain science and

¹ *This information is obtained from the Annual Employment Survey and the Irish Economy Expenditures Survey.*

technology grants administered by Forbairt and grants paid by County Enterprise Boards and under the LEADER programme. This reduces somewhat the usefulness of the database for evaluating effectiveness.

The Department of Enterprise and Employment has engaged systems consultants to review the industrial database and recommend how it might be further developed.

Annual Employment Survey

In line with its mandate to co-ordinate industrial development activity, Forfás carries out an employment survey towards the end of each year. The survey is an annual census of employment in manufacturing and international service companies. The response rate is normally close to, or at, 100 per cent. The data received is recorded on a computerised database. In 1994 approximately 6,000 companies were surveyed.

This survey provides the basic data to enable the industrial development agencies to assess the impact of their activities. The survey facilitates the calculation of job gains, job losses, number of first time jobs² created and cost per job sustained.³

Irish Economy Expenditures Survey

The purpose of this survey is to measure the domestic impact of the manufacturing and international services sectors in the Irish economy. To do this, the survey collects data on sales and profits of companies together with their expenditures on labour costs, raw materials and services.

The survey was first undertaken in 1983. At present, a series of data over 10 years exists which allows the performance of the manufacturing sector to be analysed.

Targets Monitoring System

The Targets Monitoring System (TMS) is a computer-based tracking mechanism in Forbairt which assists in monitoring the performance of companies.

² *First time jobs are calculated on the basis of increases in employment above the peak employment level achieved in the previous five years.*

³ *Cost per job sustained is the average cost of first time jobs created and sustained over a seven year period.*

At present, approximately 2,600 companies are tracked using the TMS. It is updated on a quarterly basis. The TMS calculates first time jobs on the basis of forecasts at company level.

Department Review of Industrial Performance 1980-1990

The Department of Enterprise and Employment analysed the performance of Irish-owned industry over the period 1980-1990. It examined the survival and employment record of firms, the changing structure of industry (in terms of size and sector) and the degree of success in converting approved jobs into actual jobs.

The study found

- State funding of indigenous plants which existed at the end of 1980 produced no net employment gain over the subsequent decade
- the system of evaluation of projects prior to their approval required urgent review.

With regard to firms which existed in 1980 and which received grants amounting to £416m (in 1990 prices) the analysis found that employment in these plants fell by 30,000 over the 10 year period. Existing firms that did not receive grants in the period also lost jobs (33,000) and at a faster rate.

Irish-owned firms, which started in the period 1981 to 1990, received £253m in grants and accounted for 28,000 jobs at the end of the period. New firms, which did not receive grants, added some 7,000 jobs.

Review of Small Industry Measures

Measure 1 - Enterprise Development Programme

Scope of the Measure

The objective of this measure was to encourage middle and senior managers and professional people in private industry and the public service to set up their own businesses.

An Enterprise Development Programme (EDP) team works closely and interactively with its client base. Loan guarantees, working capital, interest subsidies, capital grants, rent subsidies and training grants are available for projects. A negotiated equity stake is also taken in all new EDP projects. Over the period of the programme 136 projects were assisted with a resultant outcome of 998 gross jobs.

Evaluation of the Measure

While the external evaluators found this to be a valued measure, they recommended that an annual survey should be carried out which would determine profitability, survival rates, expectations of companies, achievements of the programme and level of satisfaction.

At present, the only indicators being generated are total expenditure, number of jobs created and number of projects assisted. We would recommend improving performance indicators and suggest the following

- number of businesses created
- cost per job created
- survival rates
- rates of expansion.

Measure 2 - Mentor

Scope of the Measure

The objective of this measure was to make available the services of a panel of retired and experienced business executives to advise selected firms with development potential.

At the end of 1993 there were 844 companies involved in this programme along with 371 mentors.

Evaluation of the Measure

Two surveys were carried out by research assistants taking part in UCD's Marketing Development Programme

- The first of these sought the perception of assisted companies of the usefulness of the measure. It found that, overall, 80 per cent of companies believed that they had benefited.
- A second survey in 1994 found that effectiveness and relevance of mentors was rated highly by the majority of companies and most companies had experienced increases in sales and taken on extra staff.

With effect from 1994 all companies, which avail of the programme, are asked to evaluate its effectiveness and relevance to small business.

Measure 3 - Software Support

Scope of the Measure

Under this measure a Director was appointed to work with the Information and Computer Services Association and the State agencies to promote the development of the software sector and provide advisory support to emerging Irish software companies.

The Director was to work with the smaller, local and mainly Irish-owned firms to secure extra business with the aim of increasing employment in such firms from 1,225 in 1988 to at least 3,000 by 1993. A second objective of the measure was to bring about an increase in the size of local firms.

According to a survey⁴ carried out in 1993 there were 336 indigenous software companies with a total employment of 4,495.

Evaluation of the Measure

The external evaluator agreed with the steps and initiatives in hand at the National Software Directorate (NSD) and also felt that the existence of a separate software measure was justified given the enormous potential of the sector.

The Industry Evaluation Unit examined the role of the NSD and its contribution to the development of the software industry in its 1995 report on the software support programme. Among its conclusions in this area were the following

- there was little evidence that the NSD has had an impact on company development with the exception of acting as facilitator for venture capital funding and as a conduit for some overseas contracts
- much of the action taken to address industry weaknesses appeared to be ad hoc, without reference to an overall plan for the industry and the direction it should take
- there was a great deal of confusion over its role among industry members
- its role had been primarily that of an influencer and catalyst at industry-wide level. It was, therefore, difficult to put a value on the NSD's contribution and to measure its direct impact on the industry.

⁴ *National Software Directorate survey of the software industry.*

Measure 4 - Irish Productivity Centre

Scope of the Measure

The Irish Productivity Centre (IPC) is jointly owned and controlled by employers and trade unions through IBEC and the Irish Congress of Trade Unions. Its main objective is to help raise the productivity of Irish business firms by

- helping business become stronger and more competitive
- developing more effective human relations with emphasis on work organisation and work involvement.

The IPC pursues its objectives by providing specialist advice and assistance to small and medium-sized companies in areas of production, finance, marketing, personnel, industrial relations and general management.

Over the period of the programme the IPC contributed 6,720 consultancy-days assisting 341 companies.

Evaluation of the Measure

The external evaluator found this to be a cost-effective programme as the cost per consultancy-day had been reduced considerably following restructuring of the IPC and the targeted number of companies had been exceeded. Users were generally satisfied with the service they received, although this depended on the suitability of the consultant for a particular project.

A survey conducted by the IPC indicated that, of the companies assisted during the life of the programme, 9 were no longer trading, 34 have less than 95 per cent of their previous employment, 262 have stable employment and 36 increased employment by more than 5 per cent.

Measure 5 - Business Innovation Centres

Scope of the Measure

There are four Business Innovation Centres (BICs) in Ireland at Dublin, Cork, Galway and Limerick. Their objective is to stimulate entrepreneurship and to encourage the introduction of innovative processes into local industry and services by providing

- practical support and advice
- access to sources of seed capital
- access to appropriate resources of State agencies.

Evaluation of the Measure

The external evaluators found that, in general, users view the BICs very positively although there seems to be an impression that marketing and international contacts could be stronger. They also felt that value for money was satisfactory as the measure was a low cost one.

A survey carried out in 1992⁵ found that around 90 per cent of companies who responded viewed the BICs in a positive light. However, in order to carry out a more thorough assessment of the impact of the centres, regular surveys should be conducted to establish a detailed profile of users, their expectations, satisfaction, profitability and suggested improvements. Information on the success and failure rates of companies assisted under the measure would also be useful.

Measure 6 - Niche Studies

Scope of the Measure

This measure funded studies to examine the potential for small scale business development in specific niche areas. Such studies evaluate the structure and capability of a specific sub-sector, highlight its strengths and weaknesses, identify key determinants of competitive success and consider market opportunities for small firms. 22 studies were completed over the period 1990-1993.

Evaluation of the Measure

While the external evaluators stated this was a useful measure they felt that a detailed value for money evaluation was not possible given the available information.

It is difficult to assess the impact of studies as no information is published showing how they influence the promotional programmes of the State agencies. Nor are there any details available of the number of jobs/opportunities identified.

Linking studies to particular activities, and hence measures, would facilitate a review of their impact.

⁵ Fitzpatrick Associates.

Measure 7 - International Services

Scope of the Measure

This measure was aimed at developing indigenous international services/projects, particularly those which are highly skilled and have the potential to add value.

Expenditure on this measure was lower than anticipated because firms in the sector qualified for other State assistance, thereby reducing their recourse to these funds. 3,052 gross jobs were created in the sector which exceeded the original target of 2,000.

Evaluation of the Measure

The external evaluator felt that the scope of this measure needed to be widened as it only included 10 designated service areas comprising companies with at least 50 per cent of their sales sourced in export markets.

It is very difficult, if not impossible, to assess the impact of this measure in isolation, as a full range of measures are available to those firms classed as international service companies.

Review of Medium-sized Industry Measures

Measure 1 - Advisory Support

Scope of the Measure

This measure aimed to assist companies achieve export-based growth, compete successfully internationally and stimulate and support an accelerated growth performance through the following

Company Development Programme

The Company Development Programme (CDP) provided advice and a facilitating service which enabled firms to view their business situation strategically and prepare appropriate business plans. The activity, which was introduced on a pilot basis in 1984, gradually developed from assisting 29 firms in 1989 to assisting 46 firms in 1993. CDP led to the formulation of an approach now used in the bulk of assistance cases.

National Linkages Programme

The National Linkages Programme was designed to help companies capitalise on domestic market opportunities and use the experience and skills gained in this market place as a platform for subsequent export growth. The programme

- provided information briefings to purchasers and suppliers
- facilitated the development of groups/consortia to secure larger contracts
- carried out workshops on international competitiveness and best practice
- encouraged overseas alliances, both technology and market based.

The value of business associated with the National Linkages Programme over the lifetime of the programme was estimated at £287m.

Business Partnerships

Business partnership was seen as a key element in helping firms to overcome the problems associated with relatively small scale when attempting to penetrate international markets.

The aim of the measure was to stimulate an accelerated rate of growth in Irish companies by identifying and promoting potential for alliances with overseas companies. There were 44 business partnerships during the period 1989-1993 and another 28 remain under consideration.

Evaluation of the Measure

The external evaluator felt that the Advisory Support measure, while being quite small in expenditure terms, was very useful. Generally, targets were met within budget. However, while this measure formed a key component of industrial support, the sectoral organisation of agencies makes it difficult to assess, definitively, the value for money of the measure.

Company Development Programme

The Industry Evaluation Unit carried out a review of the effectiveness of the CDP. Its overall conclusion was that CDP played a useful role, especially in addressing the needs of those companies in the 30 - 200 employment range, which find it difficult to engage in strategic analysis and planning.

Progress was measured by recording the number of firms assisted which is inadequate for impact evaluation purposes. While the impact is difficult to assess, since many

firms avail of other measures, its effectiveness could be gauged from surveys of assisted firms.

National Linkages Programme

The only monitoring required by the programme for this measure related to the amount of new business generated annually. It is not possible to adequately assess impact without other basic indicators such as the number and type of linkages achieved and resultant increases in employment, profitability and sales.

These indicators could be derived from monitoring the development and performance of companies involved in the programme.

Business Partnerships

Any evaluation of Business Partnerships would necessarily involve collating performance indicators such as sales, productivity, profitability and employment levels. This needs to be addressed.

Measure 2 - Investment in New Facilities

Scope of the Measure

This measure utilised a range of grant schemes to assist businesses to fund strategic development initiatives. Grants were made available towards the cost of fixed assets, which included site development, buildings, new machinery and equipment.

Under this measure grant assistance of up to 60 per cent of eligible capital assets in designated areas⁶ and 45 per cent in non-designated areas was available towards eligible fixed assets investment in new green field projects. The rate of assistance for expansions of existing projects was limited to 25 per cent.

Priority was to be given to those companies identified as having substantial growth potential.⁷ Assistance could also be given in the form of rent subsidies, interest subsidies and loan guarantees. During the programme 867 projects were assisted under this measure.

⁶ *Areas deemed to be in need of special assistance.*

⁷ *The potential to increase sales by over 20 per cent over a period of three to four years.*

Evaluation of the Measure

The external evaluator noted that this measure was central to employment creation and felt that the measure was well directed and good value for money.

During the life of the programme 28,749 gross jobs were created in medium-sized industry against a target of 28,000. The bulk of these jobs (23,032) are reported by Forbairt as attributable in some degree to this measure. Surveying assisted companies would be a useful exercise in attempting to determine the value of this measure.

Measure 3 - Technology Acquisitions

Scope of the Measure

The objective of this measure was to encourage Irish companies to investigate and acquire new technology or products through licences, patents or know-how agreements with overseas partners. Grants of up to 50 per cent of approved costs were available, subject to a maximum of £250,000 for any project.

This measure did not achieve its objective because of the lack of demand and slow take-up of the available funds. £1.56m was expended assisting 44 companies under this measure against estimated expenditure of £9.33m.

The reasons for the lack of demand were

- industrial development agencies imposed a strict interpretation of what constituted technology acquisition
- the number of companies with management structures and resources necessary to put technology acquisition in place was limited.

Evaluation of the Measure

The only indicators available in respect of this measure were the level of expenditure and number of firms assisted. The external evaluator recommended that the following indicators/information be collected

- profile of users
- proportion of sales arising from agreements
- market share gain.

In addition, non-users should also be surveyed and profiled. The availability of such data would greatly facilitate an assessment of the impact of this measure. Additional

indicators such as product survival rates and growth rate of companies may also be useful in this regard.

Measure 4 - In-Company R&D

Scope of the Measure

The objective of this measure was to stimulate companies to plan and undertake commercially successful product development work. Over the programme's lifetime £25.12m was spent assisting 1,038 companies. Assistance was provided to individual firms towards the cost of setting up permanent R&D facilities and the employment of full-time research staff. Such costs could include building equipment, materials and personnel costs directly related to R&D activities. The maximum grant support available for product development was 50 per cent while an upper limit of 30 per cent applied in the case of process development.

Evaluation of the Measure

The external evaluator noted that this was a sought after measure and continued to be central to the development of medium-sized industry.

The only monitoring undertaken was on the basis of expenditure and the number of companies assisted. In order to carry out an analysis of this measure the external evaluator felt that the following indicators would be relevant

- number of products developed
- volume of sales therefrom
- profitability of companies assisted.

The following performance indicators may also be useful

- number of product development projects undertaken
- market share gained by products developed
- growth rate of companies.

Measure 5 - Equity

Scope of the Measure

This measure, which provided State support in the form of equity, was introduced in 1992. It was aimed at developing businesses capable of competing successfully on international markets.

Firms which had been identified by the industrial development agencies as performing well, or with the potential to perform well, were targeted.

Distributions, including dividends, are retained by the industrial development agency concerned as income. Since its introduction in 1992, £19.11m was spent assisting 132 companies.

Evaluation of the Measure

The external evaluator strongly supported the development of this measure as it was considered critical to the development of a competitive industrial base.

The absence of relevant impact indicators for this measure greatly hinders evaluation of its effectiveness. Examples of basic indicators which could be put in place for this measure include

- number of jobs created
- return on investment
- increase in sales/profits/exports
- growth rate of companies.

The significance of the measure to assisted companies could also be determined by a survey approach.

Measure 6 - Analyses/Studies

Scope of the Measure

The objective of this measure was to identify appropriate sectoral development strategies and facilitate a better understanding of market opportunities in Ireland, the EU and external markets.

A total of 51 studies, which examined the structure and capabilities of various sectors, were completed. The key sectors studied were engineering, electronics, high-fashion clothing, software, specialised pharmaceuticals and healthcare.

Evaluation of the Measure

The only monitoring undertaken was on the basis of study costs and the number of studies completed.

The external evaluator felt that, while this was a useful measure, a definitive value for money assessment would be difficult given the available information and recommended

- a more focused approach with studies planned for each main sector
- an annual review of studies be published
- a cost per study indicator be introduced which would take account of the particular type of study being completed and its completion time.

Appendix G

Marketing Administration and Evaluation

Administrative Structure

Overall responsibility for the programme lay with the Department of Enterprise and Employment. This Department chaired and provided the secretariat for a monitoring committee which reviewed progress under the programme.

The Department of Tourism and Trade had responsibility for marketing policy and overseeing the measures. Public funds available to An Bord Tráchtála (ABT), whether sourced from the Irish Exchequer or the ERDF, are provided through the Department of Tourism and Trade.

At the inception of the programme in 1989, Córas Tráchtála (CTT) was responsible for seven measures which related to export markets. The Irish Goods Council (IGC) was responsible for four further measures which related to the Irish domestic market. In 1991, CTT and IGC were merged to form ABT. As a result, ABT assumed responsibility for all the measures.

The implementation of the measures by ABT involved an increase in administration costs as can be seen from Table G.1. However, such costs increased by a modest amount relative to gross expenditure on marketing support.

Table G.1
ABT administration performance 1988-1993^a

| Year | Gross spend | Receipts private sector | Net spend | Overheads / administration | Overheads / administration as % of gross spend |
|------|----------------|-------------------------------|--------------|-------------------------------|---|
| | £m | £m | £m | £m | |
| 1988 | 25.5 | 3.7 | 21.8 | 14.9 | 58.3 |
| 1989 | 26.5 | 4.3 | 22.1 | 15.2 | 57.6 |
| 1990 | 32.3 | 5.6 | 26.8 | 15.8 | 49.0 |
| 1991 | 36.3 | 5.3 | 31.0 | 15.7 | 43.1 |
| 1992 | 40.0 | 5.9 | 34.1 | 17.4 | 43.6 |
| 1993 | 45.3 | 7.4 | 37.9 | 19.4 | 42.9 |

Note: ^a In relation to the period 1988 to 1990 these figures are derived by adding together figures from the Annual Accounts of Córas Tráchtála and the Irish Goods Council.

Source: An Bord Tráchtála.

Cost Recovery

The rate of recovery by measure in 1993 is shown in Table G.2.

Table G.2
Marketing - recovery by measure in 1993

| Measure | Expenditure £m | Recovery £m | Recovery % |
|----------------------------------|-------------------|----------------|---------------|
| 1 Market Development | 12.8 | 1.1 | 8.6 |
| 2 Marketplace Services | 5.4 | 1.0 | 18.4 |
| 3 Market Information/Research | 5.5 | 0.1 | 1.0 |
| 4 Design and Product Development | 0.8 | 0.1 | 16.0 |
| 5 Promotion | 6.1 | 1.0 | 15.8 |
| 6 Regional Markets/International | 5.3 | 0.5 | 9.8 |
| 7 Targeted Marketing Consultancy | 6.6 | 2.1 | 32.3 |

Source: An Bord Tráchtála.

The highest level of recovery was achieved by the Targeted Marketing Consultancy measure (32 per cent). Recovery under the remaining measures ranged between 1 per cent and 18 per cent.

Grants for Marketing

Currently there are two grant categories. Marketing Activities grants have a maximum value of £10,000 per company per annum. Targeted Marketing Consultancy (TMC) grants are generally much larger. All TMC applications come before an ABT Grants Committee. As well as ABT personnel, this committee has representatives of the Department of Tourism and Trade, Forbairt and IDA Ireland.

The procedures employed in the selection and appraisal of projects were generally satisfactory. While information exchanges between ABT and other industrial development agencies occurred at grant approval stage, there appeared to be scope for improvement. A common online system between relevant departments and agencies would assist decision-making by ABT's project executives when assessing grant applications. The provision of such a system is being considered in the context of a review of the industrial database which has been commissioned by the Department of Enterprise and Employment and Forfás.

Management Information

All the major reports on industrial policy since 1980 recognised the need for Departments to have appropriate information on computer media to enable them to assess the effectiveness of industry support programmes.

The first phase of a Departmental industrial database was established in 1989/90. While data from the IDA, SFADCo and Udarás na Gaeltachta were successfully integrated, data from ABT and Eolas (now part of Forbairt) have not yet been validated by ABT and the Department of Enterprise and Employment.

The Department of Enterprise and Employment has engaged consultants to review the industrial database and recommend how it might be developed. The development of the database, including the incorporation of relevant data from all agencies, would facilitate the assessment of marketing measures.

Possible Approach to Future Evaluation

Impact at Firm Level

Two types of measure can be distinguished

- The first type of measure is largely concerned with providing market information. The Market Information/Research and Marketplace Services measures fall into this category. These may not give rise directly to sales.
- The second type of measure, while having an information component, is largely concerned with providing market access or improving marketing capacity. Such measures could be expected to lead to sales in the short-term.

Impact of the measures on firms could be gauged by examining

- export performance
- user perceptions of the measure
- indicators of independent marketing capacity.

Export Performance

ABT's Annual Exporter Survey provides a significant amount of information on export performance. However, the export sales of firms which benefit from ABT assistance need to be analysed. Export performance can be due to many different factors, including the characteristics of the firms themselves, such as sector, size and

ownership. Also relevant are the financial and non-financial inputs from other State agencies. Statistical analysis is required to establish the extent to which export performance is related to the marketing measures. This kind of analysis has not been carried out for many years.

User Perceptions

In order for measures to influence firms' marketing activities, these firms must view the measures as beneficial. User perceptions of all measures should therefore form a part of impact evaluation. This is especially the case for those measures which may not lead to export sales in the short term, or may have an impact only in conjunction with other measures.

ABT has commissioned a comprehensive 'Customer Care' survey of all firms who avail of its services in order to establish accurate profiles of users and to ascertain their attitudes to the supports provided.

Independent Marketing Capacity

An important indicator of the longer term impact of the measures is the extent to which assisted firms develop marketing capacity which is not dependent on further State support. The development of an independent marketing capacity is an indication of the ultimate success of State support measures.

Other Evaluation Options

The quantification of export performance is a fundamental prerequisite to enable evaluation to occur. However, an even more informative analysis can be achieved if other quantitative information is gathered or derived. Consideration should be given to the compilation of the following indicators

- *Export propensity*
It would be expected that exports as a percentage of sales for assisted firms would improve over time. This would be easy to monitor as exports and sales data are collected by ABT in its Annual Exporter Survey.
- *Export market diversification*
The extent to which assisted firms gain a foothold in and increase their exports to new markets, without losing sales in traditional export markets, would be another indicator of improving marketing capability. Again, the raw data are contained in the ABT Annual Exporter Survey.

- *Change of market share in 'served market'*
This is an important predictor of business and employment growth.¹ In this approach the identification of 'served market' would be an important and complex issue for each firm. Accordingly, this concept might be investigated by analysis of a sample of exporters.
- *Profitability*
This would be the ultimate test of marketing capability and strength. While ABT data on profitability are limited (largely to Measure 7 companies) profitability data are held for many medium/large firms in a Department of Enterprise and Employment industrial database.
- *Employment*
A good deal is known about the relationship between output and employment by sector from the Census of Industrial Production, published by the Central Statistics Office. The extent to which increased exports by assisted firms were associated with increased employment would be worthy of investigation.

There is merit also in a categorisation of assisted firms on the basis of ownership. While aid is made available to indigenous firms, defined by ABT as firms whose marketing control is located in Ireland, it would be useful to be in a position to analyse performance based on ownership also. This is particularly important in view of the fact that the marketing performance of foreign owned companies with marketing control in Ireland was found in a 1986 study² to be substantially better than that of Irish owned companies.

Review of the Individual Marketing Measures

Measure 1 - Market Development

Scope of the Measure

The objective of this measure was to develop international markets and the marketing performance of Irish SMEs.

¹ *Building Ireland's Business: Perspectives from PIMS*, Charles Carroll, IMI, 1985.

² *Review of the objectives and activities of Córas Tráchtála*, Department of Industry and Commerce, 1986.

£23.7m was spent on the following

- Sectoral Marketing Programmes which identified areas of competitive strength in Irish industry and assisted industry in pursuing the opportunities identified.
- Group Marketing which aggregated the resources of a group of companies to achieve economies of scale in areas such as office facilities, research and promotion.
- The Company Development Programme which was operated in conjunction with other organisations, for example, Forbairt, to provide strategic and marketing supports to companies.³

Evaluation of the Measure

Apart from sectoral sales growth it would appear that only activity indicators (such as the number of participating firms) were developed. This is unsatisfactory, particularly given the scale of the expenditure under this measure. There would appear to have been little information available to monitoring departments and the Industry Monitoring Committee which would help identify the firms which benefited most, the sectors in which they were located and the markets which they targeted. Activity indicators should be supplemented by an assessment of the export sales growth performance of participating firms and a survey of user perceptions of the service.

Measure 2 - Marketplace Services

Scope of the Measure

The objective of this measure was to provide marketing and operational assistance (through ABT's overseas network) to Irish firms which would otherwise not be able to operate effectively in overseas markets because of lack of experience and the scale of operations.

£8.9m was spent on a number of services to assist Irish companies including market introductions, field assistance and the organisation of visas for exporters. A London Business Centre, which provided office facilities for exporters visiting London, was also funded under this measure.

³ *ABT activity under the Company Development Programme was insignificant. However, Measure 7, Targeted Marketing Consultancy, might be regarded as ABT's main 'Company Development' measure.*

Evaluation of the Measure

Only output indicators, for example the number of services and visas, were available. This needs to be supplemented by

- a profile of users (by sector, market, firm size, etc.)
- a survey indicating user perceptions of the services provided.

While some immediate impact on export sales might be expected (via introductions to agents for example), the measure was largely concentrated on providing market information, which might or might not lead to a decision on the part of the firm to export. Accordingly, quantification of resultant export sales was probably less relevant.

Measure 3 - Market Information and Research

Scope of the Measure

The objective of this measure was to ensure that Irish companies had the knowledge with which to make well-informed market and marketing decisions.

The main activity funded was an information centre in Dublin. This centre offered the following services

- trade/visa/travel information - providing information on items such as tariff barriers, documentation required and visa requirements for entry to foreign countries
- market information - by holding a stock of market research reports and current marketing journals as well as access to a range of on-line databases
- carrying out and commissioning market research.

The centre was also in charge of the production and distribution of the Irish Exporters Handbook. £15.6m was spent on these services.

Evaluation of the Measure

The external evaluator recommended that ABT should

- compile an accurate profile of user groups of the information centre

- track the impact of publications on target sectors to ensure that the publications are giving value for money
- charge for trade enquiries and database searches where appropriate
- co-ordinate information services with universities, the Irish Management Institute and other related bodies to avoid duplication.

Measure 4 - Design and Product Development

Scope of the Measure

The objective of this measure was to assist Irish SMEs in the identification, development and promotion of new and adapted products.

£3.5m was spent on the following services to companies

- Individual Company Counselling where ABT staff assessed whether improvements could be made in product design, packaging and promotional literature.
- Design Intelligence Workshops which assisted exporting companies in keeping up to date with current market trends and developments.
- Group Development Projects where groups of companies gathered design and marketing information on a shared cost basis.
- Advanced Product Programmes to assist in the preparation of new product concepts for identified market opportunities. These product concepts were developed by consultants for market or consumer research and testing.

Evaluation of the Measure

A survey of user perceptions of the Advanced Products Programme was carried out.⁴ This survey reported quite a high level of user satisfaction and significant product development activity in the small sample of firms surveyed. The external evaluator also reported favourably on the measure.

⁴ *Survey of the Effectiveness of the Specialised Advice Scheme (Advanced Products Programme) operated by An Bord Tráchtála, Crotty and Associates, 1993.*

Measure 5 - Promotions

Scope of the Measure

The objective of this measure was to organise export marketing activities on a group basis, thereby giving Irish SMEs a market profile which individually they could not hope to achieve.

To achieve the objectives of the measure ABT organised the following events on which £16.4m was spent

- Trade Fairs
- Outward Buyer (Trade) Missions
- Inward Buyer Missions
- Seminars.

Evaluation of the Measure

The external evaluator concluded that ABT was delivering the various activities under the measure efficiently. However, available indicators only related to the number of trade fairs and buyer missions that took place and there was no follow-up information on the effectiveness of these activities. The evaluator recommended that ABT develop a framework for evaluating events on an on-going basis.

A detailed evaluation of the measure was carried out in 1994.⁵ This reported a high level of satisfaction on the part of programme participants. The evaluation highlighted the importance of tracking the exporting performance of participating firms and the need to develop adequate information systems.

As these services were focused on markets and firms with potential, a direct return in terms of export sales should be expected. Output indicators were available (number of trade fairs, trade missions etc.) and participants were surveyed. These indicators should be supplemented by an assessment of export sales performance of participating firms.

Measure 6 - Regional Markets/International Partnerships

Scope of the Measure

The objective of this measure was to increase awareness of Irish products and exports in selected regions in Europe and to develop linkages between Irish SMEs and firms

⁵ *Evaluation of Group Promotions Programme, Goodbody Economic Consultants, 1994.*

from other countries with a view to developing opportunities in third country markets.

£16.6m was applied to the following market development activities

- establishment of institutional partnerships within the targeted markets in Europe
- an awareness campaign of Irish products and companies which typically included press briefings, conferences and information stands at trade fairs
- business introductions to develop business links between Irish and foreign firms
- business development through exhibitions and identification of opportunities
- representation through support services and marketplace services once business links have been established.

Targeted regions were selected on the basis of their wealth and growth potential. They included Catalonia, Lombardy, Baden-Wurtemberg, Rhone-Alpes, Portugal, Benelux and Saxony.

Evaluation of the Measure

An ABT review of the Regional Markets/International Partnerships measure⁶ concluded that valuable inter-regional links and increased exports had been achieved and that there was a high level of support for the measure among Irish SMEs. However, the level of detailed knowledge of Irish companies in EU markets needed to be improved.

The external evaluator welcomed that review but stressed that it was merely a statement of affairs rather than a critical evaluation. It was recommended that a detailed evaluation by ABT should examine the effectiveness of the measure as to the appropriateness of the selection criteria and the strength and weakness of the five implementation phases adopted for the measure.

The last component of the stated objective 'to develop linkages between Irish SMEs and firms from other countries with a view to developing exports to third country markets' was very ambitious and was not achieved to any significant extent. The main objective, in practice, was to increase exports of Irish products in selected markets and further business links. Accordingly, the measure was really a

⁶ *Evaluation of Regional Markets/International Partnerships, ABT, 1993.*

'concentrated amalgam' of activities which could, in principle, be promoted by any ABT overseas office.

Measure 7 - Targeted Marketing Consultancy

Scope of the Measure

The objective of this measure was to assist Irish SMEs in developing overseas marketing capability in new markets.

To achieve the objectives of the measure ABT provided financial assistance to firms to draw up and implement market development plans for export markets.

Participating firms increased sales by £284m up to 31 December 1992.

Evaluation of the Measure

The evaluators noted that

- only two out of every three plans proceeded
- small companies had difficulty meeting the eligibility criteria which required them to invest at least £150,000 over two years.

Remedial action was taken by reducing the minimum investment level to £60,000 and encouraging thorough appraisal of targeted markets by providing firms with increased consultancy assistance.

Impact was assessed by analysing incremental sales by participating firms.

Appendix H

Water and Sanitary Services Administration and Evaluation

Project Administration

Water and sanitary services works are carried out by 88 local authorities (34 county councils/county boroughs and 54 borough/urban district councils) under the general supervision of the Minister for the Environment.

Proposals for public schemes originate with individual local authorities who send preliminary reports to the Department of the Environment. In general, most elements of water and sewerage schemes are designed to meet anticipated demand over the following twenty years.

Funding and Cost Control

The full cost of approved schemes is made available to local authorities by way of capital grants from the Exchequer. Where a particular industry benefits from water and sanitary services investment that industry is expected to make a contribution covering at least part of the capital and/or running costs involved.

The procedure for monitoring the cost of schemes requires a breakdown of estimates and actual costs under the specific elements of works on the scheme. Where there are cost increases written explanations are required from the local authorities. Specific details of cost overruns are sought and grant payments are withheld until satisfactory explanations are received.

Programme Review

In May 1993 evaluators¹ were commissioned by the Department of the Environment to carry out a study of investment in water and sanitary services funded from the programme and a related ERDF programme, ENVIREG.²

¹ *Fitzpatrick Associates.*

² *ENVIREG is an EU initiative covering the protection of the environment and the promotion of sustainable development. The overall aim of the Irish ENVIREG programme was to improve and protect the environment and to foster economic development.*

The study had two main objectives

- to develop a project appraisal system
- to carry out an economic evaluation of the programme.

Project Appraisal System

The main recommendations of the evaluators in regard to the appraisal of projects were

- economic appraisal of projects should be done at the earliest possible stage
- information upon which to base such appraisals needs to be accumulated by local authorities
- objectives for each proposed project should be clearly specified
- the purpose of increased capacity needs to be stated
- the number of beneficiaries should be specified
- the impact upon the stock of serviced land should be specified and take into account existing stock so as to avoid over-capacity
- an attempt should be made to specify impact on industry, in particular, the number and type of firms expected to use the increased capacity
- appraisal methods should be standardised
- projects should be ranked using a defined methodology.

The evaluators recommended a methodology described as Multi-Criteria Analysis (MCA) which, following a pilot study, they found could provide a useful and practical framework for ranking water and sanitary services projects. However, a number of problems were evident

- the methodology is constrained by existing data deficiencies
- it can only apply within categories of water and sanitary services projects and would not apply between them
- it is not appropriate for comparison of water and sanitary services projects with other alternative uses of EU funding.

At August 1995 the applicability of this system was still being considered by the EU. The Department of the Environment have concluded that the use of MCA is not considered by the EU as a valuable way of ranking projects. The Department would envisage its application only as a guide to initial prioritisation of projects. A method which combines cost, financial benefits and other effects is now being proposed.

Programme Evaluation

The evaluation was based on financial progress at the end of September 1993 and physical progress at the end of June 1993. We have reviewed the outcome of that evaluation and, in addition, the following paragraphs include any updating of facts as appropriate.

The programme was examined under the following headings

- Financial outturn
- Physical progress and capacity
- Environmental improvements
- Economic impact.

Financial Outturn

Actual expenditure for the first four years of the programme was on average £7m a year above the original forecast level.

The evaluators noted that

- the programme comprised the following scheme types
 - 75 per cent of schemes cost £3m or less
 - the 5 largest schemes accounted for £61m or 24 per cent of expenditure
- departmental financial data was deficient in that the cause of overspending on projects could not be readily isolated.³

Physical Progress and Capacity

The evaluators did not relate progress at June 1993 to original targets nor did they comment on variations in expected outturn over the period of the programme.

The reported programme output altered considerably after the date of the examination by the evaluators (June 1993). In fact, the reported expected outturn varied significantly over the programme's lifetime. It is not, however, possible to isolate the cause of this variation for the reasons set out in paragraphs 7.10 to 7.12.

³ *The Department of the Environment stated that this resulted at least in part from the fact that final accounts on schemes are not normally available until 2 to 3 years after the scheme has been substantially completed.*

It was estimated that projects funded from the programme would increase the treatment of raw water capacity by approximately 13 per cent and supply an additional 380,000 m³/day, while providing water storage capacity of around 87,000 m³/day.

Under the sewerage measures, investment at project level would result in a total waste water collection capacity of approximately 451,500 m³/day, an estimated treatment capacity of BOD⁴ 14.35 tonnes/day and has provided infrastructure to handle flood flows of approximately 54 million m³/day.

Details were not provided on the projected capacity increase which the investment could have been expected to achieve.

While an overall estimate of the total national stock of existing sewage capacity was not available at the commencement of the programme, with the result that the percentage increase in sewage capacity could not be calculated by the evaluator, the following action has been taken to remedy this deficiency

- The Environmental Research Unit (ERU) has carried out a needs analysis in respect of water and sewerage infrastructure on a county by county basis. This resulted in the compilation of an inventory of existing services.
- A sewage sludge inventory was compiled in 1993 following a survey of all local authorities with responsibility for waste water collection, treatment and disposal.⁵

The evaluators pointed out the need for collection and assimilation of capacity data in a standardised format and at a central location. Ultimately such reporting should give a better basis for assessing programme output than the physical measures set out in the programme.

The evaluators also attempted to quantify programme output in terms of additional capacity provided to industrial sites. While this exercise was possible in theory, it could not be completed due to data deficiencies. In particular the relevant figures were not available from the industrial development agencies.

The evaluators noted that most land in the ownership of industrial development agencies consisted of unserviced sites lacking water supply and sewerage connection.

⁴ BOD (Biochemical Oxygen Demand) is the quantity of oxygen removed from a water sample due to bacterial action over a specified time period.

⁵ A Strategy Study on Options for the Treatment and Disposal of Sewage Sludge in Ireland, Weston FTA Ltd., November 1993.

No data existed on medium and small sites and only limited data on larger sites which could be developed to serve food processing or fine chemical activities.

From the information available the evaluators noted an apparent shortage of suitable sites for large chemical or food processing plants. In order to attract such industries critical factors are the provision of large quantities of water and the capacity of the local sewerage system.

The evaluators concluded that there is a need to assess the additional volume of land that has been serviced and the additional capacity that has been provided by waste water and water treatment plants under the programme. They also noted that in most cases it is too early to assess if advance provision of sewerage and water supply capacity has led to economic development.

In relation to the provision of water and sanitary services to industrial sites the Department of the Environment stated that it is always ready to consider funding schemes which would assist the location of major industries.

Environmental Improvements

The water quality data to 1990⁶ suggests that the quality of drinking water over the period 1989-1990 was satisfactory and the evaluators attribute some reductions in the incidence of coliform, iron fluoride and turbidity in Irish drinking water to expenditure under the programme.

The increase in the number of monitored beaches with 'Blue Flag' awards⁷ indicates that the programme has contributed to the improvement of beach quality.

The evaluators note, however, that environment related data are constrained by difficulties in establishing a chain of causation between investment and impact.

The evaluators also stated that there are gaps in the range, timeliness and quality of available data on environmental indicators. These data limitations make it difficult to assess the impact of expenditure under the programme on the environment.

⁶ Compiled by the ERU.

⁷ Awarded annually by a European jury.

Economic Impact

While economic benefits are clearly present it is extremely difficult to isolate precisely the contribution that improved sanitary and water supplies make to employment growth, industrial development and tourism.

The evaluation found that the programme would contribute to economic welfare as follows

- supporting jobs
- facilitating the marketing of tourism
- enhancing Ireland's 'green' image which is a source of competitive advantage.

These effects were not quantified and the evaluators stressed the need for more research on the employment effects of such spending.

Economic growth occurred in the industrial sectors which are heavy users of water and sanitary services ('wet' industries)^{*} over the lifetime of the programme. These industries accounted for just over one third of gross industrial output in 1992 and all showed growth over the period to 1992. While it is not possible to directly attribute growth in this sector to the programme, the evaluation concluded that it was likely that the investment assisted this growth and reduced or avoided infrastructural constraints. It also found, however, that there did not appear to be a strong link between the geographic location of foreign owned companies in Ireland and new investment in water and sanitary infrastructure. However, this may be partly due to the fact that the impact of relatively recent and on-going construction has not had time to come to fruition.

Difficulty of Economic Evaluation

There are broadly two approaches to measuring the economic impacts of water/sanitary investments

- establishing the relationships between investment and output and employment
- assessing the benefits of investments to users.

Work on the methodology in these areas is at an early stage and is very much in the area of research. Accordingly, economic evaluation does not appear to be a practical

^{*} 'Wet' industries are slaughtering and preserving of meat, the three chemical sub-sectors (basic industrial, pharmaceuticals and other chemicals), manufacture of dairy products, the wool industry and other textiles.

course in the short-term particularly in view of some of the features of water and sanitary services investment which render an assessment of their economic impact difficult. These include

- Water and sanitary services investments are designed to cater for demands which may not arise for some time into the future. Examination of the current demand for facilities which have recently been subject to investment is not likely, therefore, to be very revealing.
- To some extent, capacity is provided to cater for demand which is 'lumpy' in nature, and which could arise at any time throughout the planning period, for instance, on the arrival of a 'wet' industry.
- Individual projects may form only part of an integrated investment which may take place over an extended time period and which does not give rise to economic benefits in the short-term.
- To the extent that the investments have an environmental/health objective, their economic impact is indirect and may take effect only after some time has elapsed.

These considerations suggest that examination of the economic impact of investments within the time frame of the programme would not be fruitful and that a longer time perspective is required.

Assessment of Impacts

In view of the difficulty in carrying out economic evaluation, the best prospect for meaningful effectiveness evaluation appears to lie in assessing achievement by means of intermediate indicators. These can be used both to monitor the progress of particular investments and ultimately to inform a view as to the economic return from them. Applicable indicators are considered below.

Water Supply

Water supply effectiveness can be measured under three headings

- the reliability of the water supply
- the quality of the water supply
- the quantity used.

This suggests that the impact of investment in this area could be gauged by

- logging interruptions to supply before and after investment
- establishing the change in quality of water supplies before and after investment
- identifying the extent to which anticipated demand for water has in fact arisen and the extent to which this has occurred because development constraints have been relaxed.

Logging interruptions to supply could be achieved simply by requiring local authorities to introduce such an information system.

Water quality is currently assessed by an ongoing sample survey conducted by the Environmental Protection Agency (EPA), which assesses the extent to which the maximum admissible concentrations of coliforms, aluminium and other such substances laid down in the Drinking Water Directive (80/778/EEC) are breached. There would be a need to extend this survey to include local areas where water supply investment projects are proposed.

Sewerage Infrastructure

Key indicators of the effectiveness of sewerage treatment are

- the quantity of effluent treated
- the quality of the receiving waters.

The impact of investment in sanitary services could, therefore, be assessed by

- identifying the extent to which anticipated demand has in fact arisen and the extent to which this has occurred because of the relaxation of development constraints
- establishing the quality of receiving waters before and after project implementation.

While the 12,700 kms of river/stream channel currently subject to water quality survey includes all the main river channel stretches in the State, the surveying of estuarine and coastal waters which receive over 80 per cent of the total waste load discharged from the domestic and industrial sectors is more limited.

The Department of the Environment has informed us that the EPA, local authorities and the Department of the Marine carry out monitoring of estuaries and other coastal waters, especially in areas where there is a risk to water quality. The EPA is now

building on the work to date by preparing a national monitoring programme for estuaries and coastal waters.

Technical Assistance

The technical assistance allocation under the programme was only spent to the extent of 14 per cent of the original provision of £440,000. The balance was applied to projects. The Department of the Environment stated that the allocation had been earmarked for a computer based recording and reporting system which was delayed due to protracted negotiations with the EU Commission.