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The Mid-Term Evaluation  
of the  
National Development Plan  
and  
Community Support  
Framework  
for Ireland,  
2000 to 2006

Edited by

John Fitz Gerald, Colm McCarthy,  
Edgar Morgenroth and Philip O'Connell

**Final Report to the Department of Finance**

by

The Economic and Social Research Institute  
in association with  
DKM Economic Consultants  
ESB International  
Gesellschaft für Finanz- und Regionalanalysen  
(GEFRA)

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# SUMMARY AND RECOMMENDATIONS

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## Overview

This is the Final Report on the Mid-Term Evaluation of the National Development Plan (NDP) and the Community Support Framework (CSF) for Ireland for the period 2000-2006. The Report was commissioned by the NDP/CSF Evaluation unit on behalf of the Department of Finance and the EU Commission. The purpose of the mid-term evaluation process is to provide an independent analysis of the Operational Programmes (OPs) of the NDP/CSF and the developments in the external environment since the current plan started in 2000. On the basis of this analysis recommendations are made on how the programmes can be better targeted over the rest of the planning period through a reallocation of funding.

The National Development Plan (NDP) is the government's investment programme for the period 2000 to 2006. It covers most major investment by the State in physical capital (buildings and equipment) as well as a significant part of the State's investment in education and training and research and development. The Community Support Framework (CSF) is the subset of Measures within the NDP, which are co-funded by the EU Structural Funds. The CSF covers all the EU Structural Fund payments to Ireland but, of course, excludes schemes funded as part of the Common Agricultural Policy (CAP).

While the CSF funded investment is still substantial, the bulk of the expenditure under the NDP is not co-funded by the EU. For the first three years of the NDP 2000-2002 approximately 14 per cent of the total expenditure of €19.8 billion was accounted for by the CSF, with the EU contribution amounting to almost €1.7 billion or around 8.6 per cent of total NDP expenditure. The expenditure under the NDP over the three years averaged around 6.8 per cent of GNP a year, of which the direct EU contribution averaged 0.6 per cent of GNP. By EU standards this is a very substantial programme of public investment in both physical and human capital.

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## Appropriateness of the NDP/CSF Strategy

To date the NDP/CSF has made significant progress towards its objectives of "continuing sustainable national economic and employment growth" and "consolidating and improving Ireland's economic competitiveness". The NDP/CSF has made a short-term contribution to sustaining activity in the domestic economy and it

will have a substantial sustainable positive effect on competitiveness and the productive capacity of the economy in the long term.

While there have been significant changes in the broad economic environment since the NDP/CSF was formulated in 1999, the overall strategy underlying the plan is as valid as it was when it was first drawn up. The deficit in key types of infrastructure was apparent by the end of the last decade and it was clear at the time that it would take at least a decade to deal adequately with this problem. The research in this report highlights the importance of tackling this deficit in physical infrastructure as a stepping-stone to realising the economy's full economic potential. The importance of continuing investment in human capital had long been recognised and this Priority was also integral to the current plan. Even when the medium-term forecasts, on which this Evaluation is based, are subjected to sensitivity tests, this does not change the conclusions. A "no regrets" policy would still make tackling the infrastructural constraint a key Priority whatever is likely to happen to economic growth over the rest of the decade.

Both the world and the Irish economy have seen a significant slowdown since 2000. However, this reduction in the pace of activity has not provided relief from the pressure on infrastructure. In spite of the slowdown, the period since the National Development Plan was drawn up has also seen a high rate of inflation in both wage rates, in the cost of housing and in other types of building and construction. The problem of inflation, and the capacity constraints in the building and construction sector, especially housing, require special attention. The resulting disimprovement in the competitive position of the economy has been more significant than was envisaged at the time the plan was drawn up. As a result, it is more important than ever to tackle the causes of this deterioration, both through the NDP/CSF itself, and also through adopting other appropriate Policy Measures.

The analysis of the medium-term prospects for the Irish economy suggests that there will be significant differences in the prospects for growth across the different sectors of the economy. The major contributor to growth in employment, including skilled employment, will be the market services sector. The high technology manufacturing sector, while growing more slowly than over the last decade, will still make an important contribution. However, the prospects for output growth in the agriculture, fishing and food processing sectors will be limited. The loss of competitiveness will continue to affect prospects for the tourism sector. The building and construction sector is close to an output peak so that output and employment will tend to decline over the coming decade, in spite of continuing public investment. All of this has implications for the likely return on state support for investment in these sectors, as well as for training and education. These conclusions have influenced the recommendations in the Report on the reallocation of resources within the NDP/CSF.

Unemployment has risen somewhat since 2001 and may continue to rise into 2004. However, given the flexibility of the



labour market, with the assistance of appropriate policies under the NDP/CSF, a period of more rapid growth after 2005 should restore full employment by the end of the decade. Accordingly, it will be important to ensure the delivery, through the NDP/CSF, of effective interventions to prevent the short-term unemployed becoming the long-term unemployed of the future.

The rapid growth in the economy over a sustained period has given rise to a major increase in greenhouse gas emissions, pushing Ireland well above the limits set as part of the EU agreement on combating global warming. Tackling this problem will require supplementary Policy Measures outside the NDP/CSF, particularly the introduction of EU emissions trading and the introduction of a carbon tax, if Ireland is to meet its emissions targets by 2008-2012.

## **FINANCING**

If the medium-term forecasts are realised and fiscal policy follows the path outlined in the *Stability Programme*, over the period to 2006 finance should not be the major constraint. If a project is worth doing, and if it can be delivered efficiently without adding to inflationary pressures, it should be financed; if the rate of return on a project (allowing for risk) is greater than the cost of borrowing then it could be funded by taxation or by borrowing. The choice of whether it should be financed by borrowing, or else by taxation, is one that concerns the possible transfer of burdens between the generations. In the unlikely event that the public finances prove consistently weaker in 2004 and 2005 than anticipated, and that the ability to borrow is constrained by the Stability and Growth Pact (SGP), it would be better to raise taxation or cut current expenditure to pay for the investment rather than to leave a valuable project undone. By funding the bulk of investment in infrastructure out of taxation over the last decade the State built up physical assets without incurring offsetting financial liabilities. When the infrastructural programme is largely completed, some time in the next decade, the State will then have a large asset that will continue to provide services for future generations.

## **CAPACITY IN BUILDING AND CONSTRUCTION**

Inflation in the civil engineering sector appears to have been brought under control and there is scope for some increase in investment in non-housing infrastructure. However, it will be important over the remainder of the NDP period to ensure that similar inflationary pressures to those of 1999-2001 do not arise again and, if possible, that prices actually fall to help restore competitiveness.

By contrast, capacity constraints are still very apparent in the housing sector, as evidenced by the fact that prices are still rising. The inflation in the housing sector can have knock-on effects elsewhere in the building and construction sector, as well as impacting on the overall competitiveness of the economy. Under these circumstances it is important to reduce demand pressures in

the housing market to make space for the investment under the NDP.

On the supply side of the building and construction sector the Government is planning to further improve the planning process for major infrastructural projects. Such action will be important if the State is to get value for money over the rest of the planning period. Whether it will be sufficient to deal with the problem of delays due to recourse to the courts remains to be seen. In addition, there is a need to tackle the problems concerning the inflation of land prices through taxation.

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### **Macro- Economic Impact**

The macro-economic returns from investment under the CSF/NDP are significantly higher than previously estimated. This reinforces the urgency of tackling the infrastructural deficit over the coming decade. The analysis undertaken with a series of models indicates that:

- The returns to investment in physical infrastructure, especially roads, are very substantial. They were higher in 2000 than at any time in the recent past, reflecting the very serious infrastructural deficit which had accumulated over the previous fifteen years.
- The NDP expenditure over the period 2000-2002 raised the level of GNP by over 7 per cent above what it would have been in 2002. More significant in the long run, the level of GNP will be around 3 per cent higher than it would otherwise have been as a result of the supply side effects of the expenditure under the NDP between 2000 and 2002. This represents a real rate of return on the NDP of around 14 per cent. The beneficial long-term effects from the NDP/CSF process are greater than was estimated in previous evaluations.
- Because a higher share of CSF expenditure goes on infrastructure and key human capital interventions than is the case for the NDP as a whole, the rate of return, at around 18 per cent, has been higher than for the NDP. Taken on its own, the long-run impact of the CSF (to the end of 2002) on GNP is around 0.7 per cent.
- The analysis also highlights the major pressures which the investment programme is placing on the building and construction sector. Over the period 2000 to 2002, with the building sector already at capacity, the increased investment contributed significantly to inflation in the sector. This points to the importance of managing demand in the sector over the period to 2006.

**Table 1: Recommendations on the Allocations for the CSF/NDP, 2004, €million**

	CSF 2002	CSF 2003	CSF 2004	NDP 2002	NDP 2003	NDP 2004
	Expend- iture	Commit- ments	Recomm- ended Commitment	Expend- iture	Estimates	Recomm- ended
<b>Total NDP envelope</b>	<b>1,219</b>	<b>1,025</b>	<b>582</b>	<b>7,702</b>	<b>7,328</b>	<b>7,540</b>
<b>Economic &amp; Social Infrastructure OP</b>	<b>683</b>	<b>426</b>	<b>258</b>	<b>4,239</b>	<b>3,698</b>	<b>3,967</b>
National Roads	318	258	148	1,084	1,270	1,445
Public Transport	203	58	60	524	441	500
Environmental Infrastructure	160	92	50	504	382	390
Sustainable Energy	1	17	0	9	13	13
Housing*	0	0	0	1,615	1,081	1,142
Health Facilities	0	0	0	504	510	475
Technical Assistance	1	1	0	1	0	2
<b>Employment and Human Resources Development OP</b>	<b>179</b>	<b>201</b>	<b>95</b>	<b>2,099</b>	<b>2,045</b>	<b>2,056</b>
Employability	108	119	50	1,131	1,030	1,040
Entrepreneurship	25	40	20	40	49	60
Adaptability	44	39	25	422	470	500
Equality	1	2	0	2	6	6
Other Measures	1	1	0	504	489	450
<b>Productive Sector OP</b>	<b>73</b>	<b>80</b>	<b>49</b>	<b>468</b>	<b>527</b>	<b>451</b>
RTDI	71	69	49	196	232	235
Industry	0	0	0	235	240	185
Marketing	0	0	0	34	47	30
Sea Fisheries	2	12	0	2	8	0
Technical Assistance	0	0	0	0	0	1
<b>Regional OPs</b>	<b>271</b>	<b>287</b>	<b>148</b>	<b>882</b>	<b>1,031</b>	<b>1,035</b>
Local Infrastructure	153	134	148	563	662	730
Local Enterprise	67	62	0	91	81	40
Agriculture & Rural Development	16	33	0	41	54	30
Social Inclusion & Childcare	34	58	0	188	235	235
<b>Peace OP</b>	<b>11</b>	<b>29</b>	<b>29</b>	<b>11</b>	<b>27</b>	<b>27</b>
<b>Technical Assistance OP</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>

*Notes:* The NDP figures include the expenditure under the CSF, as well as the non-co-funded expenditure. The 2002 figure for investment in housing and for the total NDP includes investment funded from local authorities' own resources. For 2003 and 2004 the NDP and housing investment figures do not include investment in housing funded out of Local Authorities' own resources. When the Local Authority own resources are taken into account for 2003 and 2004 this should leave the funding for housing investment broadly unchanged in volume in 2004 compared to 2003. For 2002 and 2003 the CSF expenditure includes Cohesion and Trans-European Networks (TENS) funding as well as matching public funding. These are not relevant for 2004. The 2002 NDP expenditure includes a small amount of PPP funding. The table only includes public expenditure by the EU and the State.

- The private returns to investment in education have fallen over the second half of the 1990s but they still remain very substantial. However, the social returns to investment in education are greater than previously estimated. They accrue through increasing skilled labour supply, through raising

participation rates, and through increasing the rate of productivity growth in the economy. By reducing the supply of unskilled labour, investment in education has increased the unskilled wage rate more than the skilled wage rate, narrowing the dispersion in earnings.

- There remains a substantial gap in earnings between men and women. The most important factor explaining this gap is the time spent out of the labour force. This points to the importance of NDP/CSF interventions which facilitate women's participation in the labour market, for example through support for childcare.

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## Methodology

In approaching the task of deciding on the reprioritisation within the NDP/CSF, information is limited. The benefits from many projects do not lend themselves to a single scientific metric. In this report the elements of the NDP/CSF have first been classified according to the rationale for undertaking the investment. Based on this rationale a formal screening process is then applied. This screening is a useful first step in highlighting projects that may be especially beneficial or especially problematic. However, this screening process is limited in nature and is only one input into the methodology. The other factors taken into account are:

- The financial and physical progress of different Measures;
- The efficiency with which they are being implemented;
- The cost of delivering them in the relevant time scale;
- The extent to which they contribute to the Horizontal Principles underlying the NDP/CSF (social inclusion, equality, rural development, the environment and regional balance).

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## Recommended Allocations

This report suggests a number of ways in which the NDP/CSF can be reprioritised to accommodate the lessons learned over the last three and a half years. The recommended reallocation of funding across the different Priority areas is relatively limited compared to the estimates for expenditure in 2003. In addition to the reprioritisation, there are other policy changes that are needed if the NDP/CSF is to realise its full potential and if the investment programme is to achieve its objective at a reasonable cost and within a realistic time scale.

The recommendations on the reallocation of resources within the NDP/CSF are made within an "indicative envelope" of funding for the 2004-2006 period specified by the Department of Finance. This indicative envelope involves a rather similar level of funding for 2004-2006 relative to that for 2003. For the CSF, the funding available is on a downwards trajectory, with commitments for 2004 of €582 million being significantly lower than the 2003 figure of €1,025 million. For 2005 the CSF will amount to around €520 million and for 2006 around €450 million. These figures exclude the

EU Performance Reserve funding of €131 million, together with matching national resources.

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**NDP** Set out in Table 1 is a summary of the recommendations for the allocation of the indicative funding “envelope” for 2004. The allocations under the NDP for 2005 and 2006 would be broadly indexed relative to the allocation for 2004.

The detailed recommendations in the report translate into a reduction in funding for the Productive Sector Operational Programmes compared to 2003. The likely rate of return from further investment in that sector is felt to be generally lower than in the other Operational Programmes, with more limited evidence of market failure requiring public sector intervention. The one exception is the Research Technological Development and Innovation (RTDI) Priority, where funding for 2004 is recommended to be unchanged compared to 2003. Within the OP it is recommended that funding for the business sector generally be allocated on a competitive basis, with businesses from all sectors of the economy competing for the same pool of funding.

This report recommends an increase in funding for the Economic and Social Infrastructure OP (ESI OP) over the rest of the planning period. This reflects the importance attached to tackling the infrastructure deficit. It is recommended that the increase in funding should go to the National Roads Priority. This is conditional on the use of appropriate project selection criteria and a rigorous assessment of the ability to deliver the required investment within budget. The increase in funding for public transport relative to 2003 is aimed at further developing urban public transport, subject to similar caveats to the recommendation on roads. The main-line rail Measures are adjudged to have a much lower Priority. For environmental services a similar allocation is recommended in 2004 compared to 2003. This is well down on 2002 because of the completion of a number of major projects. This should be adequate for the implementation of EU Directives. For social housing it is recommended that investment continue at roughly the same high level as in 2003. However, there is a need to implement Measures to reduce private sector demand, especially for second dwellings, ensuring that prices stabilise or even fall. In the case of health the first Priority should be to ensure maximum utilisation of existing infrastructure, especially through keeping existing hospital beds open. It is recommended that commitments to future capital expenditure need to be associated with commitments on future current expenditure to ensure that the new infrastructure will be fully utilised when completed. In the absence of such arrangements we recommend a marginal reduction in funding for 2004 relative to 2003.

It is recommended that the Regional OPs receive similar funding to 2003 but that there be a reprioritisation within the OPs to support the changed policy environment entailed by the National Spatial Strategy. To implement this there should be a significant

increase in funding for the local infrastructure Priority, which includes non-national roads. This should go together with a redirection and concentration of the funding to enhance access to the regional “gateways”. Funding should also be provided on a competitive basis for the development of key infrastructure projects in NSS designated “Gateways” as part of the forthcoming Regional Planning Guidelines.

The funding for the Employment and Human Resources Development OP (EHRD OP) is recommended to stay broadly unchanged compared to 2002. There should be some reprioritisation within that OP. Funding for Measures tackling short-term unemployment have a higher Priority than in the past, as well as Measures promoting lifelong learning and training for the employed workforce. In the light of demographic change, the justification for the current level of investment in infrastructure is weak and the need for further investment needs to be demonstrated. Pending a strengthening of the capacity to plan for future needs, there should be some reduction in funding compared to 2003.

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**CSF**

**I**n considering the appropriate allocation of the CSF funds there are additional issues that need to be taken into account. The CSF funds can not be reallocated across Measures or Priorities as easily as the non co-financed (national) resources. In addition, if EU resources are not reallocated from under-spending Measures they risk being lost to the Irish economy, whereas exchequer funds that are not used can be applied to other uses. This means that, in addition to requiring an appropriate minimum rate of return, CSF funded projects must have a high probability of delivering the required results within the appropriate time frame.

In addition, to the requirement that the projects funded under the CSF must be certain to deliver on time, a secondary consideration is the need to minimise transactions costs (bureaucracy). Some projects, especially small projects, may involve unacceptably high transactions costs if funded under the CSF. These costs will apply both to the EU administration and the local administration. Because of the parallel control mechanisms necessary for such co-funded projects it is desirable to ensure that projects are chosen where the necessary administrative overheads are likely to represent a small proportion of the total funding. This is a special concern on some of the agricultural Measures. The compliance costs for farmers can be very high. In some cases a significant part of the funding eventually paid to farmers goes to pay the cost of consultancy needed to draw down the funds.

As shown in Table 1, it is recommended that the declining CSF resources be concentrated on a smaller number of Priority areas for the period 2004-2006. Because of the Lisbon agenda, which is an important EU Priority, it is recommended that some CSF funding be used to fund RTDI under the Productive Sector OP. It is also recommended that some limited funding be allocated to key

priorities under the EHRD OP. Because of the prospective high rate of return on infrastructure projects under the ESI OP it is recommended that this area should receive a higher allocation than currently planned for 2004.

For the EU Performance Reserve it is recommended that for the BMW Region the funds be allocated to the non-national roads (BMW OP) or the national roads priorities (ESI OP) to support the implementation of the National Spatial Strategy. This would be likely to guarantee a safe and substantial rate of return, while also contributing significantly to the objective of promoting balanced regional development.

For the Southern and Eastern Region the performance reserve could be allocated to the ESI OP urban public transport Priority if projects can be identified that promise a high rate of return, for example through eliminating bottlenecks in the system. This would also contribute to the environmental objectives under the CSF. If such projects are not available or if there is any uncertainty about their delivering on time within budget, then it would be better to use the resources to fund part of the National Roads Priority under the ESI OP. The failure to include other projects for consideration is not because they are not likely to be valuable. It is rather that they are less certain to deliver as planned or else may involve high compliance costs for the Irish authorities, paralleled by significant transactions costs for the EU authorities.

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## Horizontal Objectives

In addition to the key objectives of continuing sustainable national economic and employment growth and consolidating and improving Ireland's economic competitiveness the NDP/CSF has a series of horizontal objectives.

### **SOCIAL INCLUSION**

The very substantial investment in social housing has had a substantial effect in promoting social inclusion. The discussion of the EHRD OP suggests that a number of Measures under that OP have demonstrated a positive effect on socially excluded groups. The "social inclusion" and childcare elements of the regional programmes are likely to promote social inclusion. Finally, there is evidence that the investment in education and training has significantly reduced earnings dispersion, with positive implications for social inclusion.

### **BALANCED REGIONAL DEVELOPMENT**

The fact that the economic backdrop has been unfavourable to balanced development tends to mask the mild positive impact of the NDP/CSF. Without the policies implemented as part of the Plan the imbalances would probably be greater than they are today. It is recommended that a significant reallocation of funding be made to underpin the National Spatial Strategy, which was published after the NDP began in 2000.

## **RURAL DEVELOPMENT**

There is widespread uneasiness across the OPs in relation to how the rural development Horizontal Principle is being dealt with. Monies spent appear to be having less than the required impact on rural development. It is recommended that resources within the Regional OPs need to be refocused to target the problems of rural development more effectively.

## **THE ENVIRONMENT**

On the one hand, significant progress has been made through individual Measures, due largely to the CSF-aided schemes for public transport and waste water treatment. On the other hand, the economic success of the NDP/CSF has contributed to the increased emission of greenhouse gases.

## **EQUALITY**

The NDP made important commitments to gender mainstreaming and has raised the profile of gender equality issues in policy formation and implementation. The NDP has funded investments in the area of childcare, promoting equality of opportunity between men and women in the labour market. The impact on the wider equality grounds is likely to have been weaker. The continuing gender gap in the education completion rates of young men and women is a cause for concern.

## **NORTH-SOUTH CO-OPERATION**

Progress on co-operation with Northern Ireland across the wide range of Measures covered by the NDP/CSF has been adversely affected by the political hiatus in Northern Ireland. Overall, across the five OPs, there has been quite a low level of co-operation with Northern Ireland.

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### **Lessons**

While according infrastructural investment a high Priority, there are concerns about value for money. Failure to tackle such concerns will see less roads or public transport being built with the budget allocated and will delay the completion of the very onerous programme of infrastructural investment. These concerns take two forms: first, there is a concern that the cost of building the roads is too high; second there is a concern that the level of service, and hence cost, provided for may be excessive relative to prospective demand. In the case of Luas there was very serious “cost creep” from the time the project was first adopted. Subsequent to the initial decision, major design changes were made which changed both the potential costs and benefits of the system. However, a full cost-benefit analysis (CBA) of the revised scheme was not undertaken before the revised scheme was finally chosen. As with the experience in revising the roads programme, this case shows the importance of undertaking a full cost-benefit analysis of all major



infrastructural projects before committing finally to their implementation. With full information better decisions would be made in the future on such major infrastructure projects.

An important benefit to the Irish economy from the CSF process over the last decade and a half has been the introduction *de facto* of multi-annual budgeting for capital purposes, producing more efficient delivery of investment and a higher rate of return. However, under the current NDP there has been some reversion to annual budgeting. Some projects, which had geared up on the basis of a seven year funding profile, have found that their resources were unexpectedly cut back. This has led to waste and inefficient delivery. Where projects were funded under the CSF there was a higher level of continuity. It is recommended that there be a return to multi-annual budgeting for the rest of the planning period. This is particularly important given that henceforth the vast bulk of Irish public investment will be funded by the Irish taxpayer, rather than by the EU.

The fact that only some of the investment in human capital is included in the NDP/CSF has given rise to problems. The bulk of expenditure on primary and secondary education is excluded from the NDP. This makes management of the large resources devoted to this important area very difficult. For the future all the investment in human resources should be managed together, whether or not it is included in future NDPs. This would facilitate a common evaluation and management process, to the benefit of areas not currently covered.

Many of the problems that have occurred since the plan was drawn up result firstly from the higher than planned rate of inflation, partly due to capacity constraints in the building industry. Second, there have been significant problems in building up the investment programme in key areas due to the very rapid rate of increase in investment. Third, in some cases there have been problems with project selection. Fourth, there have been problems with project management, especially the management of some large infrastructure projects. Improvements can be made through a number of initiatives that would ensure a better return:

- Unless Measures are taken to deal with the demand side of the housing market, significant Priority areas of the NDP/CSF may fail to realise their potential through excessive inflation. For example, the various tax reliefs and grants that add to demand should be abolished. In addition, the uncontrolled expansion of the second dwelling market is eating up resources, raising house prices, and militating against balanced regional development. Such dwellings should pay the full infrastructural costs that they impose on society.
- It is important to develop pricing policies for infrastructure that reflect the true social cost of their provision. The current widespread under-pricing of certain types of infrastructure

should be ended, e.g. road congestion, water abstraction and use of environmental goods.

- There is a concern that current regulations requiring waste to be dealt with on a regional rather than on a national basis may result in unnecessary capital investment, adversely affecting competitiveness and living standards. Building eight or nine facilities for waste disposal where two or three would do will prove very expensive.
- In a number of cases existing infrastructure could produce greater benefits if appropriately managed.
- While the physical planning process itself has undergone significant improvement in recent years, there are still important issues to be addressed if infrastructure is to be delivered on time. In the case of urban centres, improved public transport will require a major increase in the density of the urban environment if it is to operate efficiently.
- In a range of areas there should be a change in the role of Government in the provision of services: from provider to regulator of the 'public good'. However, Public Private Partnerships (PPPs) should only be used where they bring efficiency gains. They are likely to be an expensive means of financing new investment.

## **MANAGEMENT ISSUES**

Weaknesses are evident in relation to the transparency of project selection and prioritisation. There is a need for a more formalised review process for project appraisals where the basis for the original decisions has changed, due to changes in costs or changes in the external environment. In many cases the extent to which project selection guidelines have been followed is not clear.

In a number of areas of expenditure where the state is subsidising "desirable" economic activity, the managing authority has limited information on the likely rates of return for different projects. One way of dealing with this information gap is to develop a competitive process, as is the case for funding on Research and Development in the education sector. Under such a regime those who have a good case have an incentive to provide the best possible information to the deciding authority.

There is a need to upgrade the capacity of implementing Departments (Managing Authorities) to conduct and to appraise cost/benefit studies. Consideration should be given to the establishment of a unit in the Department of Finance devoted exclusively to the conduct/commissioning of cost/benefit studies on major projects. This could build on the work of the CSF Evaluation Unit and their ability to exercise quality control on studies delegated to Departments/agencies.

Weaknesses in project management are manifested both in excess costs and in delayed project delivery. Management structures do not always "enable" management of the programmes. For example, sanctions are not imposed on non-performing Measures.

There has been varied reporting of performance indicators across all programmes and this has affected monitoring and evaluation. Without such monitoring the effective management of the Measures is very difficult. The programme structures do not provide for unified executive and budgeting responsibility and accountability for the OPs as whole.

Given the managing authorities their existing very limited resources, they have performed satisfactorily. However, for an investment plan of this magnitude the resources available to the managers of the Operational Programmes, including the Department of Finance, should be substantially increased. While such additional resources would involve additional expense, the expense would be small in the context of managing an NDP amounting to €50 billion.

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### Community Value Added

The Berlin profile, which required front-end loading of activity, posed problems in the 2000 to 2002 period. It required some CSF projects to be implemented more rapidly than was desirable, given the constraints on the economy. Where new Measures were being introduced, for example the support for R&D, better results might have been obtained through a slower build-up in expenditure. In future, in the accession countries, with enlargement it will be better to build up funding gradually. Implementing Departments should be incentivised to get the best value for money rather than pressurised into spending the money before they are ready. Because of the danger that CSF funding may be lost altogether, it imposes inappropriate incentives on managing authorities, especially towards the end of the window when the funds are available. If it becomes clear to the managing authority that further investment in a particular measure may not be very productive, the possibility of losing the funding altogether provides a strong incentive to spend the money. If the funding came from national resources, the penalties for surrendering the resources, so they could be used elsewhere, would be much lower. This argues for using the CSF funding for projects with more certain rates of return.

The CSF process has encouraged the introduction of effective long-term planning of public investment. In the 1980s, investment projects stopped and started in line with short-term economic pressures on governments, resulting in a significant waste of resources. The formulation of a national development plan, and its subsequent implementation without major interruption, should lead to a more rational allocation of resources. There is a danger that, with the ending of the EU involvement in the process, future NDPs will not be taken as seriously as they are today. As discussed above, already there has been some evidence of a reversion to annual budgeting under the NDP. It is important for the future that multi-annual budgeting is restored for the rest of the current NDP and for its successors.

The programme approach to public investment has also tended to focus attention on particular policy problems, making those

involved in the planning process consider the wider implications of individual Measures. For example, each of the operational programmes under the CSF has its own monitoring committee consisting of relevant public servants, representatives of the EU Commission, and some representatives of outside interests. While patchy in its coverage and effectiveness, this wider involvement in the decision-making process has contributed to the successful outcome.

In addition to the need to plan investment in a medium-term time frame, the need to satisfy the donor countries, through the EU Commission, that their money is well spent has resulted in the introduction of a set of evaluation procedures that has helped change the way the administration approaches public expenditure. Before the CSF process began the key question, once the Oireachtas had voted money, was whether it had been spent in accordance with regulations. Now there is increasing interest in assessing how effective the expenditure has been. In many cases these evaluations have been published and, while the recommendations may not always have been adopted, they have had an influence on policy. This report represents the end product of the most comprehensive and wide-ranging evaluation process yet undertaken of an NDP. It is important that this evaluation process continues after the EU funding ends: there should be at least as much concern for how Irish taxpayers money is spent as for how EU funds are spent.

# 1. INTRODUCTION

This is the report on the Mid-Term Evaluation of the National Development Plan (NDP) and the Community Support Framework (CSF) for Ireland for the period 2000-2006. This report, commissioned by the NDP/CSF Evaluation unit on behalf of the Department of Finance and the EU Commission, provides analysis and recommendations on how funding should be reallocated within the NDP and the CSF. The conclusions are based on the final reports of the mid-term evaluations of the different Operational Programmes (OPs) which were completed at the end of August 2003. The overall purpose of the mid-term review process is to provide an independent analysis of the operational programmes and the developments in the NDP/CSF since the current NDP started in 2000, and to make recommendations on how the programmes can be better targeted over the rest of the planning period so as to achieve the objectives of the NDP/CSF.

The National Development Plan (NDP) is the government's investment plan for the period 2000 to 2006. It covers all major investment by the State in physical capital (buildings and equipment) as well as a significant part of the State's investment in human capital. The Community Support Framework (CSF) is a subset of Measures within the NDP, which are co-funded by the EU Structural Funds. The CSF covers all the EU Structural Fund payments to Ireland but, of course, excludes projects funded as part of the Common Agricultural Policy (CAP). While the CSF funded investment is still substantial, the EU does not cofund the bulk of the expenditure under the NDP. For the first three years of the NDP, 2000-2002, the CSF accounted for approximately 14 per cent of the total expenditure of €19.8 billion, with the EU contribution amounting to almost €1.7 billion or around 8.6 per cent of total NDP expenditure. The expenditure under the NDP over the three years averaged around 6.8 per cent of GNP a year, of which the direct EU contribution averaged 0.6 per cent of GNP. As discussed in the next Chapter, by international standards this is a very substantial programme of public investment in both physical and human capital.

The NDP/CSF is structured in terms of Operational Programmes (OPs). Within each Operational Programme there are a series of "Priority" areas for investment and within each "Priority" a series of "Measures" is prescribed. For the period 2000 – 2006 the Operational Programmes include three National Programmes, two Regional Programmes, and two specialist Programmes. The OPs are

managed by designated government Departments or special agencies as listed below:

- Employment and Human Resource Development (EHRD OP) – Dept of Enterprise, Trade and Employment (DETE),
- Economic and Social Infrastructure (ESI OP) – Dept of Transport (DoT),
- Productive Sector Programme (PS OP) – Dept of Enterprise, Trade and Employment (DETE),
- The BMW Regional Programme (BMW OP) – Border Midlands and Western Regional Assembly,
- The Southern and Eastern Regional Programme (SE OP) – South & East Regional Assembly,
- PEACE II – Special EU Programmes Body,
- Technical Assistance.

Separate evaluations have been carried out of each of the Operational Programmes<sup>1</sup> and this report is based on these OP level evaluations. The terms of reference for the Mid-Term Evaluations are comprehensive and they provide a framework to determine the extent to which the operational programmes are meeting their objectives. The terms of reference included a number of core analytical tasks to be performed as part of the evaluation. The core tasks for the review were:

- External developments and the development of other policies affecting the NDP/CSF;
- Effectiveness and progress to date;
- Efficiency of management and implementation, including project selection;
- Implementation of the Horizontal Principles underlying the NDP/CSF;
- Recommend on the allocation of funding over the remainder of the current NDP/CSF;
- Evaluate the impact of the NDP/CSF on the macro-economy.

The analysis described in this Report suggests that the overall strategy underlying the NDP/CSF remains as valid today as when the NDP/CSF was drawn up in 1999. The Plan has made a major contribution to tackling the infrastructure deficit, which was identified as a key constraint on future growth. However, as described in this report, significant problems have occurred in implementing the strategy, in particular due to the high rate of inflation reflecting supply constraints in the building and construction sector. This report suggests how best the problems identified over the first three years of the planning period (2000-2002) can be tackled, both through reallocating funds within the

<sup>1</sup> This report constitutes the evaluation of the Technical Assistance Operational Programme.

NDP/CSF, and also through the adoption of other Policy Measures that would support and facilitate implementation over the period 2004-2006.

This report has been prepared after extensive discussions with the managing authorities, other appropriate bodies and the social partners. The conclusions incorporate the valuable advice received as a result of the consultations and also from submissions received in writing from interested institutions and individuals.

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## 1.1 Review of Previous Evaluation Results

This Mid-Term Evaluation of the NDP/CSF must be seen in the context of a growing literature on evaluation of public investment in Ireland. While relatively new to the tradition of public administration in Ireland, it has over the last decade become a significant part of the planning process. This report is based on a series of evaluations of individual OPs completed at the end of August 2003, as well as special evaluations of important areas of investment carried out in the recent past.<sup>2</sup> It benefits greatly from this body of research and it summarises the key insights available from these building blocks. In some cases when the building blocks are put together the picture looks rather different than when considered on an individual OP basis. Where this proved to be the case this report has modified the conclusions of the OP level evaluations and the reasons for these modifications are explained in the text. This report represents the independent judgement of the authors on how the success of the NDP/CSF to date can be enhanced over the remainder of the planning period.

The first CSF, which began in 1989, introduced a significant change in the way that public investment was managed in Ireland. A condition of the major increase in EU funding under the Community Support Framework (CSF) was that the success of the interventions would be independently evaluated. This introduced a new culture in Irish public administration where emphasis is put on evidence-based policy making in the field of public investment. It also moved Ireland away from the stop-start budgetary process of the 1980s, which was particularly inappropriate for managing public investment.

A mid-term evaluation at a macro-economic level was carried out of the first CSF (substantially funded by the EU) and it was published in 1992 (Bradley, Fitz Gerald and Kearney, 1992). The approach taken was a model for subsequent macro level evaluations. This evaluation developed a methodology for assessing the long-term supply side impact of the CSF. As part of the study a series of micro studies were carried out to help identify important constraints on the development of the economy.

<sup>2</sup> These evaluations are listed in the References section, together with the names of the firms that carried them out.

An example of one of the conclusions of the 1992 evaluation was the recommendation that the problem of early school leavers be tackled by enhanced investment in the educational system. It went on to say “while EC policy has emphasised training, more emphasis should in future be given to education in building up the long-term human capital of the work-force”. This view was further reinforced by an *ex ante* evaluation prepared for the Irish government before the second CSF (Fitz Gerald and Keegan, 1993). The result was a continuing major emphasis on investment in human capital in the second CSF from 1994-1999. As discussed in ECOTECH, 2003, p.9, Ireland allocated the highest proportion of its CSF to investment in human capital of the member states over the period 1994-1999. Among other factors, this reflected the priorities established by the evaluation work undertaken over the course of the first CSF.

The *ex ante* evaluation for the Department of Finance of the second CSF (Fitz Gerald and Keegan, 1993) considered in considerable detail the achievements of the first CSF and made recommendations on how the further increase in investment under the second CSF could best be deployed between 1994 and 1999. This was followed by an *ex ante* evaluation carried out for the EU Commission (Honohan and O’Connell, 1994). One of its recommendations was that the central project appraisal capacity in the Department of Finance be enhanced. This recommendation was implemented over the course of the second CSF.

The approach to macro-economic evaluation of the CSF was further elaborated in Bradley, Whelan, and Wright (1995). This methodology has been applied to evaluating the impact of the CSF process in the other cohesion countries. Most recently the methodology was elaborated in Bradley, Morgenroth, and Untiedt (2003), and used in the *ex post* evaluation of the second CSF (1994-1999) for all the cohesion countries, as well as Northern Ireland and East Germany, in ECOTECH (2003).

Under the second CSF an elaborate mid-term evaluation process was carried out in Ireland. This involved evaluation of each of the Operational Programmes followed by a mid-term evaluation of the CSF and the NDP as a whole (Honohan, 1997). This evaluation further developed the methodology for integrating the micro level evaluations of the different OPs into a coherent macro framework. This methodology has been used extensively in the current Mid-Term Evaluation described in this report.

In preparing the ground for the current NDP/CSF, a report was commissioned by the Department of Finance that considered the investment priorities for the current planning period (Fitz Gerald *et al.*, 1999). This report recommended that, while investment in human capital remained very important to the future success of the Irish economy, there was an urgent need to increase the pace of investment in physical infrastructure. It also suggested that effective investment in R&D would be important in developing a high productivity economy.

The *ex ante* evaluation of the current NDP/CSF, broadly endorsed the strategy adopted in the published plans (CSF



Evaluation Unit, 1999). However, it warned against the danger that a rapid increase in investment spending, against the backdrop of exceptional growth in the Irish economy, could give rise to a significant stimulus to the rate of inflation. It also said that "...we are not convinced that the increase in resources to the productive sector is warranted". With the benefit of hindsight, these concerns are seen to have been valid and some of the recommendations in this report aim to deal with these problems over the rest of the planning period.

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## 1.2 Structure of the Report

A summary of this Mid-Term Evaluation is provided at the beginning of this report.

The main body of this report is divided into three distinct parts, with extensive technical Appendices at the end of the report.

Part 1 considers the macro-economic background of the NDP/CSF and its impact on the economy. Chapter 2 examines the macro-economic environment within which the CSF and the NDP for Ireland is operating. While this analysis indicates that the overall strategy underlying the NDP and the CSF is still appropriate to the circumstances of the Irish economy, it shows that there is a need to change some priorities within individual OPs, to reallocate funds between OPs and to implement some supporting Measures.

Chapter 3 considers the macro-economic impact of the NDP/CSF on the Irish economy. This chapter includes details of a series of special micro-economic studies undertaken as part of this evaluation. These studies consider the impact of investment in infrastructure and human capital on the economy. They also consider the factors determining the regional allocation of economic activity. When the results of these studies are incorporated into the framework of the *HERMES* macro-economic model they indicate a higher return on investment through the NDP/CSF than was previously thought. A SWOT analysis of the NDP/CSF is included in Appendix 2.

Part 2 of this report provides the detailed Mid-Term Evaluation of the NDP/CSF, considering the elements of each of the Operational Programmes. Chapter 4 sets out the methodology used to arrive at the recommendations on prioritisation of investment and on the reallocation of resources. It describes how this methodology has been applied in subsequent chapters and how the detailed recommendations in those chapters have been arrived at.

Chapters 5 to 10 analyse the performance of the different Operational Programmes to date. Recommendations are made concerning Measures within the OPs. These chapters give details of the rationale behind each OP, details of their content, and the findings of the OP level evaluations on the effectiveness and efficiency of the OPs to date. Because independent evaluations have already been completed on each of the OPs, this report generally builds on the findings of these earlier detailed studies. These studies are listed in the References Section of this report.

These Chapters, 5 to 10, also provide recommendations on each measure and explain the reasons for these recommendations – why increases or reductions in funding are suggested. These conclusions are based on the results of the evaluations of the individual OPs. However, in some cases, when the CSF/NDP is viewed as an aggregate in the context of the macro-economy, the conclusions are seen to need some modification and these modifications are incorporated in the recommendations in each chapter.

The objectives of the NDP included four Horizontal Principles: social inclusion, rural development, the environment, and equality. Together with the objectives of regional balance and promoting North-South co-operation, these principles are considered in Chapter 11. This analysis builds on the work of the evaluations of the individual OPs. However, in each case the cumulative effect of the different Measures may be rather different than the effects of the Measures taken on their own. This chapter first reviews the relevant policy initiatives. It then provides a broad conceptual framework in which to consider the policies and this framework is applied to the results of the evaluations of the individual OPs.

Chapter 12 summarises the results of an examination of the management of the CSF and the NDP and it draws conclusions on what changes could be made to improve the performance of the NDP/CSF over the rest of the planning period.

Chapter 13 discusses a range of supplementary Policy Measures that are important if the NDP and the CSF are to meet their targets and if good value for money is to be obtained from the very large investment programme.

Part 3 of this report incorporates the conclusions of the study and a summary of the detailed recommendations made throughout the report. Chapter 14 incorporates the conclusions, including the overall recommendations on the reallocation of resources for the period 2004 to 2006 for both the NDP and the CSF. The chapter also sets out the conclusions of this study on the appropriateness of the overall strategy underlying the NDP/CSF and how well aligned the different programmes are towards meeting the overall objectives of the NDP/CSF. The EU community value added is also summarised in this chapter.

# PART 1

## **The Macro-Economic Background and Impact**



## 2. MACRO-ECONOMIC BACKGROUND

The National Development Plan (NDP) was formulated at a time when the Irish economy was growing very rapidly and was experiencing serious physical constraints that were likely to affect future growth prospects. The external environment was also favourable, with the US economy growing very rapidly through 1999 and 2000 and there was a continuing substantial inflow of Foreign Direct Investment (FDI). In preparing the NDP the needs of the economy and society were assessed in a longer-term context and, in principle, the results of this assessment were not unduly dependent on the actual economic outturn in one or two years.

However, since the NDP was prepared the economic circumstances have somewhat changed. The external economic environment has shown a marked deterioration, with a rapid slowdown in the US economy and near stagnation in the EU economy. This slowdown has also been associated with significant problems in the public finances in some of the major Euro Area economies that give cause for concern about the short-term growth prospects.

In considering how the NDP should be tailored to the changing needs of the Irish economy what is important is the likely medium to long-term growth path rather than the short-term economic prospects. While the short-term prospects may be important in some cases in the timing of delivery of infrastructure, the need for new investment must be considered in terms of the likely return over the coming ten to twenty years. This need to concentrate on the medium-term prospects is reflected in this chapter.

In this report we have concentrated on highlighting those aspects of the external and domestic economic environment that have implications for the NDP and the CSF over the course of the period 2004-2006. Some of these developments were already apparent when the plan was drawn up and others have manifested themselves over the period 2000 to 2003. The analysis here follows closely that of the *Medium-Term Review 2003-2010*, Bergin *et al.*, 2003, publication of which was advanced to provide a basis for the analysis contained in this report. Detailed consideration is given to the capacity of the building and construction sector, which is very important for the delivery of key elements of infrastructure. Finally, we consider the changes in the domestic policy environment since the NDP/CSF was prepared.

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## 2.1 External Environment

At present the Irish economy faces an uncertain international environment. Although accommodative monetary and fiscal policy conditions have been in place internationally since 2001, the global economy is still sluggish. Growth in the three major economic blocks that impact on the Irish economy, namely the US, the UK and the Euro Area, is likely to remain relatively muted in 2003 strengthening somewhat in 2004, before returning to trend rates in the second half of the decade.

Despite its poor performance in 2001-2002, the US economy is likely to remain the main driver of world economic growth in the early stages of the recovery. A rebound in activity is anticipated in the short term, although growth is likely to be slower and less impressive than that of the late 1990s. The imbalances in the US economy, notably the large and growing Balance of Payments current account deficit, continues to be the main risk to growth. The large current account deficit exposes the world to the danger of sharp fluctuations in the value of the dollar. If the recent realignment of the dollar against the euro continues, it should help to redress this imbalance in the US, but any adjustment in that economy is likely to be slow.

By contrast, the recent appreciation in the value of the euro will dent the external contribution to growth in all countries in the Euro Area and may compound many of the existing structural problems that exist inside these economies. Ireland, with its greater exposure to non-Euro Area trade, will incur greater price competitiveness pressures.

The slowdown in the international economy has also led to a reduction in the international flows of FDI. The recovery in the US economy should offset, to some extent, the deceleration in global US FDI flows over the last few years. Over the medium term the enlargement of the EU in 2004, to include ten new member countries, will serve to increase competition for non-EU sourced FDI flows. However, for many of the relevant sectors the accession countries may not be direct competitors with Ireland in the market for FDI (Barry, 2003).

The medium-term prospects for the Euro Area economy remain sound, but the deterioration in its public finances and the effects of the appreciation of the euro on competitiveness are likely to impede growth in the short term. As a result of the appreciation of the euro, inflationary pressures will remain very subdued in the Euro Area over the medium term, with the major economies such as France and Germany possibly experiencing deflation in the short term. Ireland, with its greater exposure to non-Euro Area trade, will incur price competitiveness pressures due to the appreciation of the euro. The public finance position of some of the larger member states is a particular cause of concern. Fiscal policy has been effectively removed as a tool to help promote growth for countries running close to or breaching the rules of the Stability and Growth Pact. Official interest rates in the USA, the UK and the Euro Area are at historically low levels. A low cost of capital and prospects of

relatively higher rates of return provide an opportunity to stimulate investment in the short term.

In considering the cost of capital facing the authorities over the medium term there is no reason to revise upwards the costs assumed in formulating the NDP in 1999-2000. While short-term interest rates are certainly much lower than expected, the fall in longer-term rates has been less marked.

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## 2.2 Domestic Environment

The deterioration in the external economic climate had inevitable consequences for the Irish economy. Economic growth slowed dramatically through 2001, resulting in below trend growth in 2002 and 2003. The result has been some increase in unemployment and there have been additional pressures on the public finances. In addition, from the beginning of the current planning period, inflation has accelerated well above the level experienced in the late 1990s. While some acceleration was anticipated, the extent of the problem has exceeded the expectations at the time the NDP was prepared.

Looking beyond 2004, we anticipate a world recovery, with the Irish economy regaining some lost ground. The period of underachievement in the first half of the decade should be offset in the second half of the decade by a period of growth above the long-term potential of the economy (Table 2.1). Such a time path for output would see the economy restored to full employment by the end of the decade. This is a similar picture to that assumed in the *National Investment Priorities* report,<sup>3</sup> which was used as an input into the preparation of the NDP in 1999.

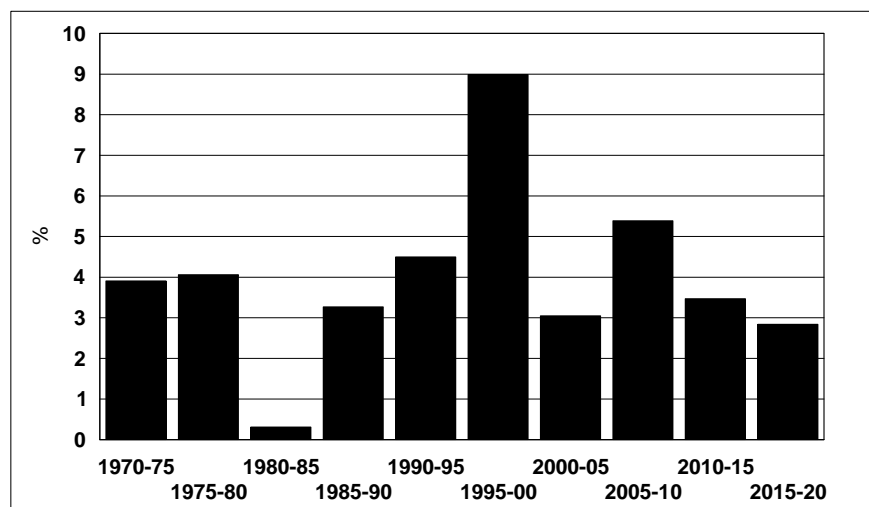
At the time the NDP was prepared, the latest medium-term forecasts, Duffy, Fitz Gerald, Kearney and Smyth (1999), envisaged an average growth rate for the 11 years from 2000 to 2010 of 4.8 per cent a year. This is identical to the forecast in the latest *Medium-Term Review 2003-2010*, which was prepared to provide a basis for this Mid-Term Evaluation. The difference today is that more of the growth is seen as occurring in the second half of the decade, 5.4 per cent a year, compared to 3.1 per cent a year in the first half (Figure 2.1). After 2010, the growth rate will slow to around 3 per cent a year, reflecting the changed demographic circumstances.

The fact that the expectations concerning the potential growth rate of the economy have not changed since the NDP was prepared means that the assessment concerning infrastructural needs, undertaken in 1999, remains as relevant as when the NDP was drawn up. Obviously some of the unforeseen changes over the last four years mean that there is a need for some changes in priorities – hence the Mid-Term Evaluation. However, the broad magnitude of the task facing the public authorities is not greatly altered, though of course significant progress has been made over the first three years of the planning period.

<sup>3</sup> Fitz Gerald J., I. Kearney, E. Morgenroth and D. Smyth (1999).

**Table 2.1: Benchmark Forecast, Major Aggregates**

	2003	2004	2005	2006	1995-00	2000-05	2005-10	2010-15	2015-20
	Per Cent				Annual Average % Growth				
GDP	2.6	3.1	6.1	6.6	9.8	4.8	5.7	3.3	2.9
GNP	2.4	3	4.7	5.7	9	3.1	5.4	3.5	2.8
GNDI (incl. Capital Transfers)	1.2	1.1	4.5	5.5	8.6	2.9	5.3	3.2	2.2
Investment-GNP Ratio	26.6	26.4	26.2	26.1	25.2	26.8	25.7	24.4	20.7
Consumption Deflator	3.5	2	3.2	2.8	3.3	3.7	3.1	2.5	2
Employment, April	1.2	1.2	2.4	2.5	4.9	2.1	2.2	1.1	0.5
Real After Tax Non-Agricultural Wage	1.2	1.1	0.8	0.6	2.6	2.0	1.5	2.1	2.0
					<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
Balance of Payments	-0.6	-0.8	-0.2	0.4	0.1	-0.2	2.8	3.1	4.6
Debt – GNP Ratio	36.3	37.3	37.2	36.4	34.4	37.2	28.3	20.1	7.1
General Government Deficit	0.9	1.5	0.9	0.5	-5.2	0.9	-0.9	-1.1	-2.9
Unemployment Rate	4.9	5.7	5.4	5.2	4.3	5.4	4.3	3.1	3.2
Net Immigration	15	5	14	19	20	14	17	10	10

**Figure 2.1: Average Annual Volume Growth Rates in GNP**

Whether the potential for a return to rapid growth will be realised will depend partly on the external environment, but also to a very significant extent on the competitiveness of the economy. The very rapid inflation in wage rates and in the related prices of many domestic services over the period 2001 and 2002 had probably already left the economy overexposed. The recent exchange rate changes have imparted a deflationary shock to the economy. In the normal course of events this will see a very significant fall in domestic inflation. As shown in Table 2.1, we see the underlying rate of inflation, measured by the consumers' expenditure deflator, falling below 3 per cent next year. Depending on how consumer prices react, the pass through into lower inflation



could be even more dramatic than we have forecast. The more rapidly that the domestic price level, including wage rates, adjusts to the changed circumstances, the lower will be the level of economic disruption from the recent exchange rate changes. We have assumed that, in line with past behaviour under similar circumstances, the rate of increase in wage rates will average 3.5 per cent a year between 2004 and 2006. Whether this will represent a sufficiently rapid downward adjustment in inflation to restore competitiveness in the face of the exchange rate shock that has recently occurred is still open to question.

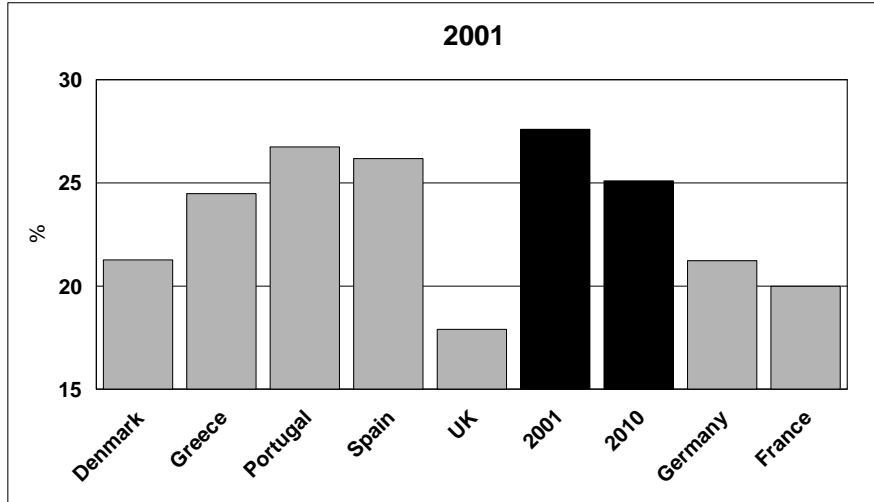
While the Irish economy over the coming decade still has the potential to grow significantly more rapidly than the average for the EU, the current difficulties in the world economy have seen a dramatic, if temporary, slowdown in domestic economic activity. Even with the slowdown, the constraints on growth due to infrastructural inadequacies remain significant. When the economy returns to trend growth these constraints will be even more apparent than they are today. Thus the primary focus of the NDP – on relaxing the constraints on growth – remains as valid today as it was in 1999.

## **THE LABOUR MARKET**

Recent labour market developments suggest that the period of very rapid employment growth experienced in Ireland after 1993 came to an end in 2001. Employment expansion began to slow noticeably throughout 2001, and by 2002 any increases were of marginal proportions. Given that those increases were in public sector employment, and that this is unlikely to be repeated in the light of current constraints on the public finances, further employment expansion is unlikely in the immediate future. One of the results of the slowdown in employment is the growth in unemployment since the middle of 2001.

The rise in unemployment has to date only been kept down by adjustments in hours worked and in the participation rate. Unemployment is likely to continue rising until the Euro Area begins to recover in 2005. However, given the flexibility of the labour market, with the assistance of appropriate policies under the NDP/CSF, a period of more rapid growth after 2005 should restore full employment by the end of the decade.

In recent years the unemployment problem in Ireland has become predominantly a problem of short-term unemployment. In this respect the current period differs importantly from the 1990s, when unemployment policy was dominated by the problem of long-term unemployment. Labour market policies, informed by the European Employment Strategy, emphasise the importance of preventing the re-emergence of long-term unemployment. Accordingly, it will be important to ensure the delivery of effective interventions to recent entrants to unemployment to prevent the drift into long-term unemployment.

**Figure 2.2: Investment as Per Cent of GDP**

Source: OECD National Accounts.

Ireland CSO National Income and Expenditure Accounts – uses GNP.

## THE ENVIRONMENT

The rapid growth Ireland has experienced, and is likely to experience out to 2010, has put serious pressures on both infrastructure and on the environment. Already Ireland exceeds its target for emissions of greenhouse gases by a wide margin and dealing with this problem over the coming decade will prove difficult. To the extent that the NDP/CSF contributes further to raising the level of output, it will add further to emissions. This will render even more urgent the adoption of supplementary Measures, such as a carbon tax, to complement the EU-wide emissions trading regime designed to bring emissions within the limits set by the Kyoto protocol.

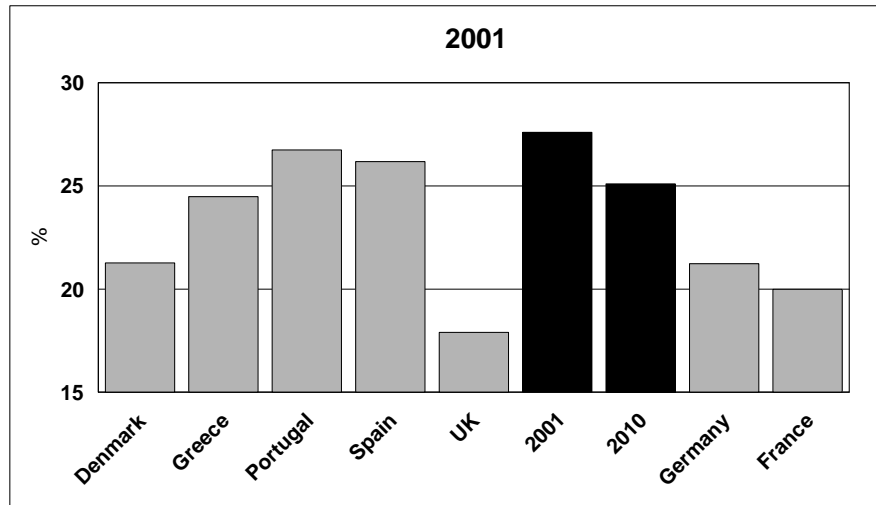
## INVESTMENT AND THE PUBLIC FINANCES

Whereas in most other countries that enjoy Ireland's standard of living, or better (e.g. UK, Germany and France), 80 per cent of resources are available for consumption, in Ireland the figure is under 75 per cent. This reflects the fact that the persistent infrastructural deficits require a very high level of investment, currently around 27 per cent of output (Figure 2.2), whereas in countries like France or Belgium the figure is closer to 20 per cent. As a result, while Ireland is technically one of the richest countries in the world, it may not always feel that way, with such a high share of resources pre-empted for investment purposes.

This need to devote very substantial resources to investment spans both the private and the public sector. As shown in Figure 2.3, while in most other EU countries public investment accounted for between 2 per cent and 3 per cent of GDP in 2000, in Ireland by

2002 it accounted for over 5 per cent of national income (GNP).<sup>4</sup> This reflected the very large increase in resources devoted to tackling the infrastructural deficit as part of the current NDP/CSF.

**Figure 2.3: Public Investment as a Per Cent of GDP, 2000**



Source: OECD National Accounts. For Ireland GNP, not GDP.

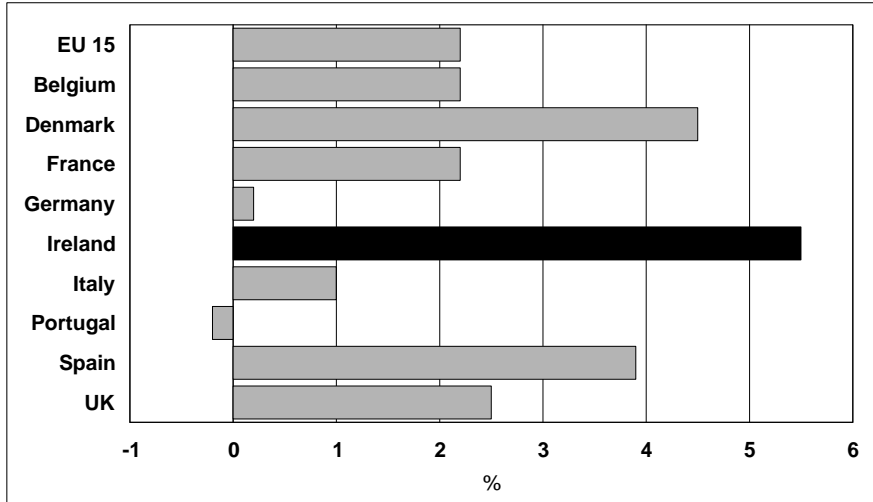
The public finances remain under pressure as a result of the current slowdown. Because of the uncertainty inherent in any such forecasts (see Chapter 4 of the *Medium-Term Review 2003-2010*) it is prudent to maintain tight control over the coming eighteen months as envisaged in the updated *Stability Programme*. However, if, as seems likely, the economy returns to growth from 2005 onwards, the resources available to the State should increase significantly. This would mean that the current limited deficit could be transformed into a small surplus by the end of the planning period (Table 2.1).

The current level of saving by the public sector in Ireland, needed to fund the programme of investment in the NDP, is exceptional by EU standards (Figure 2.4).<sup>5</sup> If this level of saving is maintained in the medium term, with a return to growth it should be possible to fund the likely needs of a revised NDP/CSF without major pressure on other elements of the public finances.

The change in the domestic fiscal position in 2002 and 2003 does not alter the investment needs of the economy. However, the financing of the investment will pose greater difficulties in 2004. While the relative easing of the public finance constraint over the period 1999-2001 should not have affected the choice of investment

<sup>4</sup> The NDP in 2002 represented 7.6 per cent of GNP and the CSF represented 1.2 per cent of GNP. The difference is accounted for by the fact that a significant portion of NDP expenditure, especially on human capital, is classified as current expenditure for national accounting purposes.

<sup>5</sup> As with all other sectors, in national accounts terms saving is defined as the difference between current revenue and current expenditure.

**Figure 2.4: Public Authorities' Saving as Per Cent of GDP, 2001**

Source: Eurostat Cronos website.

projects to be undertaken, as discussed in Chapter 6, some road projects were changed without undergoing the normal procedure for determining priorities for such investment. The substantial funds available to the Exchequer, combined with the very obvious infrastructural needs, may have affected the choice of projects to be undertaken and also the timing of projects.

Looking over the period of the rest of the current NDP, finance should not be the major constraint. If a project is worth doing, and if it can be delivered efficiently without adding to inflationary pressures, it should be financed; if the rate of return on a project (allowing for risk) is greater than the cost of borrowing then it could be funded by borrowing. The choice of whether it should be financed by borrowing or by changes in taxation or expenditure is one that concerns the possible transfer of burdens between the generations. In the unlikely event that the public finances prove consistently weaker in 2004 and 2005 than anticipated, and that the ability to borrow is constrained by the Stability and Growth Pact (SGP), it would be better to raise taxation or to cut expenditure to pay for the investment rather than to leave a valuable project undone.

By funding the bulk of investment in infrastructure out of taxation over the last decade (Figure 2.3), the State has been building up physical assets without offsetting financial liabilities. When the infrastructural programme is largely completed, some time in the next decade, the State will then have a large asset that will continue to provide services for future generations.

The final funding issue to be considered is the appropriate balance between public and private provision of infrastructure. If infrastructure can be provided through a competitive market then there will be no need for state involvement. This is clearly the case for housing (other than social housing), cinemas, pubs etc.. However, it is not the case for transport networks where economies

of scale and scope mean that there will be a monopoly provider. For example, it is not efficient to have competition between motorway networks. Where the State, on behalf of the consumer, ultimately carries the risk involved in a project, the cost of capital will be minimised if the State funds the investment directly. In highly capital intensive projects, such as roads, this is clearly the case. Thus the PPP process should not be seen as a means of dealing with any tightening in the public finance position. This issue is discussed further in Section 13.6.

## SECTORAL OUTPUT

The manufacturing sector will be less of an engine for growth than in the past. While we see a return to quite rapid growth, by EU standards, for the high-technology sector between 2005 and 2010, this will be on a much more moderate scale than was experienced in the 1990s. This reflects the fact that the sector is now quite large relative to the rest of industry and the economy. In any event, with more constrained labour supply and infrastructural resources than in the 1990s, the economy could not absorb the level of foreign direct investment (FDI) seen over the last decade. In addition, as jobs become higher paid, requiring higher skills, they tend to move off the production floor into offices and laboratories – the market services sector. This is the pattern in all the main world economies that enjoy a very high standard of living. In the long run Ireland is unlikely to be an exception to this pattern.

While gradually declining in significance, manufacturing will still remain extremely important until the end of the decade. However, policy must prepare for a situation where the market services sector will be the most important driver of growth, requiring a changed approach to economic development. The market services sector is likely to see the most rapid growth in employment in the next decade. It is the biggest employer of skilled labour and will continue to be the major contributor to value added in the economy. This has implications, in particular, for the Productive Sector Operational Programme (PS OP).

With growth of 5 per cent a year likely once the world economy recovers, prospects for individual sectors show considerable variance. Prospects for agriculture and fishing remain very weak; with sluggish growth anticipated to reduce the importance of agriculture by halving its contribution to GNP growth over the course of the decade. In both cases output is significantly constrained by quota regimes, which means that investment in physical assets or in research must achieve a payback through cost reduction – limiting the potential rate of return. The potential environmental benefits of investment in forestry have probably been enhanced by the more rapid growth in greenhouse gas

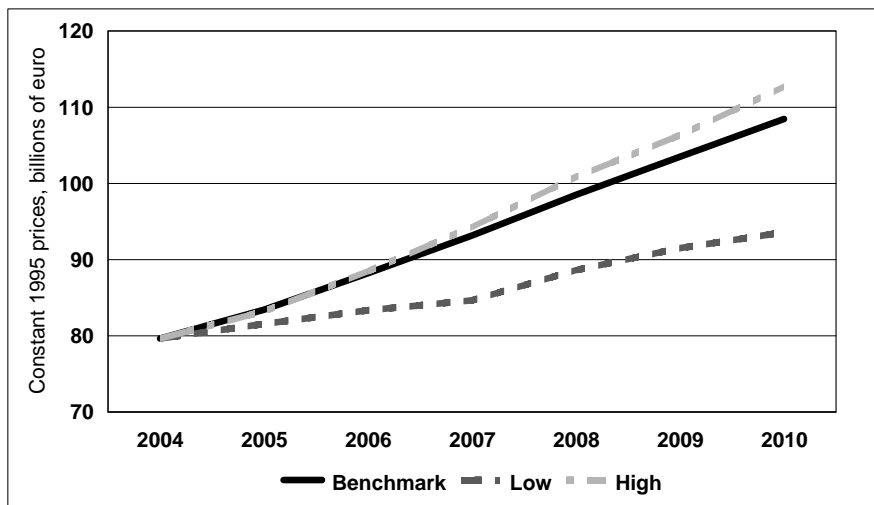
emissions than was anticipated when the NDP was prepared.<sup>6</sup> The strengthening of the euro and the loss of competitiveness in the domestic economy has also damaged the tourist sector, with low growth expected in this sector over the medium term.

### ALTERNATIVE SCENARIOS

Given the uncertainty that surrounds any forecasting exercise it is always unwise to rely on a single projection for the future. Chapter 4 of the *Medium-Term Review 2003-2010* explored a number of different scenarios that could alter the future course of the economy over the medium term. The first two scenarios concentrate on Ireland's competitiveness on world markets while the third looks at Ireland's vulnerability to a very sharp external deflationary shock arising from exchange rate changes.

The first scenario examined the likely consequences of a deterioration in Ireland's competitiveness through a combination of wage demands above productivity growth rates, a failure to address the current infrastructural deficit, and related high price increases in the non-traded goods and services sectors of the economy. The results suggest that there are significant downside risks over the medium term if policy does not focus on promoting competitiveness on world markets; growth and employment would fall significantly and living standards would be 10 per cent lower by 2010 than in the *Benchmark* forecast discussed above (Figure 2.5). This highlights the importance of successfully implementing the NDP/CSF.

**Figure 2.5: Alternative Forecasts for GNP**



<sup>6</sup> The broad environmental impact of forestry will depend on the species planted, terrain etc. However, all new planting will have a beneficial impact on net emissions of greenhouse gases.

The second scenario considered the possibility that Ireland will be more competitive over the medium term than is assumed in the *Benchmark* forecast presented above. In this case a more optimistic scenario than the *Benchmark* forecast is considered, with GNP growing at 0.7 per cent per year above the *Benchmark* growth rate. Because of the current congestion problems facing the economy, this probably represents an upper bound on the feasible growth rate of the economy over the medium term. This analysis highlights the importance of delivering the planned major increase in infrastructure. Without it the economy will not achieve its potential growth rate over the next decade.

The third scenario (not shown in the Figure) looked at the possibility that the US dollar continues to depreciate very sharply against the euro to a value of \$1.40 per euro by 2004. This scenario is also based on the worst-case outcome for the US where the Federal Reserve would react to higher inflation by raising interest rates, in spite of the negative consequences for growth. This scenario has fairly dramatic negative consequences for the Irish and EU economies over the three-year horizon considered. The very rapid deflation which it would cause, combined with much lower world demand, would push Irish output and employment significantly lower than in the *Benchmark* forecast, despite lower wages and prices. The consequences for the public finances would be very negative. Under this scenario, the rising government deficit would not be sustainable over the medium term, implying severe consequences for government spending and taxation levels.

This scenario highlights the need for prudence in the public finances today to leave adequate room to deal with such a shock, if it should occur. It also highlights the importance of a speedy and flexible response in the labour market and in the market for domestic services to the exchange rate shock that has already occurred.

The first two of these scenarios highlight the fact that the strategy being followed in the NDP/CSF is correct. It is only under the third scenario that there would be implications for the NDP/CSF. In the case of this last scenario it would not require a change in the long-term strategy itself but it would have implications for the funding of the investment: it would require a significant increase in taxation or reduction in current spending to make available the necessary resources to undertake the desired level of investment.

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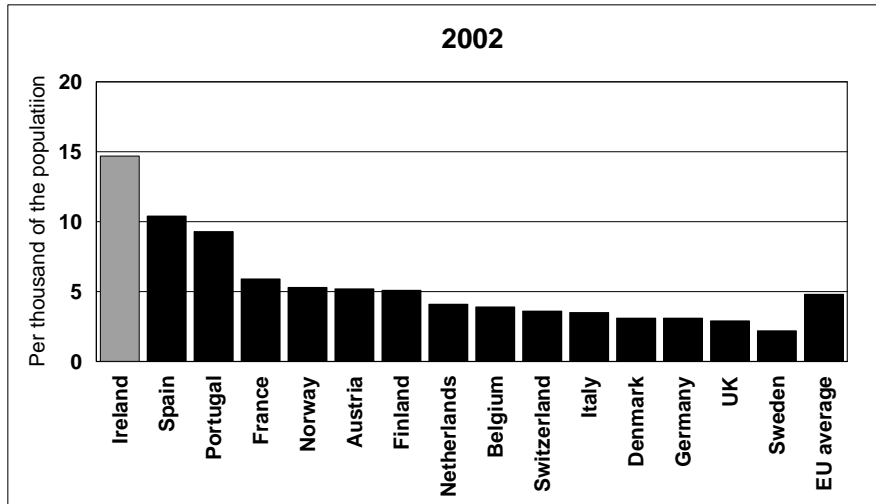
### 2.3 Building Sector Capacity and Inflation

**D**emands on the construction industry increased substantially in recent years, and particularly since the commencement of the *National Development Plan 2000-2006* (NDP). Additional non-NDP construction investment plans over the medium term, in both the public and private sectors, have added further to demand. Such projects include the integrated transportation strategy for the Greater Dublin Area and investment by new private utility companies.

Today the construction sector accounts for a major share of the output of the economy. The gross output of the sector amounted to 21 per cent of GNP in 2002 compared with 13.7 per cent in 1990. The industry’s remarkable performance since 1994 resulted in a cumulative increase in output of almost 100 per cent over the six-year period 1994 to 2000 or 11 per cent on average per year, probably the most vigorous expansion in the history of the State.

The building sector has geared up to undertake the current programme of investment, which is very large by the standards of any other EU economy (Figure 2.6). The fact that the number of dwellings built last year was roughly a third of the number built in the UK and a quarter of the number built in Germany highlights the magnitude of the achievement to date. However, capacity constraints are still very apparent in the housing sector, as evidenced by the fact that prices are still rising. Nonetheless, building at this rate should eventually see the backlog of demand for housing gradually reduced.

**Figure 2.6: Dwellings Built Per Head of Population**



*Source:* Euroconstruct Summary Report, June 2003, DKM Economic Consultants.

In the second half of the 1990s, with the economy growing at 9 per cent per annum, demands on the private sector from foreign direct investment projects, commercial, leisure and tourism projects as well as housing, all increased above expectations. While the changed economic climate has adversely impacted on private non-residential construction since 2001, public sector investment continued to record significant growth.

The State is the largest single buyer of the output of the construction sector, accounting directly for 30 per cent of total construction output. It is estimated that the volume of public sector construction output was unchanged in 2003 compared with 2002, having increased in volume terms at an annual average rate of 15 per cent over the period 1994 to 2002. The corresponding rate of increase for the construction sector as a whole was 9 per cent. Similar trends are evident from the provisions for social and



productive infrastructure in the Public Capital Programme. Substantial increases in value terms, of the order of 23 per cent per annum on average, have already been recorded in the total public investment in infrastructure between 1997 and 2003.

**Table 2.2: Public Capital Programme Expenditure 1997-2003**

	1997	2003	1997-2003	
	€m Actual	€m Estimate	Average Annual % Change In Value	% Change In Volume <sup>7</sup>
Total Public Capital Programme	4,415	8,850	12.3	n.a.
<b>Social Infrastructure:</b>				
Public Housing	451	1,707	24.9	15.4
Educational Buildings	161	482	20.1	12.5
Hospitals	168	510	20.3	12.7
Government Construction	255	808	21.2	13.5
Sub-Total	1,035	3,507	22.6	14.1
<b>Productive Infrastructure:</b>				
Roads	475	1,606	22.5	14.0
Public Transport	123	646	31.8	22.5
Water and Sewerage Services	204	581	19.0	10.9
Energy	383	1,367	23.6	15.0
Sub-Total	1,186	4,200	23.5	14.9
<b>Total</b>	<b>2,221</b>	<b>7,707</b>	<b>23.0</b>	<b>14.5</b>

Source: Public Capital Programme 2003, Department of Finance.

Excluding estimated construction inflation over this period, the overall increase in public capital spending translates into a volume increase of around 14.5 per cent per annum on average (Table 2.2).<sup>8</sup> This is almost three times the estimated average rate of GDP growth of 5.3 per cent per annum recorded over the same period.<sup>9</sup>

The rapid acceleration in construction output was caused by a substantial increase in investment across every segment of the construction sector, including housing, general contracting and productive infrastructure (civil engineering). It was thus inevitable that pressures on capacity would result, with adverse consequences for cost inflation. This was particularly noticeable in land and labour costs, with less evidence of inflation in the internationally-traded materials segments. It is important, over the remainder of the NDP period, to ensure that similar inflationary pressures do not arise and, if possible, that prices actually fall to help restore competitiveness.

The rate of construction tender price inflation accelerated from 4 per cent in 1995 to an average of 12 per cent per annum over the period 1998 to 2000. The costs associated with all of the stages in building and infrastructure projects, including those prior to construction, such as land acquisition, planning, insurance, design,

<sup>7</sup> Based on estimates for construction inflation from the *Annual Construction Review and Outlook* report published by the Department of the Environment, Heritage and Local Government, September 2003.

<sup>8</sup> The PCP contains non-construction related expenditure, such as the purchase of sites, capital equipment, rolling stock and information technology.

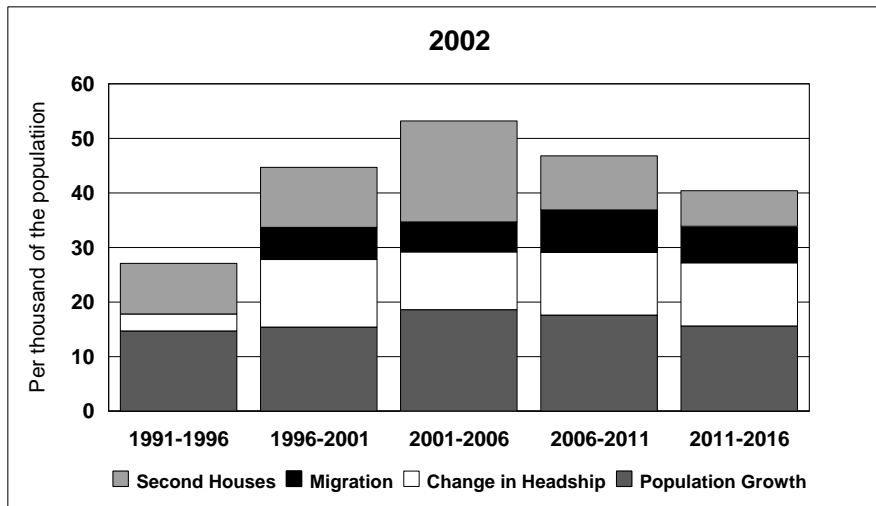
<sup>9</sup> This average assumes a GNP growth of 1.5 per cent in line with the last *Economic Review and Outlook* from the Department of Finance, August 2003.

legal and compensatory payments have all increased significantly in recent years.

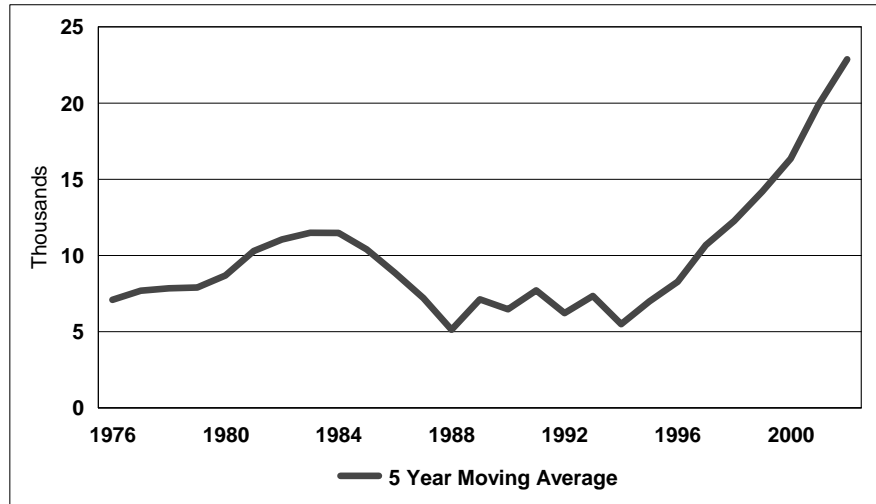
In addition, the cost overruns on some major infrastructural projects, most notably LUAS, the Port Tunnel and some key national road projects, have also been attributed to cost increases arising from contractual disputes, delays and disruption, environmental issues and variations and additional works.

One benefit of the recent moderation in construction output growth has been a downward trend in inflation in some segments of the sector, most notably in general contracting. According to the *Annual Construction Review and Outlook* (DoEHLG), there is considerable variation in tender price inflation across the various sub-sectors of the industry this year, with tender price inflation ranging from -4 per cent for private non-residential construction to 8 per cent for new private house building. Combined with an estimated average deflator of 3 per cent for new civil engineering infrastructure projects, overall construction inflation is expected to moderate to 4 per cent in 2003.

**Figure 2.7: Decomposition of Demand for Housing**



The three-year period 2000-2002 was characterised by a deceleration in output growth of the building and construction sector (excluding housing), as the industry experienced a weakness in demand, continued increases in building costs and more competitive tendering, all of which are likely to have resulted in leaner margins for contractors. After a slowdown in the rate of growth in 2001, activity in the housing sector picked up again in 2002 and was the main sector supporting employment growth last year. Today activity in the general contracting sector remains weak, particularly the component of it which is funded by private investment.

**Figure 2.8: Second or Replacement Dwellings**

The demand for housing has been fuelled by rising living standards, significant demographic pressures and the very low real interest rates.<sup>10</sup> All of these factors have contributed to the dramatic increase in demand. The demographic bulge means that there is a high proportion of the population in their twenties – the age when individuals form new households. At the same time the proportion of the population in older age groups, releasing dwellings, is very low. This “natural increase” accounts for around 20,000 dwellings a year (Figure 2.7). In addition, headship rates are very low in Ireland by the standards of the EU but they are likely to rise with rising living standards.<sup>11</sup> The immigration of skilled labour, which has helped the economy to grow more rapidly, has also had to be housed. Finally, there has been an exceptionally high demand for second or replacement dwellings (Figure 2.8).

The demand for second dwellings<sup>12</sup> or replacement dwellings is estimated as the difference between housing completions and the change in the number of households given in the Census and the *Quarterly National Household Survey*. The series in Figure 2.8 has been smoothed by taking a five-year moving average ending in the latest year. Figure 2.8 shows that for the five years ended in 2002 second or replacement dwellings accounted for over 20,000 of the annual output – over a third of the total. As shown in the model in Appendix 1, this element of demand has contributed to a substantial extent to the rate of inflation in house prices. As the second/replacement dwellings are disproportionately located in the Border, Midland and Western region it can be inferred that the

<sup>10</sup> Here defined as the nominal interest rate less the expected rate of inflation.

<sup>11</sup> Headship rates are the proportion of each cohort who are reported as “heads of household”.

<sup>12</sup> Defined here as a dwelling that is not the principle residence of any household.

effect on the cost of living (including housing) in that region has been even more marked.

Housing supply is inelastic in the short run. Evidence from Bacon, McCabe and Murphy (1998), updated in the model of the housing market in Appendix 1, shows that it can take a significant number of years to expand output in the housing sector when faced with a sudden increase in demand.<sup>13</sup> To achieve the massive increase in output in the housing sector that we have experienced over the last eight years required a huge mobilisation of resources into the sector in Ireland. Resources, including labour, had to be bid away from other sectors in the economy and from the housing sector elsewhere in the EU. This saw a rise in prices of many inputs and was reflected in big increases in land prices.

### **CAPACITY OF THE CONSTRUCTION INDUSTRY**

As discussed below, significant Measures have been taken on the supply side to try and ease constraints and increase production. However, in the absence of Measures to tackle demand they have proved incapable of halting the rise in prices in the housing sector. As discussed later in Section 13.4, it will be important if the NDP is to deliver on its targets over the coming years that demand in the housing market is managed more effectively than in the past through the use of suitable fiscal Measures. Problems in the housing sector can affect the rest of the building and construction sector through the labour market.

Outside of the housing sector, there are signs that the slow down in the economy has eased pressures on prices. While current demand conditions persist in the private sector, the industry should have the capacity to deliver the current level of output of non-housing infrastructure, or a moderate increase in output, without adding to inflationary pressures.

In an effort to address the construction capacity constraints, which became apparent towards the end of the 1990s, the Government identified Measures to increase the capacity in the industry to ensure that it was geared up to deliver the NDP in a timely and cost-efficient manner. However, it became clear, that the publication of the Government's Action Plan in September 2000 coincided with the peak in the construction industry.

The industry sought to expand capacity in three key areas:

- Increasing the supply of skilled staff;
- Promoting the introduction of innovations for building materials, products and systems;
- Improving the planning and regulatory environment.

In relation to staffing, the concerns about labour market shortages were addressed by more than doubling the intake of

<sup>13</sup> An overview of the housing section of the macro-model is given in Duffy (2002).

apprentices, increasing the output of skilled personnel from third level institutions, upskilling existing employees and by augmenting domestic capacity by encouraging greater participation by overseas contractors, bringing in skilled workers from overseas, using subcontractors and recruiting from employment agencies.

At the height of the construction boom, total direct employment in the construction sector had more than doubled from 92,000 to 190,800 (seasonally unadjusted) between April 1994 and October 2002. The latest *Quarterly National Household Survey* reported construction employment at 190,400 (unadjusted) in April 2003. It is likely that employment has been holding up due to the flexibility of large and medium-sized contractors who have been switching their resources to sectors where construction demand has not been affected by the economic slowdown, notably housing.

The industry has invested in innovative products and systems in an effort to speed up the construction process and reduce the dependence on skilled workers in scarce supply. Housing, for example, has started to introduce prefabricated units, timber framing and more modular systems for high rise developments. However, key issues raised at the time of the Action Plan were the problems and delays in securing approval/certification from the Irish Agrément Board (IAB), the national body responsible for certification, innovative building systems and materials/products. The IAB has prepared an Action Plan, which calls for additional funding over three years to address the backlog of applications before the Board.

The Government is planning to further improve the planning process for major infrastructural projects. Such action will be important if the State is to get value for money over the rest of the planning period. Whether it will be sufficient to deal with the problem of delays due to recourse to the courts remains to be seen.

In addition, there is a need to tackle the problems concerning the inflation of land prices. There are a number of possible solutions, including using fiscal remedies to capture a significant part of the development gain for the state.

Once the current boom period is over, the sector faces a period of slow growth or even contraction over the coming decade. At some stage over the next few years, when the demand for housing has been largely met, it is likely that real house prices will fall to levels closer to the EU average and this will be the signal for a winding down in capacity in the sector. Bergin *et al.*, 2003, assume that this will happen through a standstill in nominal prices over a sustained period.<sup>14</sup> In the civil engineering sector it is likely that demand will continue at an elevated level well into the next decade as there are likely to be major infrastructural needs still outstanding. However, the inevitable process of adjustment to lower demand for building and construction output, which is still some way off, will

<sup>14</sup> However, it is also possible that it could occur through a sudden fall at some time in the future.

prove painful for the sector. This means that long-term employment in the sector can not be guaranteed to all those currently working there. This has implications for planning for staffing in the future.

Looking at the civil engineering sector, it would appear that under current economic circumstances it has the capacity to continue producing at the current level of output without serious inflationary problems. It is to be hoped that the weakening in demand will actually see a fall in prices to levels more in line with experience elsewhere. It is possible that the industry could even absorb some limited increase in demand without adding to prices. However, if as suggested in this chapter, the economy returns to quite rapid growth from 2005 onwards, there could be a return to the inflationary pressures of the past. This could be aggravated by an increase in demand for construction output in a recovering wider EU economy. Under such circumstances it would be necessary for Policy Measures to be introduced to manage demand: preferably through reducing private sector demand; otherwise it might be necessary to reconsider the phasing of public sector demand.

While there is scope for increasing investment in non-housing infrastructure, in the case of the housing sector there is a continuing problem with capacity, as evidenced by the continuing rapid rate of inflation. Any further demand will further raise prices above their current level, aggravating Ireland's competitiveness problems. Under these circumstances it is important to reduce demand pressures to make space for the investment under the NDP. This issue is dealt with in more detail later in Section 13.4.

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## 2.4 Major Policy Developments

### NATIONAL SPATIAL STRATEGY

The most important new policy development affecting the NDP since it was launched was the adoption of the National Spatial Strategy (NSS) last year. The need for such a spatial strategy had been signalled in the run up to the production of the NDP (Fitz Gerald, Kearney, Morgenroth, and Smyth, 1999). Significant resources were devoted to the preparation of the NSS. It addresses an important policy vacuum in defining the long-run spatial development strategy, which the NDP, along with other policies, should adhere to. The NSS constitutes the most important regional policy document since the Buchanan report in 1968, which also sought to guide spatial planning for the whole country. However, in contrast to the Buchanan Report, the NSS is wider ranging in that it does not concentrate on enterprise development alone, instead considering the wider set of factors driving regional development in a modern economy.

The strategy is framed for the next 20 years and aims for a better spread of activities. This is to be achieved through promotion of places that have sufficient scale and critical mass to attract investment. As such the strategy should inform other policies, such as those relating to transport. In addition to the 'gateways' identified in the National Development Plan (namely Dublin, Cork, Galway, Limerick and Waterford), four further gateways were announced,

which are Sligo, Letterkenny (working closely with Derry), Dundalk and, fourth, the linked gateway of Athlone, Tullamore and Mullingar. Nine 'hubs' then complete the network.

While the NDP did not have the benefit of the NSS when it was prepared, some of its Measures did make provision for what such a NSS might contain. However, there are significant areas of the NDP that could be better tailored to implementing the long-term strategy of the NSS. The changes in emphasis, which it requires, are reflected later in this report in the recommendations for reallocation and retargeting of resources in the NDP. In addition, the development of regional spatial strategies, when they are published and adopted, may warrant support under the NDP/CSF.

### **NATIONAL ANTI-POVERTY STRATEGY (NAPS)**

Over the period of the Plan there have been significant policy developments on social exclusion in the form of the National Anti-Poverty Strategy (NAPS) and the Irish National Action Plans against Poverty and Social Exclusion (NAPincl). The NDP Measures are expected to contribute towards meeting the targets set by NAPS.

The ten year National Anti-Poverty Strategy was launched in 1997 to help achieve the objective of eliminating poverty in Ireland. A detailed review of the National Anti-Poverty Strategy was carried out in 2000-2001, and the results are contained in the new NAPS document *Building an Inclusive Society: Review of the National Anti-Poverty Strategy* (2002). It defines poverty in the following way:

*People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living, which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources, people may be excluded and marginalised from participating in activities, which are considered the norm for other people in society.*

The global poverty target set in the revised NAPS is to reduce consistent poverty to below 2 per cent by 2007.<sup>15</sup> In addition to this general target NAPS also addresses poverty issues within a number of key themes and defines targets within each of these themes:

- Income Adequacy;
- Employment and Unemployment;
- Educational Disadvantage;
- Health;
- Housing and Accommodation;
- Rural Disadvantage;
- Urban Poverty.

<sup>15</sup> Consistent poverty is measured in NAPS as households who are experiencing enforced basic deprivation and whose income is less than 60 per cent of mean household income.

Within education there is a target to eliminate early school leaving before Junior Certificate and to increase the percentage of children completing the senior cycle to 90 per cent by 2006. There are also a number of literacy targets. Both these targets are addressed through Measures in the EHRD OP. In the area of employment one of the targets is to eliminate long-term unemployment by 2007. The housing targets are explicitly linked to the commitments in the NDP. The health targets relate to health outcomes for different groups. In the health area there is less integration between the NAPS process and the NDP.

The first NAPS identified eight groups at risk of poverty – the unemployed (particularly the long-term unemployed), children (especially those in large families), single adult households, households headed by someone working in the home, lone parents, people with disabilities, travellers and homeless people. The revised NAPS mentions seven vulnerable groups: children, women, older people, travellers, people with disabilities, migrants and members of ethnic minority groups.

Running in parallel to this national process, the European Union requires each member state to prepare National Action Plans Against Poverty and Social Inclusion. The first plan for the period 2001-2003 was submitted to the EU in 2001 and a plan for 2003-2005 has recently been published. The key objectives are:

- Sustain economic growth and employment;
- Provide levels of income support to those relying on social welfare sufficient to sustain dignity and avoid poverty, while facilitating participation in employment, and economic independence if possible;
- Address the specific needs of groups at high risk of poverty;
- Support disadvantaged communities;
- Provide high quality public services to all.

Policy commitments to tackling social exclusion have also been developed in the context of the National Partnership Agreements, *Programme for Prosperity and Fairness* (PPF) and *Sustaining Progress*. For example, the RAPID programme, which identifies the most disadvantaged areas in the country and targets a proportion of NDP funding to these areas, was set up under the PPF Agreement. Key social inclusion issues in *Sustaining Progress*, which are also central to the NDP, relate to housing/accommodation, long-term unemployment, tackling educational disadvantage, ending child poverty and providing care services (for children, those with disabilities and older people).

## **THE EUROPEAN EMPLOYMENT STRATEGY**

The European Employment Strategy (EES), devised in 1997/98 in the context of high unemployment in Europe, focused on interventions to tackle unemployment and social exclusion. More recently it was agreed that Europe should aim to become ‘the most dynamic knowledge-based economy in the world, leading to more



and better jobs and greater social cohesion' (Lisbon Summit, March 2000).

The European Employment Strategy is organised around four key pillars: Employability; Entrepreneurship; Adaptability; Equal opportunities between men and women. Co-ordination of national policies is through an annual cycle of Council Guidelines and Recommendations and National Action Plans drawn up by member states, which describe how the guidelines are put into practice at national level.

Two themes have been emphasised in the annual Council recommendations:

- the need to strengthen efforts to mobilise and integrate into the labour market economically inactive people, particularly women. In this respect, the 2002 NEAP notes that the Government is committed under the NDP to supporting the development of childcare services that are accessible and of high quality;
- the need to pursue efforts to sustain productivity growth and upgrade skills – in-company training and lifelong learning places. The Managing Authority of the EHRD OP has engaged in efforts to increase spending on the In-Company Training Measures throughout the NDP/CSF period.

The Mid-Term Evaluation of the EHRD OP notes that, while this process provides for a substantial degree of coherence in policy-making in relation to employment across the EU, there is some tension between a multi-annual planning and budgetary process, as in the EHRD OP, and an annual process of policy review and adoption of new strategic directions, as represented by the annual Guidelines, Recommendations and Employment Action Plans. While the objectives of the EHRD OP have been consistent with the overall policy direction of the EES process, greater coherence may be achieved with the streamlining of the policy co-ordination cycle and the shift to a multi-annual process for setting medium-term guidelines, recommendations and action plans from Spring 2003.

## **REPORT OF THE TASK FORCE ON LIFELONG LEARNING**

The Report of the Task Force on Lifelong Learning, published in October 2002, argues that lifelong learning should be seen in the context of individual development, active citizenship, social inclusion and the economic well-being of society as a whole. The Task Force concluded that:

- Lifelong Learning requires a significant, systemic shift within the education, training and certification systems and the enterprise sector along with a change of culture on the part of society and individual citizens;

- Lifelong Learning is not achievable with incremental or short-term approaches and requires a long-term commitment on the part of government and citizens;

The Task Force established a Framework for Lifelong Learning consisting of five key elements: National Framework of Qualifications; Basic skills; Guidance and Information; Delivery, access and funding issues; Learning in the workplace. The Task Force made detailed recommendations in relation to each of the five elements in the Framework. In addition it made three overall recommendations as follows:

- The Government should establish an overarching structure to co-ordinate, review and report on the implementation of the framework and recommendations set out in the Task Force report;
- That structure should develop implementation plans and associated costings for the Task Force recommendations and oversee their fulfilment;
- The structure should report to both Government and to the national social partnership framework.

### **THE EMPLOYMENT EQUALITY ACT (1998) AND EQUAL STATUS ACT (2000)**

The Employment Equality Act 1998 prohibits discrimination in the workplace on nine grounds and the Equal Status Act 2000 extends these rights to the non-employment sphere. The nine grounds are gender, marital status, family status, sexual orientation, age, disability, religion, race and membership of the Traveller Community.

Individuals and organisations responsible for the provision of labour market initiatives have certain obligations under both acts as employers, educational and training bodies and service providers. These Acts aim to promote equality of opportunity and prohibit discrimination on specified grounds in employment, vocational training, training or experience, access to employment and conditions of employment, service provision and educational establishments.

The particular provisions of the Employment Equality Act (1998) and Equal Status Act (2000) are to:

- prohibit direct and indirect discrimination (and discrimination by association by service providers and educational establishments);
- prohibit sexual harassment and harassment on the discriminatory grounds;
- require employers, educational and training bodies, service providers and educational establishments to provide reasonable accommodation for people with disabilities unless it costs more than nominal cost;
- allow positive action Measures under the Employment Equality Act, 1998 in relation to: the gender ground; people

over 50; people with a disability; members of the Travelling Community; training or work experience (provided by or on behalf of the State) for any disadvantaged group (if the Minister certifies that it is unlikely that the group would otherwise receive similar training or work);

- allow positive action Measures under the Equal Status Act, 2000 in relation to disadvantaged groups or Measures which cater for the special needs of persons.

The Equal Status Act 2000 comes at a time when staff in Implementing Bodies are experiencing increased involvement with members of the relevant groups. A number of factors are believed to be driving these trends, such as recent policy developments, namely the NEAP Preventive Strategy and the transfer of responsibility for vocational training and pathways to employment for people with disabilities from the National Rehabilitation Board to FÁS, as part of the mainstreaming of services for people with a disability. Other factors include the recent upward trend in numbers in some of the groups (e.g. lone parents, refugees and ethnic minority groups) and the changing composition of short-term and long-term unemployed people.

## **ENVIRONMENTAL POLICY**

Since 1999 there have been several policy developments in various critical areas of the environment. These areas include climate change, land use, pollution control/environmental services, and protection of wildlife.

The government published its Climate Change Strategy in November 2000, which set out a ten-year framework of actions to reduce greenhouse gas emissions. The strategy commits the government to the introduction of carbon taxation on a phased incremental basis, to supporting the phase-out of coal burning at Moneypoint by 2008 and to Measures that address emissions from transport by means such as fuel efficiency and changes in transport modes. In May 2002 the Minister ratified the Kyoto Protocol under which Ireland is internationally legally bound to constrain growth in emissions to their 1990 level plus 13 per cent, by 2008-2012.

The European Parliament and Council agreed a directive on emissions trading in July this year. The emitters of large amounts of carbon dioxide emissions will be allocated emission permits on an annual basis through national allocation plans, mostly for free. The idea is that companies reducing emissions to a level below their limit can sell this over-achievement to other companies that are above their limit, or 'keep' the permits for future use. The cost to companies of emissions abatement in the EU will determine the price of permits in the market, and this will encourage abatement that is least costly to be taken on. The scheme will operate from January 2005 onwards.

Reforms in environmental services are addressed in the Protection of the Environment Bill. This was published in January 2003 and the Measures aim, among other things, to enhance the

licensing system that regulates industrial and other activities, with full transposition into Irish law of the EU Directive on IPPC licensing (Integrated Pollution Prevention and Control). Currently some 505 licenses are in force under the original system. The new system will put increased emphasis on energy efficiency and emissions. Also included are new Waste Management Measures that give local authorities explicit powers to charge for waste and to increase litter fines. In relation to litter, the Plastic Bags Levy came into effect in March 2002 and it has succeeded in its aim of reducing the number of plastic bags in use.

With respect to the environmental services dealing with water, the EU's Water Framework Directive entered into force in December 2000 and has the objective of achieving 'good status' for waters by 2015. It relates to water quality in rivers, lakes, canals, groundwater, to water in estuaries and to coastal waters out to a distance of at least one nautical mile. The directive provides guidance for management, including active involvement by interested parties, catchment-based management and full cost recovery of water services. The government is in the process of applying full cost recovery and metering by 2006 in the case of non-domestic users. Meanwhile, implementation of the Nitrates Directive (91/676/EEC) is progressing with the development of an action programme that limits the amount of nitrogen that can be applied to land, having regard for the derogation provisions.

At the start of 2004 new regulations come into force that transpose the EU directive on the quality of water intended for human consumption. The regulations set standards in relation to water quality, prescribing parametric values, which include a reduction to be achieved in the amount of lead.

Wildlife, or in particular their habitats (Special Areas of Conservation), are the subject of a three month consultation process, which will include the issue of compensation for restrictions arising from Regulations. Restrictions in general are not anticipated to go beyond what is required by the Nitrates Directive and *Good Farming Practice* (Department of Agriculture and Food, 2001).

Finally, Strategic Environmental Assessment ('SEA Directive' 2001/42/EC) is not required to be applied to projects co-financed under the current round of structural funds, though Environmental Impact Assessment does apply where relevant. Succinctly, SEA considers alternative options whereas EIA is constrained to dealing with alternatives within the proposed project.

## **STABILITY PROGRAMME**

Since the NDP/CSF was finalised in 1999, fiscal policy has followed a roller-coaster ride. For the period 2000 to 2002 policy was broadly stimulatory. The very strong performance of the economy in 2000, slowing through 2001, meant that the public finances were in a very strong position at the beginning of the planning period. However, the slowdown in economic activity from 2001 onwards, together with stimulatory policies, has seen a

significant deterioration in the public finance position. However, the overall budgetary position still remains fairly robust. This is reflected in the updated Stability Programme for Ireland published with the 2003 Budget in December 2002.

The updated Stability Programme envisages a fairly tight fiscal policy in 2004, putting the public finances on a path that would produce a very small cyclically-adjusted budget surplus in 2005. While the macro-economic assessment underlying this report, described in Section 2.2, would suggest a somewhat more favourable budgetary position, the assumptions concerning the underlying fiscal stance are broadly similar. Also the Stability Programme includes as one of the key objectives of government budgetary and economic policy the tackling of the infrastructural deficit. This is fully consistent with the underlying strategy of the NDP/CSF.

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## 2.5 Conclusions

The very rapid growth in the domestic economy in the 1990s led to significant shortages in physical infrastructure, in particular housing and transport infrastructure. If not dealt with, potential bottlenecks in these areas would give rise to even higher production costs in the tradable sector and ultimately would adversely affect Irish competitiveness.

In the future, the growth in the potential output of the Irish economy is likely to be similar to that envisaged at the time the NDP/CSF was drawn up. This means that the investment needs are also likely to be broadly unchanged. The broad strategy of the NDP/CSF is, therefore, appropriate to the needs of the economy. On the basis of the medium-term forecasts, financing the appropriate level of investment should not pose a major problem for the State.

Even when a range of alternative scenarios for future growth is considered, the NDP/CSF strategy is still seen to be robust. However, a major delay in the economic recovery, for example through a collapse in the dollar, would require a significant increase in taxation or reduction in spending to make available the necessary resources to undertake the desired level of investment.

Since the NDP/CSF was drawn up interest rates have been significantly lower than expected – reducing the cost of capital for investors. While interest rates remain low today, they will rise when the Euro Area economy returns to growth, and it would be inappropriate to significantly change the discount rate used in deciding on priorities for investment.

The changes in the economy that have taken place since 1999 will require some reorientation of priorities, as will the changes in the broad external environment, including the enlargement of the EU from 2004. The problem of inflation, and the capacity constraints in the building and construction sector, especially housing, require special attention.

Inflation in the civil engineering sector is currently under control and there is scope for some increase in investment in non-housing

infrastructure. However, it will be important over the remainder of the NDP to ensure that similar inflationary pressures to those of the 1999-2001 period do not arise again and, if possible, that prices actually fall to help restore competitiveness.

By contrast, capacity constraints are still very apparent in the housing sector, as evidenced by the fact that prices are still rising. The inflation in the housing sector can have knock-on effects elsewhere in the building and construction sector, as well as impacting on the overall competitiveness of the economy. Under these circumstances it is important to reduce demand pressures in the housing market to make space for the investment under the NDP. This issue is dealt with in more detail later in Section 13.4.

On the supply side of the building and construction sector the Government is planning to further improve the planning process for major infrastructural projects. Such action will be important if the State is to get value for money over the rest of the planning period. Whether it will be sufficient to deal with the problem of delays due to recourse to the courts remains to be seen. In addition, there is a need to tackle the problems concerning the inflation of land prices.

The analysis of the medium-term prospects for the Irish economy suggests that there will be significant differences in the prospects for growth across the different sectors of the economy. The major contributor to growth in employment, including skilled employment, will be the market services sector. The high-technology manufacturing sector, while growing more slowly than over the last decade, will still show significant progress. However, the prospects for output growth in the agriculture, fishing and food processing sectors will be limited. The loss of competitiveness will continue to affect prospects for the tourism sector. The building and construction sector is close to an output peak so that output and employment will tend to decline over the coming decade, in spite of continuing public investment. All of this has implications for the likely return on future investment in these sectors funded by the Productive Sector OP. It also has implications for training and education under the EHRD OP.

Unemployment has risen somewhat since 2001 and may continue to rise into 2004. However, given the flexibility of the labour market, with the assistance of appropriate policies under the NDP/CSF, a period of more rapid growth after 2005 should restore full employment by the end of the decade. Accordingly it will be important to ensure the delivery through the EHRD OP of effective interventions to recent entrants to unemployment to prevent the drift into long-term unemployment.

The rapid growth in the economy is also giving rise to a rapid increase in greenhouse gas emissions pushing Ireland well above the limits set as part of the EU agreement on combating global warming. Tackling this problem will require supplementary Policy Measures outside the NDP/CSF if Ireland is to meet its emissions targets by 2008-2012.

# 3. MACRO-ECONOMIC IMPACT

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## 3.1 Introduction

The standard approach adopted in analysing the overall macro-economic impact of the NDP/CSF in the past has decomposed the results into supply side effects and demand side effects. In the case of the supply side effects there was previously limited information available to quantify key positive externalities arising from investment under the NDPs/CSFs. This report incorporates the results of a number of detailed studies, specially undertaken for the Mid-Term Evaluation, that allow quantification of these positive externalities in certain key areas. This analysis is important in helping to focus attention on how the macro-economic impact of the NDP/CSF over the rest of the programming period can be maximised.

Underpinning the macro-economic analysis are a series of micro-economic studies that look at key channels through which the investment under the NDP/CSF impacts on the economy.

The first element of this analysis is a study of the private returns to training and education. The results of this study are summarised in Section 3.2. In addition, this section describes the implications of these results for the factors affecting the gender pay gap in Ireland in recent years. This latter information is useful in understanding how the NDP/CSF can better target certain equality issues.

The evidence on the private returns to human capital investment in Section 3.2 is used in a small model of the labour market to analyse the broader impact of such investment on the wider economy. The results of this analysis are described in Section 3.3.

A separate study has been undertaken of the impact of infrastructural investment directly on the growth potential of the economy. This study is important since, for Ireland, no reliable estimates of the return to infrastructure investment have been produced at either an aggregate, sectoral, or regional level. Information on these returns is, however, crucial to evaluate the overall impact of infrastructural investment. The results of this analysis are presented in Section 3.4.

The results from these micro-economic studies are brought together in Section 3.5 in an analysis of the full macro-economic impact of the NDP/CSF. This analysis benefits significantly from the micro-economic evidence produced by the studies described above.

A theoretical model of regional development is described in Section 3.6 and this is used in assessing the effectiveness of the Regional Operational Programmes and the overall impact of the NDP/CSF on regional balance. Appendix 2 includes a SWOT analysis paralleling that undertaken in the original NDP publication.

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## 3.2 Returns to Education and the Gender Pay Gap

### RETURNS TO EDUCATION IN 2000

#### *Introduction*

As indicated in the previous Mid-Term Evaluations (Honohan, 1997) a range of sometimes countervailing factors come to bear in determining the labour market returns, in terms of higher wages, attaching to different educational qualifications. This section reports on econometric research aimed at identifying these returns in the year 2000, using data on a large scale nationally representative sample of employees. The methods used are comparable with those reported in previous Mid-Term Evaluations for data relating to 1987 and 1994. The findings, involving changes in returns to education, are of interest in themselves and are used elsewhere in this chapter to estimate the impact of CSF/NDP investments in education, in the context of a wider model of the labour market and the macro economy.

In work based on data from 1994 it was found that returns to higher education were broadly stable, despite an increased supply of graduates arising from the expansion of third level education. International forces tending to strengthen the return to higher education may therefore have offset the downward pressure arising from increased supply. In this section we examine whether these trends have continued, or been reversed, in the years leading up to the millennium. The years in question (1994 to 2000) saw the macro economy grow at a rapid pace, and unemployment fell sharply – something which could be expected to have a significant impact on educational wage differentials.

We begin by considering the evolution of factors tending to increase or decrease returns to educational investment from 1994 to 2000. Next, we set out the data used to estimate returns to education in the year 2000. The estimates themselves are then set out and compared with estimates for 1987 and 1994. The main conclusions from this analysis are drawn together in the final part of this section.

#### *Factors Affecting Returns to Educational Investment*

Honohan (1997) classified factors affecting returns to education in three categories: supply, demand and institutional factors. We consider each of these in turn.

##### (i) Supply Effects:

Wage rates for individuals with different levels of education can be viewed as the “prices” for different types of labour, e.g., university graduate or Leaving Certificate. In the same way that prices in



general react to changes in supply and demand, so too do the prices of different types of labour respond to changes in their supply and demand.

Evidence on the response of relative wage rates in the US to the relative supplies of labour with different educational qualifications is reviewed in Levy and Murnane (1992). They found that a “dramatic increase in the supply of college educated workers was the single most important factor contributing to the reduction in the earnings premium associated with a college education in the 1970s” (Levy and Murnane, 1992). They go on to point out that the same premium rose again in the 1980s, during which time the growth rate of college graduates as a fraction of the labour force slowed down. Fersterer and Winter-Ebmer (2003) come to a similar conclusion for Austria over the period 1981 to 1987: “The general Austrian tendency for falling returns is consistent with a relatively big increase in the supply of more educated workers in the last two decades.” They note that the evidence is not consistent with a decrease in the quality of education: if the quality of recent graduates was decreasing, returns to education for younger workers should decrease disproportionately, which did not happen.

Given the rapid growth in participation in education in Ireland in recent years and, in particular, the growth in third level participation, it can be said that there has been a shift in relative supplies, especially when the nature of the inflow into the labour market is combined with retirements and other withdrawals of less educated workers.

Bergin *et al.* (2003) document the change in the educational attainment of the labour force. There has been a relative increase in the numbers in the upper education categories (Leaving Certificate and above) and a decline at the lower end. Other things being equal, a decrease in the wage premium of degrees, diplomas, certificates and Leaving Certificates, would be expected. Of course, changes in supply were not the only element, and it is to the demand side of the equation that we now turn.

(ii) Demand Effects:

There is wide agreement in the economics literature that the demand for skilled (and hence more educated) workers relative to unskilled workers has been increasing in the developed world since the 1980s (Levy and Murnane, 1992; Katz and Murphy, 1992). This increasing relative demand has been found to be a contributing factor to rising wage levels for skilled workers relative to unskilled workers. Two competing theories emerged in response to this, attempting to explain the source of the increased demand for skilled workers.

The first theory is based on the changing nature of the workplace (Berman, Bound and Griliches, 1994). The idea behind this theory is that technological change has increased the productivity of highly skilled workers and reduced that of low skilled workers. In particular, the increasing importance of computers has been identified as conferring an advantage on the

skilled (Krueger, 1993). This has become known as the “skill biased technological change” hypothesis (SBTC). A recent reappraisal (Card and DiNardo, 2002) points to several question marks over the SBTC hypothesis: wage inequality in the US stabilised in the 1990s despite continuing advances in computer technology. “Viewed from 2002, it now appears that the rise in wage inequality was an episodic event”. Card and DiNardo point to other factors – including a fall in the real value of the minimum wage – which tended to increase the wage gap between skilled and unskilled workers.

The second theory is based on the growth of international trade. With the “internationalisation” of production, there are now greater opportunities for companies to transfer those elements of the production process that are low-skill intensive to areas of the world where such low-skill labour is cheap. This, of course, results in a decline in demand for low-skilled workers in the developed world and a decline in their wages.

Whichever theory is correct, the open nature of the Irish economy and labour market would lead us to believe that the relative demand shift described has affected Ireland. Evidence for this was given in Honohan (1997): the share of non-agricultural employment accounted for by the top two groups in the skill hierarchy (managers/proprietors and professionals) rose from 26.1 per cent to 30.4 per cent between 1981 and 1991, while the share of skilled and unskilled manual occupations fell from 39.6 per cent to 33.2 per cent. Recent work (Sexton *et al.*, 2003) indicates that this trend has continued, with the share of the top two groups rising by a further 4.5 percentage points, and the share of manual occupations falling by a further 3 percentage points.

Thus, the labour market outcomes point to a shift between skill groups. This could arise from a variety of different mixes of supply and demand factors, but given the wider international evidence on this topic, it seems likely that an international shift in demand has played a significant role in leading to the Irish outcome.

**Table 3.1: Unemployment Rate (ILO definition), 1987-2002**

Year	Unemployment Rate (ILO definition)
1987	16.9
1994	14.7
2000	4.3
2001	3.7
2002	4.2

*Notes:* There is a discontinuity in the series between 1997 and 1998, as the survey used to measure unemployment changed from the annual Labour Force Survey to the *Quarterly National Household Survey*.

Cyclical demand forces must also be taken into account. Between 1987 and 1994 the unemployment rate fell by just over 2 percentage points. But the rate fell by more than 10 percentage points between 1994 and 2000, reaching a historically very low level of 4.3 per cent. Unskilled unemployed may have been among the

last to be included in the employment boom. If so, then the existence of a pool of unskilled unemployed could have exerted downward pressure on unskilled wages for some years, until the boom eventually mopped up excess labour supply and bid up wages among the unskilled.

(iii) Institutional Context:

Since 1987, the Irish labour market has been characterised by comprehensive national wage agreements whereby wages for a large number of employees have been set through collective bargains. In this context the influence of market forces may be attenuated. Hence, although the demand and supply changes which we have identified would tend to generate pressure for changes in the relative wages of education groups, the institutional context works to keep the relative wage rates constant.

A further institutional factor is the introduction of a National Minimum Wage in the year 2000. While initially the level at which this was set suggested that it might have a substantial impact on the wage distribution, the rapid growth of wages driven by economic growth reduced this potential impact. Whatever about the size of the impact, it seems clear that some boost to unskilled wages relative to skilled wages is likely to have been induced. (See Nolan, O'Neill and Williams, 2002).

How might these different influences have combined to affect the relative returns to different levels of education over the period 1994 to 2000? The first factor, supply shifts, would have lowered returns to higher levels of education. There is some ambiguity about the second group of factors, which includes elements tending to increase and to reduce the returns to education. The continuation of collective wage agreements is likely to have attenuated the influence of supply and demand forces, while the introduction of a national minimum wage seems likely to have given a modest boost to unskilled wages relative to skilled wages, reducing the return to education.

### *The Data*

Data for the estimation of returns to education in the year 2000 are drawn from the Living in Ireland Survey for that year. Full details of the survey, including sampling, response rates, and the construction of weights to ensure that survey estimates represent the national population can be found in Whelan *et al.* (2003). Here we summarise some of the key features. The Living in Ireland Survey began in 1994, and each year from then until the year 2001, it sought to re-interview those households and individuals still “in scope”. The initial household response rate was 57 per cent – not unusual for a survey of this type. Fall-out or “attrition” from the sample was somewhat higher than in other EU countries which were conducting similar panel surveys as part of EUROSTAT’s European Community Household Panel project. While analysis suggests that this fall-out was, for the most part, not heavily

concentrated on particular groups, the absolute size of the sample, and hence the precision of estimates based on it, was affected by attrition. In the year 2000, however, the sample was “refreshed” by interviewing over 1,500 new households, bringing the total sample size to 3,467. This is the sample on which the present analysis is based.

Similar data were gathered in the Living in Ireland Survey 1994, and in the Survey of Income Distribution, Poverty and Usage of State Services in 1987. These data have been used already in Mid-Term Evaluations of the Community Support Framework for earlier periods, and the new estimates can, therefore, be compared with those from Fitzgerald and Keegan (1993) and Honohan (1997).

### *Estimates of Wage Premia Attaching to Educational Qualifications*

We follow the methods used in earlier analyses for CSF mid-term evaluations in order to derive comparable estimates for the year 2000. Thus, we begin by estimating a wage equation of the following type:

$$\ln w = \beta X + \varepsilon$$

where  $\ln w$  is the natural log of the gross (i.e., pre-tax) hourly wage,  $X$  is a vector of individual characteristics and  $\beta$  is a vector of coefficients associated with these characteristics. Included in the  $X$  vector are four educational categories, which are used to indicate the highest educational qualification achieved by the individual:

- |                               |  |
|-------------------------------|--|
| Junior cycle:                 | Group or Intermediate Certificate, or the recent replacement, the Junior Certificate;  |
| Leaving Certificate:          | includes those whose highest qualification is a Leaving Certificate, along with participants on Post-Leaving Certificate (PLC) and other VPTP <sup>16</sup> courses; |
| Diploma or other third level: | non-degree qualifications from such institutions as regional technical colleges;   |
| University degree:            | includes both primary and higher degrees.  |

The premium for each of these educational qualifications is measured against the base provided by earnings of those with “no qualifications beyond primary level” (the omitted category). We

<sup>16</sup> VPTP refers to the Vocational Preparation and Training Programme. Participants on PLC and other VPTP courses are included in the Leaving Certificate category mainly because they amount to a small group in the data and so will not have a large impact on the estimates. Using the data available, we find that VPTP participants in the age group 15-32 have earnings that are not significantly different from Leaving Certificate holders and so the approach of combining these groups is acceptable.

examine results for three different specifications to allow for the possibility that the estimates of returns to education are sensitive to model specification (comparable results are available for 1987 and 1994). These specifications are as follows:

Specification 1: Age and its square,<sup>17</sup> the educational categories, sex and sex interacted with marital status, residence in Dublin and another urban area, completed apprenticeship/trade qualification;

Specification 2: As 1 but with the educational categories interacted with age bands (15-32, 33-49 and 50-64);

Specification 3: Years worked with its square, years spent in a return to training or education, years not worked and its square, the educational categories, the sex/marital status dummies, the Dublin/urban residence dummies and the time served dummy;

Given the complexities arising from the endogeneity of female labour supply with respect to the wage rate and the rise in women's labour force participation over the period, we have performed the analysis for the full sample and, in addition, for men only. We will begin by presenting the results for Specification 1 and 3 together, as these do not differentiate returns across age bands but rather view returns as being constant across age bands. The results are presented in Table 3.2 below.

**Table 3.2: Estimates of Returns to Education (All ages), 1987, 1994 and 2000**

Specification	Education Category	All			Males		
		1987	1994	2000	1987	1994	2000
(1)	Group, Inter, Junior Cert	0.17	0.22	0.13	0.18	0.24	0.14
	Leaving Cert	0.37	0.41	0.33	0.36	0.38	0.27
	Diploma or other 3rd level	0.58	0.54	0.54	0.47	0.47	0.43
	University degree	0.86	1.01	0.84	0.76	0.89	0.75
(3)	Group, Inter, Junior Cert	0.12	0.18	0.11	0.13	0.21	0.11
	Leaving Certificate	0.36	0.36	0.27	0.35	0.37	0.23
	Diploma or other 3rd level	0.59	0.53	0.49	0.49	0.52	0.43
	University degree	0.88	1.01	0.80	0.79	0.95	0.76

*Note:* A coefficient of 0.50 indicates that having the relevant educational qualification leads to an hourly wage 50 per cent higher than the base case, the same individual with no formal qualification (or equivalently, adds 0.50 to the logarithm of the wage).

Results for the full sample (males and females) indicate a sharp fall in returns to all educational qualifications with the exception of third-level diplomas. These falls are relative to the reference category, employees with no educational qualification at second level or higher. The sharpest fall is for university degrees, where the wage commanded in 2000, relative to an unskilled wage, is between 16 and 19 per cent lower than in 1994. The fall for Junior and Leaving Certificate qualifications (again relative to the wage for a

<sup>17</sup> The inclusion of age and its square allows for wages to rise with age initially, but then decline.

person without a qualification) is more modest, though still sizable, at between 7 and 9 per cent. The pattern is broadly similar when attention is restricted to male employees (for whom complications arising from rapid growth in participation do not arise). There is, however, some evidence of a fall in the return to a diploma (of the order of 4 to 8 per cent) relative to the wage for an unqualified person.

**Table 3.3: Estimates of Age-specific Returns to Education, 1987, 1994 and 2000**

Specification	Educational Category	All			Male		
		1987	1994	2000	1987	1994	2000
(2)	Age Group 15-32						
	Group, Inter, Junior Cert	0.08	0.11	0.06	0.11	0.19	0.07
	Leaving Certificate	0.23	0.21	0.17	0.19	0.22	0.09
	Diploma or other 3rd level	0.39	0.26	0.35	0.29	0.26	0.22
	University degree	0.73	0.73	0.58	0.65	0.63	0.53
	Age Group 33-49						
	Group, Inter, Junior Cert	0.18	0.24	0.14	0.12	0.23	0.13
	Leaving Certificate	0.42	0.52	0.37	0.43	0.46	0.33
	Diploma or other 3rd level	0.56	0.67	0.58	0.46	0.58	0.53
	University degree	0.90	1.13	0.94	0.78	0.97	0.81
	Age Group 50-64						
	Group, Inter, Junior Cert	0.21	0.14	0.10	0.23	0.15	0.16
Leaving Certificate	0.49	0.35	0.36	0.64	0.38	0.34	
Diploma or other 3rd level	0.87	0.71	0.60	0.67	0.55	0.46	
University degree	0.94	1.04	0.92	0.80	0.95	0.81	

*Note:* A coefficient of 0.50 indicates that having the relevant educational qualification leads to an hourly wage 50 per cent higher than the base case, the same individual with no formal qualification (or equivalently, adds 0.50 to the logarithm of the wage).

Turning now to Table 3.3, we consider the estimates which take account of the fact that returns may vary across age groups. For the youngest age group we find much in common with the pattern of results for all ages. There is a modest fall in the premium attaching to Junior and Leaving Certificates, and a sharper fall for university degrees. We find a rise in the value attaching to third-level diplomas. For young men, the fall in the value of Junior Certificate and Leaving Certificate examinations is more marked, and there is also a fall in value of diplomas. For the group aged 33-49 the main deviation from the all-ages pattern is that the premium attaching to a diploma fell by 5 to 9 per cent. For the older group (aged 50 upwards) the results were, however, quite different. The premia attaching to Junior and Leaving Certificates held up quite well; but diplomas and degrees each saw sharp falls (of the order of 10 per cent) in their premia relative to the wage for those without qualifications.

### *Conclusion*

The analysis undertaken above, like that in earlier years, is based on ordinary least squares regressions. If unobserved ability is correlated with educational attainment, then these could represent upward-biased estimates of returns to education. However, both

international and Irish evidence (see Harmon and Walker, 1995; Callan and Harmon, 1999, Denny and Harmon, 2000), based on instrumental variables (IV) estimators, suggests that the OLS estimates are not upward biased. In fact, IV estimators may show higher returns than the OLS figures; but great care needs to be taken in interpreting such results.

The main results from the analysis are:

- Returns to university degrees have fallen quite sharply between 1994 and 2000.
- Returns to the Junior and Leaving Certificates have also fallen relative to the “no qualification category”. This effect has been particularly strong for young and middle-aged men.
- Returns to diploma level qualifications have remained roughly constant, with some rise in the return for women with such qualifications.

What factors explain these changes? Increases in the supply of highly-educated labour relative to unskilled labour have undoubtedly played a significant role. Other factors include the introduction of a National Minimum Wage, and the prolonged strength of labour demand over the 1994 to 2000 period, bidding up the price of unskilled labour as unemployment (which was particularly concentrated among the low skilled) was reduced to historically very low levels. Declining returns notwithstanding, the analysis also confirms the strong positive returns to education and that these returns increase with educational attainment.

## THE GENDER PAY GAP

Reducing the pay gap between men and women is an important element of the European Employment Strategy and the National Employment Action Plans which inform the NDP. For example, the 2002 Employment Guidelines explicitly call for member states to adopt a multi-faceted strategy to achieve gender pay equality in both the public and private sectors (see Russell and Gannon, 2002). Within the NDP itself, the EHRD OP, the two regional OPs and the PEACE OP all include within their main objectives the aim of promoting equal opportunities in the workplace and/or increasing female labour market participation. Research suggests that tackling pay gaps is an important element in promoting greater female participation as women’s participation is particularly responsive to increases in pay (Doris, 2001; Callan *et al.*, 2003).

### *Data and Measures*

In this section we draw on analyses of the Living in Ireland survey data to track changes in the gender pay gap and to highlight the sources of this gap. (This data set was described earlier in this section.) For this analysis of earnings we selected employees only, which includes apprentices and employees working either full time or part time. Employees were asked about their gross pay (including overtime) received in the last pay period. They were then asked the

periodicity of this pay, and how many hours worked during that period. This information was combined to derive a gross hourly wage for each individual. In some cases, this was not their usual pay, and these respondents were asked to provide their usual gross pay and usual hours. For these individuals hourly earnings is constructed from their usual pay and hours. This format means that regular overtime is included in the calculation, but irregular overtime, which leads respondents to classify their last pay packet as not 'usual', is excluded. These selections resulted in a sample of 1,975 male employees and 1,599 female employees for the analysis.

**Table 3.4: Gender Wage Gap in Ireland 1987 – 2000, Living in Ireland Surveys**

	Hourly Wage £		
	F/M Ratio	Male	Female
1987	80.1	4.27	3.59
1994	82.8	7.71	6.38
1997	85.0	8.88	7.55
2000 <sup>1</sup>	85.1	10.28	8.75

<sup>1</sup>The figures for 2000 here and in the following tables vary marginally from those in Russell and Gannon (2002) because of data revision.

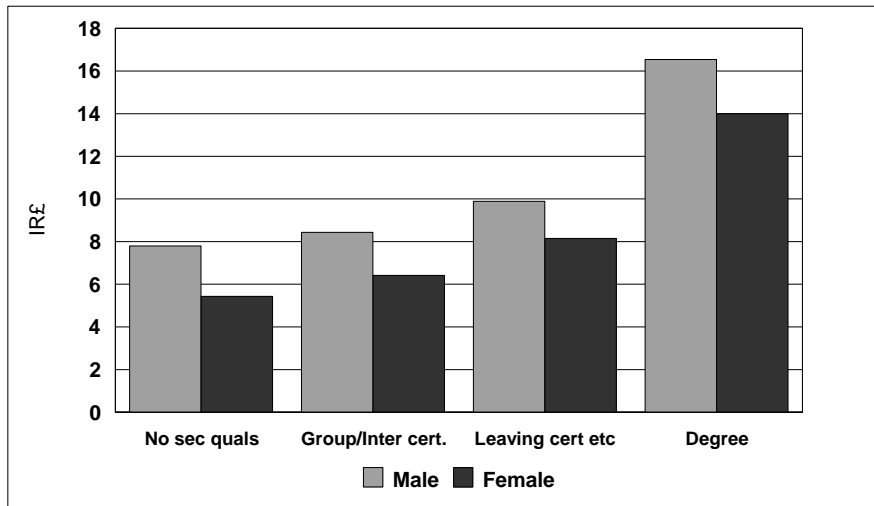
The figures in Table 3.4 show how the gender pay gap has evolved over recent years. In 1987 the ratio of women's mean hourly wage to men's mean hourly wage was 80.1, representing a gap of 20 per cent. This gap declined slowly to 15 per cent in 1997. However, between 1997 and 2000 there was very little change so the mean pay gap still stands at 15 per cent.

**Table 3.5: Male/Female Wage Differential by Educational Qualification**

	1994 ratio	1997 ratio	2000 ratio
No secondary qualifications	65.6	68.3	69.7
Junior/Group/Inter Certificate Level	73.3	75.5	76.0
Leaving Certificate/Diploma	80.5	81.9	82.5
Degree	84.9	90.6	84.7

The research on which the current summary is based investigates the size of the pay gap between men and women across a range of different personal and labour market characteristics (Callan and Russell, forthcoming). Here we focus on two factors that are particularly relevant to activities within the NDP, namely education and occupation.



**Figure 3.1: Gross Hourly Wage for Men and Women by Educational Level, 2000**

In Table 3.6 we outline the extent of the gender pay gap across different occupational groupings. The results for 2000 show that the female/male wage gap is narrowest among those in professional occupations, where women earn 91 per cent of male hourly wages on average and among clerical workers where the ratio is 87 per cent. The widest gaps are observed in both high and low status occupations. Women managers and senior officials earn only 72 per cent of male managers' earnings on average, representing a gap of 28 per cent. In sales and service occupations the gap reaches 32 per cent, while in elementary occupations the gap is 25 per cent. In the other occupational groups there were too few women to accurately measure the pay gap. The fact that the female/male wage gap is higher than the economy-wide gap in four of the seven occupational categories reveals that the differences *within* occupations are at least as important as differences *across* occupations in determining the overall wage gap.

**Table 3.6: Male Female Wage Differential by Occupational Group**

	1994 ratio	1997 ratio	2000 ratio	2000 Hourly wages £	
				Male	Female
Manager/senior officials	61.0	66.5	71.7	14.62	10.48
Professionals	82.6	94.0	91.2	15.95	14.55
Tech & assoc profess	92.1	92.4	81.2	11.63	9.45
Clerical	87.0	94.7	86.7	8.63	7.49
Service & sales workers	61.5	63.9	68.1	8.40	5.72
Agricultural workers	(too few)	(too few)	(two few)	6.38	(too few)
Craft workers	(too few)	(too few)	(too few)	8.26	(too few)
Plant & machine operators	74.3	81.5	84.2	8.06	6.78
Elementary (m and n-m)	89.9	87.3	75.3	7.02	5.29

Note: "Too few" i.e., less than 25 cases in category.

While tables of the type set out above can help to illustrate the impact of individual factors on the overall wage gap, a more systematic approach is needed to identify the total contribution of all such explanatory factors. The basic method here (described in Barrett *et al.* (2000) and due to Oaxaca (1973)) requires estimation of separate wage equations for men and women, linking hourly wage rates with labour market relevant characteristics such as the highest educational qualification achieved, years worked, years out of employment, region of residence (urban/Dublin/other) and whether or not the individual had obtained a qualification in a trade. The wage equations are reported in Callan and Russell (forthcoming). Given these estimates, it is possible to decompose the observed wage gap into three parts:

- a part which relates to differences in wages arising from years out of the labour force;
- a part which is explained by differences between the sexes in educational qualifications and other explanatory variables;
- a part which is unexplained.

The unexplained or “residual” portion of the gap is used as the basis for an index measuring how much higher women’s wages would be if their labour market relevant characteristics were rewarded in the same way as men’s. This is often termed an “index of discrimination”, though it cannot be taken as a precise measure of discrimination.<sup>18</sup> The results of this analysis are reported in Table 3.7.

**Table 3.7: Decomposition of Gender Pay Gap**

	1987	1994	1997	2000
Observed wage gap (logs)	0.289	0.171	0.198	0.175
<i>of which % due to:</i>	%	%	%	%
Years not worked	8.8	16.7	18.0	40.2
Other attributes	40.3	57.4	52.9	20.7
Residual (unexplained)	50.8	25.9	29.1	39.0
“Discrimination” index	15.9	4.5	5.8	7.1

Between 1987 and 1997 the proportion of the wage gap explained by factors associated with years not in paid work rose from almost 9 per cent to 18 per cent. This trend continued and strengthened with about 40 per cent of the gap due to “years not worked” in 2000. There was a sharp decline in the portion of the wage gap explained by other factors (principally educational levels and years worked). The role of the residual declined between 1987 and 1994 but has edged up since then, with the “discrimination” index reaching 7 per cent in 2000.

### *Implications for NDP Policy*

The results of the decomposition show that time out of the work place accounts for an increasing proportion of the persistent pay

<sup>18</sup> Actual discrimination could be either higher or lower than this figure for a number of reasons – see Barrett *et al.* (2000) for a discussion.

gap between men and women. This suggests that interventions, which facilitate employment continuity and reduce the penalties attached to time out of the work force, are extremely important. Within the first category, the childcare commitments within the NDP are central. The availability of affordable childcare is an important element of women's decisions to stay in the labour market when they have young children and on the length of time they stay out of the labour market (parental leave schemes and flexible employment are also central to this decision). Recent evidence from the CSO *Quarterly National Household Survey* suggests that average costs of paid pre-school childcare are still extremely high (€105 per week nationally, rising to €131 per week in Dublin).<sup>19</sup>

It is possible that some of the positive impact of 'participation enhancing' Measures, such as childcare, on the gender pay gap may not be seen until the medium/longer term. Barrett *et al.* (2000) argued that women in the labour market in the mid-1990s were a highly selective group and had more favourable characteristics than women outside the labour market. Therefore, if policy or economic changes encouraged women with less favourable labour market characteristics to (re)join the labour market the gender wage gap could widen in the short term. There is some evidence to suggest that this is why the significant increases in female participation in the labour market in the second half of the 1990s is not reflected in a reduction in the gender-pay-gap, which remained almost static between 1997 and 2000 (Russell and Gannon, 2002).

Actions to reduce the penalty attached to time out would include interventions that aim to re-integrate women returning to the labour market. Recent research (Russell *et al.*, 2002) has found that returners experience downward mobility when they re-enter the workforce and are highly concentrated in low skilled and low paid jobs particularly in the services sector (e.g. cleaning, waitressing, sales assistants). The study also found that access to training or retraining for this group was extremely important, because of low average levels of initial training, to update skills and to improve self-confidence. A number of Measures in the EHRD OP include women returners in their target groups, including ESF Active Measures for Long-term Unemployed and Socially Excluded, Sectoral Entry Training-Cert, Back to Education Initiative, and Skills Training for the Unemployed and Redundant. It is important in this area that the pilot Gateway for Women Programme is implemented nationally as planned. Supports to assist women returners in training, including childcare and more flexible timetabling (e.g. part-time and night courses), should be extended to a wider range of programmes. While significant positive changes have been made in certain areas e.g. childcare allowance for FAS trainees, this is countered by recent cuts in VEC funding for childcare for VTOS participants.

<sup>19</sup> CSO (2003), *Quarterly National Household Survey: Childcare*, Fourth Quarter 2002.

The unexplained residual in the gender pay gap is often used as an indicator of the degree of discrimination in the labour market. Although it is an imperfect measure, it is indicative of the proportion of the pay gap that is not accounted for by differences in men and women's human capital (e.g. work experience, education). As such it is a matter of concern that this figure has increased since 1994, despite the introduction of new equality legislation. This finding underlines the need for the continued or indeed enhanced focus in the NDP on increasing equal opportunities for men and women. Activities within the Equality for Women Measures (in the EHRD, BMW and SE Operational Programmes) are important in this respect. Although the projects tend to be small they provide an important insight into the root cause of inequality and the lessons learned from these projects should be considered for mainstream programmes.

In addition to time out of the workplace, the bi-variate analysis suggests that the occupational and sectoral segregation of men and women is also a factor contributing to the gender pay-gap. Recent labour market figures (Hughes, 2002) suggest that the Irish labour market is still highly segregated by sex both horizontally (with men and women concentrated in different sectors) and vertically (with men and women occupying different levels within occupations/organisations). There is scope for the educational and training policies of the NDP and policies that aim to enhance employment in different sectors (e.g. in the productive sector OP, the regional OPs, and the EHRD OP) to tackle this persistent segregation.

The unexplained pay gap is also likely to be linked to vertical segregation so there is a need to improve access to opportunities for advancement among female employees. This falls within the remit of the NDP programmes that train those already in employment. There is a distinct need to enhance the skills of those in low paid employment so that opportunities for upward mobility are improved and their longer-term prospects are enhanced. The current investments in employee training are small relative to the overall Employment and Human Resource Development budget and currently have a low level of female participation.<sup>20</sup> There is a need to re-target these schemes to ensure that they are reaching the appropriate employees (see social inclusion section) to focus more effort on improving the conditions of those in employment.

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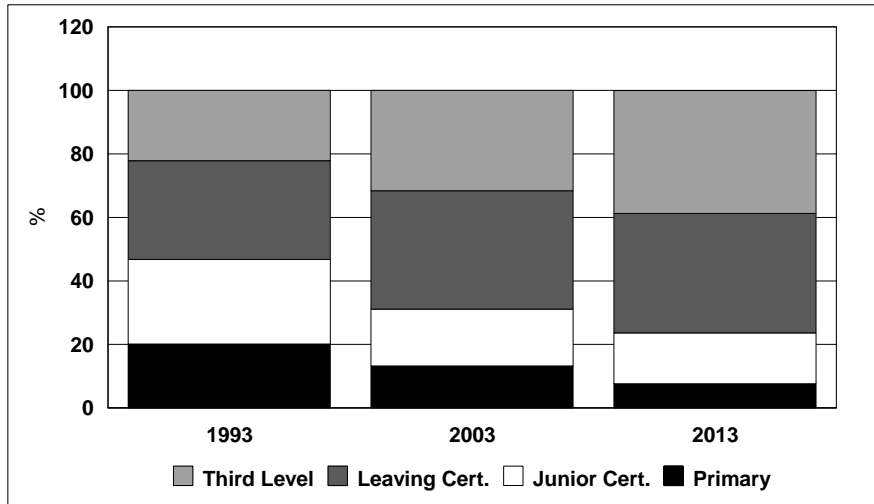
### 3.3 Human Capital

Since the NDP/CSF process began in Ireland in the late 1980s considerable attention has been devoted to expanding investment in human capital. The Priority given to this type of investment was reinforced by the results of a wide range of research, all of which indicated that returns from this type of investment in Ireland could be quite high (Bradley, Fitz Gerald and Kearney, 1992). The returns

<sup>20</sup> In-company training run by FÁS has a female participation rate of 42 per cent but the Enterprise Ireland measure has a rate of only 27 per cent.

to further investment in human capital were particularly high in Ireland because of the failure to invest in human capital at the same time as the rest of Northern Europe in the period 1945-70 (Durkan, Fitzgerald, and Harmon, 1999). As a result, compared to the other cohesion countries, a higher share of resources under successive CSFs was devoted to this form of investment in Ireland.

**Figure 3.2: Educational Attainment of the Labour Force**



*Source:* Bergin, Cullen, Duffy, Fitz Gerald, Kearney and McCoy (2003).

The result of this investment has been a major upgrading in the educational attainment of the labour force. As shown in Figure 3.2, over the last decade the proportion of the labour force with at least a Leaving Certificate has increased from over 50 per cent of the labour force in 1993 to just under 70 per cent today. As a result, of the continuing rise in the educational attainment of the new labour market entrants over the last decade, partly funded by successive NDP/CSFs, the next decade will see a further substantial increase in the human capital of the labour force; in ten years in 2013 the proportion with at least a Leaving Certificate will amount to around 77 per cent of the labour force. Given the plateauing of educational participation rates today, the educational attainment of the labour force will grow much more slowly from the middle of the next decade, in line with the current experience elsewhere in the EU.

While the returns to education and training have fallen somewhat in the most recent years for which information is available, they are still very significant (See Section 3.2). Barrett, Fitz Gerald and Nolan (2002), suggest that a significant reason for this decline at the end of the 1990s was the immigration of skilled labour, allowing the economy to grow more rapidly. When the same model was used in the *Medium-Term Review: 2001-2007* Appendix 2.2, it still indicated much higher overall returns to education than had previously been allowed for in modelling the macro-economic effects of the CSF. These returns arise from the effects of education and training on productivity and labour supply. Here we develop

the model further and apply it to the investment under the NDP/CSF between 2000 and 2002.

## METHODOLOGY

The investment in human capital can be expected to affect the economy through a number of different channels changing labour supply, wage rates, competitiveness, and productivity. In examining the effects of NDP/CSF funded investment in human capital on the economy we use a small model of the labour market that incorporates most of these channels. The model is described in Appendix 3. We incorporate the results of this model into the *HERMES* macro-economic model to produce an overall assessment of the macro-economic impact of the investment.

### *Labour Supply*

By upgrading individuals' skills the investment in human capital affects the relative supply of skilled and unskilled labour.<sup>21</sup> As individuals' human capital is raised, moving them into the skilled category, the effect of the resulting fall in the supply of unskilled labour on the economy will depend on whether the economy is at full employment (1998-2002) or whether there is substantial unemployment (pre-1998). Where there was substantial unemployment, the unskilled wage rate was effectively set as a mark-up on welfare benefits. Under these circumstances any fall in labour supply would not affect the wage rate but would only serve to cut unemployment. However, in the 1998-2002 period, where there was close to full employment, a fall in unskilled labour supply would have had an effect on unskilled wage rates. In the context of the 2000-2002 period we feel that the assumption that the unskilled wage rate is affected by market circumstances is most appropriate.

In addition to the direct fall in labour supply due to the reduction in the unskilled population, the resulting rise in the unskilled wage rate would tend to produce an increase in actual participation rates. As shown in Table 3.8, the elasticity of supply of unskilled labour is high, especially for unskilled women. This rise in the participation rate would partly offset the fall in the population.

In the case of skilled labour, there will be a direct effect from the investment, increasing supply. The increase in supply, through reducing wage rates, will affect both the participation rate for the increased population of skilled individuals and also the pattern of migration. The participation rate is directly affected by the wage rate. In the model the elasticity of supply imposed was that estimated for 1998, 0.32, as shown in Table 3.8. The ultimate effect on skilled labour supply will depend on a complex range of factors. This is particularly important for skilled female labour supply. In the

<sup>21</sup> Here we simplify by assuming only two skill or educational levels – skilled who have at least a Leaving Certificate and unskilled with at most a Junior Certificate qualification. While we have data on labour supply in somewhat more detail, more disaggregation would make modelling work intractable.

case of migration, here assumed to be largely skilled individuals, real after tax earnings in Ireland relative to the outside world is assumed to drive individual's choice of location to live. A fall in skilled wage rates will eventually result in a significant reduction in immigration.

**Table 3.8: Elasticity of Labour Supply**

	1994	1998
<b>Males</b>		
Unqualified	1.21	0.68
Qualified	0.21	0.06
<b>Females</b>		
Unqualified	1.94	2.80
Qualified	0.74	0.58
<b>Population</b>		
Unqualified	1.58	1.74
Qualified	0.48	0.32

*Source:* Doris, 2001.

### *Wage Rates*

For most of the period between 1980 and 1997 unemployment (largely unskilled labour) was very high and the unskilled wage rate was close to a floor determined by the welfare system. However, under the labour market conditions prevailing between 1998 and 2002 for unskilled labour (very low unemployment), the decline in supply can be expected to lead to an increase in unskilled wage rates. Because the elasticity of supply of unskilled labour is quite high (Table 3.8), the increase in wage rates from the fall in supply can be expected to be quite moderate.

In the case of skilled labour, the increase in labour supply will tend to depress wage rates in the short term. The fall in rates will be quite significant because of the relatively low short-run elasticity of labour supply through changes in the participation rate. However, in the long run, the fall in wage rates will tend to generate a reduction in immigration of skilled labour, returning the supply back towards its initial level. This process can take some considerable time to play out.

### *Competitiveness*

The combined effect of these changes in wage rates, moving in opposite directions, will be to significantly reduce the overall wage rate in the economy. This reduction could persist for some considerable time, until changes in supply, through migration, would eventually restore the long-run equilibrium. This reduction in labour costs, generated by the initial change in the structure of labour supply, would improve the competitiveness of many firms in the economy. This improvement, though only temporary, would be enough to generate a significant increase in domestic output in the medium term.

### *Productivity*

The most important permanent effect on the economy will come about through the increased productivity of the domestic labour

force. The increased productivity will allow domestic firms to produce output at lower unit cost. This, in turn, will result in a permanent increase in the level of output and employment in the economy. At the level of the individual, those whose human capital is enhanced will see a substantial increase in their earning power. This channel is handled in the *HERMES* macro-economic model using as inputs the results from the study of the returns to education and this labour market model.

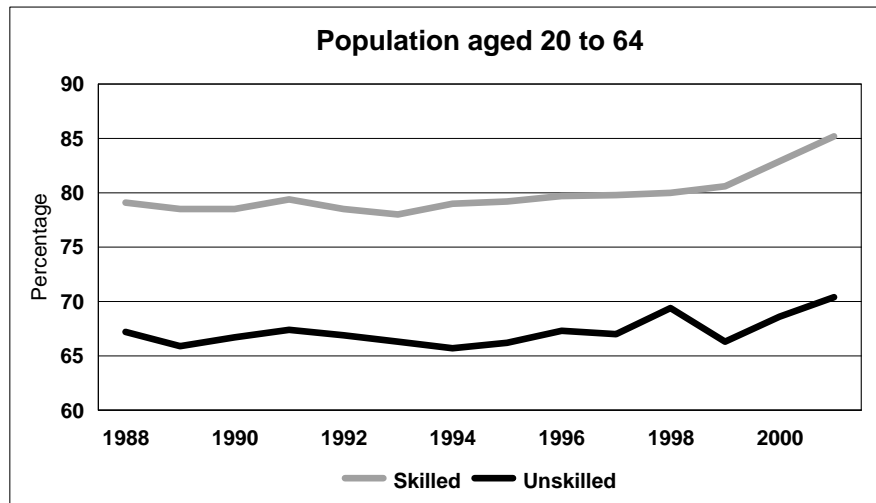
### EFFECT OF INVESTMENT IN HUMAN CAPITAL

Quantifying these different effects to produce an overall assessment of the macro-economic impact of investment in human capital requires a suitable macro-economic model or suite of models. Here we use two models – a small labour market model (*HK*) and the *HERMES* macro-economic model. The modelling strategy adopted involves three stages:

- Identify how the expenditure changed the human capital of the population.
- Identify how this change in human capital affected the economy using the *HK* small labour market model – the effect on labour supply and wage rates.
- Using the input from the first two stages quantify the macro-economic impact using the *HERMES* model, taking into account the effects of enhanced productivity.

Details of the small labour market model and the technical details of how it was used to quantify the impact of the NDP/CSF are given in Appendix 3.

**Figure 3.3: Labour Force Participation Rates**



Information on the throughput of the educational and training system was used to quantify the numbers of individuals whose educational attainment was raised as a result of the NDP/CSF interventions. The information in Section 3.2 was used to translate



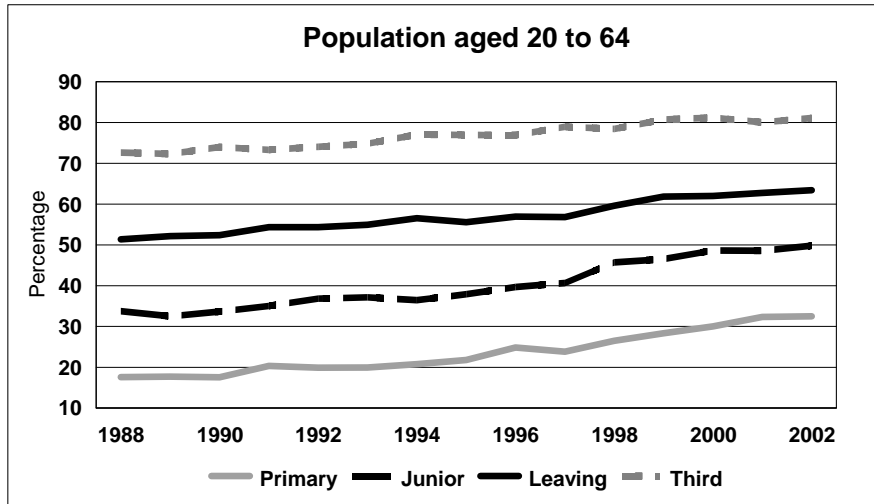
these changes into the skill/educational attainment categories used in the model. These data indicate that, as a result of the NDP/CSF interventions, there has been a substantial increase in the numbers of people with a high level of educational attainment and a significant reduction in the numbers with only a limited education.

The initial reduction in the supply of those with limited educational attainment had the effect of raising unskilled wage rates, which, in turn, resulted in a higher participation rate among the smaller unskilled population. In addition, the interventions have moved many individuals from the low-skilled category, which has a low participation rate, to the high skilled category, which has a high participation rate. As shown in Figure 3.3, even in 2002 there was almost a fifteen percentage point gap between the participation rates of the unskilled and skilled populations. The gap was even bigger for women than for the population as a whole. Thus, the upgrading of skills directly affected participation rates through opening up a much wider range of employment opportunities and through raising potential earnings. Overall, the impact of the Measures is to bring about a very substantial initial increase in the total labour force, both skilled and unskilled.

In the case of the skilled labour force, the increase in supply initially tended to depress wage rates. Overall, the impact effect of the investment in education and training has been to increase total labour supply and to moderate the increase in average wage rates (averaged over skilled and unskilled labour). This moderation in wage rates, in turn, has to some extent offset the background deterioration in competitiveness that has occurred since 2000. Without the NDP/CSF intervention, the loss of competitiveness, and the resulting loss of output, would have been worse than it actually was.

In the long run the impact of the investment in education and training on competitiveness will be somewhat reduced through the effects on net migration. Because of migration, the supply of skilled labour is extremely elastic and immigration is reduced because of the fall in the skilled wage rate emanating from the increase in supply. In addition, the lower wage rate results in a lower participation rate for the albeit increased skilled population. The result is that in the long run the positive effect on skilled labour supply is smaller than the impact effect and the skilled wage rate will tend to return towards its baseline value.

This human capital model does not currently capture the effects of higher productivity arising from the improved human capital of the labour force. This channel is the most important way that the investment in human capital will permanently affect the productive capacity of the economy and the standard of living. To measure the impact of this productivity gain we have used the *HERMES* model, as discussed in Section 3.4. These effects (labour supply, wage rate, and productivity) are introduced into the *HERMES* model and the results are shown in Section 3.5.

**Figure 3.4: Female Labour Force Participation Rates**

Source: Labour Force Survey micro data.

The labour market model also permits an estimate to be made of the effect of the investment in human capital on relative earnings. Using the same model, Barrett, Fitz Gerald and Nolan, 2002,<sup>22</sup> found that the dispersion between skilled and unskilled wage rates had been affected in the 1990s by the increasing supply of skilled labour. The simulations described here would suggest that the ratio of skilled to unskilled average wage rates was reduced by .05 to 1.7 in 2001 as a result of the investment in human capital. Thus, the interventions under the NDP/CSF contributed to reducing this aspect of earnings inequality. This is likely to have made a positive impact in reducing social exclusion.

The labour supply changes are likely to be dominated by changes in female participation rates. The participation rates for females have always been strongly influenced by level of educational attainment (Figure 3.4). Thus, the upgrading of human capital for the female population will have had a much bigger effect on labour force participation than would be the case for males, contributing to the Lisbon Agenda. As such, the labour market interventions are likely to have a positive impact on equality in the labour market in the medium term.

<sup>22</sup> Barrett, A., J. Fitz Gerald and B. Nolan (2002), "Earnings Inequality, Returns to Education and Immigration into Ireland", *Labour Economics*, November.

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### 3.4 Infrastructural Investment

Over the past decade there has been renewed academic interest in the issue of economic growth. The focus of much of this work has been to model more explicitly the factors, which impact on a country's growth rate, and in particular how policy can alter that growth rate. This approach stands in contrast to the earlier growth models, which explained economic growth simply through technical progress, the sources of which were not explained. In these earlier models, growth was essentially exogenously driven, with Policy Measures changing the transition path but not the long run steady state growth rates of an economy. These models also predicted convergence among economies, which, due to diminishing returns to factor inputs, would arise if countries had similar rates of technical progress.

#### THEORETICAL BACKGROUND

The recent developments in endogenous growth theory have addressed the shortcomings of the earlier pioneering literature. An important feature of the endogenous growth models is the existence of spillovers or externalities, which arise from particular investments due to their public good characteristics. These externalities generate additional unintended additions to the productive capacity of an economy. In contrast to the earlier exogenous growth models the more recent endogenous growth models do not predict automatic convergence. There can be winners and losers.

In particular the endogenous growth literature has investigated how technical progress can be affected directly through investments in research and development (R&D), and this has been incorporated into growth models as the accumulation of knowledge (e.g. Romer, 1986) or improvements in the quality of intermediate inputs (e.g. Aghion and Howitt, 1992; 1998). Here externalities arise when innovations in one firm are adopted elsewhere, i.e., when such innovations have public good qualities. Another line of research has concerned the level of social capital, that is the institutions, government policies and interpersonal relationships that exist in a country (see Zak and Knack, 1998; Hall and Jones, 1999). In this literature social capital affects the development of all other types of capital. Importantly, the new literature has also focused on two aspects that have important implications for the evaluation of the structural funds, namely the role of investments in infrastructure and human capital.

The effect of public infrastructure in growth models, is typically incorporated as an additional input in the production function (Barro, 1990; Futagami *et al.*, 1993). Because public infrastructure is a public good, that is, it can be used by many producers (and consumers) at the same time without reducing its usefulness, it gives rise to externalities. These are referred to as output externalities. Thus, if production is characterised by constant returns to scale in the private inputs (labour, capital and intermediate inputs) a doubling of all private inputs will double output, even if the level of

infrastructure is held constant, which implies increasing returns in all inputs. This externality is captured by the effect that infrastructure has on the level of output. Another way in which infrastructure can have a beneficial impact is by raising the total factor productivity of all inputs (Hulten and Schwab, 1991), which we refer to as the factor productivity externality. Here infrastructure allows these private factors of production to work more efficiently raising their marginal product. For example in the case of workers, they waste less time travelling to work if a country has good transport infrastructure, resulting in an increase in welfare.

While these are the most natural ways of modelling the impact of infrastructure on growth some other approaches have also been used: for example, infrastructure impacts on economies by connecting them. Thus, Kelly (1997) argued along Smithian lines that infrastructure allows for an expansion of markets which in turn increases specialisation, which improves efficiency and therefore growth. In this model growth is subject to threshold effects, requiring sufficient infrastructure to properly integrate markets, which then increases specialisation. Another way in which infrastructure has been incorporated into growth models is to assume that infrastructure reduces the cost of intermediate inputs by fostering specialisation (Bougheas, Demetriades and Mamuneas, 2000). This model yields a non-monotonic relationship between infrastructure and long-run growth, which means that there is an optimal stock of infrastructure beyond which additional investment will be detrimental to growth. Thus, countries with a lower stock of infrastructure will have the highest return to additional infrastructure while those with a stock of infrastructure that is above the growth maximising level will actually grow slower with more infrastructure investment. Another important finding of this model is that infrastructure accumulation is very productive if the tax rate is low and counter productive if the tax rate is too high.

In general it is important to note that while infrastructure has beneficial public good characteristics, it has to be financed through taxes and it is therefore important that the tax revenue is spent on infrastructure that is more productive than any other expenditure that could have been financed by the tax take. This argument has been supported by empirical research, which shows that certain types of infrastructure impact more than others on output. For example, Pereira (2000) finds for the USA that electricity and gas facilities have the highest return, while conservation structures have the lowest return. He also finds a relatively small impact for roads infrastructure, which might surprise some people, but which accords well with the discussion above. The USA already has a highly developed roads network and is therefore unlikely to benefit much from additional roads.

Not every sector benefits equally from infrastructure. Thus agriculture is often found to have the lowest return to public infrastructure (see Pereira and Roca-Sagales, 2001). Thus, *ceteris paribus*, a country with a higher proportion of agriculture will benefit less from infrastructure than one where agriculture is less important.

Furthermore, how efficiently a given stock of infrastructure is used also impacts significantly on the effect that infrastructure has as was noted by Hulten, (1996). He shows that, a 1 per cent increase in the efficiency of use has a significantly larger impact than an equivalent increase in the stock of infrastructure.

There is now a large body of literature that has estimated these effects, focusing largely on the estimation of the rate of return to infrastructure. This is inferred from the output elasticity of infrastructure, and the latter is estimated under the assumption that infrastructure enters the production function as a public intermediate input. An alternative approach involves the estimation of a cost function and associated factor demand functions, which yields shadow values for infrastructure.

The only published study for Ireland is that by Kavanagh (1997) who uses the production function approach in conjunction with modern time series methods. She finds an output elasticity of 0.14, which, however, was not statistically significantly different from zero. In other words, her results suggest that a lack of infrastructure would not result in lower levels of output than a situation where there is adequate infrastructure. This finding conflicts with the view of numerous commentators who in recent years have asserted that Ireland faces a serious infrastructure deficit. The existence of such an infrastructure deficit accords well with the evidence on increases in congestion, travel times, as well as environmental damage. If the assertion that Ireland indeed suffers from an infrastructure deficit is correct, then the rate of return from investing in infrastructure should be high, provided that this investment does indeed address this deficit. Denny and Guiomard (1997) on the other hand find unrealistically high output elasticities, which range from 0.93 to 6.3. As part of this Mid-Term Evaluation of the NDP a special study on the returns to infrastructure investment was carried out (Morgenroth, 2003b) which produces more realistic and robust estimates of the macro-economic returns to infrastructure.

## RESULTS

Details of the equations estimated are given in Morgenroth (2003b). Overall the results suggest that, while roads infrastructure has a direct positive impact on output and consequently a positive return, water and sewerage infrastructure does not appear to have such an effect. This might be explained by the fact that this type of infrastructure has an indirect effect through improvements in quality of life and thus, the modelling strategy adopted here is not able to pick up these effects.

Given this general result, the results also suggest that the manufacturing sector benefits more than the services sector from road infrastructure investment. At first this might seem puzzling since the services sector includes freight and transport. However, these account for only a small share of the sector, which is dominated by other activities such as retail and wholesale and banking. Thus, this result is not surprising and one would indeed

expect a higher return in the manufacturing sector. This result supports the strategy followed in the study to disaggregate the data into the two sectors and to estimate separate models.

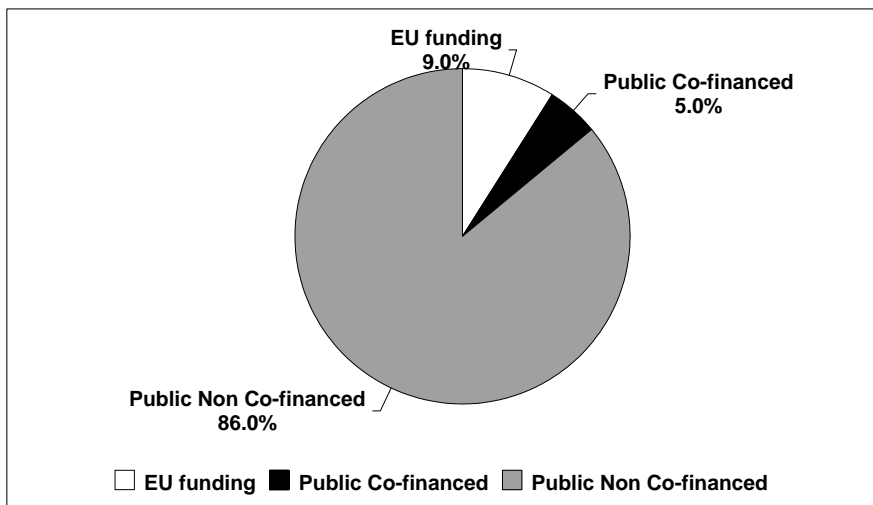
An important result emerges on the return that can be measured by the marginal product of investment, i.e. the return of a one-unit increase in the stock of infrastructure. This is readily calculated from the results. These indicate that at no point do the returns to road infrastructure exceed those of private capital. However, the results indicate that, while the returns over a long period were no higher than the long-run interest rate, during the 1990s they rose very substantially to an average of 30 per cent. While these returns appear high they point to the severe infrastructure deficit, which is putting a constraint on the economy as a whole. Indeed it is well known that when investments remove bottlenecks the return is very substantial as such investments not only have a direct return, but they increase the return of the existing infrastructure. Thus, the completion of some projects such as the Dublin port tunnel or the remaining section of the M50 are likely to have very substantial returns as they affect the efficiency of the existing sections of the M50.

The results from Morgenroth (2003b) are incorporated in the analysis in the next section. The productivity gain for each sector is imposed on the *HERMES* model and the resulting broad economic benefits are estimated.

### 3.5 Macro- economic Impact

The micro-economic studies described in the previous sections provide an important quantification of the positive externalities arising from infrastructural and human capital investments under the NDP/CSF. In this section we use the results from these studies as inputs into an assessment of the full macro-economic impact of the NDP/CSF.

Figure 3.5: Source of Funding 2000-2002



Here we consider the impact of all public expenditures under the NDP over the period 2000-2002. This includes all public monies, both national and EU. The vast bulk of this money, 86 per cent, is national non co-financed expenditure. Funding from the EU (including the CSF plus the Cohesion Fund, TENS (Trans-European Networks) and the EEA Financial Mechanism) amounts to 9 per cent of the total, the remaining 5 per cent comes from national public co-financing of these Measures.

Our analysis concentrates on total national public expenditure, referred to as the NDP. In addition, we examine separately the impact of a subset of the NDP, the Community Support Framework (CSF). The CSF includes EU and national public co-financed expenditure. Finally, we also examine the impact of EU funding alone, excluding the Irish government contribution, referred to as EU. Table 3.9 shows the levels of expenditure under these three definitions.<sup>23</sup> The 2000-2002 NDP spending is a very substantial investment programme, accounting for just under 6 per cent of GNP in 2000, rising to 7.6 per cent by 2002. As shown in Figure 3.5 above, CSF expenditure accounts for a relatively small portion of this total. Nevertheless it represented an injection of 1.2 per cent of GNP in 2002, over 60 per cent of which was funded by the EU.

**Table 3.9: Public Expenditure under the NDP**

	NDP			CSF			EU		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Total, € million	5,161	6,932	7,702	562	968	1,219	354	604	739
% Of GNP	5.9%	7.2%	7.6%	0.6%	1.0%	1.2%	0.4%	0.6%	0.7%

We use the ESRI *HERMES* medium-term macro-economic model (Bergin *et al.*, 2003) to analyse the impact of the 2000-2002 public expenditures under the NDP, CSF and EU. This provides a sufficiently comprehensive and detailed framework to quantify the substantial demand side impact of the NDP on the economy. Furthermore, it can also be used to assess the longer-term supply-side effects of the NDP, i.e., the impact on the long-term productive capacity of the economy. Initially such supply-side effects are much more modest than individual year demand-side effects. However, because they outlive the lifespan of the investments themselves they are ultimately more important to the long-run growth potential of the economy.

We begin this section by reviewing briefly the channels through which the NDP influences the economy. This section also elaborates on the methodology used to aggregate individual investment programmes into different economic categories for input into the *HERMES* model, and discusses how we incorporate the results of the studies on human capital and infrastructure in

<sup>23</sup> The figures for the EU for 2000 do not include expenditure carried over from the previous CSF.

Sections 3.3 and 3.4 above to estimate supply-side effects. The final part of this section presents our results.

## METHODOLOGY

In assessing the impact of an investment programme on the economy, it is important to clearly define the counter-factual or alternative scenario. This is not unproblematic, since the assumption of “no NDP” is clearly unrealistic – it is inconceivable that the state would have undertaken no investment over such a sustained period. However, it does have the advantage of simplicity and captures the likely “maximum” impact of the NDP. As a starting point we use the “with NDP” scenario, this represents the state-of-play at present. We use the latest forecasts from the *Medium Term Review 2003-2010* as the “with NDP” scenario for the years 2003 out to 2015. We then run a series of “what if” simulations designed to extract the investment policy shocks. For example, for the NDP simulation we set the NDP 2000-2002 expenditures at zero and re-simulate the model. For the EU simulation we set the EU 2000-2002 EU funded expenditures at zero and re-simulate the model. The effects of the NDP or EU are then defined as the difference between the “with” and “without” scenarios.

The demand side effects arise from the spending of the NDP: employment of builders, teachers etc. on undertaking the investment. The key to the success of the NDP/CSF, however, lies in the extent to which the level of output and employment is permanently raised as a result of the investment. The extent of this “supply side” effect can be compared to the initial injection to measure the “rate of return” on the public investment.

### *Demand Side Effects*

The very substantial sums involved in the NDP means that there is a considerable immediate domestic impact. These demand effects arise as a result of direct increases in expenditure and income. For example, investment in infrastructure is a major determinant of demand for the building sector, while expenditure on employment in health, education and training will increase the demand for labour with knock-on effects on wages, employment, labour force participation and migration. Through these and other channels, the demand side impact of the NDP is considerable.

The *HERMES* model is used to quantify these immediate effects of the 2000-2002 NDP expenditures on the economy. A key consideration in assessing demand side effects of the current NDP is the likely inflationary costs, in particular in the building and construction sector. The NDP includes substantial investment in infrastructure, and a large injection of demand into the housing market, both of which came at a time when the building sector was already booming. As described in Appendix 1, the *HERMES* model fully elaborates a sub-model of the housing market that we can use to assess the inflationary impact of the NDP on house prices



separately from the effect on other building and construction inflation.

The NDP is equivalent to an average of 7 per cent of GNP per annum over the period 2000-2002. This represents an important stimulus to the economy while the investments are implemented. It is a relatively straightforward exercise to quantify the immediate demand-side impact of the NDP. We aggregate individual programme Measures into appropriate government expenditure categories as shown in Table 3.10. These national accounting categories are much more useful for this exercise than the traditional government accounting categories as they identify the channels through which the different types of expenditure impact on the economy.

The largest single item of expenditure, 27.6 per cent of the total, is government investment in the market services sector, which by national accounting conventions includes investment in roads and environment services. Personal transfers, employment subsidies and childcare are next at 16.4 per cent. Other significant items include current (13 per cent) and capital (13 per cent) expenditure on health and education, investment in housing (10.6 per cent) and other capital expenditure (14 per cent), the latter includes expenditure on public transport and energy and communications.

**Table 3.10: Allocation of NDP into Government Expenditure Categories**

	<b>% of Total 2000-2002</b>
<b>Current Expenditure:</b>	
Personal Transfers	16.4
Health and Education: current expenditure	13.0
Non Agricultural Subsidies	2.0
Agricultural Subsidies	0.6
<b>Capital Expenditure:</b>	
Investment in Public Administration	0.4
Investment in Health & Education	12.8
Investment Market Services, government	27.6
Investment Housing, government	10.6
Other capital expenditure	13.7
Transfers to industry	2.8
	100.0

### *Supply Side – Channels of Influence*

In considering the long-term impact of the NDP on the economy we consider four main channels, namely, human capital, infrastructural investment, aids to the private sector and income support. Of these, the first three are the most important, with income support having little long-term impact on the economy. Table 3.11 provides a breakdown of the allocation of funds across these four channels. Infrastructure accounts for well over half of all expenditure under NDP, CSF and EU funding, with human resources coming in second at around one-fifth of the total under

the CSF, but much lower, at 13 per cent, under the NDP. Income support and aids to the private sector have lower Priority under the CSF than under the NDP. (See Appendix 5 for a listing of Measures that are considered as being redistributive.)

**Table 3.11: Allocation of Funds 2000-2002**

	NDP	CSF	EU
as % of Total			
Infrastructure	58	63	67
Human Resources	13	20	19
Aids to Private Sector	11	9	8
Income Support	18	8	7

### Infrastructural Investment

Section 3.4 and Morgenroth (2003b) present the results of a study of the effects of infrastructural investment on the growth potential of the economy. These suggest that the returns to infrastructure have risen strongly during the 1990s as the success of the economy led to the emergence of binding infrastructural constraints. Given the importance of infrastructure as a measure within the NDP, this suggests that the macro-economic returns from the infrastructural investment under the NDP are substantial.

Infrastructural investment is important for growth, especially given the serious infrastructural deficits. In the literature, as discussed in Section 3.4, it is treated as an extra input into private sector productive activity. However not all infrastructural investment, as defined in Table 3.10, will match this definition. In Table 3.10 infrastructural investment under the NDP includes investment in roads, public transport, environmental services, housing and public infrastructure (including health and education). Of these, we identify investments in roads and public transport as those likely to have long-term effects on productive capacity.

In quantifying the supply-side effect of roads investment, we used the results of Section 3.4. This suggests an elasticity of 0.5 for manufacturing value added, and 0.25 for market services value added with respect to investment in roads. Combining these effects gives an implied realised rate of return on this investment of about 25 per cent. In addition to this direct productivity effect, the alleviation of congestion will reduce consumer costs. To capture this we include a (relatively low) realised rate of return (1.25) on this investment applied to consumer prices. This almost certainly underestimates the “consumer surplus”<sup>24</sup> that will accrue from the investment.

<sup>24</sup> The consumer surplus includes the saving in leisure time (including commuting time) of private individuals. Because individuals are not paid for their leisure time its value to individuals is not included in the national accounts. However, the importance of this time saving is recognised in cost-benefit studies and it has a real value in improving overall welfare, even if this is not reflected in measures such as GNP.

In quantifying the effect of public transport investment we take an experimental approach, testing different realised rates of return. The rate of return applied in the results reported here (about 7.5 per cent) is similar to that used in the previous Mid-Term Evaluation (Honohan, 1997). This feeds through directly into an increase in output potential in the market services' transport and communications sector.

Clearly the very high return on roads investment, given the high share of infrastructure in the NDP, means that the supply-side effect of this channel will be substantial, and significantly higher than in previous Mid-Term Evaluations. To quantify the importance of this, we also estimate the supply-side effects of the NDP without these long-run infrastructural effects. This is referred to as the "no infrastructure" scenario.

### Human Capital Investment

Section 3.3 describes in detail the channels through which human capital investment can impact on the economy. Human capital investment includes all expenditure on education and training. In Section 3.3 these investments are converted into educational throughput, with consequent increases in skilled labour, a fall in the skilled/unskilled wage rate and a rise in labour force participation. This is estimated to lead to a total productivity increase of around 0.6 per cent. We implement this long-term productivity increase in the *HERMES* model in both the manufacturing and market services sectors, introducing it gradually until it reaches its full impact in 2010. Because there is a time delay involved in the education and training process, we only begin to implement this productivity effect in 2003.

In addition to this long-run productivity increase, the investment in human capital will increase labour force participation (Section 3.3). We implement the implied increase in labour supply via an increase in the participation rate of females in the 25-64 age category.

### Aids to Private Sector

This channel provides direct assistance to the private sector to help stimulate investment, thereby increasing productivity and reducing costs. Aids to the private sector, as shown in Table 3.10, includes subsidies and grants to industry, employment subsidies and R&D, together with direct subsidies<sup>25</sup> to the agriculture, tourism, forestry and fishing sectors.

We exclude direct sectoral subsidies from supply-side effects as they are concentrated in sectors with poor medium-term growth prospects (agriculture, forestry and fishing). Industrial grants appear

<sup>25</sup> These direct subsidies refer to investment expenditures under the two Regional OPs. Expenditures under the Productive Sector OP are included under the general R&D, industrial grants and industrial subsidies categories which feed into our estimated supply-side effects.

as a direct input into the *HERMES* model, reducing the cost of capital in the manufacturing sector and encouraging new investment, including foreign direct investment. Finally, subsidies to employment, industry and R&D are assumed to have a long-run high return on investment, similar to that used in the previous Mid-Term Evaluation (about 7.5 per cent) (Honohan, 1997).

### Income Support

Income support is the weakest channel for supply-side effects. The income support category in Table 3.10 includes social welfare transfers, housing (improvements to existing housing and groups with special needs), rural and local development and childcare. These programmes are unlikely to affect the growth potential of the economy, with one exception: we include a labour force participation effect based on the childcare measure. In conjunction with expenditure on upskilling of the workforce under the human capital expenditures, investment in childcare may be seen as a channel for increasing the labour force participation of women with low educational qualifications. To allow for this possibility, we use the estimated labour supply elasticity for unqualified women in Doris (2001) to estimate a potential labour supply response for women in the 25-34 age group. This is a marginal effect, as investment in childcare represents 2.4 per cent of total income support in 2000-2002. This channel suggests a potential increase of 2,500 in labour supply by 2002, equal to 0.4 per cent of female labour supply in the 25-64 age group.

### *Supply Side – Aggregate Effects*

We combine these four supply-side channels to estimate the aggregate supply-side or permanent effect of the NDP, CSF and EU. As discussed above, not all expenditure under the NDP is treated as having long-term growth consequences; in particular income support is treated as having very marginal supply-side effects. In total, just under half of total NDP expenditure is identified as having substantial long-run supply-side effects.

A further channel, which arises in both the demand side and supply-side simulations, is the improvement in the balance of payments and government borrowing requirement, which arises as a by-product of the EU funding. We treat the EU structural funds as a direct inflow through the current account of the balance of payments. This represents a simplification in the case of capital transfers. However as argued in Honohan (1997, p. 38), since these flows do not have to be repaid and are resources available for domestic investment – which is indeed their intended purpose – they represent a net gain to the external position of the Irish economy.

In the results shown below for the effects of the CSF, the balance of payments shows a sustained improvement, as does the position of the public finances. The debt/GNP ratio is allowed to continue to improve throughout the period as debt is repaid. This represents a further gain to the economy as the improvement in the

public finances could allow a sustainable further domestic fiscal stimulus (through raising expenditure or cutting taxes).

The increase in employment and output from the NDP will have additional effects, through the multiplier process, on all sectors of the economy. These multiplier effects are embedded in the *HERMES* model. The increase in growth and employment financed by the NDP will reduce certain aspects of government spending and increase tax revenue through buoyancy effects. The results of these indirect changes are likely, in time, to more than offset the cost to the government of financing the NDP. As with the CSF, depending on how these benefits are used, they may add to the growth rate in the medium term. For example, if these indirect benefits are used to repay foreign debt then future debt interest payments will be reduced. In this section we have assumed that the additional revenue buoyancy is used to repay debt.

## RESULTS

In this section we present our estimates of the impact of the NDP, CSF and EU investments. We begin by presenting the direct demand side effects of the NDP over the period 2000-2003. We then discuss the aggregate long-run effects of the total NDP, structural fund expenditure including co-financing (CSF) and EU structural expenditure alone (EU). Finally we present our estimates of the impact of the infrastructural and human capital supply-side effects separately.

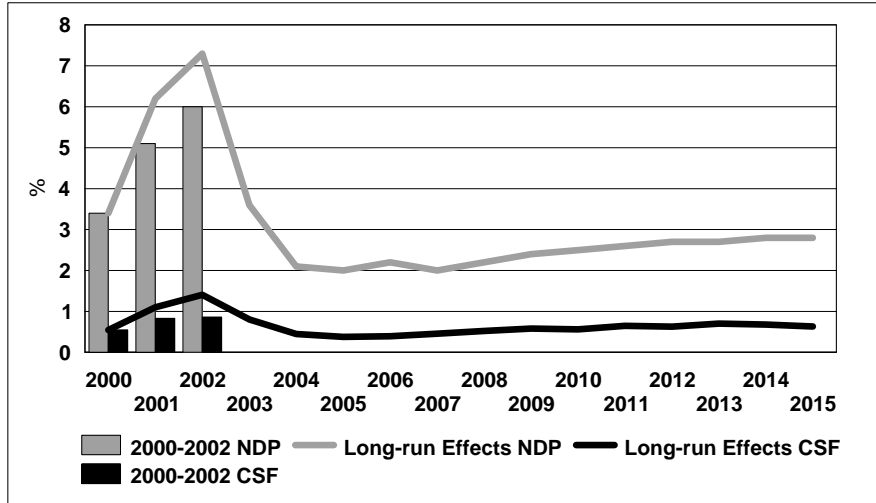
The results are shown as the difference between the “with” and “without” scenarios in each case. When we talk of, for example, a change in GNP or consumer prices as a result of the NDP we are talking of the difference between the level of GNP and consumer prices in the “with NDP” scenario and the levels in the “without NDP” scenario. Thus when we talk of the NDP raising GNP in 2002 by over 7 per cent this does not mean that the growth rate will be over 7 per cent up, but that the level of GNP in 2002 will be 7 per cent above the level it would otherwise have been without the NDP. As discussed above, the “without NDP” scenario is not meant to be realistic but rather it is used as a tool to help quantify the overall impact of the NDP investments.<sup>26</sup>

Figure 3.6 summarises the aggregate demand and supply-side impacts of the NDP and CSF respectively on GNP. As can be seen from the graph, the initial impact of these investments is much greater than the more permanent effects shown for the period after 2002. This is because the demand side impact is purely transitory, while the supply side impact takes some years to build up. The long-

<sup>26</sup> All of the estimates reported here are quite insensitive to variations in the benchmark macro-scenario (the “with NDP” scenario), here based on the *MTR 2003-2010*, as experience has shown that the *HERMES* model is almost linear in this regard. No reasonable variation in the benchmark would alter any of the numbers reported by more than 0.1 per cent.

run effects of the NDP on GNP are substantial. By 2015 the cumulative effect is to raise GNP by almost 3 per cent.

**Figure 3.6: Total Effects of NDP and CSF on GNP**



Given a cumulative investment of 19.8bn euro, over 20 per cent of GNP, this suggests a long-run return on investment of around 14 per cent, which is high but not implausible. Bradley, Morgenroth and Untiedt (2003) in a macro-regional evaluation of the structural funds, estimated a cumulative Structural Funds multiplier defined as the cumulative percentage increase in GDP divided by the cumulative Structural Funds share in GDP.<sup>27</sup> This multiplier helps to standardise Measures of the impact of Structural Funds interventions by controlling for the scale of expenditure. Their estimates are based on the 1994-1999 Structural Funds expenditure and suggest a high multiplier for Ireland (2.8) over the period 1994-2010 relative to the other Objective 1 countries; Portugal (2.5), Greece (1.1) and Spain (1.8). We have calculated this multiplier for the NDP 2000-2002 expenditures over the period 2000-2015 based on the results shown in Figure 3.6. These indicate that our results are of a similar order of magnitude for the NDP multiplier at around 2.4.<sup>28</sup>

*Demand Side Effects*

The cumulative demand-side impact of the NDP on GNP in 2002 is 5.4 per cent. This is lower than the actual size of the NDP due to leakage through imports of capital goods and material inputs. The balance of payments surplus and the exchequer surplus both fall by

<sup>27</sup> Bradley, J., E. Morgenroth and G. Untiedt (2003). “Macro-regional Evaluation of the Structural Funds using the HERMIN Modelling Framework”, ESRI, Working Paper 152.

<sup>28</sup> Our results are biased downwards since the demand side effects are only in place for three years rather than six years in the Bradley *et al.* (2003) study.

3.8 and 4.3 percentage points respectively, reflecting the ratcheting up of imports and the exchequer costs of funding the large investment programme.<sup>29</sup> The increase in activity in the building and construction sector leads to a significant increase in building sector output prices and in particular in house prices.

**Table 3.12: Short-Run Effect of NDP on Key Macro-economic Variables**

	2000	2001	2002
GDP (%)	2.9	4.3	4.7
GNP (%)	3.4	4.9	5.4
Balance of Payments as % of GNP	-2.8	-3.8	-3.8
Exchequer Surplus as % of GNP	-4.3	-4.4	-4.3
Debt/GNP Ratio (as % of GNP)	2.7	4.8	8.5
Consumer Prices (%)	0.0	1.1	1.5
Average Wage Rates	-0.4	1.6	2.3
Unemployment Rate (as % of Labour Force)	-3.2	-3.8	-3.8
Total Employment (thousands)	60.3	84.7	97.6
Labour Force (thousands)	7.5	19.9	32.5
Net Immigration (thousands)	0.0	16.2	21.1
New House Prices	2.7	13.3	14.2
Building and construction deflator	3.5	4.7	4.7

The sizeable growth in output is reflected in strong growth in employment. The NDP demand-side effects are concentrated in labour-intensive sectors such as building, health and education. The simulation suggests that the NDP injected almost 100,000 jobs by 2002 inducing net immigration of 21,000. Together with a rise in participation rates, this led to an increase in the labour force of over 32,000 by 2002. These numbers suggest that the unemployment rate would have been almost 4 percentage points higher by 2002 without the NDP. This “no-NDP” is clearly an unrealistic alternative but this does serve to illustrate the magnitude of the demand-side boost to the economy provided through the NDP.

Inevitably such a large injection of funds will lead to an increase in prices in the short run. Average wage rates are estimated to be 2.3 per cent higher, with consumer prices up 1.5 per cent. However the sectors where the NDP had a large inflationary impact are the housing and other building and construction sectors. We estimate that the NDP housing investment programme, together with the rise in general income levels, gave rise to new house prices being over 14 per cent higher by 2002. The inflationary effect in other building and construction sectors is, albeit more modest, at 4.7 per

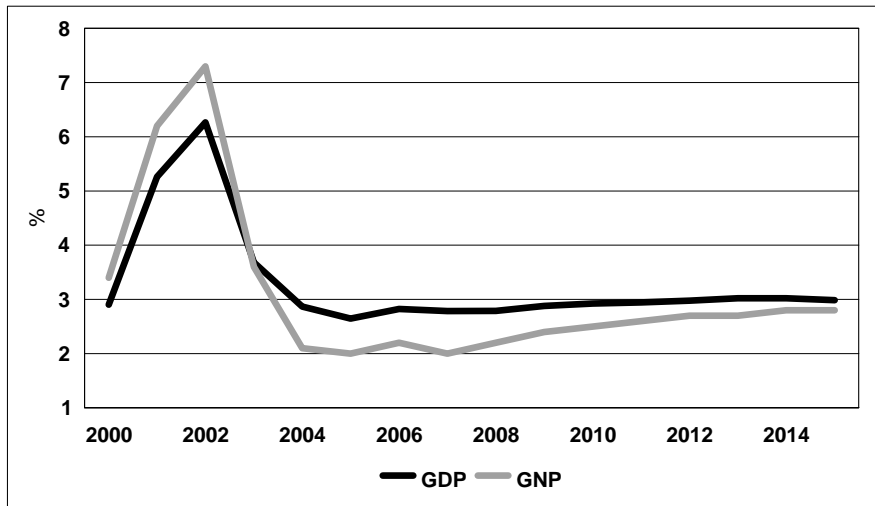
<sup>29</sup> As discussed later, this is a net deterioration since the inflow of EU funds represent a gain for the balance of payments and the exchequer accounts.

cent, double the increase in average wages. The latter effect may well underestimate the inflationary consequences of the NDP.

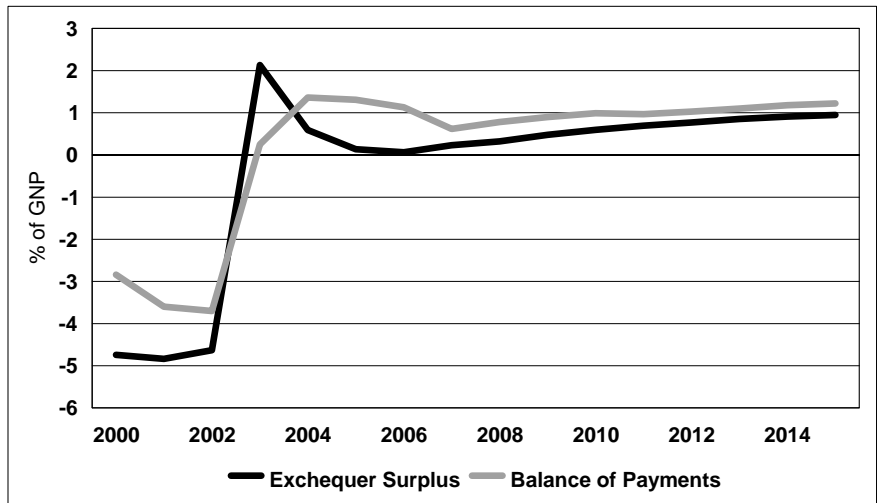
*Supply Side – Aggregate Effects of NDP*

At the heart of any extensive investment programme is an objective to boost the economy’s long-run growth potential. The best performance indicator of this target is the impact on GNP and GDP. In Figure 3.7 we show the impact of the NDP on the level of GNP and GDP. Details of the impact on other major aggregates are shown in Appendix 4. This indicates that the supply-side effects take some time to fully work through the economy. It is only from

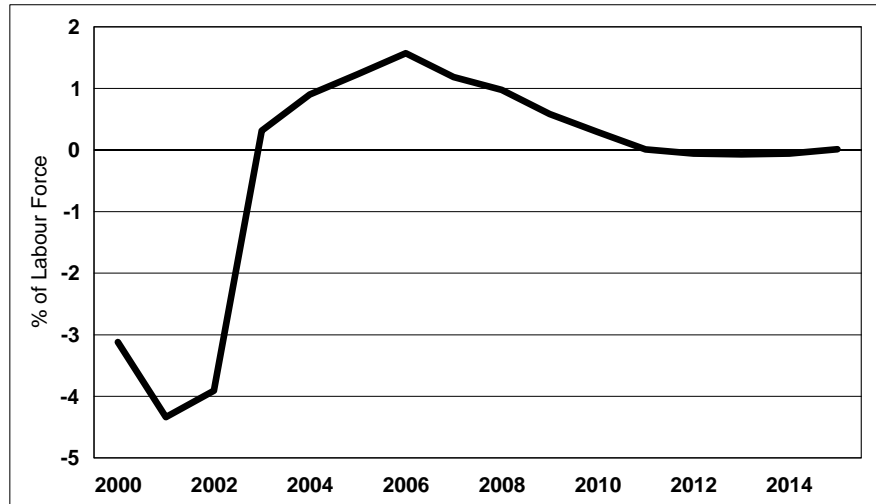
**Figure 3.7: Impact of NDP on GNP and GDP**



**Figure 3.8: Impact of NDP on Balance of Payments and Government Surplus**





**Figure 3.9: Impact of NDP on Unemployment Rate**

2010 onwards that the full long-run impact of the NDP can be seen. Initially the impact on GNP is lower than on GDP due to the cost to the exchequer of foreign borrowing to fund the NDP, and due to the increases in profit repatriations in manufacturing driving a wedge between GNP and GDP. However, by the end of the period their paths converge as the public finances move into surplus due to the strong performance of the economy (Figure 3.8).

The strong supply-side impact of the NDP on the economy drives strong growth in employment, which induces higher rates of net immigration. This means that the impact on GNP per head is more muted at 2.3 per cent by 2015, with the remainder of the long-run increase in GNP absorbed by an increase in the population.

While the demand-side effects of the NDP are strongly inflationary, over the long term the inflationary effects disappear, with prices and wages roughly unchanged by 2015. Increases in labour supply in the long-run serve to modify wage demands, while improvements in productivity keep consumer prices unchanged. The strong employment effects of the NDP fall off beyond 2002. However, increases in human capital, together with strong output growth, ensure a long-run positive effect, with total employment 50,000 higher than without the NDP. There is no lasting long-run effect of this higher employment on the unemployment rate. In 2000 the unemployment rate, at just over 4 per cent of the labour force, was close to a full employment rate, so that any further increases in employment will, over the long run, induce increases in participation, immigration or higher wages.

It is interesting to note the time-path of these effects. Once the initial demand-side stimulus ends after 2002, there is an increase in the unemployment rate peaking at 1.6 (Figure 3.9) in 2006. This is mainly due to the strong increase in the labour force, peaking in 2005, driven both by increased migration and labour force participation, attracted by the improved labour market

circumstances in the years 2000-2002. (Of course this rise assumes a complete ending of the NDP in 2003.) In addition, improvements in human capital also increase the supply of skilled labour (Section 3.3). The unemployment rate gradually moves back to equilibrium as the labour supply effect is attenuated by renewed migration and as the supply-side productivity effects begin to kick in increasing employment. The assumption here that the NDP ended in 2002 is purely used for illustrative purposes. In reality, as discussed later in this report, the NDP will continue at a rather similar level of activity for the foreseeable future.

In the long run the improvement in competitiveness, arising from the NDP, results in a permanent increase in value added in industry of almost 4 per cent by 2015. Output in the market services sector is also over 3 per cent above the “no NDP” levels. This is due to some direct supply-side effects from the NDP, but also through the indirect multiplier effects of the demand stimulus to the economy.

Despite an initial deterioration in the public finances due to funding the NDP, the long-run consequences for the public finances are positive due to the high rate of return on these investments. By 2015, despite funding an investment campaign which cost the domestic exchequer cumulatively almost 19 per cent of GNP between 2000 and 2002, the exchequer surplus as a percentage of GNP is one percentage point higher and the debt/GNP ratio falls by almost three percentage points. This reflects the revenue buoyancy consequent on the long-run stimulus to the economy through positive supply-side effects, together with some reduction in government expenditure on transfers and debt interest.

#### *Supply Side – Aggregate Effects of CSF/EU*

As discussed above, the “no NDP” scenario is intended as an illustrative exercise to estimate the likely impact of the NDP. It is clearly unrealistic to assume that the Irish government would have simply pursued no investment programme over the 2000-2002 period. In this section we consider a different scenario, designed to estimate the impact of EU structural expenditures over the period 2000-2002, both with and without Irish government co-funded expenditures.

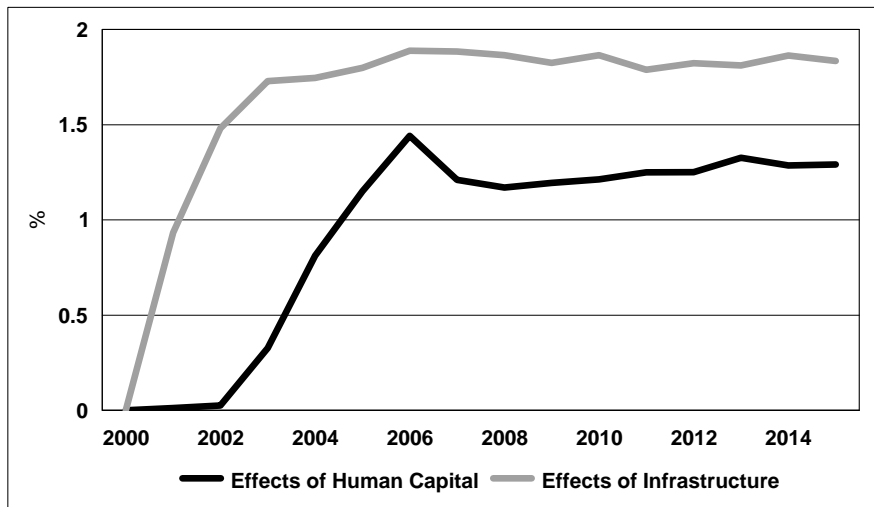
The initial impact of the CSF (EU plus domestic co-funding) and EU (EU funded expenditure excluding the Irish government co-funding) scenarios on GNP is 1.4 and 0.9 per cent respectively in 2002. By 2015 this effect is halved to 0.7 and 0.4 per cent respectively. The long-run effects are proportionately stronger here than under the NDP because the structural expenditures are more heavily concentrated on infrastructure and human capital, both of which have a very high rate of return, as discussed in Sections 3.3 and 3.4 above. This would represent a rate of return on the initial CSF investment of around 18 per cent. Further details of the results for both these scenarios are given in Appendix 4.

### *Supply Side – Infrastructure and Human Capital Effects*

In the assessment of the macro-economic impact of the NDP/CSF we use the results of two separate studies which help to quantify the importance of infrastructural and human capital investment, as described in Sections 3.3 and 3.4. To get some idea of the relative importance of these two effects in the aggregate NDP effect we estimated two more scenarios, one is a “no infrastructure” scenario which omits the supply-side infrastructural effects, the second is a “no human capital” scenario which omits the supply-side human capital effects. The details of how these two effects are implemented in the model are discussed earlier in the section.

Figure 3.10 contrasts the impact on GDP of the investment in human capital and the investment in infrastructure. Together these two key elements account for the bulk of the long-term supply side impact of the NDP. In both cases it takes time for the supply side effects to come through. In the case of investment in human capital it is probably slower than for investment in physical infrastructure. This arises from the fact that the full benefits of the human capital investment must not only await the individuals completion of education and entry into the labour market, but it also takes significant time for their enhanced productivity to impact on the long-term capacity of the economy.

**Figure 3.10: Impact of NDP on GDP – Infrastructure and Human Capital Effects**



The impact of the infrastructural investment represents the single most important element of the positive supply side impact of the NDP. This is not surprising since it accounts for close to 60 per cent of total expenditure under the NDP. These results would suggest that the long-term impact of the investment completed over the period 2000 to 2002 could be to expand the productive capacity of the economy by just under 2 per cent. However, even when this important supply-side channel is excluded from analysis, there is a permanent output and employment effect in the economy through

the other channels of human capital, aids to the private sector and investment in childcare.

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### 3.6 Regional Impact – Model

The NDP has a specific aim of achieving more balanced regional development. This aim has been underscored by the publication of the National Spatial Strategy, which further elaborates the spatial development strategy that is to be followed by government policies, and in particular the NDP. As such it is important to review the trends in key variables and to evaluate the effectiveness of the NDP in achieving this goal.

One problem at the regional level is that policy makers seldom have access to accumulated research on the macro-economic and macro-sectoral performance at a regional NUTS II or NUTS III level, which would allow them to assess the overall impact of Policy Measures. In this section regional issues are first addressed by outlining the major development of the key socio-economic variables. Second, in order to provide a framework to analyse the impact of the NDP on regional development the relevant developments in the economic literature are reviewed.

#### REGIONAL SOCIO-ECONOMIC PROFILE

This section analyses the key socio-economic variables and their evolution. A major constraint in this type of analysis is the lack of availability of comprehensive up to date data. Indeed at the regional level for Ireland many variables are only available up to the year 2000, the first year of the NDP, and many crucial variables are simply not available. Clearly, if government policy is to achieve more balanced regional development then in order to evaluate progress on this, and in order to design well-founded policies, adequate data must be available.

Table 3.13 gives details on a number of these variables for the two NUTS II regions. First of all it shows the large gap between the Border, Midland and West region and the Southern and Eastern region with respect to per capita Gross Value Added (GVA) for the year 2000. Given that the national per capita GVA was €24,108 in 2000, the figures indicate that the GVA of the BMW region is 28 per cent below the national average, while the Southern and Eastern region (S&E) has a per capita GVA that is 10 per cent above the national average. This reflects the relative population distribution between the two regions such that the S&E region drives the national average figures. A less substantial gap emerges for per capita disposable income where the BMW lags just 13 per cent behind the national average, while the S&E region is only 4 per cent above the national average.

The differences between the gaps in GVA and disposable income derive from a number of factors. First, the welfare system has a tendency to reduce disparities in income between regions. Thus, if a region has a higher unemployment rate, resulting in a higher dependency rate then it will, *ceteris paribus*, have a lower output per person, as unemployed people do not produce output.

However, the unemployed receive income in the form of unemployment benefits, which is counted into the income figures. Second, commuting affects the figures for output, since output is measured where it is produced rather than where the worker that produces it lives. Income on the other hand is measured where the individuals live. This is a particular issue at the NUTS III level but may also be a factor at the NUTS II level. Finally, the output figures are distorted due to transfer pricing and profit shifting. This implies that, while the output of firms may be high, a substantial part of their revenues is transferred abroad, not benefiting individuals in Ireland directly. If more of these foreign firms are located in the S&E region then the GVA in that region will be biased upwards, relative to the actual level of gain to the country that is retained.

The table also shows some basic labour market statistics. Employment growth in the BMW region has been faster over the period of the NDP than in the S&E region. Nevertheless, the unemployment rate in the BMW region exceeds that of the S&E region by just over 1 per cent. The table also shows that population growth over the intercensal period was almost identical in both regions, while the population density of the two regions differs significantly: the BMW region is more rural/low density in nature and the S&E region more urban/high density in nature. This has important implications for the potential of the two regions, as will be outlined below.

**Table 3.13: Regional Indicators**

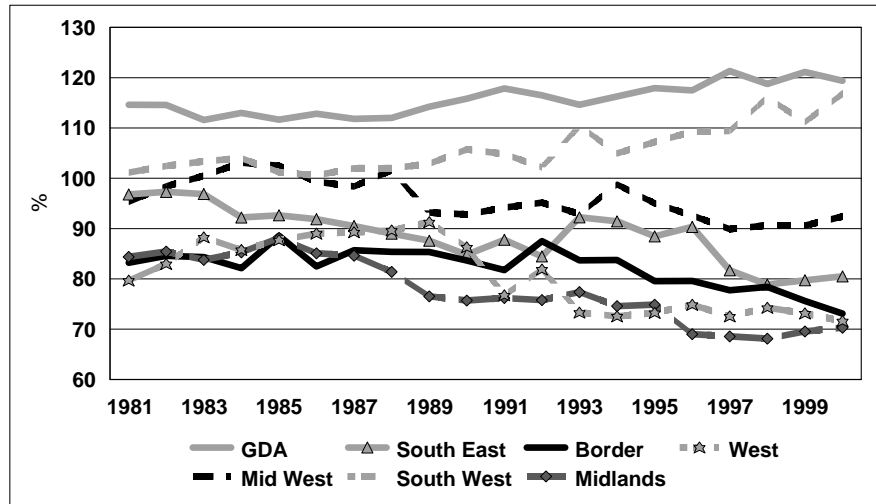
	<b>Border, Midland and Western</b>	<b>Southern and Eastern</b>
Per Capita Gross Value Added (2000)	€17,338	€26,535
Per Capita Disposable Income (2000)	€13,116	€15,121
Employment Growth 2000-2003	3.3%	1.8%
Unemployment Rate (2003Q2)	5.2%	4.1%
Persons at Work (2003Q2)	450,900	1,327,400
Population (2002)	1,038,200	2,879,000
Average Annual Population Growth 1996 – 2002	1.3%	1.4%
Population Density (persons per km <sup>2</sup> , 2002)	32.0	79.1

*Source:* CSO *Census of Population*; *Quarterly National Household Survey*; Regional Accounts; Regional Income Estimates and ESRI calculations.

While the focus in this chapter is on the NUTS II level, it is also important to highlight the heterogeneity within the two regions, especially as achieving balanced regional development in the S&E region refers to a rebalancing within that region. Furthermore, the evolution of the heterogeneity is an important feature that needs to be highlighted. Figure 3.11 shows the evolution of an index of per capita gross value added for regional authorities, where the index is calculated relative to the national average. The figure clearly shows that there is a reduction in the spread of the variable over the period 1981 to about 1987, which was a period of regional convergence within Ireland. However, since about 1987 the spread has increased, indicating regional divergence. Noticeable is the poor relative performance of the Border, Midlands and West regions, which make up the BMW NUTS II region. However, another important feature is the poor performance of the South East region. This

clearly shows that within the S&E region the NUTS III regions are subject to quite different trends, and this explains the concern with balanced regional development within the S&E region.

**Figure 3.11: Index of Per Capita Gross Value Added for Regional Authorities, 1981–2000 (State = 100)**



*Source:* CSO Regional Accounts and ESRI calculations. GDA refers to the Greater Dublin Area, which is made up the Dublin and Mid-East Regional Authority areas which form a functional region.

A further point worth noting regarding per capita gross value added is that at the time the new regional arrangements for Ireland were negotiated as part of the Agenda 2000 Agreement, the latest data available showed that the BMW region had a per capita GVA of just 72.4 per cent of the EU average while the same indicator showed the Southern and Eastern region to be at 108.3 per cent of the EU average.<sup>30</sup> The latest figures for 2000, show that the BMW region has converged towards the EU average with a per capita GVA which stands at 82.7 per cent of the EU. In other words, the BMW region has grown faster than the average EU regions. However, the Southern and Eastern region has done even better in that it now (2000) has a per capita GVA which stands at 126.6 per cent of the EU average.

Apart from these aggregate indicators, it is also useful to analyse regional sectoral trends. Table 3.14 shows the recent trends in sectoral output. An obvious fact is that the importance of the agriculture sector is declining rapidly in both regions. However, that sector is almost twice as important in the BMW region as in the S&E region. Another important feature is that manufacturing and building and construction has increased its share in both regions. This is notable since in most other OECD economies manufacturing is declining in importance in favour of services.

<sup>30</sup> This is based on the revised data published in the CSO release on County Incomes and Regional GDP, 2000.

Indeed, services have also increased their share, but in the case of the S&E region only slightly, while in the BMW region this increase has been quite substantial.

**Table 3.14: Sectoral Shares in Gross Value Added, 1995 and 2000**

	1995	2000
<b>Agriculture</b>		
Border, Midland and Western	17.6	7.4
Southern and Eastern	10.0	3.6
<b>Manufacturing, Building and Construction</b>		
Border, Midland and Western	44.7	48.9
Southern and Eastern	49.2	55.1
<b>Market and Non-market Services</b>		
Border, Midland and Western	37.7	43.7
Southern and Eastern	40.8	41.3

*Source:* CSO Regional Accounts.

## DETERMINANTS OF REGIONAL DEVELOPMENT

The above description of the regional data is not adequate to evaluate the impact of policies, since the complexity of economic activity cannot be captured in such a simple approach. Instead economists apply a variety of models, which although simplified, reflect the key mechanisms that operate in an economy: e.g. output determination, and the determination of factor demands and prices. For regional development the conventional models that apply to small open economies are good starting points, as are the standard growth models. However, for regions, theories of economic geography and firm location suggest that a range of additional factors must also be taken into account.<sup>31</sup> These also encompass the relationships between regions that arise through trade, migration and commuting. Indeed these are more important than those that apply between countries.

The advances in economic geography, as elaborated by economists, show that there are forces that foster agglomeration and those that foster dispersion. The basic new economic geography models have evolved from the new trade literature, which was importantly influenced by Paul Krugman (e.g. Krugman, 1980 and Brander and Krugman, 1983). In these models trade takes place due to increasing returns and each good will only be produced in one country/region by one firm and the gains from trade arise in the form of greater product diversity than would be produced if there were not trade. Thus, the increasing returns do not arise out

<sup>31</sup> An overview of the endogenous growth and new economic geography literature can be found in Morgenroth (2003a). The endogenous growth literature is reviewed in Hammond and Roderiguez-Clare (1993). The new economic geography models are outlined in Fujita, Krugman, and Venables (1999), and Fujita and Thisse (2002). A summary of the small open economy models can be found in Barry, *et al.* (1997).

of spillovers; rather they arise out of the increase in the variety of goods. An important aspect in these models is the existence of transport costs, which have a significant impact, namely that countries/regions will export the goods for which there is a large domestic demand. A larger domestic market allows firms to produce at a lower cost, which means that their exports are also cheaper after transport costs have been added than when domestic demand is low. This also implies that the workers in a larger country/region are better off since they face a lower price for consumption goods. Thus, the assumption of increasing returns in conjunction with transport costs gives rise to a home market effect.

However, it is an extension of these models, namely if workers are allowed to migrate, that generates the most interesting results. If there are two sectors say manufacturing and agriculture, agricultural workers are immobile, as they cannot move their land while manufacturing workers can migrate. Workers choose to live in the region where their real wage is highest. The decision of workers to locate in a specific region will depend on the transport costs, the initial share of manufacturing, and returns to scale. For example, if transport costs are low, a region with a slightly higher starting population will attract manufacturing firms due to increasing returns provided these are sufficient to outweigh the transport costs incurred in serving the smaller market. This will also result in lower prices for consumption goods in that region which will attract more workers which further reinforces the agglomeration process in manufacturing. Thus these models can explain a core-periphery distribution of economic activity.

More recent advances in this literature (see Giannetti, 2002) show that the sectoral composition of regional economies is an important aspect of development, as different sectors have different tendencies to agglomerate. However, it appears to be the more high-tech sectors that tend to agglomerate, which has an immediate impact on regional development. Thus regions, which have a higher initial concentration in these high-tech sector or factors that are conducive to these sectors, such as universities, are likely to grow faster as firms in these fast growing sectors agglomerate there. This puts in motion a process of cumulative causation that sustains these agglomerations.

However, as agglomerations become too large diseconomies arise that foster dispersion of economic activity. The most obvious diseconomy that is apparent in large cities is congestion, which alters not only the quality of life in the centres, but also changes the relative prices, for example of transport, compared with less agglomerated areas. In this respect a recent paper by Henderson (2000) suggests that excess primacy as measured by the share of the largest city in the total population decreases national growth. Indeed, he finds that Dublin is too large relative to other cities in Ireland and therefore displays excess primacy, which reduces growth. Indeed, it is relative prices – competitiveness – that enables more peripheral regions to attract firms. As a result, one role of government policy must be to ensure that the prices that it controls



are correct. For example, congestion imposes extra costs on all inhabitants of a city and these costs are not mediated through the market. In this respect, government policy should aim to charge congestion prices. While this is often seen simply as a tool to reduce congestion, it also changes relative prices in favour of less congested areas, which thus become attractive as potential locations for firms.

A similar issue pertains in the housing market. High housing costs inevitably lead to higher wage costs for firms, as individuals need to live somewhere, or they lead to migration and commuting (see Morgenroth, 2002), which will again impact on house prices elsewhere and congestion. In this respect, housing policy can have important regional development implications. For example, strong demand from outside a region, perhaps for holiday homes/second dwellings, increases the price to local residents, which then impacts on competitiveness of that region. Here there are obvious merits in favour of intervention to ensure no loss of competitiveness.

In general the empirical evidence on the existence and dynamics of agglomerations is quite strong (e.g. Ciccone and Hall (1996); Ciccone (2002); Ellison and Glaser (1997)). In the Irish context the relationship between urbanisation and regional growth has been highlighted by Bradley and Morgenroth (2000) and Boyle, McCarthy and Walsh (1999). Overall, the growth experience of Irish regions together with the theoretical literature suggest that strong agglomeration forces operate in all economies. It is unrealistic to expect government policy to completely overcome these forces. Rather, government policy should aim at harnessing these important forces. This can be achieved through a policy of developing selected centres which act as conduits for growth in their wider hinterland. This type of rationale underlies the main thrust of the NSS.

This model suggests that the most important determinants of regional development are the presence of factors that generate growth. In this regard the competitiveness of regions, as measured by relative prices not only for goods but also for services, that determines firm location and real disposable incomes. These types of arguments are reflected in the research on firm location, where apart from lower labour costs, other factors, such as the availability of infrastructure, are an important prerequisite.

In order to assess the impact of the NDP on regional development it is therefore necessary to assess how it has impacted on infrastructure, human capital and R&D as well as the evolution of a variety of relative prices. However, the latter is quite difficult to accomplish in the absence of published data at the regional level for many price series.

The brief socio-economic profile presented above highlights a number of issues. First, it shows the clear distinction between the regions, with the BMW region lagging behind the Southern and Eastern region in terms of output and income indicators. Structurally, the BMW region still relies more heavily on agriculture, which is not surprising given its more rural nature. However, the dependence on agriculture, forestry and fishing has declined dramatically since 1995 in that the share of output from that sector

more than halved in the period to 2000. Given the lack of data for the more recent period from 2000, there is little hard evidence on the relative development of the two regions, except for employment, which shows substantially faster employment growth in the BMW region since 2000 than in the Southern and Eastern region.

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### 3.7 Conclusions

A series of micro-economic studies of the labour market and of infrastructure, when integrated within a macro-economic framework, provide an estimate of the overall economic impact of the NDP/CSF. Both the micro-economic studies on their own and the macro-economic analysis provide insights into how the performance of the NDP/CSF could be improved over the coming three years.

The first micro-economic study shows that the returns to education have fallen between 1994 and 2000, reflecting the significant changes in the supply of skilled and unskilled labour. Other factors affecting the returns include the introduction of a National Minimum Wage and the prolonged strength of labour demand over the 1994 to 2000 period, bidding up the price of unskilled labour as unemployment (which was particularly concentrated among the low skilled) was reduced to historically very low levels.

However, this analysis indicates that, while lower than in the past, the returns to education still remain very substantial. This study shows that in a competitive labour market, the productivity of those with a good education is much higher than the productivity of the less skilled. As a result, investment in education and training has had a major positive impact on the economy in upgrading the skills of many individuals. It has helped increase participation rates, especially among women. It has added to the productivity of the economy and it has also helped bring about a significant reduction in inequality in earnings. This last finding indicates that, taken as a whole, the NDP/CSF has contributed to the Horizontal Principle of promoting social inclusion.

A related study shows that time out of the work place accounts for an increasing proportion of the persistent pay gap between men and women. This suggests that interventions, which facilitate employment continuity and reduce the penalties attached to time out of the work force, are extremely important. The availability of affordable childcare is an important element of women's decisions to stay in the labour market when they have young children and on the length of time they stay out of the labour market (parental leave schemes and flexible employment are also central to this decision). This element of the NDP/CSF can, as a result, make a significant contribution to reducing inequality.

A second study looking at the aggregate impact of infrastructure on the performance of the macro-economy indicates that, while returns to investment in infrastructure were quite low in the 1980s, they had risen to quite a high level by 2000. This reflected the fact

that in the 1980s the economy's performance was not seriously hampered by infrastructural constraints – more infrastructure would not have had a significant impact on potential output. However, the success of the 1990s saw the economy unprepared for the potential level of output. As a result, the returns to investment in physical infrastructure, especially roads, were exceptionally high by 2000, reflecting the serious constraint that the infrastructural deficit represented.

These two studies bring new micro-economic evidence to support the macro-economic analysis previously based on some untested assumptions. When integrated into the macro-economic framework the results suggest that the NDP will result in the level of GNP being almost 3 per cent higher in the long run than it would have been without the investment. This implies a rate of return on the investment under the NDP of around 14 per cent. This improvement is sustainable in the sense that the public finances will also be better off in the long run as a result of this investment.

For the CSF, taken on its own, the long-run impact on GNP is around 0.7 per cent. This represents a rate of return of around 18 per cent. The fact that the return on the CSF is higher than on the NDP as a whole reflects the fact that a higher share of CSF expenditure goes on infrastructure and key human capital interventions, which have a high rate of return, than is the case for the NDP. Because of the EU funding element the effect of the CSF on the public finances is particularly favourable, resulting in an increased surplus of 0.3 per cent of GNP. If this surplus were reinvested the long run rate of return could be even higher.

These results, if applied to the previous investment in infrastructure through the first and second CSFs, would also be likely to result in some upward revision of the estimated impact. This reflects the new information available from the results of the micro-economic studies discussed in this chapter.

The analysis also highlights the major pressures which the investment programme is placing on the building and construction sector. Over the period 2000 to 2002, with the building sector already at capacity, the increased investment contributed significantly to inflation in the sector. This points to the importance of managing demand in the sector over the period to 2006.



# PART 2

Mid-Term Evaluation of the NDP/CSF



# 4. ANALYSIS OF NDP/CSF— METHODOLOGY

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## 4.1 Introduction

The current NDP/CSF has been under way for nearly four years. As will be discussed in subsequent chapters, much of the work undertaken as part of the NDP/CSF over the 2000-2003 period has contributed to enhancing the productive potential of the economy and to enhancing welfare, broadly defined. This report is a Mid-Term Evaluation and it must take account of the extent to which investment programmes are already determined. Even if it were desirable, it would not be possible to rewrite the NDP/CSF from scratch. The history of the NDP/CSF must be considered, and any reprioritisation recommended must take account of the difficulty and costs in radically changing an investment strategy in a short period of time. In any event, as discussed in previous chapters, the evidence indicates that the original strategy of the NDP/CSF was broadly correct and that it is neither necessary nor desirable to make a major change in course at this half way stage in the planning period.

This chapter outlines the approach taken in this report to determining what changes are appropriate at the mid-point in the planning period. A wide range of factors has been taken into account in arriving at conclusions. In particular, the evaluations of each of the individual Operational Programmes provides the key input into the process. A limited number of changes in prioritisation compared to the OP evaluations are recommended, chiefly where the sum of the NDP/CSF adds up to something rather different from its parts.

Analysing a very large and complex programme of public investment, such as the NDP/CSF, is not a simple task and there is no “correct” way to determine the appropriate prioritisation of Measures. The range of information available on the huge range of projects is not always ideal and the time and resources available to analyse them is limited. The managing authorities of the different OPs will themselves have a wide range of experience dealing with the individual Measures.

In this Mid-Term Evaluation we set out the detailed reasons for favouring individual Measures<sup>32</sup> over other possible projects. The methodology we use does not produce a unique answer but, in making it transparent, readers can form their own view as to the validity of the choices made.

In carrying out the analysis we begin from the understanding that the marginal cost of public funds is quite high.<sup>33</sup> Thus the cost of raising a euro of revenue through taxation is greater than a euro because of the distortions inherent in any tax system.<sup>34</sup> This means that the value obtained from using that revenue must be significantly greater than the cost of raising the revenue if national welfare is to be raised by government action. As a result, the first question to consider when looking at different investment Measures is whether there is a “market failure” that would justify state intervention. An obvious example of market failure is the road system: without state involvement the roads would not be built.

However, even where there is market failure, as in the case of roads, the potential rate of return from the investment must still be sufficiently high to justify the cost of raising taxation to pay for it. Ideally the social rate of return should be calculated for each project and that project should only be funded if the rate of return is greater than the social cost of financing the project. Allowance must also be made for the risks inherent in any project. The forecasts for future revenue or social returns on any project are necessarily uncertain, as is also often the forecast for the cost of the investment. Where projects are particularly risky or where the rate of return is very uncertain it is necessary to take this into account before deciding on whether to invest. Risky investments, even if promising a high return, will be less attractive than more reliable projects with more limited returns. For example, the riskiness of investment in R&D must be balanced against the expected high returns, while investment in non-national roads may offer a lower but more certain return.

While in many cases it is difficult to undertake these calculations in a formal way, it is important in any project selection process to take them into account at least in a more qualitative fashion. In some cases variations in project selection in the NDP have been made without recalculating the costs and benefits. This leaves open the possibility that the revisions seriously reduce welfare, though of course they could also prove to be wise. This issue arises in Chapter 6 in considering the roads programme.

<sup>32</sup> Within the Operational Programmes, expenditure is divided among a number of “priorities”. Within each “Priority” area are a number of “measures”. In many cases the expenditure is further detailed in terms of “Sub-Measures”.

<sup>33</sup> Albeit, it is significantly lower than in the 1980s, Honohan and Irvine (1987) and Honohan (1998).

<sup>34</sup> For example, when taxes on labour are raised this discourages participation in the labour force. Any reduction in labour supply will tend to raise wage rates and reduce output. Thus the cost of the taxation is not just the revenue foregone by labour, but also the reduction in output.



A further issue, which must be considered in any process of project selection, is the optimal timing for undertaking the investment. If, for example, roads or metro systems could be bought in supermarkets in unlimited quantities then there would be no need to buy them over a period of many years. The optimal answer would be to borrow and to buy and deploy all the roads needed immediately. However, reality is very different. Most of the investment in physical or human capital or R&D can only be undertaken gradually. The roads have to be built in place. No amount of money will overnight convert someone with a Leaving Certificate into a university graduate, with all the attendant skills and expertise.

Generally, the more rapidly investment is put in place the more costly the investment will be. Thus the fact that a project has a very high potential rate of return and, as a result, a high Priority, does not mean that it should be undertaken immediately. *Festina lente* may in some cases produce a higher long-run return on money spent. For example, for a given budget spent on roads, more roads may be delivered by undertaking the investment programme over a ten year period rather than over a five year period and the lost benefit from the slower deployment could be offset by the cost savings. When this issue of timing is taken into account, it in some cases modifies our assessment of the appropriate priorities for investment over the period 2004-2006.

The timing of investment may also have been affected in the past by funding constraints. In particular, the Berlin profile, which involved the front-end loading of CSF funding, required a very rapid build up in investment in some sectors. The accelerated pace may have contributed to a rise in costs and lower value for money than if a more appropriate pace had been possible.

Finally, even if a project promises a high rate of return and even if it could be implemented rapidly without inflationary consequences, there is still the possibility that the investment will be dogged by inefficient implementation. Obviously, the efficiency of delivery will feature in any decision-making process on determining investment priorities.

In practise information is limited and the benefits from many projects do not lend themselves to a single scientific metric. In this report the elements of the NDP/CSF have first been classified according to the rationale for undertaking the investment. Based on this rationale a formal screening process is then applied that produces an initial scoring of projects. This screening is a useful first step in highlighting projects that may be especially beneficial or especially problematic. However, this screening process is crude in nature and is only one input into the selection process. The financial and physical progress of different Measures, the efficiency with which they are being implemented, the cost of delivering them in the relevant time scale are all considered, and the extent to which they contribute to the Horizontal Principles underlying the NDP/CSF.

In a number of areas of expenditure where the state is subsidising “desirable” economic activity, the managing authority has limited information on the likely rates of return for different projects. One way of dealing with this information gap is to develop a competitive process where those seeking funding who have a good case have an incentive to provide the best possible information to the deciding authority. For example, such a process is already in place for allocating a significant part of the funding on Research and Development in the education sector.

In a number of cases we have recommended the implementation or extension of such a competitive process. In the Productive Sector OP it is recommended that all types of business compete together for funding under the industry Priority rather than having separate funding preallocated for indigenous industry, food processing, seafood processing etc. By setting up separate budgets for support for different sectors of the economy it makes it most unlikely that the same rate of return will be obtained from investment in each sector. This means that the final allocation will not maximise the economic benefits of the scarce national resources. In addition, a broader competitive process for funding is likely to produce more information for the managing authority and a better understanding of how effective such interventions are likely to be.

Undertaking new investment is not the only way to provide services to the wider public. The effective utilisation of the existing capital stock is also considered, for example in the case of very different types of capital stock such as hospitals, urban roads, and buses. For example, building hospitals without funding to use them leads to underutilisation of the capital stock. The appropriate supplementary Measures required to produce the necessary infrastructural services for the economy at least cost are considered in Chapter 13.

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## 4.2 Screening Process

In the analysis of economic welfare the rationale for public investment spending involves issues of both *efficiency* and *equity/distribution*. The Mid-Term Evaluation of the last CSF defined efficiency as follows: “[T]he economy is functioning efficiently if it is producing as much as possible with the resources available, and investing enough to generate sustained growth of capacity subject to respecting the needs of current consumption and environmental protection.” (Honohan, 1997, p.75) Where the economy fails to function efficiently because of what is termed “market failure” or “distortions”, then there is a basis for justifying public intervention. In this analysis the rationale for public intervention is classified under four headings, specifically:

### *Category 1: Public Goods*

The basis for public sector involvement in the provision of services or facilities that have public good characteristics arises from the difficulty or impossibility of charging the users of the facilities directly for the benefit which they receive (difficulties with operating exclusionary pricing). Public goods Measures can be classified into three types: *information, infrastructure and cultural*. ‘Information type’ public goods involve a number of different activities such as research and evaluation/technical assistance. ‘Infrastructure’ covers spending on roads, environmental services, and basic education (the training of all people to some minimum standard). ‘Cultural spending’ (e.g. monuments, parks etc.) is a classic example of a ‘merit good.’<sup>35</sup>

### *Category 2: Corrective Pricing*

The most pervasive examples of a need for corrective pricing arise in relation to certain infrastructure projects. In many cases the price for using the infrastructure does not reflect the full cost to society. Alternatively, there may be cases where the cost to the private sector of investing takes no account of wider societal benefits from the investment.

An example of such a distortion could be where the cost of clean technologies for generating electricity does not take account of the environmental benefits that they confer. A subsidy for renewable energy falls within this category as it could provide the correct price signals to potential investors.<sup>36</sup> This category of intervention opens up possibilities for innovative forms of public and private sector partnerships. The crucial point is that there needs to be a “truer” pricing of infrastructural usage. Where such corrective pricing is implemented through a subsidy, it is generally appropriate that the subsidy be fixed at an appropriate rate and the volume of demand will determine the level of expenditure. This makes budgeting more complex than where the total expenditure is specified in advance.

### *Category 3: Targeted Interventions.*

Expenditure in this category is warranted principally where private agents lack information or are too risk averse to undertake (potentially) profitable activities. For example, they may lack the information necessary to make the optimal level of investment in energy saving in their homes. If such information is provided (either directly or indirectly) through government support they may as a result, be able to overcome the problem, and subsequently such

<sup>35</sup> A ‘merit good’ is either a good or a service that ‘society’ believes should be made available for consumption to all.

<sup>36</sup> As discussed in Chapter 13, a better way of incentivising appropriate investment in clean technologies is to tax the dirtier technologies.

supports can, and should be, phased out. Key areas of investment, identified as predominantly targeted interventions, are training, and energy efficiency and R&D support for business.

In effect, these interventions are aimed at reducing or eliminating distortions that would otherwise impair the economy from performing optimally, both in terms of efficiency criteria and distributional consequences. In these cases it is probably appropriate to specify the size of the budget needed to trigger appropriate private sector action and then allocate that budget through some competitive mechanism as described above.

#### *Category 4: Redistribution.*

Redistribution is generally best tackled through the tax and social welfare systems. Nevertheless there are still some aspects of investment programmes that have a redistributive function. The most obvious example is social housing.

In order to identify the Measures which are justified and those that are not a screening method is particularly useful. It provides a means to formalise what are otherwise purely subjective choices and ensures that all Measures are treated equally. This type of method was used before (last *Mid-Term Evaluation* (MTE) Honohan (1997), and *National Investment Priorities* reports). Here the approach used in the last MTE is followed.

The Measures and Sub-Measures are first classified according to the four categories or types of rationale, shown in Table 4.1. For the NDP, 55 per cent of expenditure has been allocated to public goods, 3 per cent to corrective pricing, 14 per cent on targeted subsidies and 28 per cent on redistribution (chiefly social housing). For the CSF a higher share went on investment in public goods, 72 per cent, with only 4 per cent of expenditure on redistributive Measures.

The scoring system, first developed for the *Mid-Term Evaluation* of the last CSF was applied to each of these categories. Details of the scoring system and the scores themselves are given in Appendix 5.

This scoring system is used as a start in terms of prioritisation. In some cases Measures that come out as having a relatively high Priority from the scoring may actually not need an increase in funding because they have achieved their objective. In other cases, where a measure has been a failure, the importance of the objective may argue for continuing funding if there are major reforms. As a result, it must be seen as only a first stage in reaching a judgement on allocation of future funds.

**Table 4.1: Share of Each OP by Type of Measure, 2000-2002, Per Cent of Expenditure**

	Public Goods	Corrective Pricing	Targeted Interventions	Redistribution
<b>NDP</b>				
BMW	80	4	6	9
Southern & Eastern	65	5	7	23
Employment and Human Resources	38	0	32	30
Productive Sector	35	43	17	5
Economic and Social Infrastructure	64	0	4	32
PEACE	0	1	38	61
Technical Assistance	100	0	0	0
<b>Total</b>	<b>55</b>	<b>3</b>	<b>14</b>	<b>28</b>
<b>CSF</b>				
BMW	72	14	8	5
Southern & Eastern	60	16	15	10
Employment and Human Resources	18	0	74	9
Productive Sector	42	3	55	0
Economic and Social Infrastructure	100	0	0	0
PEACE	0	1	38	61
Technical Assistance	100	0	0	0
<b>Total</b>	<b>72</b>	<b>3</b>	<b>22</b>	<b>4</b>

Having scored each Measure and Sub-Measure their financial progress was then considered. While those Measures that get a score above a set threshold are clearly worth doing (around 0.4 or 0.5), these may nevertheless be under-performing in terms of financial or physical progress. This needs to be evaluated next by comparing the actual outturn with the targeted outcome. This will identify the best Measures in terms of progress and, together with the scoring method, will identify the best Measures overall. For those that are scoring highly but under-performing, the reasons for this under-performance should be investigated. Are there management problems; are there problems with lead-in times, planning delays etc?

In some cases the fact that expenditure over the 2000 to 2002 period fell below the planned level is due to the managing authority applying appropriately strict criteria to ensure value for public money. In such cases it is inappropriate to penalise a slow draw down of funds. In some cases in the Productive Sector OP, and possibly in the case on the energy provisions under the Economic and Social Infrastructure OP, this has been the case.

Because the horizontal issues are also important in deciding on the performance of individual Measures, these are also assessed. However, instead of the above scoring method we simply take account of whether they do or do not have a significant effect. Where a measure scores badly but has a significant positive impact on the targeted horizontal issues this would argue for maintaining funding.

In this report our conclusions have been crystallised into a series of recommendations at the detailed “measure” level. Because data on the estimates for this year are not available at the “measure” level we have based our recommendations on future funding for each “measure” on the expenditure for the period 2000-2002. The absence of information for the current year poses problems for this exercise. (It also raises questions about the management information available to those responsible for the NDP/CSF.)

The recommendations are generally in the form of “increase”, “same”, or “reduce” depending on the prospective rate of return to society as assessed through the ranking system explained above. However, in some cases, if remedial action was taken, raising the prospective rate of return, further investment could be justified. This is especially the case where the returns on investment are affected by problems in delivering the projects in a timely and cost-efficient manner.

### *Prioritisation*

The selection process described above has been used to determine the high Priority and low Priority areas for future investment. However, just because an area of activity is considered high Priority does not necessarily mean that there should be an increase in funding, even if there are considerable unmet needs. If an increase in spending (or even the current level of spending) will lead to a substantial increase in price then it may be better to delay investment. In the medium to long term, more of the vital infrastructure may be bought for a given budget through an appropriate phasing of investment plans.

This reflects the fact that there are considerable economic costs to dramatically changing the pace of activity on different investment programmes. These costs include the direct inflationary consequences of ramping up expenditure more rapidly than the supply side is able to respond. They also include the considerable administrative costs, as existing management systems have to be developed or changed. The administrative disruption arising from dramatic changes in the pace of investment activity can account for some of the cost overruns discussed later in this report.

This potential problem of inflationary consequences due to rapid changes in pace of investment was signalled at an early stage in the *ex ante* evaluation carried out for the current NDP (CSF Evaluation Unit, 1999). This evaluation suggested that there could be significant inflationary consequences from trying to accomplish a substantial part of the investment in infrastructure in too short a period. In making recommendations we have taken these issues into account. There are a number of areas of activity that are considered high Priority but where we recommend no increase in investment or even a cut because of capacity problems. Obviously, in such cases, the optimal result would be to take Measures to increase the supply capacity of the relevant sector of the economy. However, this option is often not easily implemented by changes in public policy.

### 4.3 The “Envelope” for 2004-2006

Having determined the priorities within the individual Operational Programmes and discussed whether individual Measures over the period 2004-2006 should receive “more”, the “same” or “reduced” funding than in 2002, the final step is to fit these recommendations within an indicative “envelope” of funding for the period 2004-2006. Details of the indicative envelopes of funding available under both the CSF and the NDP were provided by the Department of Finance.

In this report our conclusions have been crystallised into a series of recommendations for each “Priority” area within the OPs. At this aggregate level our recommendations for the allocation of funds for the period 2004 to 2006 are based on the details of expenditure for the “Priority” areas for the period 2000 to 2002, as well as on details of the estimates for the current year, 2003. On this basis we make recommendations for the allocation of funds for the different “Priority” areas for 2004, assuming that the prioritisation for 2005 and 2006 will be broadly unchanged. This reflects the fact that the authors did not have sufficient information to warrant a more differentiated approach to the funding post-2004.

In the case of the CSF, details were also available on the current “commitments” for 2004.<sup>37</sup> Our recommendations for reallocation of funds within the CSF take account of these initial allocations, but are generally not constrained by them. However, in the case of the PEACE OP, these allocations can not be varied without loss of funding and they have been left unchanged in this report.

In all the tables in subsequent chapters the CSF funding includes EU funding and the Irish government co-financed element. The NDP expenditure includes both the CSF funding and the non co-financed Irish government expenditure. Private expenditure and PPP expenditure is excluded.

In preparing the recommendations in this report the authors did not have information on commitments already entered into for the period 2004 to 2006. For example, the contracts have already been signed for many investment projects, such as roads, to be built from 2004 to 2006. Under these circumstances, even if cuts were recommended, it could be very wasteful to implement them. Even if contracts have not been signed, major investment in planning investment in infrastructure may make it impractical to alter course very rapidly. The recommendations in this report must be considered in the light of this information gap.

There is one further complication with the “envelope” of funding. The figures for housing investment in 2002 include funding from local authorities’ own resources, whereas no such funds are included in the envelope for 2004 to 2006. In making our recommendations it has been assumed that such funding of around €650 million from own resources will be available to implement the

<sup>37</sup> While referred to as commitments, in most cases these initial allocations can be revised in the light of the recommendations of the mid-term evaluation process.

recommendations on investment in housing in 2004. If this were not the case then there would have to be some limited further reallocation made in the numbers presented in Chapters 5 to 10.



# 5. REGIONAL OPS

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## 5.1 Rationale

While Ireland has experienced very rapid growth over the last decade, the unprecedented economic development has not been spread evenly throughout the country. This spatially uneven development has led to congestion and other constraints in the more urban areas while some resources may be under-utilised in the less urbanised areas. Consequently, the National Development Plan identified balanced regional development as one of the key objectives. In the context of the Agenda 2000 Agreement, Ireland negotiated the establishment of two NUTS II regions namely the Border, Midlands and West Region (BMW) and Southern and Eastern Region. Under this agreement the BMW region retains Objective 1 status up to 2006 for Structural Funds while the Southern and Eastern region qualified for Objective 1 in Transition status, which implies a phasing out of the Structural Funds up to 2005.

An important aspect of the NDP is that it contains two regional operational programmes (OPs), one for each region, that are aimed at achieving more balanced regional development. They are managed by the Regional Assemblies, which were created to manage these regional OPs. This section evaluates these two OPs. The evaluation in this section draws on the Mid-Term Evaluations of the OPs, the Programme Complements, Progress Reports, and the Evaluation of the Equality Opportunities Childcare Programme 2000-2006.

The evaluation of the Regional OPs is made easier by the fact that the OPs are almost identical in terms of the Measures contained in them, although the differing status with regard to Structural Funding should be borne in mind. For the BMW region the aim of the programme is more focused on convergence with the Southern and Eastern region, and in particular with the Greater Dublin Area (GDA). In other words this objective is defined relative to another region. On the other hand, the programme for the Southern and Eastern region is more concerned with a better balance within the region, which is characterised by a number of large urban centres that have been growing more rapidly, while some parts of the region are more rural and have not benefited as much from the period of recent growth.

Given the differing characteristics of the two regions and the differing aims of the two regional OPs it is somewhat surprising that the two OPs consist of identical Measures and Sub-Measures. Indeed this lack of differentiation may well be responsible for the poor performance of individual Measures within either of the OPs

as these Measures may be unsuitable for the particular region. Clearly this is an issue that cannot be fully addressed at this point, but it is an issue that must be borne in mind in the design of future programmes.

## 5.2 Current Activity

Overall the regional OPs account for less than 20 per cent of the total National Development Plan. The OPs consist of a number of priorities, namely Local Infrastructure, Local Enterprise, Agriculture and Rural Development and Social Inclusion and Childcare. These priorities are further subdivided into Measures and Sub-Measures. This section briefly reviews the current activity.

### PRIORITISATION IN THE OPS

Before the more detailed prioritisation is addressed, it is useful to compare the prioritisation at Priority level across the two OPs. This is done in Table 5.1, which shows some interesting differences between the two OPs. In the BMW OP, local infrastructure and agriculture and rural development are given a higher Priority than in the Southern and Eastern Region OP, where Social Inclusion and Childcare is given a higher Priority. This reflects some of the differences between the regions. First, infrastructure can help overcome the problems associated with the relative remoteness of the BMW region and can help in strengthening linkages between the more rural parts of the region and the urban centres. As was indicated above, agriculture accounts for a bigger share of regional output in the BMW region, where however, the sector is subject to significant structural problems related to farm size, type of enterprise and age and educational profile of the agricultural labour force. On the other hand, deprivation and lack of social inclusion is particularly concentrated in the larger urban areas and especially Dublin. Thus, the higher focus on social inclusion and equality in the Southern and Eastern region is probably warranted.

**Table 5.1: Prioritisation: Planned Expenditure by Priority for the Period 2000-2002, Per Cent of Total**

Region	BMW	Southern and Eastern
Local Infrastructure	66.4	59.1
Local Enterprise	12.5	9.6
Agriculture and Rural Development	10.9	6.5
Social Inclusion and Childcare	10.3	24.8
Total OP	100.0	100.0

Further to the differences highlighted above, there are differences in prioritisation at Measure and Sub-Measure level within the OPs. With regard to Local Infrastructure, there is a heavier emphasis in the BMW OP on Rural Water and to a lesser extent on E-Commerce and Communications and Regional Airports as compared to the prioritisation in the Southern and Eastern

Region OP. This implies that there is a higher emphasis on Seaports and to a lesser extent on Roads, Urban and Village Renewal and Culture and Recreation Facilities. In the Local Enterprise Priority the BMW OP places a heavier weight on Forestry and Fisheries Harbours and slightly heavier weight on Tourism while in the Southern and Eastern Region OP there is a heavier weighting on Micro-enterprise and Regional Innovation Strategies. For the Agriculture and Rural Development Priority the BMW OP places more importance on General Rural Development and Services for Agriculture while the Southern and Eastern Region OP allocates a higher proportion of resources to General Structural Improvement and Alternative Enterprises. Finally, the BMW OP contains a higher relative allocation for Childcare and Community Development while the Southern and Eastern Region OP is more focused on Youth Services than the BMW OP.

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### 5.3 Progress and Effectiveness of the OPs

The actual expenditure for the period 2000-2002 is shown in Table 5.2 as well as the actual expenditure expressed as a percentage of planned expenditure for both the CSF and the NDP. Throughout this report the NDP expenditure includes the CSF expenditure. As Table 5.2 shows, the progress to-date for both OPs is very mixed with some Measures being on target while there has been no activity in a few and relatively slow progress in others. Overall, however, for both OPs actual expenditure is well behind planned expenditure. It is notable that the progress across the Measures in both OPs is very similar as can be seen from Table 5.2. In fact the correlation coefficient between the progress of the two OPs is 0.89. A number of Measures have had particularly slow and even no progress at all up to the end of 2002. These include the Waste Management, Tourism and Regional Innovation Strategies Measures in both OPs and the E-Commerce and Communications measure in the BMW region OP. With regard to the group of Measures that are under-performing in both OPs, the reasons for this are the same. In the case of the Waste Management measure progress was delayed due to the lack of agreement on the Regional Waste Management Strategies. Furthermore, planning delays and local opposition are also likely to delay progress. The Tourism measure was hit by a number of factors. First, state aid clearance was delayed. Second, the selection criteria involved a double hurdle selection process, which was slow to implement. The general economic environment for the Tourism sector has deteriorated due to external as well as internal factors. Finally, the quality of applications was not high. With regard to the Regional Innovation Strategies, progress has been slow due to the fact the Department of Education has cut capital budgets, which limited the scope of complementary development in the Institutes of Technology. Furthermore, there have been delays in constructing the Incubation Centres. Finally, the E-Commerce and Communications measure in the BMW was hit by a very low level of interest by the private

sector, which has resulted in a revised approach, with delivery through local authorities.

**Table 5.2: Border, Midlands and Western Region OP and Southern and Eastern Region OP, Actual Expenditure as a Percentage of Planned Expenditure, 2000-2002**

Region:	Border, Midlands and Western			Southern and Eastern		
	Actual Spending €million	CSF % of planned	Total Public NDP	Actual Spending €million	CSF % of planned	Total Public NDP
<b>Measure</b>						
<b>Local Infrastructure:</b>						
1 Non-National Roads	505.1	281.7	110.4	681.4	72.1	117.4
2 Rural Water	80.6	101.6	55.1	56.8	47.5	91.6
3 Waste Management	0.0	0.0	0.0	0.6	1.4	0.5
4 Urban and Village Renewal	8.1	39.8	43.9	18.3	39.1	45.7
5 E-Commerce and Communications	8.1	13.1	13.1	9.4	35.4	35.4
6 Seaports	4.9		48.2	39.0		52.5
7 Regional Airports	1.9		32.3	0.9		34.8
8 Culture, Recreation and Sports	22.5		36.3	43.5		40.1
9 Technical Assistance	0.2	27.0	27.0	0.2	16.3	16.3
Total Local Infrastructure Priority	632.0	102.0	78.3	850.1	53.9	83.8
<b>Local Enterprise:</b>						
1 Tourism			2.6	0.4	0.0	1.0
2 Micro enterprise	0.9	188.5	80.0	56.7	127.6	92.5
3 Regional Innovation Strategies	27.6	4.6	4.6	2.4	14.4	14.4
4 Forestry	0.4	114.5	71.9	14.6	51.8	86.8
5 Fishery harbours, Gaeltacht/Islands harbours	18.6	197.6	101.5	21.8	54.8	64.5
6 Aquaculture Development	43.7	65.1	65.1			
Total Local Enterprise Priority	3.4	100.3	62.4	95.9	65.5	58.3
<b>Agriculture and Rural Development:</b>						
1 General Structural Improvement	7.3	11.4	9.7	14.2	9.4	20.3
2 Alternative Enterprises	2.0		21.0	4.7		50.2
3 General Rural Development	6.6	29.6	21.6	4.7	38.8	26.0
4 Services for Agricultural and Rural Development	15.8		96.4	13.0		95.6
Total Agriculture and Rural Development Priority	31.8	15.1	24.0	36.7	13.6	32.9
<b>Social Inclusion and Childcare:</b>						
1 Childcare	17.6	74.5	49.6	39.9	43.5	43.5
2 Equality	0.6		17.8	5.2		59.6
3 Community Development and Family Support	16.1		105.9	50.9		114.4
4 Crime Prevention	1.7		18.7	14.5		55.9
5 Youth Services	10.0		73.4	98.6		97.2
6 Local Development	39.6		81.4	122.7		80.5
Total Social Inclusion and Childcare Priority	85.6	74.5	68.4	331.8	43.5	78.1
Total OP	843.8	83.3	69.4	1,314.4	49.5	76.7

Table 5.3 shows the corresponding physical progress in the two OPs. This is mostly measured using the Key Efficiency Indicator. In some cases no indicator was available, so in these cases nothing is reported. Overall, the same patchy performance emerges as in the case of the financial progress. Local Infrastructure, Non-National

Roads, Rural Water and Regional Airports have progressed particularly well, which also applies to a lesser extent to Culture, Recreation and Sports facilities, Urban and Village Renewal and E-Commerce and Communication. For the latter no data were available for the BMW OP. The Local Enterprise Priority appears to be progressing well, while the opposite is true for the Agriculture and Rural Development Priority. Finally, The Social Inclusion and Childcare Priority has made good physical progress, except in the case of the crime prevention measure.

**Table 5.3: Regional OPs: Physical Progress as a Per Cent of Planned Progress, 2000-2002**

Measure	CSF	Border, Midlands and Western	Southern and Eastern
		% of planned	% of planned
<b>Local Infrastructure</b>			
1 Non-National Roads	CSF	100.6	102.7
2 Rural Water	CSF	82.2	130.51
3 Waste Management	CSF	NA	NA
4 Urban and Village Renewal	CSF	51.5	57.7
5 ECommerce and Communications	CSF	NA	58.4
6 Seaports		0	0
7 Regional Airports		81.5	95
8 Culture, Recreation and Sports		70.5	70.2
9 Technical Assistance	CSF	NA	NA
Total Local Infrastructure Priority	CSF		
<b>Local Enterprise</b>			
1 Tourism		0	70.0
2 Micro enterprise	CSF	80.7	91.6
3 Regional Innovation Strategies	CSF	NA	50
4 Forestry	CSF	101.7	118.2
5 Fishery harbours, Gaeltacht/Islands harbours	CSF	296.9	92.4
6 Aquaculture Development	CSF	110.8	
Total Local Enterprise Priority	CSF		
<b>Agriculture and Rural Development</b>			
1 General Structural Improvement	CSF	13.8	46.5
2 Alternative Enterprises		74.8	68.1
3 General Rural Development	CSF	58.0	17.2
4 Services for Agricultural and Rural Development		20.7	11.2
Total Ag. and Rural Development Priority	CSF		
<b>Social Inclusion and Childcare</b>			
1 Childcare	CSF	69.0	50.1
2 Equality		0	0
3 Community Development and family Support		83.7	120
4 Crime Prevention		24.8	25.6
5 Youth Services		184.6	112.3
6 Local Development		81.4	85.7
Total Social Inclusion and Childcare Priority	CSF		

A number of constraints have contributed to this performance.<sup>38</sup> First of all it must be recognised that the new institutions (Regional Assemblies) needed to get up and running. While this may not have directly delayed the progress of the OPs, it must be recognised that the staff in the Regional Assemblies had little time to prepare for the implementation. The efficiency with which they have managed the OPs should therefore be noted. The restrictions due to the foot and mouth crisis slowed down progress in some areas, especially agriculture. It appears that farmers were waiting to see what changes would be made to the Common Agricultural Policy (CAP), which may explain the poor take up of the agriculture measure. The deterioration of the external economic environment has reduced demand for some Measures, and has undoubtedly reduced the return on others. There were long delays in getting state aid clearance. Another management issue relates to the slow progress on selection projects in some cases. The quality of applications appears to have been poor in a number of cases.

The slow progress so far is of particular concern regarding the Southern and Eastern region OP for which the planned spending profile entailed a front-loading with funding declining towards the end of the programme. In common with other OPs, a more gradual build up of funding might have seen progress running closer to targets.

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## 5.4 Lessons from the OP Evaluations

This section summarises the main findings of the Mid-Term Evaluations of the two operational programmes.

### EFFECTIVENESS

Effectiveness is measured by progress, both physical and financial. Both OP evaluations contain an extensive evaluation of both types of progress, which is similar to that reported above. Nevertheless the main findings are briefly summarised in this section.

The evaluators noted that progress on non-national roads has been excellent; physical progress of the Rural Water measure has been relatively good; but that progress on the Waste Management measure has been very poor. Similarly, financial progress on the E-Commerce and Communications has been poor and the majority measure will involve a greater level of public sector financial contribution. The micro-enterprise and harbour infrastructure Measures are progressing well while the tourism, forestry and aquaculture Measures are under-performing. For the Agriculture and Rural Development Priority, there has been poor progress with regard to the structural improvement measure, the alternative enterprises measure, and the general rural development measure. While financial progress is good for the services for agriculture measure, “physical” progress is poor.

<sup>38</sup> These issues are dealt with in detail in the OP evaluations.

Under the Social Inclusion and Childcare Priority progress is satisfactory, except for the Equality measure, which is behind schedule. The Crime Prevention and Prison Services Training Measures are suspended and the Youth Services measure is roughly on target in financial terms but there is not enough information on its physical progress. It should be noted that the actual progress for the Childcare measure is lower than had been reported in the OP evaluations as new data have become available. This shows that the measure is behind schedule in terms of physical progress.

### *Efficiency*

Cost efficiency is not dealt with in the Southern and Eastern Regional OP evaluation and dealt with in only a cursory way in the BMW OP evaluation. Nevertheless, it is useful to briefly review the main findings of the BMW OP evaluation.

Under the Local Infrastructure Priority the consultants only present unit costs for roads, and point out that these costs are substantially above the projected unit costs for the Specific Improvement Grants, while the opposite holds for the Restoration Programme. The majority of Measures investigated are being delivered at below planned unit costs.

### *Delivery*

The OP evaluations identify a number of constraints that affect delivery of the local infrastructure Priority. There has been slow progress in the Rural Water measure due to resistance to the Design Build and Operate contracts, but these problems appear to have been overcome. The Waste Management measure has been affected by resistance to facilities development, failure to adopt waste management plans and the need for new legislation. The timing of financial allocations under the Urban/Village Renewal measure has hindered progress as these were made too late and projects needed to be completed by the end of the year. Furthermore, there are also constraints due to the lack of public sector finance for this measure. Delivery of the E-Commerce and Communications Measure has been delayed as a result of the downturn in the telecommunications sector. This has major implications as “the majority of planned expenditure 2003-2004 will involve a much greater reliance on local authority involvement to cover a shortfall in private sector investment (BMW OP evaluation page 36). The Recreation and Sports facilities measure has been delayed due to late publication of the NSS, which was necessary in order to decide upon the correct centres in which the facilities are to be located. Finally, there have been some delays due to statutory planning regulations.

For the Local Enterprise Priority a number of Measures were very slow to get started. These delays are surprising as the same implementing bodies as in the previous programme are involved. Furthermore, a number of Measures were affected by reductions in the funding allocations. The tourism measure was affected by delays in state aid approval. The selection criteria may be too restrictive

and the selection process was too slow. These Measures may suffer from a possible reduction in funding. The Regional Innovation Strategies were progressing slower than anticipated and one college has withdrawn its project. The Forestry measure was affected by the restrictions due to foot and mouth disease. The Forestry Harvesting Sub-Measure has been suspended. The Fishery and Gaeltacht/ Islands harbour Measures have slower physical progress due to longer lead in times. Finally, the Aquaculture measure was late to start up, with first approvals only being made in October 2001. Further constraints involve delays in licensing and lower annual funding than anticipated.

The Agriculture and Rural Development Priority has been affected by a number of general constraints, namely the restrictions due to foot and mouth disease, which have particularly affected all areas of on-farm investment, and delays in getting state aid approval. Furthermore, the Animal Welfare Standards for pigs Sub-Measure was subject to delays due to delays in legislation. The Animal Carcass Disposal Sub-Measure has suffered delays as tighter environmental requirements with regard to facility location are being enforced. The Rural Development Fund has suffered from a lack of good projects.

A constraint, which affects a number of Measures/Sub-Measure under the Social Inclusion and Childcare Priority, is the reduction of funds. Furthermore, the Childcare Capital measure has been affected by the buoyancy in the construction sector and related inflation. This is especially problematic as the measure is very heavily subscribed. The Equality measure was slow to get started and the Family Services Projects measure was subject to staff shortages. The Prison Services Training and Development measure has been suspended and the Probation and Welfare Services measure has not been able to secure premises (BMW). The latter is further affected by insufficient funding to meet targets. The Young People's Facilities measure has suffered from lack of demand.

### *Conclusions – Border, Midlands and Western Region*

The Border, Midlands and Western region OP evaluation makes specific recommendations regarding the funding allocations for all Measures going forward. In most cases the changes suggested in terms of re-allocation are quite modest.

For the Local Infrastructure Priority, a reduction is recommended for the Habitat Protection and Conservation measure, while Non-National Roads and E-Commerce and Communications are recommended to have an increased allocation. Among the Measures contained under the Local Enterprise Priority only the Forestry Harvesting measure, which is suspended, is to receive no allocation. In the case of the Agriculture and Rural Development Priority a number of Measures are to receive a reduced allocation. These are Improvement in Animal Welfare, Improvement in Dairy Hygiene and Housing and Handling Facilities for Alternative Enterprises. Finally, for the Social



Inclusion and Childcare Priority, Childcare Capital Projects, Childcare Quality, and Youth Information Centres are recommended to receive an increased allocation, while the Prison Service Training and Development, Young People's Facilities and Services Fund are to receive a smaller allocation. All other Measures are to receive the same allocation.

The Border Midlands and West OP evaluation makes a number of other important recommendations. First, it suggests that it is vital that there be a particular focus on five Measures and Sub-Measures which have had very poor progress, but which together account for 31 per cent of their original planned spending over the duration of the NDP. These are Waste Management, E-Commerce and Communications, Regional Sports Facilities, Tourism and Farm Waste. For these Measures a greater urgency is needed to ensure sufficient progress. This should involve the drawing up of actions plans, which contain specific proposals as to how progress can be speeded up.

The publication of the NSS has a number of direct implications for the NDP. First, the Regional Economic Plans/Planning Guidelines will identify strategic projects at the NUTS III level, and these should be prioritised. In the meantime local authorities should identify such projects and ring-fence funding for these. The implementing bodies should report on how they are incorporating the NSS in their Measures. In general a greater urgency is needed in incorporating the NSS.

### *Conclusions – Southern and Eastern Region*

The Southern and Eastern Region OP evaluation ranks investment in the areas of infrastructure particularly highly. Roads, Regional Airports and Seaports are ranked to be of highest Priority, while Waste Management, Rural Water, E-Commerce and Port Infrastructure are also highly ranked. The evaluation does not make major recommendations about re-allocations, claiming that the scope for these is very limited. Instead it contains a range of recommendations that are more related to management issues, and especially to the need to improve the indicators used.

The OP evaluation makes a number of other general recommendations. Specifically it recommends that the NSS needs to be reflected in the OP in a more structured way. The role of the Managing Authority could be strengthened. In order to evaluate the spatial targeting data at NUTS III level should be more comprehensive. This could also help in enhancing the involvement of the Regional Authorities. In general, the future commitments should take account of the Regional Plans, which are currently being prepared.

## **EFFICIENCY OF THE OP**

As was noted above, the issue of efficiency was not covered in great detail in the OP evaluations and this section aims to give more detail on efficiency. The effectiveness of the OPs can be measured

using the output and impact indicators that are specified in the Programme Complements. This analysis is constrained by a number of related issues. First, in many cases no useful data are collected to construct a unit cost variable. Second, in some cases several output or impact indicators are available. Finally, in some cases the quality of the output or impact indicators appears to be poor. The analysis that was performed here concentrated mainly on the key effectiveness indicators (KEI). In order to make the analysis more tractable here the key effectiveness indicator (KEI) is used. Many of the Measures are subdivided into Sub-Measures for which separate KEI are collected. Therefore, to construct a measure level physical progress, some kind of weighted average indicator needs to be constructed. The most natural weights are the percentage shares of the Sub-Measures in the measure. The physical progress or effectiveness is measured relative to the mid-term target. As data for the physical progress is only available for the period up to the end of 2002 while the mid-term target refers to the end of 2003, achieving about 70 per cent of the planned physical progress implies that the measure is on target. Furthermore, it should be noted that in some cases because the output indicator Measures the completion of a project such as a building, lack of physical progress as measured by the KEI could mask actual progress in that the structure may be almost complete. Also, in some cases no indicators are available or no data has been collected.

The BMW OP evaluation highlighted that the actual unit costs of the Specific Improvement Grants Scheme for Non-National roads was over twice the planned unit cost. This is indeed the case, but as Tables A6.1-A6.2 in Appendix 6 show, the unit costs are still considerably lower than the unit costs for the Southern and Eastern Region OP, which would be expected. This points to an overly optimistic planned unit cost. In general the unit costs of the Road Improvement and Restoration Measures appear reasonable while those for Miscellaneous Grants appears on the high side. While the actual unit costs for the Rural Water measure appear to be very low compared to the initial plan, they nevertheless are quite high, particularly in the BMW region where it is over three times higher than in the Southern and Eastern Region OP. For the BMW OP the Inland Waterway Sub-Measure is also more costly than had been planned.

Particular problems with regard to unit costs are identified in the Agriculture and Rural Development Priority, where Installation Aid for Young Farmer and Farm Waste Management are more costly than planned in both OPs. Furthermore, the Western Development Fund and the Teagasc Advisory Service are more expensive than planned in the BMW OP, while the Cattle and Equine Breeding Infrastructure, the Horticulture, improvement in equine Quality, and Housing and Handling Facilities for Alternative Enterprises are more expensive than planned in the Southern and Eastern Region OP. The Social Inclusion and the Community Development and the Probation and Welfare Measure had unit costs above target in the

BMW region and the Young Peoples Facilities measure had excessive unit costs relative to target.

## **PRIORITIES**

The recommendations for the regional OPs that are covered in this section are derived by applying the scoring method that was described above in Chapter 4 and that has been utilised in the past (see Honohan, 1997). An important aspect of the evaluation is an assessment about the need for public sector involvement in undertaking or supporting activity. Indeed in many cases this is highly questionable as there are considerable private returns to certain investments, and consequently a high level of deadweight. However, the scoring method of itself is not sufficient to decide on the priorities going forward. As discussed in Chapter 4, a range of other factors, including financial and physical progress, are taken into account.

Overall, at the programme level, both the Local Infrastructure and Social Inclusion and Childcare priorities remain a high Priority as they address areas of market failure, while the Local Enterprise and Agriculture and Rural Development programmes are not high priorities. In the case of rural development the problem is that the existing Measures are not well targeted or executed. In that case there is a need for a new measure that is appropriately targeted. There is some variation within the programmes with regard to priorities, reflecting the diverse Measures included. This would suggest reallocation within the priorities.

Set out below in Table 5.4 are the recommendations for future funding for the regional OPs. The recommendations cover each measure in the OPs. To indicate the significance of the measure within the OPs we show the expenditure under both the CSF and the NDP for the period 2000 to 2002. As discussed above, the recommendation is made in terms of: “increase”, leave unchanged (“same”) or “reduce” the relevant measure. The recommendations do not indicate how much of a change should be made in the funding. An explanation of the recommendations on each measure is also included in the tabular presentation. A more detailed explanation for the recommendations on the OPs is given in the text after the tabular presentation.

**Table 5.4: Recommendations on the BMW and S&E Operational Programmes**

Measure	Total Expenditure 2000-2002 € million		Recomm- endation	Comment
	CSF	NDP		
<b>Local Infrastructure</b>				
1. Non-National Roads	252.646	1186.566	Increase	While the Non-National Roads measure does well the actual targeting of the expenditures does not explicitly take into account the National Spatial Strategy. Furthermore, in at least some cases the quality of the road improvements and maintenance can be questioned.
2. Rural Water	37.077	137.38	Same	Justified on the basis that it provides resources to improve the quality of the local water supply. Physical progress has been good while financial progress in the BMW region has been somewhat slow. However, the concern here is that the cost of improving the rural water supply per household is too high.
3. Waste Management	0.574	0.574	Reduce	This measure has been delayed due to the lack of agreement on regional waste strategies. Public sector involvement is warranted for re-cycling, however, those who generate waste should also pay for its disposal, and this should be possible with regard to hazardous waste.
4. Urban and Village Renewal	19.999	27.398	Increase	While the sums for village and town renewal should be left the same, in support of the NSS an increase in support for the major urban centres identified in that report would be justified.
5. E-Commerce and Communications	17.488	17.488	Reduce	The fact that the E-Commerce and Communications measure had to be altered due to the lack of private sector interest has added to costs, which may be difficult to justify unless there is strong private sector demand for broadband services. Low score as this should be provided by the market.
6. Seaports	0	43.943	Reduce	The Seaports Infrastructure and Capacity Development measure suffers from high costs relative to the likely benefit.
7. Regional Airports	0	2.833	Same	Poor score, in part due to the lack of impact and output Measures.
8. Culture, Recreation and Sports	0	66.507	Same	Important from a balanced regional development point of view in that it can be used to contribute to critical mass formation in the key centres selected in the NSS. In this respect targeting is important. This is despite the fact that they are probably of a lesser importance than some other local infrastructure facilities.
<b>9. Technical Assistance</b>	<b>0.433</b>	<b>0.433</b>	<b>Same</b>	
<b>Local Enterprise</b>				
1. Tourism	0	1.225	Reduce	The external environment with regard to the tourist sector has deteriorated to an extent where the likely return to

2. Micro enterprise	85.561	87.331	Same	<p>further investment in the sector is unlikely to have high returns. This is already reflected in the poor financial progress of the measure. Measures are performing well both in financial and physical terms. However, the overall impact of this measure is likely to be small.</p>
3. Regional Innovation Strategies	2.81	2.81	Reduce	<p>Strategies have been under-performing to an extent where they are unlikely to catch up with the original target.</p>
4. Forestry	16.198	33.174	Reduce	<p>The woodland Sub-Measure appears to address some public good issues. However, it is difficult to see what market failure the forestry harvesting and forestry road Sub-Measures address. These are almost simple redistributive schemes and resources for these Sub-Measures should be reduced.</p>
5. Fishery harbours, Gaeltacht/Islands harbours	32.058	65.431	Same	<p>This measure improves access in areas where roads alone are not adequate, such as islands and is therefore contributing to rural development.</p>
6. Aquaculture Development	3.393	3.393	Reduce	<p>This has substantial private returns.</p>
<b>Agriculture and Rural Development</b>				
1. General Structural Improvement	10.92	21.509	Reduce	<p>The facilities grant aided under the Farm Waste scheme have very substantial private returns. Similar concerns exist regarding all other Sub-Measures under the general structural improvement Measures except for animal carcass disposal where, however, the take up has been poor.</p>
2. Alternative Enterprises	0	6.773	Reduce	<p>Under the Alternative Enterprises measure only the organic sector development Sub-Measure appears to address a genuine market failure. In the case of all other Sub-Measures there are very substantial private returns, often in sectors which are already characterised by a high preponderance of large commercial operations.</p>
3. General Rural Development	7.446	11.308	Same	<p>The General Rural Development measure is a useful one in principal but suffers from poor progress. Some targets on disadvantage. If a more effective mechanism could be developed to target rural development, and social exclusion in a rural context, this could attract increased funding, reallocated from other areas within the agricultural and rural development Priority.</p>
4. Services for Agricultural and Rural Development	0	28.82	Same	<p>Teagasc advisory service. This is a useful service, which should help in strengthening the commercial viability of farm families. However, this Sub-Measure is not cheap, and there appears to be no option for private provision of the same service, which</p>

<b>Social Inclusion and Childcare</b>				is possible as there are many independent agricultural advisors. The farm relief services Sub-Measure is a direct subsidy to a commercial operation with no obvious market failure.
1. Childcare	57.449	57.449	Same	Remains a high priority. The Measures contained in this Priority are generally useful in that they address deprived areas and services to vulnerable young people. The capital grants Sub-Measure has seen slow progress. The output Measures indicate slow physical progress and there appear to be some capacity constraints in the local voluntary sector. There is also a need to improve the indicators so that the areas targeted can be identified more readily (e.g. DED identifier). This has suffered from slow progress
2. Equality	0	5.753	Same	
3. Community Development and Family Support	0	67.029	Same	
4. Crime Prevention	0	16.17	Same	
5. Youth Services	0	108.565	Same	
6. Local Development	0	162.357	Same	
Total	544.052	2,162.219		This is a useful measure that is aimed at enabling disadvantaged communities to participate in local development, training and employment. This has suffered from slow progress
				The Youth Services Grant scheme is not specifically aimed at disadvantaged youth, and there is poor progress with regard to the Young Peoples Facilities and Services Fund.
				This measure is aimed at countering social exclusion and the related problem of drug misuse. It is somewhat behind target in terms of financial and physical progress.

## 5.5 Recommendations

Overall the proposed allocations by “Priority” going forward are outlined in Table 5. This table shows for both the CSF and the Total NDP, the actual expenditure in 2002 and the recommended expenditure for 2004 in nominal terms. Thus it is recommended that the Regional OPs are to receive increased funding overall. With regard to the CSF, the funding is to be targeted on Measures where there is likely to be a certain and significant return to investment so as to make best use of the resources. The total allocated to the two OPs should be split according to the relative weights used in the design of the OPs initially.

### *Local Infrastructure*

Most Measures under the Local Infrastructure Priority are progressing well, both in financial and physical terms, and many are also justified on economic grounds, as highlighted by the scoring analysis. However, there are some concerns with regard to a number

of Measures, both in terms of economic justification and actual outturn, including unit costs.

While the Non-National Roads measure does well, the actual targeting of the expenditures does not explicitly take into account the National Spatial Strategy. Of course, this reflects the fact that the NSS had not been published until the end of 2002. However, going forward this measure should reflect the NSS in terms of targeting. Furthermore, in at least some cases, the quality of the road improvements and maintenance can be questioned.

**Table 5.5: Recommended Funding Allocations, 2004, €million**

	CSF				NDP		
	2002	2003	2004	2004	2002	2003	2004
	Expend- iture	Commit- ments	Preliminary Commitments	Recomm- ended	Expend- iture	Estimates	Recomm- ended
Regional OPs	271	287	205	148	882	1,031	1,035
Local Infrastructure	153	134	90	148	563	662	730
Local Enterprise	67	62	50	0	91	81	40
Agriculture & Rural Development	16	33	23	0	41	54	30
Social Inclusion & Childcare	34	58	41	0	188	235	235

*Notes:* For 2002 and 2003 the CSF expenditure includes Cohesion and TENS funding as well as public funding. These are not relevant for 2004. The 2002 NDP expenditure includes a small amount of PPP funding. The table only includes public expenditure by the EU and the State.

The Rural Water measure is justified on the basis that it provides resources to improve the quality of the local water supply as the Drinking Water Directive has been adopted, and there is an urgent requirement to make progress on water quality. However, the issue of cost recovery needs to be addressed, especially in the case of second dwellings (see Chapter 13). Physical progress has been good, while financial progress in the BMW region has been somewhat slow. However, the concern here is that the cost of improving the rural water supply per household is quite high, particularly in the BMW region where it is more than three times higher than in the Southern and Eastern Region.

With regard to Waste Management this measure has been delayed due to the lack of agreement on regional waste strategies, which has now been resolved. A further issue that is likely to arise going forward is local resistance to facilities. The measure comprises a number of different aspects, including recycling facilities, which are unlikely to be provided privately. However, hazardous waste facilities should be provided by the private sector by applying the polluter pays principle.

The Seaport Capacity measure suffers from high costs relative to the likely benefit. Seaports are not pure public goods in that there is a high degree of excludability and costs can easily be recovered from the users of the facilities. Therefore, the use of public funds is questionable, even though the facilities are clearly necessary. The cost of improving inland waterways is also quite high and, relative to many other Measures, this should not be given a high Priority, although some of the investment has a positive North-South effect.

Our assessment of E-Commerce and Communications measure differs somewhat from that of the OP evaluations. This is justified on the basis that these facilities should be provided by the private sector. This applies particularly to all larger urban areas, and especially a large part of the Southern and Eastern Region. There is, nevertheless, justification for supporting these facilities in the second tier urban areas, provided that there is some demand for the services (which should justify private sector involvement in their provision). The fact that the E-Commerce and Communications measure had to be altered due to the lack of private sector interest has added to costs, as pointed out in the BMW OP evaluation. This may be difficult to justify unless there is strong private sector demand for broadband services, which appears not to exist. In general the use of wireless facilities, which could be put in place in response to demand from the private sector requiring a lower level of subsidisation, is preferable, especially outside of the centres designated in the NSS.

The Cultural, Recreational and Sports facility measure is important from a balanced regional development point of view in that it can be used to contribute to critical mass formation in the centres selected in the NSS. In this respect targeting is important. This is despite the fact that they are probably of a lesser importance than some other local infrastructure facilities, but they play a key role in attracting both residents and businesses to the centres. Priority should be given to Measures that tackle social exclusion. The inland waterways Sub-Measure appears very costly. While it involves cross-border co-operation it pre-empts valuable resources that could be used to further regional balance and tackle social exclusion.

Part of the increased funding under the Local Infrastructure Priority should be used to establish a special fund within the Regional OPs to support infrastructure facilities in the gateways designated in the NSS. The funds should be used to support investment in key strategic facilities that would clearly contribute to the development of critical mass. The funds should be allocated on a competitive basis to designated centres on the basis of the forthcoming Regional Planning Guidelines.

### *Local Enterprise*

The Measures under the Local Enterprise Priority do not score well on economic grounds. Often the market failure is not obvious, while the potential for deadweight is high. Thus, it is not clear why the state is involved in these activities, especially as there are more pressing needs of a public goods nature, particularly in relation to infrastructure. It is not clear why the private sector requires substantial support at a time when, although increasing, unemployment rates are near to full employment.

Undoubtedly the Measures contained under this Priority have been hit by the deterioration of the external environment. This is particularly true with regard to the tourist sector where the likely



return to further investment is quite low. It appears that the external environment and sector specific issues have led to a loss of competitiveness, which can not be addressed with the Measures in place, but requires responses that are not part of the NDP. There is already poor progress with the measure, which may already signal the low return. Consequently, the Tourism measure should receive a reduced level of resources going forward.

The micro enterprise Measures are performing well both in financial and physical terms. However, the overall impact of this measure is likely to be small. The Regional Innovation Strategies have been under-performing to an extent where they are unlikely to catch up with the original target, so that resources for this measure should also be reduced. Here there may be a question as to whether there should not be different Measures, which are more targeted at different types of firms. The current measure may not be well suited to existing companies, which have the potential to innovate but lack the necessary skills, and may not be able to link up with Institutes of Technology.

It is difficult to see what market failure the Forestry Harvesting and Forestry Road Sub-Measures address. These are redistributive schemes and resources for these Sub-Measures should be cut. On the other hand, Woodland Improvement appears to address some public good issues in that it aims at improving the quality and species mix of woodland especially in urban and amenity areas. Public expenditure on Forestry Harvesting and Forestry Roads Sub-Measures, which fund private equipment and roads, can not be justified. Fisheries harbour infrastructure investment is likely to have a poor return, given that quotas restrict catches. However, harbours for the Islands and Gaeltacht areas are justified on Rural Development grounds as they increase access. It is not easy to see what market failure the Aquaculture measure addresses, especially as this measure appears to be expensive, there are clear private sector returns so that these are likely to suffer from deadweight, and there are possible negative environmental effects.

### *Agriculture and Rural Development*

An important factor that appears to have been ignored is the fact that the two regions comprise quite different agricultural sectors. Indeed agriculture is probably the only economic activity for, which the two regions are functionally meaningful. Thus, different Measures would be warranted for the BMW region than the Southern and Eastern region. Instead, it appears that the agriculture Measures are more generally related to the general support as part of the Common Agricultural Policy.

Trends at Priority level for agriculture confirm that, while the wider economy was experiencing strong growth in the 1990s and up to 2001, agricultural incomes were flat in nominal terms and falling in real terms. Low output growth and the drift of people out of agriculture may alter the nature of demand within the agriculture Measures. It supports the logic behind farm diversification and rural

development Measures and the Teagasc New Opportunities for Farm Families Programme.

In principle the Measures under the Agriculture and Rural Development Priority should have a positive impact on rural development but, as with the Local Enterprise Priority, this Priority contains a number of Measures which are difficult to justify on economic grounds and which are unlikely to make any real impact on rural development. Installation Aid to young farmers is likely to carry a very high deadweight as it is unlikely that the absence of this would deter young farmers from entering this sector.

The facilities grant aided under the Farm Waste scheme have very substantial private returns, furthermore they are likely to lead to more intensive farming, at a time when the CAP reform appears to be placing more emphasis on extensification. Furthermore, the unit cost of this measure is quite substantial. In any case environmental concerns with regard to farm waste can be dealt with through regulation and enforcement. Similar concerns exist regarding all other Sub-Measures under the general structural improvement Measures, except for animal carcass disposal. For the latter scheme the take up has been poor. For example, improvements in dairy hygiene can be achieved through regulation as is the case in other industries. Under the Alternative Enterprises measure only the organic sector development Sub-Measure appears to have the potential to address a genuine market failure in the sense that the conversion from 'conventional' to organic farming is likely to be associated with initial loss in income. However, farmers must have completed the transition to organic before qualifying for aid under the development of the organic sector measure. For this reason, we note that there is a significant element of deadweight attached to these schemes, as the eligible recipients are likely to be in a position to undertake the required investment without this targeted intervention. This measure may therefore benefit by a change in the eligibility criteria such that farmers that are in the process of converting to organic farming become eligible.

In the case of all other Sub-Measures there are very substantial private returns, often in sectors which are already characterised by a high preponderance of large commercial operations. The General Rural Development measure is a useful one in principal, but suffers from very high costs and poor progress. Finally, the Services for Agricultural and Rural Development measure consists of two Sub-Measures. In the case of the Teagasc advisory service this is a useful service, which should help in strengthening the rural communities by helping farm families map out a path to sustainable income generation. However, this Sub-Measure is not cheap, and there appears to be no option for private provision of the same service, which is possible as there are many independent agricultural advisors. The second measure for Farm Relief Services is a direct subsidy to a commercial operation with no obvious market failure.

Finally, the OP is not making a significant contribution to promoting rural development. Rural development is associated with the mobilisation of resources based in rural areas, of which labour is

one such endowment. Structural rigidities within the agricultural sector account for substantial underemployment. There are two ways to overcome these structural problems with rural development Measures: first by improving the labour profile of those actively engaged in agriculture (aim of Installation Aid Sub-Measure) and second by improving the potential for current agricultural labour to be mobilised outside of agriculture (preferably keeping the resources in rural areas and contributing to rural development). However, direct employment creation is not a key aspect of this Priority. Mobilising labour supply and enhancing labour quality should be key supply side labour effects. Along these dimensions, Sub-Measures in this Priority would score extremely badly.

In the Mid-Term Evaluation of the last CSF, Honohan *et al.* (1997) noted the tension between the national drive for well-paid employment growth based on productivity on the one hand, and on the other hand, a perception that rural areas need to be populated by active farmers. Ideally, economic progress should bring about a restructuring of the agricultural sector with the aim of curbing underemployment in the sector (i.e. employment levels falling would be a good thing as long as output is maintained or growing) and reducing the number of small farms. In the meantime, it has been widely recognised that rural development is a much wider concept than agri-development and should pay more attention to the non-farm rural population, as farmer numbers are set to decline further. In addition, with the majority of farmers working only part-time on their farms, they could benefit significantly from broader economic progress in rural areas.

For these reasons we recommend that on-farm structural Measures be downgraded but that the general rural development Measures be maintained. Sub-Measures relating to the development of Alternative Enterprises are considered not to be working due to their small take-up but also their targeting at commercial producers. If there were an additional eligibility criterion that those grant-aided should be private farmers who are downsizing their traditional farming activity in favour of these grant-aided ones, this scheme would have a more beneficial rural development impact than at present. Overall, therefore, some redirection of resources within the local development Priority to a better-targeted rural development measure would be desirable.

### *Social Inclusion and Childcare*

The Measures contained in this Priority are generally useful in that they address deprived areas and provide services to vulnerable young people and deprived communities.

The Childcare Measures are useful since they focus on deprived areas where individuals may be unable to afford fully private childcare facilities and, therefore, withdraw from the labour market. As increased female labour force participation has important positive implications for national output in general, this measure serves a useful purpose. However, physical progress is slower than

expected and the unit costs in the Southern and Eastern region are above the planned unit costs. Furthermore, in order to ensure that only deprived areas are actually targeted better information/indicators are needed. In respect of this measure it is also noteworthy that the financial progress of the Quality Improvement Sub-Measure is ahead of target while that of the capital grants Sub-Measure is behind target for financial progress. The quality improvement measure also suffers from a lack of physical progress indicator. The Equality measure has suffered from poor progress, as has the Crime Prevention measure. On the other hand, Community Development and Family Support as well as Youth Services and Local Development have progressed well and all appear to be providing useful services. However, with regard to the Youth Services measure, the Youth Services Grant scheme Sub-Measure is not specifically aimed at disadvantaged youth, and there is poor progress with regard to the Young Peoples Facilities and Services Fund.

Overall a number of Measures, especially Childcare, Equality and Crime prevention have suffered from slow progress. In the case of childcare the output Measures are positive but there appear to be some capacity constraints in the local voluntary sector. There is also slow progress in the Crime Prevention measure.

With regard to most Measures under this Priority, improved indicators that allow the areas targeted to be identified more readily (e.g. DED identifier) are urgently needed. The lack of such data makes it almost impossible to measure in how far there is proper targeting and progress in terms of social inclusion.

### **COMMUNITY VALUE ADDED**

Quite a number of Measures under the regional OPs are part of the CSF. The basis for the recommendations in Table 5.4 on CSF funding was outlined above but it is necessary to highlight separately the recommendations regarding the co-financed Measures. It is recommended that all the funding under the CSF be concentrated on the Local Infrastructure Priority. In particular the non-national roads measure is likely to produce relatively certain, if unspectacular rates of return. It will not have a problem in using the resources. The allocation of increased resources from the CSF Performance Reserve could be used to help reprioritise this measure to support the development of the regional gateways under the NSS.

### **SUPPORTING MEASURES**

There are a number of supporting Measures that would have a positive impact on the OP. First of all, apart from the urgent need for improved targeting of Measures in accordance with the NSS, there needs to be much more integration with the other OPs in order to capture important complementarities. This should also take into account the forthcoming Regional Development Plans/Planning Guidelines.

Another important accompanying measure relates to incentives regarding the forestry sector. The government clearly wants to increase this sector and this would have obvious environmental benefits. However, planting by farmers is crucially dependent on the general level of subsidies for a variety of enterprises. In this respect REPS appears to be more profitable than forestry. This cannot be overcome by Measures that support harvesting machinery or forestry roads, which are more relevant to large-scale growers. A better approach would be to modify the incentives under the CAP.

## CONCLUSIONS

An important aspect of the NDP is that it contains two regional operational programmes (OPs) that are aimed at achieving more balanced regional development. Our evaluation and the individual OP evaluations have analysed in detail the financial and physical progress of the two OPs. As they contain identical Measures it is valid to evaluate both OPs jointly, keeping in mind that they have different aims and that they relate to areas which are different in terms of a range of key economic, demographic and social indicators.

Overall, progress for both OPs is well behind target. The performance to date has been slowed by a number of factors. These included the deterioration of the external environment, management issues and measure specific issues. The deteriorating external environment has particularly affected demand led Measures. Other external events such as the foot and mouth crisis have also resulted in slow progress, particularly in relation to the Agriculture and Rural Development Priority. Among the management issues that have slowed down progress, delays in state aid clearance are particularly important. Here clear lessons should be learned for future programmes. Individual, measure-specific issues have also arisen, such as the delays in agreeing the Regional Waste Strategies, and delays due to the planning process, particularly for controversial facilities.

A number of broad trends emerge from the evaluation of individual Measures. Those Measures that support public goods, and especially certain types of infrastructure, are reviewed favourably as they address clear market failures. On the other hand, a number of Measures would appear to be subject to deadweight, as the investment supported under these Measures has significant private returns. This is particularly the case with regard to the Local Enterprise and the Agriculture and Rural Development priorities. Finally, the Social Inclusion and Childcare Priority Measures appear to be well designed and impact positively in deprived areas and on young people.

A universal conclusion from both OP evaluations and this overall evaluation concerns the availability and types of indicators. Here improvements are necessary and data should be available at NUTS III level for financial and physical progress, as well as impact and efficiency indicators. Such data would facilitate a more

thorough evaluation of the OPs, especially with regard to inter regional disparities, which are targeted under the Southern and Eastern OP.

A further issue that needs to be tackled going forward is the implementation of the NSS. The delay in publishing the NSS has meant that the project selection criteria did not incorporate spatial planning issues. With the publication of the NSS and the forthcoming Regional Planning Guidelines appropriate amendments to the project selection criteria, particularly in the case of infrastructure projects should be made. This applies in particular to the Non-National Roads measure and the Urban and Village Improvement measure. In order to facilitate the implementation of the NSS, we recommend that a special fund be set up that supports on a competitive basis integrated infrastructure projects in line with the Regional Planning Guidelines.

# 6. ECONOMIC AND SOCIAL INFRASTRUCTURE OP

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## 6.1 Rationale

The key physical infrastructure priorities of the NDP/CSF are included in the Economic and Social Infrastructure OP (ESI OP), which encompasses public sector investment in six Priority areas: national roads, public transport, environmental infrastructure (water supply, wastewater and solid waste facilities, coastal protection), sustainable energy, as well as investment in social housing and health services infrastructure. Other physical investment in regional economic and social infrastructure, including non-national roads, solid waste facilities and rural water supplies is provided for in the Regional Operational Programmes, analysed in Chapter 5.

The ESI OP accepted the stock and quality of public physical infrastructure as one of the key determinants of long-run economic growth (Chapter 3.4), with a major impact on the competitiveness of industry, and as a significant factor determining the attractiveness of the country to foreign direct investment. The distribution of infrastructure also has a bearing on the spatial pattern of development within the country. The ESI OP sets out the rationale for investment in infrastructure in the six Priority areas. In respect of the classification of Measures, investment in national roads, public transport and environmental and health services infrastructure is justified on the basis of being “public good” type interventions, while housing is justified on the basis of its redistributive effects, targeted at groups which are not in a position to finance their own accommodation needs.

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## 6.2 Current Activity

Table 6.1 sets out the actual expenditure to end-2002 on the ESI OP, and the classification of the Priorities. The main points about expenditure to date are:

- Total expenditure to the end of 2002 has been €10.6 billion.
- The largest Priority in expenditure terms is Housing, at €3.79 billion to date, or 35.7 per cent of the total. National roads is next with €2.61 billion or 24.7 per cent of the total.
- The year-on-year split of expenditure has been 25 per cent in 2000, 35 per cent in 2001 and 40 per cent in 2002, reflecting the initial slow take-off of implementation of the plan.

Table 6.2 overleaf compares actual expenditure to date with the planned expenditure under the OP. Notable points are:

- Overall, expenditure to 2002 is 5 per cent ahead of the plan, an overspend of €545 million.
- The overspend occurred in 2001 and 2002.
- The largest overspend has been Roads, 13 per cent; Housing has had an overspend of 9 per cent.
- Public Transport has experienced an underspend of 6 per cent, which arose mainly in 2002.
- Expenditure on the much smaller Sustainable Energy Priority is well behind the planned level, while the Technical Assistance Priority is significantly overspent.

## PHYSICAL OUTPUTS AND PROGRESS

### *National Roads Priority*

The National Roads Priority is significantly overspent to date. Table 6.3 provides a more detailed analysis of the Priority, indicating that:

- the overspend is concentrated in the S&E region – expenditure in the BMW region, by contrast, is considerably underspent.
- Despite the overspend, physical delivery is considerably behind schedule.
- For the Major Inter Urban routes (MIUs) only the Dublin-Border route has made meaningful progress.
- The additions to the M50, targeted for the end of 2003, will be completed in 2004.
- The MTE does not specify mid-term targets for the Port Tunnel and Secondary Roads. The former is due to be completed in mid-2005, roughly 6 months later than was expected at the start of the construction phase.

**Table 6.1: ESI OP Expenditure to Date and Classification/Targeting**

	Actual Spend 2000-2002				Classification/Targeting
	2000 €M	2001 €M	2002 €M	2000-2002 €M	
ESI OP Total	2,673.50	3,678.20	4,249.00	10,600.70	
National Roads	611.3	911.4	1,093.10	2,615.80	Public Good
Public Transport	456.1	490.2	523.8	1,470.1	Public Good
Environmental Infrastructure	460.6	571.2	503.9	1,535.7	Public Good
Sustainable Energy	3.8	4.5	9.3	17.6	Corrective Subsidy (Energy Conservation) Targeted Subsidy (Alternative Energy)
Housing	848.2	1,326.0	1,614.6	3,788.8	Redistribution Targeted Subsidy (improvement to existing housing)
Health Facilities	293.5	373.8	503.7	1,171.0	Public Good
Technical Assistance	-	1.1	0.6	1.7	n.a.
Year-on-Year Expenditure Growth		37.6%	15.5%		



**Table 6.2: ESI OP Actual Vs Planned Expenditure 2000-2002**

	Actual Expenditure				Overspend as % of Plan			
	2000 €M	2001 €M	2002 €M	2000- 2002 €M	2000 %	2001 %	2002 %	2000- 2002 %
ESI OP Total	2,672.7	3,678.2	4,249.0	10,600.7	0	7	7	5
National Roads	610.6	911.4	1,093.1	2,615.8	16	14	10	13
Public Transport	456.1	490.2	523.8	1,470.1	7	-1	-19	-6
Environmental Infrastructure	460.6	571.2	503.9	1,535.8	-3	16	-6	2
Sustainable Energy	3.8	4.5	9.3	17.6	19	-66	-67	-61
Housing	848.2	1,326.0	1,614.6	3,788.8	-8	7	22	9
Health Facilities	293.5	373.8	503.7	1,171.0	-5	-2	16	4
Technical Assistance	-	1.1	0.6	1.7	100	124	32	43

**Table 6.3: Indicators of Output & Progress – National Roads Priority**

Financial Progress	Actual €M 2000-2002	Target €M 2000- 2002	Actual as % of Target 2000-2002
National	2,616	2,323	113%
BMW region	593	858	69%
S&E region	2,023	1,465	138%

Physical Progress Major Inter-Urbans (MIUs)	Total Distance (km)	% Completed end 2002	% Completed or Under Construction end 2002	Actual Savings as % of Plan
		%	%	%
Dublin/Border	75	21.33	72.0	13.8
Dublin/Galway	191	0	0	0
Dublin/Limerick	136	0	16.2	0
Portlaoise/Cork	177	0	5.6	0
Kilcullen/Waterford	128	0	0	0
Total	699	7.7	12.3	1.8
Addition to M50* (km)	26	34.6	100	na

Source: Mid-Term Evaluation of the ESI OP Indecon *et al.*

Notes: Time savings from completion of entire network. Indecon indicate that the mid-term target for completion of the MIU network is 31 per cent, and that 29.8 per cent is expected to be completed by end 2003. Indecon conclude “likely that (mid-term target) will be achieved in 2004.”

\* Includes Dublin Port Tunnel.

### *Public Transport Priority*

The regional expenditure pattern on the Public Transport Priority is similar to the road Priority, with expenditure slightly ahead of target in the S&E regional and behind in the BMW region. Notwithstanding this, expenditure on Dublin Public Transport is behind target.

Table 6.4 sets out physical progress indicators. Notable among these are:

- Physical delivery of LUAS is well behind schedule.

- Track renewal under the rail safety measure is on target, but upgrading of level crossings is not, and the journey time reductions achieved to date have been disappointing.
- The increase in mainline rolling stock capacity is behind schedule, and due to be delivered in 2005. The target for passengers carried is unlikely to be met.
- Numbers on the national Bus Éireann fleet have already exceeded the mid-term target, but the provincial fleet has not had the same success.

**Table 6.4: Indicators of Output & Progress – Public Transport Priority**

<b>Financial Progress</b>	<b>Actual €M 2000-2002</b>	<b>Target €M 2000-2002</b>	<b>Actual as % of Target 2000-2002</b>
National	1,470.1	1,569.4	93.70%
BMW region	155.4	302.2	51.40%
S&E region	1,314.7	1,267.2	103.70%
<b>By Measure</b>			
DTI Public transport	739.7	999.6	74%
National Public Transport	626.7	574.9	109%
<b>Physical Progress</b>	<b>Actual</b>	<b>Mid-Term Target</b>	<b>Actual as % of Mid-Term Target</b>
<b>LUAS</b>			
Length of track completed (km)	0	25.6	0%
Capacity (# passengers at am peak time)	0	11,951	0%
Buses delivered and commissioned	1,060 (mid-2002)	1,187	na
Length of track renewed (km)	390 (end 2002)	490	80%
Journey Time reductions (minutes)	18 (2003)	50	36%
<b>Mainline Rail Renewal/Upgrading</b>			
rolling stock capacity	20,790	22,190	93.7%
Passengers (Million per annum)	11.3 (2002)	13.8	82%
<b>Bus Éireann</b>			
Passengers on national fleet (m per annum)	25.1 (2002)	24.8	101%
Passengers on provincial fleet (m per annum)	20.9 (2002)	24.1	87%
<b>Total Bus Éireann &amp; mainline Rail</b>			
Combined Passengers (m per annum)	57.3 (2002)	62.7	91%

### *Environmental Infrastructure*

Expenditure on this Priority to 2002 was slightly over target. Table 6.5, however, indicates that there is significant variability between expenditure on the various Measures. Waste Water investment, by far the largest element, is 30 per cent ahead of target, while water supply is 18 per cent behind target. The Measure to Support Economic Activity (mainly provision of serviced sites) is more than 50 per cent behind target.

In terms of physical progress, the table indicates that most Measures are significantly behind target. The information on the Waste Water Measure is less than satisfactory, given the large sums of money involved. However, it does appear that physical delivery

of the Measure is behind schedule, which is worrying given the overspend to date.

**Table 6.5: Indicators of Output & Progress – Environmental Infrastructure Priority**

<b>Financial Progress</b>	<b>Actual 2000-2002</b>	<b>Target 2000-2002</b>	<b>Actual as % of Target 2000-2002</b>
	€M	€M	%
National	1,533.8	1,508.8	101.7
BMW region	438.9	411.9	106.5
S&E region	1,094.9	1,099.6	98.2
Waste Water	1,089.4	838.3	129.9
Water Supply	179.2	219.0	81.8
Management & Rehab	87.2	97.4	89.5
Support Economic Activity	153.4	330.3	46.4
Coastal Protection	27	24	113
<b>Physical Progress</b>	<b>End 2002</b>	<b>Mid-Term Target</b>	<b>End 2002 as % of Mid-Term Target</b>
Waste Water			%
Number of Schemes (Note 1)	56	135	41
Length of rivers classified unpolluted (%)	Note 2	72%	n.a.
Area of lake classified unpolluted (%)	Note 2	75%	n.a.
Compliance with UWWT Directive	Note 3	-	n.a.
Water Supply			
Number of Schemes	25	50	50
Compliance of public schemes with Drinking Water Directive	Note 4	94%	na
Management and rehabilitation of infrastructure			
No. of Projects Completed	18	30	60
Trained Personnel in Water Services	513	1,000	51
Infrastructural support for expanded economic activity			
No. of Projects Completed	128	250	51
Housing Sites Provided	54,506	150,000	36

*Note 1:* Physical number of projects; does not differentiate between size of projects. *Weighted by size of project, physical progress is greater.*

*Note 2:* In the period 1998-2000, 70 per cent of rivers and 93 per cent of lakes were assessed as unpolluted.

*Note 3:* The Directive has a target that all agglomerations with a PE of over 2000 must meet the Directive by 2005. Department of the Environment and Local Government reports indicate that with the opening of the Dublin Bay Project compliance is at 87 per cent.

*Note 4:* EPA Drinking Water Quality Report indicates that compliance is at 96 per cent for public schemes in 2001.

*Source:* Mid-Term Evaluation of the ESI OP, Indecon *et al.*

### *Sustainable Energy*

This Priority is significantly behind target in expenditure terms, and physical delivery is even further behind (see Table 6.6).

### *Housing Priority*

Expenditure on the Housing Priority, the largest in the OP, is ahead of the 2000-2002 target on almost all Measures (Table 6.7). Only the Improvements to Existing Stock Measure is behind the expenditure target. Accommodation for Groups with Special Needs, although

the smallest of the Measures, is the most ahead on expenditure, having spent over 2½ times the targeted amount.

**Table 6.6: Indicators of Output & Progress – Sustainable Energy**

<b>Financial Progress</b>	<b>Actual 2000-2002 €M</b>	<b>Target 2000-2002 €M</b>	<b>Actual as % of Target 2000-2002 %</b>
Total Expenditure	17.4	44.5	39
By Measure			
Energy conservation/efficiency	16.4	27.2	60
Alternative/Renewable Energy	1.3	14.9	8
<b>Physical Progress</b>	<b>End 2002</b>	<b>Mid-term Target</b>	<b>End 2002 as of Mid-Term Target</b>
Research & Development			
R&D and Demonstration projects undertaken	7	100	7
Built environment			
Additional homes rated	0	12,000	0
Additional homes insulated	3,100	7,500	41
Public sector design studies	62	50	124
Public sector model solutions	33	N/a	N/a
Alternative/Renewable Energy			
Additional clustered connection capacity	0	130 MW	0
District heating / CHP pilot studies	0	5	0
District heating / CHP schemes	0	2	0

*Source:* Mid-Term Evaluation of the ESI OP, Indecon *et al.*

Physical delivery varies by measure. The Local Authority, Voluntary and Affordable Housing Measures are all roughly two-thirds of the way to their mid-term target, which is slightly behind what one would expect at the end of 2002. There is a wide variation in physical delivery of the Sub-Measures under Existing Stock Improvement. Grant aid and improvements under remedial works schemes are ahead of what one would expect, but progress in improving Local Authority units, including regeneration schemes, is disappointing, with only 22 per cent of the mid-term target reached by the end of 2002.

Accommodation for Groups with Special Needs covers travelling families and the homeless. The only physical progress indicator available is that 268 travelling families were “removed from the roadside” by the end of 2002. The Homeless component is demand led and has been influenced by the growth of refugees and asylum seekers. We have no indicators of progress on the Homeless Sub-Measure. €351 million has been spent on this Measure, and further investigation of unit costs is required.

**Table 6.7: Indicators of Output & Progress – Housing Priority**

<b>Financial Progress</b>	<b>Actual 2000-2002</b>	<b>Target 2000-2002</b>	<b>Actual as % of Target 2000-2002</b>
	€M	€M	%
<b>Geographic Analysis</b>			
National	3,789	3,476	109.0
BMW region	825	724	114.0
S&E region	2,964	2,744	108.0
<b>Analysis by Measure</b>			
Local Authority	1,882	1,642	114.6
Voluntary Housing	441	411	107.5
Affordable housing for lower income households	669	652	102.5
Existing Stock Improvement	446	645	69.1
Accommodation for groups with special needs	351	129	272.8
<b>Physical Progress</b>	<b>End 2002</b>	<b>Mid-Term Target</b>	<b>End 2002 as % of Mid-Term Target</b>
Local Authority			
Completions/acquisitions	13,306	20,000	66.5
Households removed from the waiting list	24,361	34,000	71.7
Voluntary Housing			
Completions	3,564	5,500	64.8
Households removed from Waiting List	2,770	4,000	69.3
Affordable housing for lower income households			
Households purchasing affordable housing	5,515	8,000	68.9
Existing Stock Improvement			
No. of households with improved living conditions	32,395	30,750	105.3
Accommodation for groups with special needs			
No. of Traveller families removed from the roadside	268	285	94.0

Source: Mid-Term Evaluation of the ESI OP, Indecon *et al.*

### *Health Priority*

Expenditure on the Health Priority is slightly ahead of target (Table 6.8). Acute Hospital expenditure is 22.5 per cent ahead of target, while the Non-Acute Care Measure is 17.7 per cent behind.

In terms of physical progress, the Acute Hospitals measure has delivered ahead of target, but not to the degree the expenditure data would suggest. The Non-Acute Care Measure incorporates Sub-Measures dealing with the disabled, elderly, mentally ill, community health facilities and dental services. Physical progress varies, but a few points are worthy of note:

- It appears that progress with day-care facilities is greater than with residential care facilities.
- Improvements/additions to the number of Community Health Care facilities is well behind target. The population served by new facilities is behind target, but the population served by improved facilities is ahead of target, suggesting that the Measure is more advanced than the number of schemes undertaken indicates.

- Apart from the re-equipment of Cork Dental Hospital, delivery of the dental care Sub-Measures has been disappointing.

**Table 6.8: Indicators of Output & Progress – Health Priority**

<b>Financial Progress</b>	<b>Actual 2000-2002 €M</b>	<b>Target 2000-2002 €M</b>	<b>Actual as % of Target %</b>
<i>Geographic Analysis</i>			
National	1,171	1,128	103.8
BMW region	352	338	104.0
S&E region	819	790	103.7
<i>Analysis by Measure</i>			
Acute hospitals	715	584	122.5
Non-Acute/ Continuing Care	383	466	82.3
ICT and Research	73	78	92.8
<b>Physical Progress</b>	<b>Outturn 2000-2002</b>	<b>Target 2002</b>	<b>Outturn as % of Target</b>
Acute hospitals			
Additional Acute Beds	12,847	12,547	102
Number of procedures performed per annum	963,000	860,000	112
<b>Non-Acute/ Continuing Care</b>	<b>Actual 2002</b>	<b>Mid-Term Target</b>	<b>% Progress Towards Mid- Term Target</b>
Facilities for Persons with Disability			
Residential places for persons with intellectual disability and autism	8,760	9,444	58
Day places for persons with intellectual disability and autism	17,637	16,620	211
Long-term residential places for persons with physical and/or sensory disability	650	730	39
Respite places for persons with physical and for sensory disability	298	316	84
Additional day care places for persons with physical and /or sensory disability.	400	892	45
Appropriate places available for young chronically sick people	477	190	291
Beds (including extended care and respite beds) for Community Nursing Units/Community Hospitals	10,004	10,257	65
Day care places per week for elderly people	5,434	5,209	132
Additional Places per week in new social centres for elderly people	250	400	63
Beds in acute psychiatric units	697	778	33
In-patient child & adolescent psychiatric beds	55	80	0
Admissions to old stand-alone psychiatric hospitals	10,659	9,197	65

Source: Mid-Term Evaluation of the ESI OP (Draft Report, July 2003), Indecon *et al.*

### 6.3 Lessons from OP Evaluation

#### MAIN FINDINGS FROM OP MID-TERM EVALUATION

In this section we summarise the main findings in the OP MTE, under the headings Prioritisation, Effectiveness, Efficiency and Delivery, for each of the Priorities. We then set out the conclusions and recommendations arrived at in the OP MTE. Points which simply summarise levels of expenditure or physical delivery are not repeated.

#### PRIORITISATION IN THE OP

“The Programme in general is well managed and this represents an important achievement given the size ... of the Programme”. Project selection appears generally satisfactory, but there is a need for a more “formalised review process” and of “Cost Benefit Analysis (CBA) techniques when deciding priorities”. The need for infrastructure investment is significant and essential for maintaining economic growth. An allocation of 5 per cent of GNP is appropriate, though there is scope for more non-Exchequer funding.

The following issues are raised in considering future priorities:

- A need for increased non-exchequer funding and greater use of charging.
- Closer integration of capital investment with service provision; the health service and public transport are highlighted.
- Balanced Regional development is an important consideration, but the evaluators caution against funding uneconomic projects.
- Greater use of Price signals to achieve objectives, in particular, to align private and social costs resulting in “more appropriate” demand levels, to reduce the need for some public investments, and to raise revenues to help meet the funding deficit in the OP. Specifically taxation to encourage energy efficiency; Greater use of water charges; Congestion charging in urban areas; Greater use of toll roads.

“Purely on the basis of success in meeting mid-targets, the transport Measures ought to be favoured for the allocation of the performance reserve but any decisions must be based on an overall assessment of progress, investment needs and an evaluation of costs and benefits.” This should be allocated in total to public transport, particularly to the GDA. Any increase in investment in environmental services should be achieved by the application of user charges. No additional taxpayer resource should be allocated to this area. Priority should be given to achieving cost savings in the Roads programme.

## **EFFECTIVENESS OF THE OP**

Overall the programme is broadly effective having regard to the external environment.

### *Roads*

Key effectiveness indicators for 5 Major Inter-Urbans (MIUs) will not be met.

### *Public Transport*

- Key effectiveness indicator for Greater Dublin Area (GDA) public transport is ahead of mid-term target, but for national public transport the mid-term targets are unlikely to be met.
- Performance of the Quality Bus Corridors (QBCs) has been impressive, and buses are a key Priority and are the most cost effective way of improving public transportation in the short run.
- Investment in rail should be considered in the context of increasing development densities.

### *Environmental Infrastructure*

The key effectiveness indicator for waste water is behind the mid-term target, but “progress is good”. “Available indicators make it difficult to accurately assess progress to date”.

### *Sustainable Energy*

Effectiveness indicators for energy conservation are not available, and for alternative energy will not be met. Given the challenge Ireland faces in meeting the Kyoto limit, all least cost options, including altering prices through taxation changes, must be pursued.

### *Housing*

Output will be close to but short of mid-term targets. Concerns are expressed about the cost of construction and serviced land, and capacity in the voluntary sector.

### *Health*

Data to monitor the results and impact of this investment are not particularly informative.

## **EFFICIENCY OF THE OP**

Cost efficiency of investment is a cause for concern. “Ireland’s record in terms of delivery of projects on time and within budget is poor and there is considerable scope for improvement”.



*Roads*

Funding and cost savings are key issues.

*Public Transport*

Maximise the contribution of QBCs and have regard to the role of demand management.

*Housing*

“Objectives could be met more cost-effectively by further developments in the private rental market”.

*Environmental Infrastructure*

With respect to water services, more emphasis is needed on pricing and leakage control.

**DELIVERY OF THE OP**

Delivery problems have arisen primarily due to the fact that the ESI OP was overly ambitious, given the capacity of the construction sector to deliver and the capacity of the various delivery agencies within the State sector. Improving delivery depends on on-going improvements in selecting the correct projects and managing these projects on time and within budget.

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**6.4  
Recommendations**

The preceding section summarised the findings and recommendations of the ESI OP Mid-Term Evaluation by Indecon. The following represents our recommendations for the ESI OP in the context of the overall NDP Mid-Term Evaluation. Our recommendations are based on the view that this OP has made substantial progress to date. However, it is particularly important for this sector that supplementary Measures are adopted to ensure that value for money is obtained and that the investments are worthwhile. Some of these issues only arise from a macro-economic assessment of the NDP as a whole, not being apparent when the OP is evaluated on a stand alone basis.

Set out below in tabular form are the detailed recommendations by “Measure” for future funding for the Economic and Social Infrastructure OP (ESI OP). To indicate the significance of the measure within the OP we show the expenditure under both the CSF and the NDP for the period 2000 to 2002. (Data for 2003 were not available). As discussed in Chapter 4, the recommendations are made in terms of: “increase”, leave unchanged (“same”) or “reduce”. An explanation for the recommendations on each measure is also included in the tabular presentation. The recommendations do not indicate how much of a change should be made in the funding as a more detailed discussion of the recommendations on the OP is given in the text after the tabular presentation.

**Table 6.9: Recommendations on the Economic and Social Infrastructure Operational Programme**

Priority	Measure	Total Expenditure 2000-2002, €million		Recommendation	Comment
		CSF*	NDP		
National Roads	Total National Roads Priority	634.191	2603.717	Increase	Subject to an economic justification for upward adjustments to road specification from what was envisaged in the Road Needs Study and subject to the capacity of the sector to produce the required output without inflationary pressures. Environmental maintenance of roads is important (Drainage); some reprioritisation needed.
Public Transport	Total Public Transport Priority	364.541	1470.108	Same	Rail safety and mainline track renewal: no further commitment without proper economic cost benefit analysis. Inter-urban bus is increasingly liberalised. Urban bus: good returns. However, not making good use of the capital stock because of failure to introduce integrated ticketing as promised. Urban rail: LUAS serious problems with delay and cost. Suburban rail: Need to improve use of capital stock through frequency improvement and imposing appropriate physical planning guidelines on urban areas (Dublin) to optimise usage of infrastructure.
Environmental Infrastructure	Waste Water	442.31	1089.396	Reduce	High Priority to finish current programme. Current priorities are driven by requirements of UWWTD. No new commitments to be entered into without appropriate assessment of the environmental and economic costs and benefits. Management of the infrastructure to be reformed to reap economies of scale in operation. Commercialisation of water industry would reduce or remove need for direct Exchequer funding.
	Water Supply	0	179.196	Reduce	High Priority to finish current programme. No new commitments to be entered into without appropriate assessment of the environmental and economic costs and benefits. The management of the infrastructure to be reformed to reap economies of scale in operation. Commercialisation of water industry would reduce or remove need for direct Exchequer funding.
	Management & Rehabilitation of Infrastructure	0	87.183	Same	

Sustainable Energy	Support for Economic Activity	0	153.374	Reduce	This should be operated on a commercial basis.  Subject to an economic case being made for each project. With the advent of emissions trading the development of wind energy will be subject to appropriate economic incentives from market forces. Where strengthening of the transmission and distribution system is suggested, the appropriate approach will be determined by the regulatory authorities, with the costs carried as part of use of system charges.
	Coast Protection	0	26.634	Same	
	Energy Conservation	0.22	16.5	Same	
	Alternative Energy	1	1	Reduce	
Housing	Local Authority Housing	0	1882.12	Same	For social inclusion reasons social housing is an important Priority. If, as a result, continuing extensive provision is made for this measure then it is desirable that private sector demand is reduced through, for example, eliminating tax relief on mortgage interest payments. Otherwise the addition of a large public sector demand to the large private sector demand will lead to further inflation. The provision through multiple Measures for social housing needs rationalisation, concentrating on the most effective methods of provision. Sale of local authority houses at below market prices should be discontinued. The appropriate balance between direct provision of social housing and use of the rent supplement scheme needs to be identified.
	Voluntary Housing	0	441.3	Same	
	Access to Affordable Housing	0	668.66	Reduce	
	Improvements to Existing Housing	0	445.89	Same	
	Groups with Special Needs	0	350.78	Same	
	Acute Hospitals	0	715.03	Reduce	
Health					In principle this is an important measure for tackling social exclusion. However, there have been implementation difficulties. This measure has seriously overrun; requires detailed review before further expenditure. The per unit costs look exceptionally high on the basis of the output indicators. It is not clear how effectively the problem of homelessness is being tackled. Beds were closed at various times over the past few years due to such factors as staff shortages (particularly shortages of nursing staff) and this year a substantial number of beds in Dublin in particular have been closed due to what the hospitals indicate are funding deficits. In terms of addressing hospital

	Non-Acute/Continuing Care	0	383.5	Same	capacity issues, the first Priority should be to ensure that all beds in public hospitals remain open. Where increased capacity is considered warranted, it is difficult to justify an increased commitment of public money to building new beds when currently 20 per cent of beds in public hospitals are designated as private or semi-private. This measure is important for wider equal opportunities and social inclusion. Investment in this sector should help release more expensive resources in the acute hospital sector.
	ICT and Research	0	72.459	Same	
Technical Assistance	OP Technical Assistance	1.659	1.659	Increase	
Total		1443.9	10588.6		

Notes: PPP expenditure excluded.

\*Total CSF expenditure plus other structural expenditure, i.e. Cohesion Fund, TENS.

Overall the proposed allocations by “Priority” going forward are outlined in Table 6.10. This table shows for both the CSF and the Total NDP, the actual expenditure in 2002, the estimates for 2003 and the recommended expenditure for 2004 in nominal terms. The allocations are made within an indicative “envelope” determined by the Department of Finance for the 2004 to 2006 period. Table 6.10 shows the original commitments under the CSF for 2004 as well as our recommendations on how the CSF funding should be reallocated.

For 2002 the NDP figures include Local Authorities’ own resources used to finance investment in social housing. For 2003 and 2004 these resources are excluded. However, it is assumed that they will be sufficient to leave investment in housing broadly unchanged in real terms in 2004. When these resources are taken into account the allocation proposed in Table 6.10 involves a significant increase in resources for the ESI OP compared to both 2002 and 2003. This reallocation of funding to the ESI OP reflects the conclusions reached in Chapter 3: there is a prospective high rate of return on investment in infrastructure that is implemented in a cost-efficient manner. Given the infrastructure constraints, if more money was available within the overall envelope, it should be allocated to the ESI OP, subject to the institutional and industrial capacity to deliver.

As shown in Table 6.10 we recommend an increase in funding for the National Roads Priority compared to 2003. For Public Transport, while recommending a lower allocation than for 2002 there is some increase compared to 2003. As discussed in the text, this allocation should favour urban public transport, especially buses, rather than main-line rail.

**Table 6.10: Summary of Recommendations on the ESI OP, Classified by Expenditure, €m**

	CSF 2002	CSF 2003	CSF 2004	CSF 2004	NDP 2002	NDP 2003	NDP 2004
	Expend- iture	Commit- ments	Preliminary Commitments	Recomm- ended	Expend- iture	Estimates	Recomm- ended
<b>Economic &amp; Social Infrastructure OP*</b>	<b>683</b>	<b>426</b>	<b>148</b>	<b>258</b>	<b>4,239</b>	<b>3,698</b>	<b>3,967</b>
National Roads	318	258	94	148	1,084	1,270	1,445
Public Transport	203	58	25	60	524	441	500
Environmental Infrastructure	160	92	12	50	504	382	390
Sustainable Energy	1	17	16	0	9	13	13
Housing*	0	0	0	0	1,615	1,081	1,142
Health Facilities	0	0	0	0	504	510	475
Technical Assistance	1	1	0	0	1	0	2

*Notes:* For 2002 and 2003 the CSF expenditure includes Cohesion and TENS funding as well as public funding. These are not relevant for 2004. The 2002 NDP expenditure includes a small amount of PPP funding. The table only includes public expenditure by the EU and the State.

\* The 2002 figure for investment in housing, for the Economic and Social infrastructure OP and for the total NDP includes investment funded from local authorities' own resources. For 2003 and 2004 the NDP, ESI OP and housing investment figures do not include investment in housing funded out of Local Authorities' own resources.

Due to the completion of a number of major water supply and waste-water schemes, the estimated expenditure for this sector in 2003 is significantly down on 2002. We have allocated a similar sum to the sector for 2004 compared to 2003 so that the required investment programme can be completed. As explained above, the proposed allocation for social housing implies a continuation of the high level of activity seen in 2003. If such resources were not available this would call for some further reallocation across all OPs.

In the case of health, some reduction is recommended compared to 2003. This reflects concerns about the effective utilisation of the existing stock of beds and concerns that, even when the stock of beds is increased, there will not be current resources to use them. Future investment should go together with commitments of current funding that will see the new investment fully utilised. The NDP funding for technical assistance is also increased, albeit at a modest level.

The fact that we have not recommended higher allocations for some key Measures reflects concerns with the ability to deliver a major increase in investment efficiently and on time. In the case of the roads and urban transport, there is no doubt that they have a high Priority as the current inadequate provision of the stock of infrastructure represents a serious economic bottleneck. Similarly the importance of tackling the shortage of social housing is important from the point of view of social inclusion. However, there are concerns about the capacity of the building and construction sector to deliver increased output without inflationary consequences, notwithstanding the recent moderation in overall construction inflation. If it could be shown that these problems were being dealt with, then a more rapid rollout of infrastructure

that has a continuing high Priority would be justified. The roads, public transport, environmental infrastructure, sustainable energy and technical assistance priorities have been CSF co-financed, while the housing and health priorities have been non co-financed. For the remainder of the ESI OP we recommend no further CSF funding for sustainable energy. CSF funding should be continued in respect of national roads, public transport and environmental infrastructure, areas where the investment is most productive or where the pattern of investment is driven by EU regulation and where there should be an adequate number of projects having a high probability of completion on time.

## **ROADS**

This measure is part funded by the CSF and our recommendations apply to both the co-financed (CSF) and the non co-financed (NDP) elements.

Investment in roads is likely to produce a high rate of return to the economy. As such it is accorded a high Priority. The progress to date, albeit at a rather high cost, will significantly enhance the growth potential of the economy over the coming years. The continuing high rate of investment recommended in this evaluation should produce further significant benefits. As the roads system begins to connect up these benefits could be enhanced.

While according such investment a high Priority, there are concerns about value for money. Failure to tackle such concerns will see less roads being built with the budget allocated and will delay the completion of the very onerous programme of infrastructural investment. These concerns take two forms: first, there is a concern that the cost of building the roads is too high; second there is a concern that the level of service, and hence cost, provided for may be excessive relative to prospective demand. Where the level of service (LoS) chosen is unduly generous for likely traffic needs, this will raise costs and result in a delay in tackling bottlenecks elsewhere in the road system. The welfare loss from such delays would, of course, be significant.

The five main routes connecting Dublin to Belfast (N1), Galway (N6/N4), Limerick (N7), Cork (N8/N7), and Waterford (N9/N7) are designated in the National Development Plan and in the ESI OP as key infrastructures. They are to be built, throughout their length, to a standard described as four-lane motorway or four-lane 'high-quality dual carriageway'. It is our understanding that the concept of high-quality dual carriageway envisaged would have significant amounts of grade separation. In rural locations, it is our belief that the operating capacities of four-lane dual carriageways with significant grade separation will not differ materially from the capacity of a four-lane conventional motorway. There will tend to be limited cost differences too.

At level of service mid-D (Table 6.11), postulated as the replacement trigger in the Road Needs Study (RNS), a four-lane motorway in rural conditions offers capacity of 55,500 Annual

Average Daily Traffic (AADT). The M50 around Dublin is mostly four-lane, and currently carries volumes, in suburban mode of course, well in excess of 55,500 throughout its length. Estimated capacities for the various road types as per the Road Needs Study are shown in the Table 6.11.

**Table 6.11: Capacity in AADT by Road Type According to the Road Needs Study**

Road Type	Capacity in AADT at Level of Service	
	C	D
Undivided Two-Lane 2x(3.75+3.0)m.	6,500	11,600
Wide Two-Lane 2x(5.0+2.5)m.	7,700	13,800
Dual Carriageway Standard 2x(7.5+3.0)m.	34,600	44,100
Motorway 2x(7.5+3.0)m.	43,500	55,500

The volumes of traffic currently carried on two of the major inter-urbans, the N9 connecting the N7 junction near Kilcullen in Co. Kildare to Waterford city, and the N8 connecting Portlaoise (and Dublin also via the N7) to Cork city, had the following traffic pattern in 2001, the last year for which final data are available on the National Roads Authority (NRA) website, Table 6.12.

**Table 6.12: Traffic on the N8 and N9, 2001**

	N9 Kilcullen to Waterford	N8 Cork to Portlaoise
Traffic Volume Range	Kilometres of Route	Kilometres of Route
Less than 5,000	25.90	Nil
5 to 10,000	25.17	80.08
10 to 15,000	64.86	68.91
Over 15,000	0.52	7.37
Total Length	116.45	166.36

Approximately 26 kms of the N9 had volume below 5,000 AADT in 2001. If the road proposed for these sections is motorway (or 'high quality' dual carriageway of equivalent capacity) able to accommodate 55,500 at the replacement trigger of LoS D, capacity is being provided equal to (at least) 11 times current volume. For such a section, even traffic growth at 4 per cent per annum indefinitely, higher than envisaged in the Needs Study or in any of the other long-range projections, would take 50, 60 or more years to approach the replacement trigger Level of Service. It is clear that adequate levels of service, for the foreseeable future, can be achieved for these sections using a lower road type specification. This conclusion is *not* altered if LoS C is deployed instead of LoS D. Almost half of the route length is carrying traffic below 10,000 AADT, and virtually none is above 15,000. The road Needs Study, not surprisingly, did not recommend motorway on this alignment, *even in a sensitivity analysis with traffic 20 per cent above the base case.*

Roads with capacity of 55,500, or anywhere near it, appear to be a significant over-design for the numerous lightly-trafficked sections of the N8 and N9. For the Mullinavat section, for example, even a Wide Two-Lane road would offer above LoS D for 40 years at 3 per

cent compound traffic growth. The Road Needs Study did not recommend motorway, or even dual carriageway, for the sections in question, and no economic analysis has been offered to our knowledge to justify the design inflation which appears to have occurred.

This apparent over-design is compounded to the degree that portions of these routes are being considered for tolling. Tolling will divert some of the traffic, low to begin with, and the costs of excess capacity incurred as a result of road-type over-specification will be exacerbated.

We have discussed these issues in the context of two routes. They arise also on other routes, generally on National Primary routes outside Leinster.

**Recommendation:** All sections of the national primary network, excluding only those where binding contractual commitments have been entered into, should be scaled back to the Needs Study recommended road type, *unless* a persuasive cost/benefit analysis, justifying the enhanced design, is available. The resources released should be used to prioritise schemes that will contribute to the objectives of the National Spatial Strategy.

Finally, responsibility for National Secondary roads now resides in the Department of Transport, with responsibility for regional and county roads remaining with the Department of the Environment, Heritage and Local Government. It raises the question of whether regional routes will do better than some national secondaries, given the natural and understandable focus of the NRA on national primaries. There should be some informal blurring of the distinction between secondaries and regionals, in order to ensure that prioritisation is driven by pavement condition, cost of improvement, and traffic, and not inadvertently by quirks in the road classification scheme, which is arbitrary of its nature.

Finally, the Dublin Port Tunnel is a major project proceeding to completion. There have been cost increases and delay, a feature of major urban road projects around the world. The costs of disruption during construction are a major element in the *economic* as distinct from financial cost of these investments, and it is not clear that adequate account was taken of this cost component in the case of the Dublin Port Tunnel. A chronology of this project is given in DKM, 2003a.

## **PUBLIC TRANSPORT**

This measure is part funded by the CSF and our recommendations apply to both the co-financed (CSF) and the non co-financed (NDP) elements.

## **URBAN FIXED-LINE RAIL PLANS**

The principal scheme currently in construction is the LUAS light rail project in Dublin, the largest such undertaking in Ireland for over a century. This was originally envisaged as a single line connecting Dundrum (with an extension to Sandyford as a variant),



through Dublin city centre, to Tallaght. Traffic projections in the initial assessments were based on the full penetration of the city centre which, as well as encouraging usage, would also have resulted in operating economies in the form of a single depot, shared staff and common reserve rolling stock. The decision to construct two separate lines which nowhere interconnect, and which do not traverse the city centre as originally envisaged, will result in lower patronage and higher operating costs, as compared with the original scheme.

The experience with LUAS is instructive. The initial commitment to LUAS was made on the basis of a first cost estimate of IR£228m., equivalent to €290m. (at 1995 prices). Subsequent to the initial decision, major design changes were made which changed both the potential costs and benefits of the system. However, a full cost-benefit analysis (CBA) of the revised scheme was not undertaken before it was chosen. As with the experience in revising the roads programme, this case shows the importance of undertaking a full cost-benefit analysis of all major infrastructural projects before committing finally to their implementation. With full information better decisions might be made in the future on such major infrastructure projects.

The most recent cost estimates for the revised scheme range upwards from €750m., and there has, of course, also been a substantial delay in project delivery. We estimate that the general index of underlying construction cost inflation would explain an increase in the budgeted figure for the rather different first proposal, estimated at €290 million, to a maximum of about €470m. The remaining excess cost must be attributed to other factors, including in particular design changes. Some of these involved a *downward* respecification of the project, but some also involved significant additions. The most significant downward respecification was the removal of the critical city centre section. Sections were added elsewhere, including an Eastward addition towards the Docklands and the Sandyford section.

Cost overruns on urban fixed-line projects are a common experience world-wide, as are failures to meet the patronage targets on which initial assessment and political sanction were based (Flyvbjerg, Bruzelius and Rothengatter, 2003). There are documented cases where costs were double what had been expected, with patronage half what had been promised. The LUAS experience, not least because it fits the international pattern, should inform future decision-making about fixed-line investment in Dublin or in other Irish cities. It is exceedingly rare for such projects, anywhere in the world, to cost less than estimated by the project promoters. It is equally unusual for these schemes to deliver the passenger volumes promised. The DART electrification scheme in Dublin in the early 1980s cost more than budgeted, and delivered fewer passengers than promised when commissioned. The principal lesson drawn in the extensive international literature on this topic is that the initial cost/benefit assessment, carried out before any

commitments are given, is absolutely central. These projects are rarely abandoned once commenced.

The costs of disruption during construction are sizeable for on-street urban projects, and can constitute a major portion of total economic costs. No estimate of these costs was included in the evaluation of LUAS to our knowledge, despite a recommendation that this be done from the External Evaluator to the 1994-1999 Operational Programme on Transport. Cost/benefit studies must include all economic costs, and not just cash costs. A chronology of the LUAS project is given in DKM (2003b).

A second, though much smaller, Dublin fixed-line investment has been the twin-tracking of the suburban line from Clonsilla to Maynooth. The current Summer 2003 timetable shows just twenty daily stopping services on this route on weekdays, even though the infrastructure work was completed, we understand, in 2001. A suburban service with headways approaching 60 minutes cannot be expected to deliver meaningful user benefits, and the lesson is that infrastructure investment alone will not pay off unless adequate operational management and performance is delivered. To attract significant patronage, suburban service must offer frequencies at least in the 10/15 minute zone at peak, according to all international experience. Dublin suburban rail planning appears to us to have focused excessively at times on capacity at the expense of frequency, in order to accommodate mainline and freight operations in the Dublin area. These activities should not be given scarce 'paths' on the system without explicit costing of the damage done to suburban frequency possibilities. We are aware that Irish Rail will introduce a new timetable from January 2004 and that this will see substantial frequency improvements in the Dublin suburban system, including Maynooth.

Following on the *Platform for Change* document prepared by the Dublin Transportation Office, which proposed a city-wide Metro system for the Dublin area at costs ranging up to €8bn., there has been a continuing debate on major new fixed-line options for Dublin. Most recently, there have been contentions that the Dublin Transport Office (DTO) system, or parts of it, could be built for sums considerably less than the Dublin Transport Office (DTO) estimates. In the light of both Irish and international experience, we must recommend that a degree of scepticism is justified in assessing cost estimates. If major further investment is to be made in fixed-line options it is likely that these will only be economic if major efforts are made to increase the density of the city, especially along the transport corridors. While scope for such action is limited, the continuing rapid growth in Dublin leaves more opportunity for influencing future density than is the case for most other European cities. The importance of such supplementary policies for developing a sustainable city is stressed in Chapter 13.

**Table 6.13: Bus/Rail % Share in Dublin: DTO AM Peak Estimates by Mode**

	1991	1997	2001	% Change 1997-2001
Car	64	72	70	+67
Bus	25	19	23	+109
Rail	11	9	7	+27

*Source:* Dublin Transport Office *Preliminary Estimate*, January 2003.

There are broader grounds for recommending caution in entering into commitments to fund further fixed-line investments in Dublin. The net impact to date of bus and rail investment in the Dublin area has been a substantial improvement in bus patronage, at modest cost, versus a disappointing passenger performance by rail, at substantial cost (Table 6.13).

If Dublin continues as a low density city, bus will have strong advantages over fixed-line systems, and it is currently the predominant public transport mode in Dublin. During the period 1997 to 2001, bus trips at the morning peak more than doubled in the greater Dublin area. Notwithstanding the greater investment spend on rail (Maynooth-Clonsilla double-tracking, Malahide DART extension, Greystones DART extension, station openings and upgrading, and rolling stock acquisition), morning peak rail trips grew only 27 per cent. Bus market share actually rose by 4 points, an unusual achievement for an urban bus company. The fixed-line share fell two points, and was just 7 per cent in 2001. On these figures, the payoff to the modest investment in buses and Quality Bus Corridors has been impressive, and the payoff to rail investment disappointing. Rail proponents can argue that the full benefits of some of the rail investment have yet to be seen, and there is some truth in this. But aside entirely from lower cost, the shorter lead-times and roll-outs for bus projects should be seen as an argument in their favour.

## URBAN BUS

The introduction of QBCs and the increase in number of services has been successful in increasing patronage. However, the utilisation of the bus fleet could be improved and travel times for users significantly reduced through Measures such as faster loading through use of multiple doors and the adoption of a coherent and efficient integrated ticketing system. The need to introduce an integrated ticketing system has long been recognised. It may involve some simplification of fares and loss of revenue. However, by reducing delays in collecting fares and loading times, it would reduce journey times, increase patronage, and produce a better utilisation of the expensive capital stock. However, these benefits are not guaranteed. In particular there is a danger that a new integrated system could be introduced that could prove both expensive to implement and could fail to deal with the issue of delays in boarding buses.

**Recommendation:** In planning future public transport investments in Dublin, expensive rail projects which take a long time to deliver need to be rigorously compared to cheaper bus-based schemes that are fast to implement. Investment in public transport needs to be combined with road user charging.

### MAINLINE RAIL

We recommend that the mainline rail projects already committed should proceed, but that all other commitments should be avoided until the Government's deliberations consequent on the Strategic Rail Review are finalised. On the latter, we are surprised at the scale of investment recommended by Booz Allen Hamilton, and unaware of any countries with Ireland's traffic characteristics for which a similar scale of investment has been proposed by anyone. The cost/benefit analyses on which the recommendations are based require careful evaluation. In particular, we are conscious of the sheer scale of the road investment programme on routes available to buses parallel to the main rail lines, and of the €20 million per annum current Exchequer cost of the regional air services subsidy. Demonstrating that enhanced rail is justified, given these advances in other public transport modes, is more difficult than would have been the case a decade ago before these improvements had gathered pace. To be specific, the traveller on a route such as Dublin-Galway now has car, bus, air and rail options. The air option is now five return flights per day. The car and bus options will benefit from the completion of road projects already under way or planned, the air service is heavily subsidised, and there has been a significant rail investment. It is fair to ask whether further expensive rail enhancement can be justified in the light of these developments, bearing in mind the modest overall intercity traffic volumes in Ireland. We also note a recent critique of the Strategic Rail Review (Barrett, 2003).

### ENVIRONMENTAL INFRASTRUCTURE

The waste-water Sub-Measure is part funded by the CSF and our recommendations apply to both the co-financed (CSF) and the non co-financed (NDP) elements. We would make the following broad recommendations in relation to future environmental infrastructure investment in Ireland:

- The water and wastewater industry in Ireland should be commercialised. This is dealt with later in Chapter 13.
- Future water investments should reflect environmental priorities in Ireland
- Tackle agricultural water pollution.

The Urban Waste Water Treatment Directive (UWWTD) has been the main driving force behind the investments under Environmental Infrastructure. On implementation in the 1990s this directive determined the priorities for investment in Ireland over at least the following decade. Unfortunately those priorities were

rather different from the environmental priorities that might have been determined on an objective basis for Ireland. A higher Priority should have been given to pollution of lakes and rivers than was the case and scarce resources were devoted to other lower Priority areas because of the directive. For the future this highlights the case for undertaking a proper cost-benefit study of new environmental regulations before commitments are entered into domestically or at an EU level. This recommendation is similar to the recommendation made on future decision-making on both roads and public transport. It reinforces the experience with the NDP/CSF process in Ireland on the importance of evidence-based decision making.

In the context of a commercialised water industry, the operators should be required to maintain environmental standards appropriate to Irish conditions. If the Government undertakes that higher standards are to be met (including by passing EU Directives that contain excessive requirements in an Irish context), the Exchequer should pay the extra cost of compliance.

There is consensus that agricultural activities are a major source of water pollution. Exchequer-funded infrastructural investment may not form a major part of the solution, but other regulatory Measures may be appropriate. More generally, there is a need to price the water resource consciously in those parts of the country where there is actual or emerging scarcity. Economic as well as engineering solutions are essential.

We understand that with the commissioning of the Dublin Bay project Ireland is 87 per cent compliant with the UWWTD and provision is made for substantial funding, albeit lower than in 2002, to complete the necessary investment programme.

## **ENERGY**

This measure has been part funded by the CSF. We recommend no further CSF funding for this Priority.

### *Conservation*

Expenditure and output have been behind target on this Priority. Expenditure to the end of 2002 was €17.4 million, while the target to that point was €44.5 million. This partly reflects caution by the implementing body in ensuring value for money. Given expenditure and output to date, we must question whether all the money originally allocated to the Measure can be usefully expended. Furthermore, the actual benefit from investment to date has not been assessed. Experience overseas indicates that there is scope for economically efficient energy savings in, for example, public sector/low income housing. We would advise research into Irish conditions that may identify areas where potential exists.

Grant-aiding energy conservation in the private sector is not justified unless there are identified market failures that cannot be easily corrected. If the price of energy is too low, because

environmental impacts are not taken into account, then taxes can be used to correct this.

We would also recommend research into the costs and benefits of improving the energy efficiency of new buildings via enhanced building regulations, since the cost of this is likely to be less than achieving the same through retro-fitting.

### *Alternative Energy*

With the advent of emissions trading and the favourable environment that it creates for alternative energy sources, this measure may no longer be necessary in the NDP. Under the emissions trading regime the development of wind energy will be subject to appropriate economic incentives from market forces. Where strengthening of the transmission and distribution system is suggested, the regulatory authorities will determine the appropriate approach, with the costs carried as part of use of system charges. There may be justification for technical and economic research into the costs and benefits of the various alternative energy sources, if this is not being undertaken elsewhere.

## **HOUSING**

The Housing Priority is outside the scope of structural funds and the CSF and is totally financed from public funds. It is the largest single Priority in the ESI OP, accounting for 34 per cent of the total investment in the ESI OP over the period 2000 to 2006 or 36 per cent of total ESI OP expenditure over the 2000-2002 period. The overall focus of the reprioritisation exercise should be on ensuring that the expenditure is being spent in the most cost-efficient manner, is delivering value for money and that the Measures selected to deliver the overall housing objectives in the NDP are the most effective for meeting the accommodation needs of those unable to provide it for themselves.

The key role of the Measures under the Housing Priority is to address the segments of the market where there are private market failures. In addressing the effectiveness of the Housing Priority Measures in the NDP, it is essential to consider the overall focus of housing policy as the latter will determine the extent of State intervention required. The main objectives of the many housing initiatives over the period since 1998 have been to improve access to accommodation for first time buyers, to restore balance to the housing market, to dampen house price increases and to assist lower income households who cannot afford to accommodate themselves. In regard to the latter, there was recognition of the need to expand provision of social and affordable housing and to improve the existing stock. Although housing supply has reached record levels, the facts are that average new house prices have continued rising, by a cumulative 61 per cent in real terms since 1998, and the numbers on local authority and affordable housing lists have increased over the last three years. Social housing needs alone have risen by 23.5 per cent since the NDP was framed. This has put considerable

financial strain on the public sector. It is salutary to note, however, that low interest rates have prevented serious affordability problems from emerging in the private market; an upswing in mortgage interest costs over the next cycle will create more acute affordability problems than any yet experienced.

Three further housing initiatives have been announced since the NDP was launched, namely the affordable housing initiative (AHI), the Part V provisions for social and affordable housing in the *Planning and Development Act, 2000*, and the affordable housing scheme announced as part of the new Social Partnership Agreement *Sustaining Progress*. All three initiatives have resulted from the rapid acceleration in house prices over the boom period and the lack of housing supply in key urban locations. The consequence has been a greater demand than originally anticipated in the NDP for social and affordable housing. The three initiatives aim to boost the total social and affordable housing supply, with the *Sustaining Progress* scheme expected to deliver 10,000 'affordable' houses on lands in public ownership. Although the affordable housing initiatives are not expected to impact directly on the Exchequer, the 'free' land represents a subsidy, the true opportunity cost of which should be taken into account in assessing the economics of each scheme. Also contributions under the Part V provisions must be considered as revenue and included in the cost of financing accommodation. All three Measures will result in increasing demand from those who are eligible, and thus higher house prices, as other households above the eligibility threshold will not be accommodated in the short run.

The affordable housing Measures in the NDP would seem to be mistargeted since they focus on home purchasers, among whom affordability problems have been less extreme. Recent research on housing affordability indicates that the severest housing affordability problems have occurred in the private rented sector (Fahey *et al.*, 2003). Furthermore, the NDP Measures are concerned with the affordability of *purchase* of housing rather than of *access* to accommodation, and thus conflict with the traditional stated priorities of Irish housing policy, as well as the social inclusion objectives of the NDP. There is also some international evidence that high levels of home ownership and a small private rented sector (both of which are represented to an extreme degree in Ireland) inhibit the mobility of labour and so depress labour supply and increase unemployment (Bover, Murphy and Muellbauer, 1989; Oswald 1999). Further promotion of home ownership through the NDP would therefore seem to conflict with its employment objectives. High rates of stamp duty on second-hand housing transactions exacerbate this problem. From a social inclusion point of view, the social housing component of the NDP needs to be sustained. From both a social exclusion and employment perspective the affordable housing component needs to be redesigned so as to give greater Priority to the support of the private rented sector, recognising that housing is a market for accommodation, irrespective of tenure.

We recognise the need for a targeted response to the broad range of housing needs. However, the rationale for having a multiplicity of schemes, which have served to increase demand and house prices, needs to be justified. We recommend that there should be a rigorous examination of the cost effectiveness of all the Measures in the Housing Priority, plus the additional affordable and social housing initiatives announced since the NDP was launched, to establish the most effective Measures for meeting the needs of the target groups for which the Housing Priority is intended. Clear targets should be set for each scheme selected.

Some 50 per cent of the total expenditure on housing over the period 2000-2002 has been for the construction and acquisition of local authority housing for persons on housing lists in local authorities. We understand that policy has recently been reviewed and that it is now focused on new build, with acquisitions used on a more limited basis. As already acknowledged, both options have been achieved at significant cost over the initial three years of the NDP. Whether the local authority buys the services of the building and construction sector directly or makes acquisitions in the second-hand market, the impact on the market is the same. Both options imply increased expenditure which adds to demand and leads to upward pressure on house price inflation, given the inelastic supply of housing in the short run and given the constraints in the sector. The rationale for building rather than buying needs to be justified.

The funding for local authority housing is augmented by the proceeds of tenant purchase schemes. Over the period 2000-2002 existing tenants purchased a total of 4,450 units. Taking the average second-hand house price, if sold at market value, the total proceeds would be in the region of €618 million or €206 million per annum on average. This is almost 30 per cent of the average annual provision for local authority housing in the ESI OP. However, we understand that the price of a dwelling is based on the market value less any discounts/allowances to which the tenant is entitled. Estimates obtained from the Department of the Environment, Heritage and Local Government show that the total proceeds from sales over the period 2000 to 2002 was €271 million, or 44 per cent of the market value estimated above. We accept that use of national averages may exaggerate the extent of subsidy, but the central point remains: the State is struggling to meet demand for public housing while depleting the stock at below-market prices. Although the numbers of tenant purchases are declining we recommend that the tenant purchase scheme should be reviewed and that the full market value should apply in respect of each disposal.

Given the inelastic supply of housing in the short run, higher state expenditure on this Priority drives up prices. The failure to manage demand as well as supply is the core of the problem. Given that it is considered socially desirable to house some families who would never be able to house themselves, the result must be that other households delay forming an independent household. In the short run the reallocation of the housing stock can be achieved by



bidding up prices or through reducing private sector demand. It would be much better to manage demand, as discussed in Chapter 13, rather than to follow the inflationary route. In the longer run the answer lies in increasing the supply of housing.

In terms of the remaining NDP period, the extent to which the outstanding financial resources under the Housing Priority meet their objectives will depend on the extent to which both demand and supply are managed across the market as a whole. Given scarce resources, the appropriate approach is to cut private demand through raising the cost of housing – charging full infrastructural costs for second dwellings, eliminating mortgage interest relief, property tax etc. There has been some move in this direction with the abolition of the first time buyers' grant in the December 2002 budget.

The fifth measure in the ESI OP is the 'Accommodation for Groups with Special Needs'. This measure, according to the Indecon evaluation, was significantly over budget (+273 per cent) in the first three years of the NDP. As already noted, the expenditure to date suggests that housing travelling families and accommodating the homeless has been unusually expensive. A full explanation of the reasons for the significant cost overrun should be provided.

## HEALTH

The Health Priority is outside the scope of structural funds and the CSF and is totally financed from public funds. A total of €1.17 billion has been spent on the Health Priority to end 2002, compared with €3.04 billion planned for the 2000-2006 period. Two considerations are important in the context of further investment in the public health system:

First, expenditure (current and capital) has been growing at an exceptional pace in recent years: current real expenditure will have grown by 136 per cent (net of inflation) between 1996 and 2003. In 2003 Irish public expenditure on health per capita is on track to be the third highest in the EU. At the same time, the public perception is that the service has not improved in tandem.

Second, and partly as a result, a number of studies have been commissioned and have reported on the health system. The overall conclusion from these studies is that the system is not delivering benefits commensurate with its costs and is in need of reform.

We believe that further investment in the health system should only be undertaken in the context of meaningful reform, on the basis that identifiable benefits exceed the costs, and that the delivery of these benefits is subsequently assessed.

Two specific points can be made on the details of the programme as it stands:

- (i) The performance indicators used tend to measure inputs rather than outputs; in other words the question of how efficiently the increased resources are being used is not addressed.

- (ii) There is a multiplicity of Measures and Sub-Measures, on which the level of delivery varies widely.

In considering the funding needs for investment in health the key recommendation is that expanding physical capacity only makes sense once there is full utilisation of existing capacity. Because of current funding problems almost 270 beds were closed over 2002. The reintroduction of beds out of commission should take Priority over new build. Expansion of physical capacity should only take place once funding to utilise the additional infrastructure is assured. Otherwise there is a danger of capital stock being underutilised. As discussed in Chapter 13, this issue of utilisation of the capital stock is a common problem across the OPs and arises from the failure to apply similar evaluation criteria across current as well as capital expenditure. Capital investment, in Health or any other area, should not be seen as an alternative to best operational management of the existing capital stock.

In making any determination concerning future capital commitments for new beds in acute hospitals a number of issues need to be kept in mind:

- It is questionable if all beds currently available in acute hospitals have been open as a matter of routine in recent years. Large numbers of beds were closed at various times over the past few years due to such factors as staff shortages (particularly shortages of nursing staff) and this year a substantial number of beds in Dublin in particular have been closed due to what the hospitals indicate are funding deficits. In terms of addressing hospital capacity issues, therefore, it could be suggested that the first Priority should be to ensure that all beds in public hospitals remain open. There are also seasonal closures of beds that happen as a matter of 'routine', for example at holiday periods. A hospital bed is an expensive commodity, even when empty, so there would be a case for reviewing such routine closures with a view to increasing efficiency, access and throughput.
- Where increased capacity is considered warranted, it is difficult to justify committing public money to building new beds when currently 20 per cent of beds in public hospitals are designated as private or semi-private. These beds are subsidised by the State to a level of around 50 per cent (Commission on Financial Management and Control Systems in the Health Service, 2003, Table 5.1). The public health system could immediately gain an additional 20 per cent of capacity by the redesignation of these beds. (The hospitals would object because they see the *per diem* income from these beds as 'cash' and do not seem to recognise the fact that there is a net cost to the hospital from private/semi-private beds.)

New hospital beds are very costly; new beds have higher revenue costs than existing beds (primarily due to staffing requirements).

The experience of so-called ‘replacement’ hospitals has shown that the new facilities are always significantly more expensive to run than those they purport to replace. We concede that they will often be capable of supporting enhanced service delivery.

- There are probably a number of very specialised areas where bed capacity is a very serious problem currently and these may need review. One such area is Intensive Care.
- Private hospitals only treat elective patients, mainly on a day or five day basis. For the most part, the very sick are treated in the public health system. As a result, the current tax breaks for the building of private hospitals should be discontinued and the revenue saved applied to funding the necessary capital investment in the health sector under the NDP.

The non acute/continuing care measure is of considerable importance from a social inclusion and equality point of view. It can also contribute to reducing pressure on acute hospital beds by ensuring that appropriate secondary care is available for people who no longer need care in acute beds. A significant factor in current pressures on the acute hospital system arises from shortages in this sector. By providing appropriate secondary care significant capacity could be released in the acute hospital sector.



# 7. PRODUCTIVE SECTOR OP

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## 7.1 Rationale

The Productive Sector Operational Programme (PSOP) operates within the National Development Plan (NDP) and is one of three National (Inter-Regional) Programmes. It consists of five Priority areas, namely RTDI, Industry, Marketing, Sea Fisheries Development and Technical Assistance. The first four Priorities are designed to further enhance the economic development whereas the latter one is set up to accompany the former.

At the outset most of the public spending under the PSOP was earmarked to the Industry Priority (46.2 per cent), followed by the Research, Technological Development and Innovation (RTDI) Priority with 44.9 per cent. The Marketing Priority accounts for 7.9 per cent and the Sea Fisheries Development Priority has 1.0 per cent of the public budget. At the regional level 36 per cent was earmarked for BMW region and 64 per cent for the S&E region.

Following the Programme document the PSOP "... will aim to ensure that Ireland has a business environment and infrastructure that is as favourable as any other location worldwide." The objectives of the NDP and CSF to which the OP will contribute are:

- continuing sustainable national economic and employment growth;
- consolidating and improving Ireland's international competitiveness;
- fostering balanced regional development;
- promoting sustainable development throughout the sector through increased social inclusion, more environmentally friendly development and improved economic growth overall.

One special feature of the PSOP is the measure on RTDI. The importance of the development of research and innovation capacity in Ireland is discussed in Appendix 7. The Irish economy experienced a strong growth in R&D related activities within the last decade. Taking total gross expenditure on R&D (GERD) and business expenditure on R&D (BERD) values, Irish R&D expenditures significantly outperformed the aggregate EU and OECD areas. However, the gross and business R&D expenditure share as percentage of GDP is still lagging behind the average of both EU and OECD.

The international comparison shows that relative R&D performance is rather heterogeneous among OECD countries. Irish performance for both the business and non business R&D expenditures still ranks relatively low, with small R&D per GDP shares in both the 1980s and 1990s. Still, at least with respect to BERD volumes, Ireland experienced a period of strong growth, converging more rapidly to the international average than other cohesion countries such as Spain, Portugal and Greece.

The Irish R&D activities are especially dominated by industry R&D expenditure, which account for more than 70 per cent of the overall R&D activities in Ireland and fund more than 60 per cent of all R&D expenditures. The shares of government R&D and other sources both domestic and foreign, have been reduced throughout the last decades.

Taking into account additional innovation and R&D indicators, such as the number of professionals in R&D intensive industries or the number of researchers per person employed, the following findings are supported:

Ireland has experienced a strong growth in R&D related activities, dominated by the business/industry sector. With respect to researchers and professionals, Ireland is approaching the EU and OECD average more rapidly than other periphery/cohesion countries. Finally, both the service and manufacturing sectors exhibited especially high innovation costs and lack of financing opportunities which impeded the growth process. These factors should be taken into account when implying policy actions to enhance and maintain R&D activities.

Although the public R&D share in overall expenditures for Ireland reduces over time, government, will continue to have an important role in supporting business R&D through the creation of basic scientific and technical knowledge, which firms can incorporate into new products, processes and services.

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## 7.2 Current Activity

**B**efore examining the physical progress under each measure and Sub-Measure it is useful to review the financial progress for the period 2000 to 2002. In Table 7.1 we summarise the planned and actual spending for the public section of the PSOP. The table shows both the CSF spending and the NDP spending. It should be noted that the latter includes the CSF. This convention, where NDP refers to the total including the CSF is used throughout. At the national level, expenditure across the OP has totalled €1,072 million. This is equivalent to 51 per cent of the OP forecast, indicating that under-spending amounts to 49 per cent of the original OP forecast. Over the years 2000 to 2002 we observe a gradual decline in under-spending, in that the actual expenditure as a percentage of planned expenditure increases from 30 per cent to 57 per cent. The CSF accounted for €151.3 million or 14 per cent of the total funding and of this €79,10 million came from EU funding.

**Table 7.1: Financial Progress for PSOP 2000 to 2002, in € and % of Plan**

	Planned Spending		Actual Spending		Actual Spending as a % of Planned Spending	
	CSF	NDP	CSF	NDP	CSF	NDP
RTDI	289.7	919.5	147.2	403.4	51	44
Industry	0.0	992.7	0.0	555.2		56
Marketing	0.0	151.8	0.0	108.9		72
Sea Fisheries	22.0	24.7	3.9	4.0	18	16
Technical Assistance	0.6	1.2	0.2	0.2	33	17
Productive Sector OP	312.4	2,089.9	151.3	1,071.6	48	51

**Table 7.2: Physical Progress by Measure for the Period 2000 – 2002, % of Planned**

Priority	Measure	Progress
Research, Technological Development and Innovation (RTDI)	Education	180.6
	Industry	96.2
	Agriculture	69.4
	Food – Institutional R&D	310.0
	Marine	93.0
	Forestry	160.3
	Environmental RTDI	44.4
Industry	Indigenous Industry	110.0
	Food Sector – Agricultural Products	6.3
	Seafood Processing	0.0
Marketing	Film Industry	161.8
	Gaeltacht	130.4
	Foreign Direct Investment	86.7
	Industry	16.3
	Food Sector	11.5
	Seafood	6.4
Sea Fisheries Development	Tourism	
	Adjustment of Fishing Effort	0.0
	Fisheries Development	56.8
	<i>Renewal and Modernisation of Fleets</i>	4.0

*Source:* Own calculations using information from Mid-Term Evaluation of Productive Sector Operational Programme, Final Report by INDECON INC.

The Measures showing the highest degree of under-spending (neglecting Technical Assistance), are Sea Fisheries Development (just 16 per cent of planned spending), followed by RTDI (44 per cent) and Industry (56 per cent). The Marketing Priority has the lowest level of under-spending, with spending of 72 per cent of the OP plan. With the exception of the Marketing Priority some reduction in under-spending is apparent in 2002. At the regional level the figures indicate that in the BMW region just 34.4 per cent of the OP forecast was actually spent, while for the S&E region the figure is 60.3 per cent. So, the under-spending is substantially higher in the BMW region.

Taken as a whole, the picture suggests that during the period 2000 to 2002 financial progress has been slow for different reasons ranging from the Irish and international economic slowdown to implementation delays and funding problems, so that the original Mid-Term targets will not be achieved.

In Table 7.2 physical progress by measure is shown for the entire OP, using the key effectiveness indicator or, where not available, one output indicator as specified in the Programme Complements. As physical progress is reported at Sub-Measure level, the figures at measure level had to be calculated as a weighted average of the Sub-Measure indicators, where actual expenditure weights are applied. In general, the physical output across the Sub-Measures has been relatively positive compared with the financial progress. A second general conclusion is that the effectiveness indicators are missing in part, and that no impact indicators are shown. To be fair to the impact analysis, it seems much too early to be able to measure impact at the Sub-Measure level so that it is not remarkable that this is missing.

With regard to physical progress in the OP a mixed picture emerges although, there is significant physical progress across the Sub-Measures within this Priority and the mid-term targets will be achieved in most cases. For the RTDI Priority there are a number of notable findings. There has been no physical output of renewal of research equipment. With regard to Postgraduate students, progress has been very good with twice the projected number of Postgraduate and Postdoctoral students emerging from the Education RTDI measure. However, the number of individuals trained in R&D management under the Industry RTDI Measure has been zero. A substantial number of national collaborations have been established but no financial progress on an environmental centre of excellence was observed over the period 2000-2002, the OP evaluators conclude that uncertainty surrounds the completion of this project. Finally, where they are available, regional indicators show that progress has been concentrated in the Southern and Eastern region. This is not surprising, since most of the Measures and Sub-Measures are demand driven and the institutions that absorb the funding are located there.

The industry Priority also suffers from significant under-spending as compared to planned spending. However, many of the Measures appear to be achieving the physical progress targets. Nevertheless, there are some exceptions. There has been poor progress on incubation space, such that no firms were using the incubation space under the regional network Sub-Measure. The number of companies in receipt of R&D capability grants under the Foreign Direct investment measure is small, as are the number of firms that received training grants. Again, the regional pattern is much in favour of the S&E region. An exception is Indigenous Industry and the number of Business plans developed. The marketing Priority under-spending is small compared to the other priorities. The output Measures indicate that the mid-term targets



### 7.3 Lessons from OP Evaluation

should be achieved. The sea fisheries Priority is significantly behind financial targets and the output indicators are also behind target.

In this section we review the main findings of OP level Mid-Term Evaluation for each of the priorities under the headings Prioritisation, Effectiveness, Efficiency. There may be some overlap in some of the points. Then we set out the recommendations arrived at in the MTE. Statements, which summarise levels of expenditure or physical progress, are not repeated.

#### **PRIORITISATION IN THE OP**

The success of the programme as a whole depends on the selection of projects and the management of the programme. Therefore, relevant project selection criteria and procedures have to be utilised as is correctly highlighted by the OP evaluators, project selection should be on a competitive basis where only the best projects get funding. The Mid-Term Evaluation of this OP found the following:

- RTDI Priority – a competitive process features in respect of all Measures/Sub-Measures within the Priority, where such a process is applicable;
- Industry Priority – A competitive process currently applies only in respect of the Gaeltacht Land & Building Sub-Measure and the FDI Sites and Premises Sub-Measure, where competitive tendering applies;
- Marketing Priority – Competition does not feature in areas where project selection applies;
- Sea Fisheries Development Priority – competition is not currently applied in project selection.

Another point regards the transparency of selection process. In the vast majority of the cases the project selection procedures can be viewed as transparent. An exception, as the evaluators point out, is the FDI measure where transparency is questioned. The evaluators overall assessment concerning the management of the Programme is that this is impressive and furthermore “that the Managing Authority is actively engaged in ensuring that ongoing monitoring of the Programme takes place in line with standard EU and CSF Evaluation Unit guidelines.” (MTE, 362).

The evaluators’ assessment of the monitoring and performance indicators is that they are generally relevant. However, there is a need for significant improvements, especially with regard to the central issue of measuring impact and value added. There should be a particular interest in having consistency across the indicators. Moreover, the evaluators question the realism of the targets set down, since they are often not easily quantifiable and there is no reliable data source. Also, since the targets are not always realistic, it is difficult to judge the achievement of objectives by means of evaluating efficiency and effectiveness.

## EFFECTIVENESS OF THE OP

As noted above, the Programme is, in general, well managed and the Monitoring system delivers relevant output data, while performance/effectiveness indicators are largely missing. An assessment of the effectiveness of the PSOP has to take into account the fact that external developments have an impact on the effectiveness of the Measures and Sub-Measures. This ensures that financial progress is not the main criteria for the evaluation.

### *RTDI Priority*

In general, there is a significant amount of under-spending at the measure level, but there has been some acceleration in the overall rate of progress on an annual basis. The physical progress across the Sub-Measures indicates that physical output has been relatively positive in comparison to the mid-term targets. However, the evaluators show that progress has been mixed, with clear success in some areas, while other areas show difficulties in reaching the mid-term and possibly the final targets.

- The various targets under the *education measure* will be achieved by the end of 2003 or have been achieved by 2002. An exception is the Technological sector research-Sub-Measure in relation to the Postgraduate R&D Skills and Enterprise Platform strands.
- In relation to the *industry measure* most of the mid-term targets will be achieved. Exceptions are the Sub-Measure on “innovation management” and “collaboration in an international context”.
- In all other Measures of this Priority the mid-term targets should be reached, an exception is the “Marine-Research Sub-Measure”.

### *Industry Priority*

Under this Priority the key focus is to support the Irish industrial base. Specific industries (Food sector, Sea Food Processing, Film industry), regions (Gaeltacht) and enterprises, depending on their ownership (indigenous industries, foreign owned enterprises), are assisted.

In relation to physical progress, the OP evaluators point out the following:

- Under the Indigenous industry measure, they “believe that three out of the seven key effectiveness indicators across the seven Sub-Measures are likely to be achieved by 2003”.
- In the Food sector, although the number of projects supported exceeded the mid-term target in 2002, given the time lags involved in project completion, the mid-term targets for the key effectiveness indicator and other result and impact indicators are unlikely to be attained by end-2003.

This would suggest that the original targets might have been overly ambitious.

- In the Seafood Processing sector measure, the delay in commencement and the time lags involved in data collection have meant that no figures are available to-date in relation to physical progress. However, as the second tranche of funding is now underway, they would expect activity on this measure to accelerate in 2003/2004.
- Film Industry: all of the mid-term targets for the output indicators and impact indicators (including the key effectiveness indicator) have been achieved by 2002. Moreover, all but one of the final targets for the programme have also been attained. The speed at which the final targets have been achieved suggests grounds for revisiting these targets for the remainder of the Programme.
- Gaeltacht: under the Finance for Industry Sub-Measure, the mid-term and final targets may prove difficult to achieve for the companies involved, given the more difficult economic climate. For the same reasons, the mid-term and final targets for gross job creation (the key effectiveness indicator under this Sub-Measure) are likely to prove difficult to attain. However, progress on the Land & Buildings programme is on target although achievement of the final targets may prove more challenging if the current climate persists.
- Foreign Direct Investment: The evaluators believe that the mid-term targets in respect of three out of six of the key effectiveness indicators across the six Sub-Measures are likely to be attained. However, progress on remaining physical indicators is mixed.

### *Marketing Priority*

The overall objective of the Marketing Priority is to enhance the marketing effort in key, strategically critical areas of Ireland's industrial base.

- When compared to the other priorities, the financial progress of the Marketing Priority is best. The expenditure between 2000 and 2002 was equivalent to about 70 per cent of the forecast for this period.
- In terms of physical progress and effectiveness, the key effectiveness indicators for the Seafood and Tourism marketing Measures have been achieved by 2002, while it is likely that the key effectiveness indicator for the Industry marketing measure will be met in 2003. It is unlikely, given the economic climate, that the key effectiveness indicator for the Food marketing measure will be met.

### *Fisheries Development*

- The expenditure adds up to just 16 per cent of the plan. In relation to the external environment of the Priority, the main factors affecting progress relate to the deteriorating exchequer financial position, sector-specific developments such as the timescales involved in seeking and obtaining EU State aids approval and the impact of EU Regulations limiting sea fishing activities off the North West coast.
- Physical progress to-date has been slow, particularly in relation to outputs and results. The evaluators indicate that it is unlikely that mid-term targets for output and result indicators across the Priority will be achieved by 2003.

### **EFFICIENCY OF THE OP**

The MTE of the Productive Sector OP contains a rather limited amount of information on the efficiency of the Measures and Sub-Measures. The calculation of efficiency Measures suffers for a number of different reasons. First, the indicators at hand often cannot be used to construct a reliable cost measure. Second, output indicators that could be used are not available, and third the quality of the indicators may be poor. Finally, several Measures and Sub-Measures, especially under the RTDI Priority and under R&D, contain risky projects where output is uncertain. In these circumstances project selection criteria should assure efficiency. The evaluators recommend that closer attention should be given to the development of appropriate efficiency indicators.

In a few cases unit-costs were calculated. An analysis of the cost-per-job, provided through the main development agencies, has shown that, while cost-per-job fell continuously in IDA Ireland and Enterprise Ireland up to 2001, there was an increase in this indicator in 2002.

The OP evaluation highlights the possibility of potential deadweight and displacement risks in some Measures. This is especially evident in the RTDI-industry, the Industry-Gaeltacht and the Marketing-industry Measures. Further evidence would be needed to focus on these Measures.

### **RECOMMENDATIONS OF THE OP EVALUATION**

In the following we reproduce the main recommendations of the OP evaluators. It has to be pointed out that nearly all of them trace back to details of financial and physical output without establishing an association to an economic rationale. The problem of the reallocation of funds is not solved since there are undefined terms and definitions that make it difficult to give clear indications.

*Overall OP Issues*

- Where there are doubts on whether spending targets will be met under any specific measure, the funds should be reallocated to other areas.
- Where data on key performance indicators are not available, close attention should be given by the monitoring committee to reviewing these Measures and, where appropriate, consider scaling back on investments or closing Measures.
- Increased targeting of expenditure on those Measures that align with the government's spatial strategy.

*RTDI Priority*

- Scaling back expenditure in RTDI areas where it is judged that investments will not be spent effectively during the programme period.
- Re-examine the profiling of expenditure on RTDI measures to ensure that funding is targeted on research activities that display public good characteristics and where potential deadweight is minimised.
- Closer alignment between capital and current areas of spending under the RTDI Priority.
- Retargeting of both funding and selection procedures to ensure that a higher proportion of projects funded under the RTDI measure are undertaken in areas prioritised in the Government's spatial strategy.
- Adjust management and delivery of the RTDI Priority Measures to ensure greater application of the programme Horizontal Principles.
- Greater attention given to the improvement of monitoring and performance indicators within the RTDI Priority, so as to facilitate more accurate assessment of expenditure efficiency, results and impacts.

*Industry Priority*

- Scaling back expenditure in areas under the industry Priority where it is judged that investments will not be spent effectively during the programme period.
- Greater use of equity to replace grant aid in Gaeltacht areas.
- Revision of Údarás na Gaeltacht land and building programme.
- Restricting FDI grants to regional areas prioritised under the National Spatial Strategy or to sectors where there are strategic advantages.

*Marketing Priority*

- Scaling back expenditure in areas under the marketing Priority where it is judged that investments will not be spent effectively during the programme period.
- Greater cost recovery in marketing services.
- Sea Fisheries Development Priority
- De-commitment of funding if it is judged expenditure targets will not be met.

**Table 7.3: Recommendations on the Productive Sector Operational Programme**

Measure	Total Expenditure 2000-2002, €million		Recommendation	Comment
	CSF	NDP		
<b>Research, Technological Development &amp; Innovation (RTDI)</b>				
Education	63.708	152.524	Same	The need to expand investment in the long run in research is accepted. However, this does not mean that it will always deliver the expected return. It is very important to put in place a model for allocation that incentivises research that will make an appropriate contribution. As with the building sector, the attempt to ramp up investment in this area very rapidly has significant costs. It is difficult to always pick winners when there has not been time and experience in identifying problem areas. There is also a problem with investment being disproportionately in buildings which are now not fully utilised.
Industry	83.485	169.898	Reduce	The infrastructure research capability should be reduced; the rest is left unchanged.
Agriculture	0	24.68	Reduce	The prospects for the agricultural sector are poor. Output is not expected to rise so potential returns from investment in the agricultural sector are low. Teagasc research should be retargeted on areas that may show an expected return – the environment, forestry (as part of land use) etc.
Food – Institutional R&D	0	14.871	Reduce	It is not clear why this sector should be treated separately from research in other industrial sectors. This measure should be eliminated and the food sector should compete under the industry measure.
Marine	0	32.111	Reduce	This sector shows poor prospects for future growth. This measure should be eliminated and the sector should compete under the industry measure.
Forestry	0	3.215	Same	The prospects for this sector are better than for agriculture.
Environmental RTDI	0	6.139	Same	The allocation process should be examined to ensure that transactions costs are minimised.
<b>Industry</b>				
Indigenous Industry	0	210.409	Reduce	The venture capital Sub-Measure looks to be successful, while other Sub-Measures show little financial progress.
Food Sector – Agricultural Products	0	2.06	Reduce	This sector faces poor growth prospects and it should any way compete with other indigenous industry.
Seafood Processing	0	2.071	Reduce	This sector faces poor growth prospects and it should any way compete with other indigenous industry.
Film Industry	0	26.397	Reduce	This sector was also funded through the tax system – providing excessive funding. Having provided incentives for the “infant” industry, total public provision should be less generous. As the stimulus has been given to the industry to get it started it is time to phase it out. Further support for the industry

Gaeltacht	0	98.449	Reduce	should be part of broad support for cultural activities outside the NDP. Support for land and buildings produces a very low return and was eliminated elsewhere. Support under this measure should be ended whereas the financial grants should be the same.
Foreign Direct Investment	0	215.766	same	The nature of the support is that it is demand driven. It is anticipated that demand will remain low in 2004. Support should be targeted more at R&D than employment grants. International competitiveness should be assured by enhancing productivity not supporting wages.
<b>Marketing</b>				
Industry	0	18.566	Reduce	The market failure that justified this in the past is likely to have been reduced by the changing structure of the sector. Further support should be restricted to areas where significant externalities can be expected (i.e. SME and export activities).
Food Sector	0	19.442	Reduce	This measure should be merged with the industry measure
Seafood	0	3.384	Reduce	This measure should be merged with the industry measure.
Tourism	0	67.485	Same	The market failure that justified this in the past is probably still there. The downside is that the prospects for future growth are much lower than in the past.
<b>Sea Fisheries Development</b>				
Adjustment of Fishing Effort	0	0	Reduce	It is not clear that there is potential for growth in output in the sector. In fact, output may fall.
Fisheries Development	3.412	3.412	Reduce	It is not clear that there is potential for growth in output in the sector. In fact, output may fall.
Renewal and Modernisation of Fleets	0.492	0.553	Reduce	It is not clear that there is potential for growth in output in the sector. In fact, output may fall.
<b>OP Technical Assistance</b>	0.193	0.193	Same	

## 7.4 Recommendations

Because of the success of the economy in recent years, the extent of the market failure in the productive sector has been reduced. The clear success of the market sector of the economy indicates that many of the perceived reasons for market failure have been removed or addressed in earlier NDPs. As a result, it is anticipated that there will be reduced need for intervention over the rest of the current planning period.

There are some areas included in the OP where there are public good elements that still argue for significant continued support. However, these areas suffer by comparison with much of the ESI OP in that it is difficult to quantify output and impact. Thus measuring success in this sector is more difficult and the likely returns on some Measures, while potentially high, are difficult to quantify. This is especially true for the R&D and RTDI measure and Sub-Measures.

The recommendations for the Productive Sector OP that are covered in this section are derived by applying the scoring method that was described in Chapter 4. A central issue is to what extent public sector interventions are needed for specific Measures and Sub-Measures. For several Measures this is questionable since there are substantial private returns on investment, or funding is provided

for sectors that have low growth prospects. Second, financial and physical progress is taken into account and combined with the results of the scoring to produce recommendations for the period 2004 to 2006.

**Table 7.4: Summary of Recommendations on the Productive Sector OP € million**

	CSF			2004 Recomm- ended	2002 Expend- iture	NDP	
	2002 Expend- iture	2003 Comm- -ments	2004 Preliminary Comm- -ments			2003 Estimates	2004 Recomm- ended
Productive Sector OP	73	80	58	49	468	527	451
RTDI	71	69	49	49	196	232	235
Industry	0	0	0	0	235	240	185
Marketing	0	0	0	0	34	47	30
Sea Fisheries	2	12	9	0	2	8	0
Technical Assistance	0	0	0	0	0	0	1

*Notes:* For 2002 and 2003 the CSF expenditure includes Cohesion and TENS funding as well as public funding. These are not relevant for 2004. The table only includes public expenditure by the EU and the State.

Overall, at the Priority level the RTDI and Industry Measures remain a high Priority as they address areas of market failures. Especially for R&D, it could be shown that Ireland's performance has been unfavourable relative to the EU and OECD. As a result, further investment is needed to reduce the gap.

The scoring exercise and the analysis of financial progress for this OP suggests that the overall funding may be somewhat too large for this OP and that some funding should be reallocated from here to other parts of the NDP. The discussion of the reallocation within the OP is done at the measure and Sub-Measure level and shown in Table 7.3. This NDP level evaluation in some cases reaches different conclusions than the OP level evaluation. These differences arise from either a different assessment of market failure when the OP is viewed in the context of the total NDP, or else because of the macro-economic forecast for individual sectors. As discussed in Chapter 4, the recommendations for each measure are made in terms of "increase", leave unchanged ("same") or "reduce" the relevant measure. It has to be pointed out that these recommendations are based on the data for the financial spending during the period 2000 to 2002. Commitments or contracts that have been already entered into are not considered. Furthermore, the regional component in this OP seems somewhat arbitrary since the main bulk of the Measures are demand driven and the authorities have little or no influence concerning the spatial distribution. As a result, the recommendations are not regionally differentiated. A more detailed explanation for the recommendations is given in the text after the table.

Set out in Table 7.4 is a summary of our recommendations for 2004, using the estimates for 2003 as a basis. The allocation is made within the indicative "envelope" specified by the Department of



Finance for 2004-2006. The recommendations are made at a “Priority” level.

The detailed recommendations translate into a reduction in funding for the OP in the NDP. The provision for RTDI “Priority” is broadly unchanged compared to 2003. For the other “Priorities” it is recommended that there be significant reductions in funding compared to 2003. In the case of the CSF, which will see a major reduction in size over the period 2004-2006, it is recommended that the remaining funding in the OP be concentrated on the research Priority.

## **RTDI**

As discussed in Chapter 4, and the introduction to this chapter, while an area of investment may be a very high Priority, the costs of delivering it may be much higher if investment is increased too quickly. Therefore, a more gradual approach may provide better value for money and a higher ultimate return on any given budget.

Most of the Sub-Measures under the education and industry measure show high scores and are therefore justified on economic grounds. This is not true for most of the other Sub-Measures in this Priority. However, financial progress is mixed, most of the Sub-Measures show substantial under-spending. Even if the financial progress in the short run is mixed the need to expand investment in research is accepted in the long run. Yet this does not mean that it will always deliver the expected return. R&D investment can prove unproductive and its impact is only observable in the long run. It is very important to put in place a model for allocation that incentivises research that will make an appropriate contribution.

As with the building sector, the attempt to build up investment in this area very rapidly has produced significant costs. It is difficult to always pick winners when there has not been time and experience in identifying problem areas. As with the other OPs, there is a danger that capital expenditure may be given higher Priority over current expenditure, even if there are Sub-Measures that support individual current research projects. This could result in the expensive infrastructure not being utilised to capacity. Future utilisation and financial staging should be part of the project selection criteria.

When it comes to research targeted at specific sectors attention has been paid to the medium to long-term growth prospects of those sectors. Where sectors are not expected to grow significantly, or even in some cases to contract, the likely return from investment in R&D can be expected to be lower than the average. Of course there will still be areas where returns may be high but these will need special justification.

For example, the prospects for the agricultural and marine sectors are poor. Output is not expected to rise, so potential returns from investment in the agricultural sector are low. Teagasc research should be retargeted on areas that may show an expected return – the environment, forestry (as part of land use) etc. Again, even in

these sectors, there are some areas where high returns might be expected and market failures are present. But support should only be given to those businesses that have a significant opportunity to compete in the long run on international markets without requiring continuing support.

It is not clear why research in the food sector should be treated separately from research in other industrial sectors. This also applies to the marine sector. These special sectoral Measures should be eliminated and the food and marine sectors should compete under the industry measure.

## **INDUSTRY**

In the provision for industrial support, the arguments for intervention in terms of market failure are much lower than they were in the early 1990s. As a result, we recommend a winding down of such activity. The financial performance of this Priority has reflected the changing needs of the sector. The provisions made in the NDP were too generous, even with a rather different economic climate. With the benefit of hindsight, it is clear that a smaller provision would be appropriate for the rest of the planning period and that any larger provision would be likely to be unused. While there is a general concern about deadweight and the rationale for state intervention as part of this Priority, it must be acknowledged that significant progress has been made in sharing risk. Thus there has been a general move away from non-refundable grants where the risk of the project was largely borne by the State to a higher emphasis on refundable loans. This re-orientation of support to enterprises is welcomed.

As discussed in Chapter 4, support for individual business sectors should be abolished and all sectors should compete for funding under a single measure. This would ensure that similar project selection criteria were applied and similar rates of return achieved.

Apart from these general conclusions some specific recommendations can be made. In the case of indigenous industries the venture capital measure performed well. Since highly risky projects may exhibit positive externalities there are some arguments for enhancing this Sub-Measure. Looking at the Sea Food Processing and Agricultural Product industries, the future growth potentials are limited with the possible exception of the aquaculture sub-sector. The economic impact of the support is expected to be small and the utilisation is small. It seems appropriate to reduce these Sub-Measures and transfer the funds to other areas. These sectors should be allowed to compete for funding on the same basis as other indigenous firms.

Supporting the Film industry has led to growing output and employment. However, it also received very substantial support through the tax system. Having provided incentives for the “infant industry”, total public provision should be much less generous from now on. If further support for the industry is to be provided this

should be done as part of broad support for cultural activities. The industry should then compete against other cultural activities to attract future funding. This approach, providing a more competitive environment for support, is in character with the recommendations we have made for other Measures in this and other OPs.

A special case concerns the support of foreign-owned companies. Foreign direct investment was one of the main drivers of Irish economic development in recent decades. Most Sub-Measures under FDI did not perform well during the years 2000 to 2002. An exception is the Sub-Measure on capital grants. There may be several reasons for this. Concerning R&D, it can be shown that foreign-owned companies do most of their research in the home country. Second, the Irish national innovation system may be too limited, so that the companies do not ask for grants. Therefore, it could be better to reduce the research grants under FDI and raise the funds for other grants or to enhance endogenous potential, to use the funds for the support of networks on R&D between foreign owned and indigenous industries. It is questionable whether employment grants are useful when the economy is close to full employment.

Finally Fitz Gerald *et al.* (1999), recommended that support for land and buildings to support industry be abolished. While this has generally happened elsewhere it has remained in the Gaeltacht measure. It is now time for support under this measure should be ended. The financial aid Sub-Measure for the industry should remain the same for the period 2004 to 2006.

## **MARKETING**

In the case of marketing, the recommendations are informed by the evidence of reduced market failure and differential prospects by sector. With regard to market failure it is noteworthy that within this Priority the industry marketing measure is specifically aimed at SMEs where there is a likelihood, due to their small size, that these firms are not able to market their products internationally. Thus this measure does address a possible market failure and there is justification for continued funding of the measure. With regard to tourism, the fragmented nature of the sector still argues for public intervention in marketing. However, for the broad industrial sector the growth in the sector's expertise means that the need for centralised provision of marketing services is reduced compared to the 1980s and the 1990s. Overall, the funds that will be available to this measure should be targeted at SMEs that may not be able to enter international markets. Of course in this respect efforts should be made to encourage such firms to pool resources for marketing.

## **SEA FISHERIES DEVELOPMENT**

The Measures under this Priority account for only a small share of the OP. In general, the growth prospects of this sector are very limited. This Priority does not make a significant contribution to national economic development. While the sector is concentrated

geographically in a few localities, mostly on the western seaboard in the BMW region, one might argue that the expenditure under this Priority contributes to regional balance and rural development. However, the sea fisheries sector is subject to the EU Common Fisheries Policy (CFP). The CFP imposes quotas on a variety of fish species, in order to conserve stocks, and these are particularly important for the high value species. Thus the potential to increase output in this sector is limited and indeed output may fall. Consequently, investment in the sea fisheries sector is unlikely to have a high return. Furthermore, the measure, in common with other Measures aimed directly at the private sector, may be subject to substantial deadweight. Overall, this would suggest that the funds would be reallocated to areas where a significant impact could be expected.

# 8. EMPLOYMENT AND HUMAN RESOURCES DEVELOPMENT OP

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## 8.1 Rationale

The purpose of the EHRD OP is to address the labour market and human capital needs of the Irish economy for the 2000-06 period. As set out in the OP document, the overall objectives of the OP are to:

- promote employment growth and improve access to, and opportunities for, employment;
- mobilise all potential sources of labour supply and enhance its quality in order to address skills and labour shortages across the economy as a whole;
- promote the development of a strategic lifelong learning framework;
- promote equal opportunities between women and men, in particular through a gender mainstreaming approach;
- promote social inclusion with particular reference to the reintegration of the socially excluded and the long-term unemployed into the labour force;
- strive for balanced regional development, by addressing the existing and potential education, training and skills deficits of the Border, Midland and Western and Southern and Eastern regions;
- contribute to the protection and improvement of the environment.’ (EHRD OP page 62-63)

The OP is organised around 4 Priorities, summarised in Figure 8.1.

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## 8.2 Current Activity

Table 8.1 shows planned and actual expenditure by Priority for the 2000-2002 period. Overall, as of end-December 2002, the EHRD OP had invested 88 per cent of forecast expenditure to date, so the OP is broadly on target with respect to financial progress. There was, however, substantial variation in financial progress by Priority. The Employability Priority was at 95 per cent of targeted expenditure, and Adaptability was at 84 per cent. However, expenditure on the Entrepreneurship Priority was 76 per cent below that forecast to end 2002, and the underspend in respect of Equality was 79 per cent.

**Figure 8.1: EHRD OP Priority Level Objectives****Priority 1: Employability**

1. To mobilise all potential sources of labour supply.
2. To minimise unemployment and prevent the drift into long-term unemployment by strengthening the preventative approach.
3. To promote social inclusion with particular reference to the re-integration of the socially excluded and the long-term unemployed into the labour force.

**Priority 2: Entrepreneurship**

4. To support sustainable productivity and competitiveness improvements in existing businesses, and SMEs in particular, by improving education and training levels and to intensify policy efforts to that end.
5. To more fully exploit the employment or income-generating potential of the Social Economy initiatives in regard to disadvantaged individuals or groups at local level.

**Priority 3: Adaptability**

6. To promote a skills trained and adaptable workforce by facilitating people in the wider economy and in specific sectors to adapt their skills to changing labour market requirements through further training, re-skilling and lifelong learning.
7. To enhance the quality of labour supply through continued investment in education and training and, in particular, through developing a strategic and flexible framework for lifelong learning.
8. To enhance the quality of labour supply and ease of adaptability by developing and deploying an improved framework of certification and qualifications.

**Priority 4: Equality**

9. To promote equal opportunities between men and women.
10. To adopt a comprehensive gender-mainstreaming approach, including Measure components to tackle gender employment gaps, and monitoring of progress through adequate data collection.

**Table 8.1: EHRD OP Actual vs Planned Expenditure 2000-2002**

	<b>Planned, 2000-2002</b>	<b>Actual, 2000-2002</b>	<b>Actual as Per Cent of Planned</b>
<b>Total OP</b>	<b>6,740.8</b>	<b>5,962.5</b>	<b>88.5</b>
Employability	3,478.6	3,302.5	94.9
Entrepreneurship	337.1	80.3	23.8
Adaptability	1,457.4	1,221.8	83.8
Equality	11.9	2.5	21.0
Other Measures	1,455.8	1,355.4	93.1
<b>TOTAL CSF</b>	<b>870.3</b>	<b>598.2</b>	<b>68.7</b>
Employability	511.3	429.4	84.0
Entrepreneurship	173	57.3	33.1
Adaptability	170.6	108.6	63.7
Equality	10.7	1.5	14.0
Other Measures	4.7	1.4	29.8
<b>TOTAL EU</b>	<b>494.8</b>	<b>339.1</b>	<b>68.5</b>
Employability	294	245.3	83.4
Entrepreneurship	99.2	33	33.3
Adaptability	93.6	59.3	63.4
Equality	5.5	0.8	14.5
Other Measures	2.5	0.7	28.0

**Table 8.2: CSF and EU Shares of Planned and Actual Expenditure, 2000-2002**

	Plan Per Cent	Actual Per Cent
Total CSF	12.9	10.0
Total EU	7.3	5.7

**Table 8.3: EHRD OP Co-financing: Planned Expenditure by Priority and Measure**

Policy Field	Employment Guidelines (NEAP 2000)
<b>Active Labour Market Measures</b>	
02 ESF National Employment Service	1, 2 and 3
05 ESF School Completion Initiative	7 and 8
11a ESF Early School Leavers Progression	7 and 8
11b ESF ESL – Youthreach and Travellers	7, 8 and 9
14a ESF Apprenticeships/Traineeships – FÁS	17
<b>Social Inclusion</b>	
03 ESF Active Measures for LTU and Socially Excluded	3 and 9
09 ESF Third Level Access	17
33a ESF Technical Assistance – Equality Studies	18
<b>Lifelong Learning</b>	
21 ESF Lifelong Learning-BTEI	5, 6, 21 and 22
22 ESF Lifelong Learning-National Adult Literacy Strategy	5, 6 and 21
<b>Adaptability and Entrepreneurship</b>	
13 ESF Skills Training for the Unemployed and Redundant Workers	21
18aESF In-Company Training – FÁS	17
18bESF In-Company Training – EI	17
19a ESF Social Economy Programme	12
19b ESF Social Economy – Local Social Capital	12
26 ESF Undergraduate Skills	17
29b ESF Quality Assurance/certification and national Qualifications Framework	5 and 6
<b>Gender Equality</b>	
30 ESF Educational Disadvantage	19
31a ESF Equal Opp Promotion and Monitoring- education	19
31b ESF Equal Opp Promotion and Monitoring- NDP	18, 19 and 21

Source: Fitzpatrick Associates and ESRI (2003) EHRD OP Mid-Term Evaluation, Final Report.

**Table 8.4: Actual vs Planned Expenditure by Region, 2000-2002**

	Plan (€m)	Actual (€m)	Actual as % of Planned
<b>BMW Total</b>	1,965.5	1,781.6	90.6
Employability	993.6	1,033.6	104.0
Entrepreneurship	89.5	31.8	35.5
Adaptability	516.6	371.0	71.8
Equality	1.0	0.3	30.0
Other Measures	364.9	344.9	94.5
<b>S&amp;E Total</b>	4,775.2	4,181.5	87.6
Employability	2,485.0	2,268.9	91.3
Entrepreneurship	247.6	48.5	19.6
Adaptability	940.8	851.4	90.5
Equality	10.9	2.2	20.2
Other Measures	1,091.0	1,010.5	92.6

**Table 8.5a: Total Planned and Actual Expenditure, 2000-2002. Employability Priority**

	Planned	Actual	% of Planned
1 Action Programme for the Unemployed	345.4	109.9	31.8
2 National Employment Service	122.4	152.0	124.1
3 Active Measures for LTU and Socially Excluded	1,089.6	1,200.5	110.2
4 Early Education	25.5	0.5	1.8
5 School Completion Initiative	56.8	25.6	45.2
6 Early Literacy	8.0	7.6	95.0
7 Traveller Education	5.5	8.1	145.1
8 School Guidance Service	55.9	67.2	120.3
9 Third Level Access	72.1	35.2	48.8
10 Schools Modern Languages	11.4	6.4	56.3
11a Early School Leavers Progression	129.0	79.0	61.2
11b Early School Leavers Youthreach and Travellers	133.6	94.2	70.5
12a Sectoral Entry Training Tourism School Leavers	31.1	25.3	81.4
12b Sectoral Entry Training Tourism	19.9	27.1	136.3
12c Sectoral Entry Training Tourism (Education)	36.1	42.2	117.0
12d Sectoral Entry Training Agriculture	33.7	33.3	98.9
13 Skills Training for Unemployed and Redundant	76.0	269.0	354.0
14a Apprenticeship/Traineeship (FÁS)	384.5	366.7	95.4
14b Apprenticeship (Education)	49.5	74.7	150.8
15 Employment Support Services	691.1	568.1	82.2
16 Vocational Training & Pathways Employment People with Disabilities	99.1	107.4	108.4
17 Refugee Language Support Unit	2.4	2.6	109.6
<b>Total Employability Priority</b>	<b>3,478.6</b>	<b>3,302.5</b>	<b>94.9</b>

CSF funding accounted for almost 13 per cent of total planned expenditure in the OP for the years 2000-2002, and 10 per cent of total actual expenditure. EU funding accounted for 7.3 per cent of total planned OP expenditure for the period, and 5.7 per cent of actual. The European Social Fund (ESF) funding in the EHRD OP accounts for 85 per cent of the total of €1.057 billion ESF funding under the 2000-06 Irish CSF. ESF co-financing is intended to have a strategic and value-added role in contributing towards the achievement of the OP's labour market and human resources development objectives. The overall objective of the ESF is to support and complement the EHRD OP's labour market and human resources development objectives by contributing to actions in support of the European Employment Strategy.

**Table 8.5b: Total Planned and Actual Expenditure, 2000-2002, Entrepreneurship Priority**

	Planned	Actual	% of Planned
18a – In Company Training (FÁS)	80.7	35.5	44.0
18b – In Company Training (Enterprise Ireland)	66.5	13.1	19.7
19a – Social Economy	186.6	31.7	17.0
19b – Social Economy – Local Social Capital	3.3	0.0	0.0
<b>Total Entrepreneurship Priority</b>	<b>337.1</b>	<b>80.3</b>	<b>23.8</b>



**Table 8.5c: Total Planned and Actual Expenditure, 2000-2002, Adaptability Priority**

	Planned	Actual	% of Planned
20 Lifelong Learning - General Training	4.3	6.9	161.2
21 Lifelong Learning - Back to Education Initiative	508.8	256.7	50.5
22 Lifelong Learning - National Adult Literacy	51.8	39.5	76.2
23 Lifelong Learning - Further education Support	15.1	6.1	40.2
24a Ongoing Sectoral Training (Cultural, Gaeltacht and Film)	12.7	15.9	125.3
24b Ongoing Sectoral Training – Seafood	5.7	5.2	91.5
24c Ongoing Sectoral Training – Forestry	7.3	4.4	60.8
24d Ongoing Sectoral Training – Equine Institute	0.8	0.5	67.4
24e Ongoing Sectoral Training – Agriculture	3.5	3.5	100.0
24f Ongoing Sectoral Training – Tourism	9.6	13.3	138.6
24g Ongoing Sectoral Training – Tourism Training	8.5	5.8	68.1
25 Middle-Level Tech/Higher Tech Business Skills	668.1	699.2	104.6
26 Undergraduate Skills	63.4	55.8	87.9
27 Postgraduate Courses	19.4	23.9	122.8
28a Training of Trainers – Primary, Post-Primary and Tertiary	53.1	53.6	101.0
28b Training of Trainers – FÁS	4.0	1.5	37.9
29a Quality Assurance	12.9	13.3	103.6
29b Quality Assurance – Certification	8.5	16.7	196.6
<b>Total Adaptability Priority</b>	<b>1,457.4</b>	<b>1,221.8</b>	<b>83.8</b>

**Table 8.5d: Planned and Actual Expenditure, 2000-2002, Equality, Infrastructure and Other Priority**

	Planned	Actual	% of Planned
30 Educational Disadvantage	3.8	1.1	28.7
31a Equal Opp Promotion/ Monitoring (Education)	5.6	0.5	8.7
31b Equal Opp Promotion/ Monitoring (NPD)	2.5	1.0	38.0
<b>Total Equality Priority</b>	<b>11.9</b>	<b>2.5</b>	<b>21.3</b>
32 Infrastructure	1,420.5	1,314.3	92.5
33 Technical Assistance	1.3	0.4	32.5
Total Other Measures	1,455.8	1,355.4	93.1
<b>TOTAL EHRD OP</b>	<b>6,740.8</b>	<b>5,962.5</b>	<b>88.5</b>

Table 8.3 lists the 20 ESF co-financed Measures/Sub-Measures; these include 18 education, training and employment and two technical assistance Measures/Sub-Measures, and also indicates to which EES Policy Field and Guideline they relate.

Table 8.4 shows summary expenditure data by region. Overall, total expenditure in the Border, Midland and Eastern Region over the years 2000-2002 was €1.781 billion, 91 per cent of planned. The corresponding figures for the Southern and Eastern Region were €4.182 billion and 88 per cent, respectively. The underspend in the S&E region was particularly high, about 80 per cent, in respect of both Entrepreneurship and Equality.

Tables 8.5a-d show detailed planned and actual expenditure to end-2002 by Measure and Sub-Measure. Of the 22 Measures in the Employability Priority, actual expenditure was 90 per cent less than planned in 9 Measures; in 6 Measures actual expenditure was approximately on target (90-110 per cent of planned), and in 7 Measures expenditure was more than 110 per cent of planned. Actual expenditure on two very large Measures, 3 and 14a, was close to planned, and was substantially above the target figure in the case of Measure 13, Skills Training for Unemployed and Redundant Workers.

Actual expenditure under the Entrepreneurship Priority was well below target in all 4 Measures and Sub-Measures. Under the Adaptability Priority, actual expenditure was less than 90 per cent of planned in respect of 8 Measures, close to target in respect of 5 Measures, and in excess of planned (more than 110 per cent) in respect of another 5 Measures. Actual expenditure on the largest single Measure under this Priority, Measure 25, Middle Level Technician/Higher Technical Business Skills, was very close to planned. However, expenditure on the second largest Measure in the Priority, Measure 21, Back to Education Initiative, was only 50 per cent of planned. Expenditure on the Equality Priority was well below target, while that on Infrastructure was close to planned. In general, financial progress in the EHRD OP has been largely driven by the largest programmes. Expenditure on most of these was broadly on target, while expenditure on many of the smaller programmes fell well below target.

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### 8.3 Lessons from OP Evaluation

In this section we set out the main results from the Mid-term Evaluation of the OP.

#### **PRIORITIES IN THE OP**

The Mid-Term Evaluation notes that a number of important trends have emerged since the commencement of the OP:

- Deterioration in the economic environment leading to no or to low output growth in the economy;
- Sluggish employment growth and increasing unemployment, in particular short-term unemployment;
- Higher than expected inflation during to date which, although now easing, is likely to continue to affect education and training costs;
- Decline in numbers in the groups aged 5-14 and 15-19 years which provide the traditional intake to post-secondary education Measures funded under the OP;
- Constraints on the public finances, which will have some direct implications for 2003 and 2004-06 EHRD OP expenditure.

The remainder of the OP period will experience a very different economic climate than was the case when the OP commenced. The

outlook is further complicated by the fact that the OP was drawn up at a time when the changes brought about by rapid economic growth were only beginning to be fully understood. There is, therefore, also an element of delayed adjustment which should now still take place, particularly in relation to the emphasis on the long-term unemployed as distinct from the short-term unemployed and those in work.

The changes in the external macro-economic, demographic and policy environment were considered to have a number of direct implications for the rest of the OP period:

- the need to re-balance expenditure in the light of the dramatic fall in the numbers of unemployed and long-term unemployed;
- the need for adjustments within Active Labour Market Policies to reflect recent developments:
  - greater focus on short-term unemployment in the light of growing job losses, and in order to ensure preventative action so that long-term unemployed numbers do not rise;
  - more focused and progression led interventions for the long-term unemployed and socially excluded;
  - greater focus on supply side interventions having strong labour market linkages which have a significant impact on participants' future employment prospects.
- falling demographic numbers in the initial education age cohorts suggest falling demand for some of this provision, and the need for older age groups to replace that group as a source of flexible labour supply for the economy. This in turn suggests a relatively greater emphasis in the future on continued education;
- a need for greater focus on training for those at work;
- a need for increased emphasis on lifelong learning opportunities for everyone in Irish society at all levels – in work, out of work and out of the labour force, and for innovative responses to this;
- a need for a greater awareness of and focus on costs and cost effectiveness in HRD provision.

## **FINANCIAL PROGRESS**

As noted above, as of end-2002 the OP had invested approximately €6.0 billion (or 89 per cent) of forecast expenditure. The Evaluation concluded that the OP could therefore be said to be broadly on target in expenditure terms, particularly taking account of front loading of some financial projections for administrative reasons (i.e. the Berlin profile).

In relation to the ESF co-financed Measures, the OP had invested 68 per cent of forecast expenditure at the end of 2002. In relation to the regional split of funding between the Border,

Midland and Western and Southern and Eastern Regions, performance in each region was equivalent to the overall OP average.

The OP-wide performance masks great differences at Priority level. 'Employability' is above the OP average at 95 per cent, and 'Adaptability' is just below at 84 per cent. In contrast, both 'Entrepreneurship' and 'Equality' are far below, at 24 per cent and 23 per cent of the end-December 2002 target, respectively. These patterns reflect those of the big Measures which essentially drive the Priority figures. Employability is dominated by Community Employment (CE) and Adaptability by MLT/HLTBs, both of which were above forecast at end 2002. In Entrepreneurship both the In-company Training and the Social Economy Programme were well behind forecast expenditure.

### **PHYSICAL PROGRESS**

The evaluation also examined the physical progress of the OP at end-2002 in terms of indicators of 'outputs', 'results', and 'impact'. With regard to physical progress, the Final Report of the Mid-Term Evaluation of the OP attempts to examine physical progress in terms of indicators of outputs, results and impacts. The report shows that output indicators, mainly in the form of throughput data, are available in respect of 34 of the 47 Measures and Sub-Measures in the programme. Of these 16 were above target, 10 were broadly on target, and 8 were below target. The Final Report notes that only 14 of the 47 Measures could be assessed in respect of result indicators, and 10 Measures could be assessed in respect of impact indicators. The Final Report concludes that indicators are comprehensive (i.e. defined, relevant and reported) in respect of output. However, the quality of indicators of results is poor and impact indicators typically do not exist. This is far from satisfactory, and is particularly disappointing in the light of the fact that many of the activities supported by the OP have been in operation for some years.

### **EFFECTIVENESS AND VALUE FOR MONEY**

The Mid-Term Evaluation attempted to assess efficiency by comparing actual with planned unit costs at measure level. Data for such a comparison were available in respect of 29 of the 47 Measures in the OP. Roughly half of the Measures showed unit costs well in excess of planned, and about half below. The Evaluation concluded that there is currently no systematic basis for assessing "to what extent delivery of OP education and training is or is not cost-efficient." This is due both to the nature of the indicators used in the OP and to the absence of appropriate benchmarks.

## ANALYSIS OF LABOUR MARKET IMPACT

The Evaluation also included a special analysis of the labour market impact of a limited number of Measures for which survey data on post-programme outcomes were available. The analysis provided estimates of the employment and wage effects of programme participation, net of other factors that could influence labour market outcomes (e.g. age, gender, previous educational attainment and labour market experience).

In initial education the impact analysis found that participation in Measure 21, Post Leaving Certificate Courses, Measure 25 Middle Level Technician/Higher Technical and Business Skills, and Measure 27, Postgraduate Conversion Courses have significant positive effects on employment and earnings. The findings indicate that both Measures contribute to several objectives – enhancing individual employability and the quality of labour supply, and contributing to demand for skills in the economy.

In the case of active labour market programmes (ALMPs) funded under the OP, the impact analysis found that certain ALMPs implemented by FÁS, including Traineeships, Specific Skills Training, Jobstart, Linked-work Experience, Community Youth Training and Alternance (funded under Measures 1, 3, 11a, 13 and 14) had a positive impact on subsequent employment chances, even when other relevant personal characteristics were taken in to account. Programmes with no statistically discernable impact on employment, when personal characteristics are taken in to account, include Community Employment (funded under Measure 3), the single largest ALMP. Participation in CE, and some other ALMPs, did however, increase the probability of an individual continuing in other education, training or employment schemes, although the data did not permit analysis of whether this represented progression or churning.

Beyond the Measures covered by the impact analysis there is a great deal of activity funded under the EHRD OP in respect of which it is not possible to conduct a rigorous analysis of impact because of the absence of post-programme follow-up data. This is despite agreement by the OP Monitoring Committee to collect such data. The Mid-Term Evaluation accordingly recommended that “follow-up data be organised jointly, on a common basis, for the OP as a whole, given the failure of individual agencies (with the exception of FÁS) to do it individually.”

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### 8.4 Recommendations

The recommendations are broadly favourable to this OP. The macro-economic assessment of this and previous NDPs have consistently highlighted the importance of investment in human capital (see Chapter 3). This has been reflected in the high Priority attached to this area of investment. While the labour market circumstances are dramatically different today from those of a decade ago, successive NDPs have adjusted their mix of Measures to maintain the relevance of the investment programme. Even since

the current NDP was drawn up there has been a significant change in labour market circumstances. This enhances the need to prevent the increase in numbers of short-term unemployed turning into higher long-term unemployment.

The sectors in which future growth in employment will take place are likely to show a different mix than in the past. This also calls for some reorientation of activity.

Set out below in Table 8.6 are the recommendations for future funding for the Employment and Human Resources Development OP (EHRD OP). The recommendations cover each measure in the OP. To indicate the significance of the measure within the OP we show the expenditure under both the CSF and the NDP for the period 2000 to 2002. As discussed above in Chapter 4, the recommendation is made in terms of: “increase”, leave unchanged (“same”) or “reduce” the relevant measure. The recommendations do not indicate how much of a change should be made in the funding. An explanation for the recommendations on each measure is also included in the tabular presentation. A more detailed explanation for the recommendations on the OPs is given in the text after the tabular presentation.

**Table 8.6: Recommendations on the EHRD OP**

Measure	Total Expenditure 2000-2002, € Million		Recommendation	Comment
	CSF	NDP		
<b>Employability</b>				
1 Action Programme For The Unemployed	0	109.85	Same	Important – activation for unemployment. Underspent to date because target was high, but demand will grow with unemployment
2 National Employment Service	5.25	151.98	Increase	Important and demand will grow with increased entry to unemployment.
3 Active Measures For LTU and Socially Excluded	38.92	1200.5	Same	Mainly community employment: overspent to date, now contracting. Major problem with impact. Need to migrate social inclusion element to other area of public expenditure. This measure is meeting special needs of groups such as lone parents. It is also an important source of resources for services in disadvantaged communities. These needs would be better met through a targeted measure, perhaps under the Equality or Social Economy measure.
4 Early Education	0	0.468	Increase	Important, but very late starter – increase above current (2002) level.
5 School Completion Initiative	25.645	25.645	Increase	Important, slow growth, but demand is there.
6 Early Literacy	0	7.635	Increase	Important, demand increasing.
7 Traveller Education	0	8.052	Increase	Important and demand increasing.
8 School Guidance Service	0	67.196	Same	Important, keep as is.
9 Third Level Access	22.05	35.172	Increase	Important and demand increasing.
10 Schools Modern Languages	0	6.402	Reduce	Slow starter– will not meet spend target.
11 Early School Leavers	167.395	173.225	Reduce	Important but target too high – reduce spend on Measure 11a, increase on 11b.
12 Sectoral Entry Training	0	127.9	Reduce	Sectors are contracting. Effort should be retargeted on more excluded groups. Reduce Measures 12a and 12d, maintain current

13	Skills Training For Unemployed And Redundant Workers	132.11	269.03	Increase	spending on 12b and 12c. Important, high and growing demand. Positive impact on employment chances.
14a	Apprentice /Traineeship FÁS	38.05	366.68	Same	Important, but demand may decline (e.g. Construction). Also little progress on equality in spite of major efforts to improve coverage.
14b	Apprenticeship Education	0	74.698	Same	Important, but demand may decline (e.g. Construction). Also little progress on equality in spite of major efforts to improve coverage.
15	Employment Support Services	0	568.05	Reduce	Mainly Back to Work Allowance scheme, with dubious deadweight & job sustainability. Useful to retain secondary benefits to remove unemployment traps and counter social exclusion Income support Measures for target groups are not helpful for competing in an open labour market especially for particular categories (e.g. Farmers wives).
16	Vocational Training & Pathways Employment People With Disabilities	0	107.42	Increase	Important for social inclusion of disabled. Growing demand. Need to provide secondary benefit retention to remove unemployment traps and counter social exclusion.
17	Refugee Language Support Unit	0	2.606	Increase	Growing demand. Public good.
<b>Entrepreneurship</b>					
18	In Company Training	44.14	48.58	Same	Important, but underspend in Sub-Measure 18b, implemented by Enterprise Ireland. A new Sub-Measure 18c has been launched by the Managing Authority to encourage joint training ventures by groups of companies. This should be carefully targeted to avoid deadweight. Particular care needs to be taken in Measures of this kind to ensure gender equality in access to training.
19	Social Economy	13.16	31.71	Reduce	Slow starter. Assess whether responsibility for this measure should be moved to a more appropriate funding source.
<b>Adaptability</b>					
20	Lifelong Learning General Training	0	6.85	Increase	Although the general training measure involves a relatively small amount of money, it is important to the lifelong learning agenda. This measure is positive on social inclusion and rural development.
21	Lifelong Learning Back To Education Initiative	3.77	256.74	Increase	This measure is important. The underspend is due to lack of development of part-time courses. Increase expenditure only if part-time places are provided.
22	Lifelong Learning National Adult Literacy Strategy	39.283	39.491	Increase	This measure is important, need to do more to encourage low skilled to participate.
23	Lifelong Learning Further Education Support Services	0	6.06	Same	Although this measure has been a slow starter, the guidance and counselling for lifelong learning is a good idea.
	Ongoing Sectoral Training	0	48.635	Reduce	Mainly targeted on contracting sectors, or where other supports are available. In addition, agriculture, fishing and tourism are sectors with limited growth and employment prospects over the medium term.
25	MiddleLevel Technician/Higher Technical Business Skills	0	699.185	Same	Important and demand is high – Institutes of Technology. Labour market (wage & employment) effects are high, so private returns are high and deadweight is a potential issue.
26	Undergraduate Skills	55.773	55.773	Same	Meeting skill needs mainly in computer

27	Postgraduate Courses	0	23.851	Same	software and information technology. Future growth in demand will be slower than in the past. High demand, but future growth in demand will be slower in some courses due to changes in skill needs, particularly in computer software.
28	Training Of Trainers	0	55.114	Reduce	Demand is high in education sector, so maintain spending in Measure 28a, but is likely to fall in 28b.
29	Quality Assurance	9.744	30.068	Increase	Quality is important.
<b>Equality</b>					
30	Educational Disadvantage	0.248	1.084	Same	Slow starter. Important for Horizontal Principles.
31	Equal Opportunities Promotion And Monitoring	1.27	1.443	Increase	Slow starter. Important for Horizontal Principles. Increase 31a and maintain 31b.
<b>Other Measures</b>					
	Infrastructure	0	1354.04	Reduce	Important, but need to justify a continuation of the rate of investment achieved in 2000–02 in light of demographic change. The justification provided for current investment is weak. It may be there but needs to be demonstrated. In the third level sector it is hard to justify new buildings given the demographics. In the primary sector the incentives to maintain or repair schools are weak. Where new infrastructure is needed as part of new suburban development an increasing share of the cost should be met from development levies. This would incentivise population movement to areas with spare capacity. The Department of Education needs to develop its capacity to plan appropriately for infrastructure needs.
	<b>Technical assistance</b>	1.35	1.35	Increase	Strengthening of management capacity and improvement of indicators (particularly on impact) will require that planned resources be used.

Set out below in Table 8.7 is a summary of our recommendations for the allocation of resources by “Priority” for the 2004-2006 period using the expenditure estimates for 2003 as guidance. In the case of the CSF we show the preliminary commitments for 2004 as well as our recommended reallocation.

Overall, for the Operational Programme we recommend that resources for 2004 should be broadly unchanged compared to 2003. Within the OP we suggest a marginal reduction in resources for the Other Measures “Priority”, with some increase in resources for the Entrepreneurship and the Adaptability “Priorities”. In the case of the CSF funding we suggest some concentration of resources to reduce administrative costs, given the more limited funding.



**Table 8.7: Recommended allocation of NDP/CSF envelope for 2004, €million**

	CSF 2002 Expend- iture	CSF 2003 Commit- ments	CSF 2004 Preliminary Commit- ments	CSF 2004 Recomm- ended	NDP 2002 Expend- iture	NDP 2003 Estimates	NDP 2004 Recomm- ended
Employment and Human Resources Development OP	179	201	141	95	2,099	2,045	2,056
Employability	108	119	84	50	1,131	1,030	1,040
Entrepreneurship	25	40	28	20	40	49	60
Adaptability	44	39	27	25	422	470	500
Equality	1	2	2	0	2	6	6
Other Measures	1	1	1	0	504	489	450

*Notes:* For 2002 and 2003 the CSF expenditure includes Cohesion and TENS funding as well as public funding. These are not relevant for 2004. The table only includes public expenditure by the EU and the State.

### *Employability*

In recent years the unemployment problem in Ireland has become predominantly a problem of short-term unemployment. In this respect the current period differs importantly from the 1990s, when the unemployment policy was dominated by the problem of long-term unemployment. Labour market policies, informed by the European Employment Strategy, emphasise the importance of preventing the re-emergence of long-term unemployment. Accordingly, it will be important to ensure the delivery of effective interventions to recent entrants to unemployment to prevent the drift into long-term unemployment. This raises the issue of the capacity of EHRD OP Measures to provide places in training and employment programmes to promote labour market reintegration. It will also be important that such Measures be effective in enhancing the employment prospects of their participants. Given anticipated increases in entry to unemployment in the current difficult economic circumstances, we suggest that spending on Measure 1, the Action Programme for the Unemployed is retained at 2002 levels, and that spending on Measure 2 (CSF), the National Employment Service be increased to respond to increased entry to unemployment.

The relatively recent changes in the balance between short- and long-term unemployment also suggest the appropriateness of reducing the numbers participating in Measures targeted principally at the long-term unemployed, particularly CE in Measure 3 (CSF), and to re-direct resources to the provision of effective programmes with strong labour market linkages to prevent the drift from short- to long-term unemployment. This is not to suggest, of course, that resources be taken from programmes targeted at the long-term unemployed: rather that the long-term unemployed should also benefit from effective interventions designed to improve their employment prospects in the open labour market. Specifically with regard to CE, we concur with the thrust of the Mid-Term

Evaluation of the OP that recommended that CE be restructured, with one component remaining as an activation measure designed to enhance participants' employment prospects, with appropriate enhancements to the training and progression elements. This first element would be considered, and assessed, as a mainstream active labour market programme. A second component could be designed to provide longer-term employment opportunities for those particularly disadvantaged in the labour market. This component could be considered as serving the Social Inclusion objective, and consideration should be given to provide a separate funding mechanism for this component, perhaps under the Equality Priority.

While some of the employability schemes targeted at preparing participants to work in specific sectors have been relatively successful, our recommendations have been tempered by the macro-economic assessment of the future prospects for those sectors. For example, the demand for labour in the building sector is expected to fall from its current high level over the coming decade and a half. Accordingly, we have recommended that expenditure levels on the Measure 14 (CSF) Apprenticeship programmes should not increase beyond their 2002 levels. A similar logic applies to Measure 12, Sectoral Entry Training. Employment in Agriculture is expected to continue to contract. Employment prospects in Tourism are, at best uncertain, in the face of declining competitiveness in the industry. We have accordingly recommended that spending on Sub-Measures 12a and 12d, Tourism School Leavers, and Agriculture, respectively, should be reduced. We recommend that spending on Sub-Measures 12b and 12c, both in Tourism, be maintained, although effort should be retargeted in an effort to reduce social exclusion.

We regard provision for early school leavers in Measure 11 (CSF) as important. Nonetheless, we follow the recommendation of the Mid-Term Evaluation that spending should be reduced on the basis that the original forecast assumed a higher demand than necessary. This would entail a reduction in Sub-Measure 11a, Early School Leavers Progression, and some increase in Sub-Measure 11b, for Youthreach and Travellers. Measure 4, Early Education, primarily relates to a Centre for Early Childhood Development and Education. Expenditure to date has been limited due to delays in finalising the terms of reference, the fact that the Centre did not become operational until 2002, and to difficulties in recruiting staff with appropriate skills and expertise. The measure is important in its own right and has the potential to contribute to social inclusion and to help prevent early school leaving. Now that the Centre is operational, expenditure should increase beyond 2002 levels.

Given increased entry to unemployment, it is essential to provide effective training programmes to assist re-entry to employment and prevent the drift in to long-term unemployment. This is a key element of the European Employment Strategy and the Irish National Employment Action Plans. Training programmes with strong linkages to the labour market, such as those funded under Measure 13 (CSF), Skills Training for Unemployed and Redundant

Workers, have been found to significantly enhance the employment prospects of their participants. We recommend that spending on this measure increase in response to increased unemployment.

We agree with the recommendation of the Mid-Term Evaluation of the OP that Measure 15, mainly the Back-to-Work Allowance schemes, be substantially reduced. This programme suffers from potentially high deadweight and the sustainability of jobs acquired under the schemes is questionable. However, it would be useful to retain secondary benefits to remove unemployment traps and counter social exclusion. We consider that Measure 16, Vocational Training and Pathways to Employment for People with Disabilities, is an important measure to aid the social inclusion of disabled persons and we recommend an increase in expenditure over 2002 levels. However, we also consider in relation to this measure that consideration should be given to providing for the retention of secondary social welfare benefits, particularly the medical card, for those progressing to employment in order to reduce unemployment traps and counter social exclusion.

### *Entrepreneurship*

Continuing training in work-related skills of the employed workforce is a key element of Lifelong Learning (see the discussion under Adaptability below). Comparative indicators suggest that Ireland lags behind other European and OECD countries in participation rates in such training. Council Recommendations in the European Employment Strategy have consistently argued for greater investment in this area in Ireland. We recommend that investment in this area through Measure 18 (CSF), In-Company Training, be maintained at 2002 levels. Expenditure and activity in this area under Measure 18b, implemented by Enterprise Ireland has fallen far short of planned levels. The Managing Authority has been proactive in reallocating funds to a new Sub-Measure, 18c, which seeks to encourage groups of companies to implement joint training activities. Consideration might be given to allocating some of the resources in this new measure to support training of employed workers (as individuals) rather than through employers. This might take the form of allowing training suppliers to tender for work-related training programmes to employed individuals on a subsidised basis.

### *Adaptability*

The need for increased attention to lifelong learning in order to meet the skill demands of the knowledge economy are well established and are recognised in the recent report of the Task Force on Life Long Learning. Given underlying demographic trends, whereby the Irish workforce is beginning to age, and labour market entry from education is falling, the previous policy of relying mainly on 'front-loaded' education and training in the initial education system are unlikely to deliver sufficient flexible skills in the future. This suggests a strategic need to alter the balance

between initial and continuing education and training – resources freed up in initial education as a result of declining enrolments could be diverted to continuing education and training. This general comment refers to the *balance* between investment in initial education (prior to labour market entry) versus continuing education and training of both employed and unemployed labour force participants, and is not intended to suggest that spending on initial education should cease. Indeed, throughout our recommendations we have suggested that support for mainstream initial post-secondary education should be maintained. These developmental imperatives are consistent with the recommendations of the 2002 Joint Employment Report as well as the Report of the Task Force on Lifelong Learning.

These considerations apply to a range of Measures in the Adaptability Priority. We have recommended increases in expenditure in each of Measures 20, 21 and 22 (all CSF), all concerned with Lifelong Learning. With respect to Measure 21, Back to Education Initiative, the econometric analysis presented in the Mid-Term Evaluation of the OP indicates strong private returns in the form of both employment prospects and earnings, to participation in Post-Leaving Certificate Courses (PLCs) funded under this measure. Measures 20, Lifelong Learning – General Training, and 22, Lifelong Learning – National Adult Literacy Strategy, are also both important, although much smaller in scale. There is a need to do more to encourage the low-skilled to participate in Measure 22 in order to counter social exclusion. With regard to Measure 23, Lifelong Learning – Further Education Support Services, guidance and counselling in relation to lifelong learning is useful and important for filling information gaps. We recommend that spending be maintained at 2002 levels. This is consistent with the recommendation of the OP Mid-Term Evaluation.

Measure 24 covers Ongoing Sectoral Training in 7 separate Sub-Measures in Tourism, Agriculture, Fishing, Film and the Equine industry. We recommend that expenditure should be scaled back somewhat on this measure. Most of the Sub-Measures are targeted on contracting sectors (Agriculture, Seafood, and Tourism), or where other supports are available (e.g. Film and the Equine industry). Agriculture, fishing and tourism are sectors with limited growth and employment prospects over the medium term. While we suggest that expenditure on this measure be scaled back, consideration should be given to providing resources for training programmes that offered opportunities for increasing value-added in a sector (e.g. in tourism) or offered individuals opportunities to compete for employment opportunities in other, expanding, sectors of the economy. More generally, given that market services have been identified as employment-growth sectors, consideration should also be given to providing resources for ongoing sectoral training in these sectors where skill bottlenecks may arise. This could involve re-allocating funds for ongoing sectoral training from declining to expanding sectors of the economy.

*Infrastructure*

We consider that investment in education and training infrastructure is essential. However, we also consider that the justification for maintaining current levels of investment is weak and needs to be demonstrated. In the third level sector it is hard to justify new buildings given the demographics, although we recognise that a greater focus on continuing education could have implications for infrastructure. In the primary sector the incentives to maintain or repair schools, rather than to build new schools, are weak. Where new infrastructure is needed as part of new suburban development an increasing share of the cost should be met from development levies. This would incentivise population movement to areas with spare capacity. Total expenditure on Measure 32, Education and Training Infrastructure in the period 2000-2002 amounted to in excess of €1.35 billion, slightly less than planned, consisting of €1.3 billion on educational infrastructure and €40 million on training infrastructure. Total expenditure on the measure increased from €330 million in 2000 to about €490 million in both 2001 and 2002. We recommend that annual expenditure levels should be scaled down below their 2002 level. This is consistent with the recommendation of the Mid-Term Evaluation, which suggested an allocation of €785 million for the years 2004-6, as planned in the original OP.

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**8.5**  
**Supplementary**  
**Issues**

A further strategic issue in enhancing skills through to the end of the current NDP and beyond concerns the nature of education, particularly at third level. Here a strong case can be made for enhancing the linkages between the third-level institutions and the business sector. This could facilitate enhanced relevance of current tertiary education courses. It could also enhance the role of the tertiary sector in meeting the emerging skill needs of employers by providing short-cycle and part-time education and training programmes for workers already in employment.

If the EHRD OP is intended to support enhancement of labour supply, then it is difficult to understand the coverage of the OP in post-secondary education. Under the present OP, some activities at post-secondary are covered (PLCs), Institutes of Technology, and some University (specific undergraduate skills mainly, although not exclusively, software) and post-graduate conversion (again mainly software). A great deal of other activity at third level, the mainstream of university education, is not included in the OP. Much of this activity is vocational in nature, and is thus consistent with the objectives of the OP. The rationale for this coverage appears to be more historical than functional.

This situation makes it difficult to develop a strategic approach to post-secondary education and training, and to assess the contribution of the post-secondary system to meeting labour market needs. It also gives rise to difficulties in reporting of management information and monitoring through the OP indicators system.

While we recognise that there is no easy solution to this dilemma, planning of the next Human Resources OP should take account of both integration of the OP with the mainstream educational system as well as the development of appropriate management structures.

# 9. PEACE II OP

It is worth noting that although the Peace OP theoretically began in 2000, in effect it only started properly in 2002. This was because of delays in agreeing and approving the content of the programme, followed by a need to establish some new structures to implement it. Consequently, the Mid-Term Evaluation has been carried out at a relatively early stage in the actual life of the programme. By mid-2003, only a minor proportion of the resources available to the programme had been spent, and therefore it is too early at present to expect to see a great deal in the way of results.

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## 9.1 Rationale

The Peace OP in the Republic of Ireland is part of the Peace II programme that operates both in Northern Ireland and in the Border region of the Republic of Ireland. Almost 80 per cent of the total Peace II expenditure is allocated for spending in the North. The overall aim of the programme is “to reinforce progress towards a peaceful and stable society and to promote reconciliation”. To achieve this, the programme aims to support economic and social projects that “address the legacy of the conflict” or that “take opportunities arising from Peace”. As the Mid-Term Evaluation report shows, economic, social and political conditions have become more difficult in Northern Ireland and the Border counties since the programme was put forward in 1999-2000 (Price-WaterhouseCoopers, 2003).<sup>39</sup> Consequently, the rationale for the programme is at least as strong now as it was at the start and its objectives are still relevant.

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## 9.2 Current Activity

The Peace II programme is part of Northern Ireland’s CSF and at the same time it operates as the Peace OP in the Irish CSF and National Development Plan. Table 9.1 shows expenditure on the South’s Peace OP during the period 2000-2002. The amounts spent are small, and a good deal smaller than the amount of expenditure that was planned for 2000-2002. Table 9.2 shows the comparison between actual expenditure and planned expenditure for the period 2000-2002. Total expenditure on the programme in that period was just 12 per cent of the planned expenditure level. In Priority 2 – the Social Integration, Inclusion and Reconciliation Priority – actual

<sup>39</sup> PriceWaterhouseCoopers (2003). *Ex-post Evaluation of Peace I and Mid-Term Evaluation of Peace II: Draft Final Report* (18<sup>th</sup> August) Dublin.

expenditure was about one-third of the planned level, whereas in all the other priorities it was no more than one-tenth of the planned level.

**Table 9.1: Expenditure on the Peace OP, 2000-2002 (Million Euro)**

Priority Title	EU	CSF	Total NDP
1. Economic Renewal	1.66	2.21	2.21
2. Social Integration, Inclusion and Reconciliation	4.96	6.61	6.61
3. Locally-Based Regeneration and Development Strategies	0.08	0.11	0.11
4. Outward and Forward Looking Region	0.00	0.00	0.00
5. Cross-Border Co-operation	1.43	1.91	1.91
TOTAL	8.13	10.84	10.84

The degree of under-spending is primarily a reflection of the delayed start to the programme, and it does not mean that there is a very low level of activity up to the present. Since it has got started there are indications of considerable activity. According to the Mid-Term Evaluation by PriceWaterhouseCoopers (2003, Chapter XI), the Peace II programme as a whole (North and South), by August 2003, had spent only 9 per cent of the programme budget, but it had assessed 5,981 applications for funding, it had approved 1,957 projects and it had committed 55 per cent of the programme budget to them. Most of the activity had taken place in the previous six months and it was therefore relatively early to be examining progress against many of the more important performance indicators.

**Table 9.2: Actual and Planned Total NDP Expenditure on the Peace OP, 2000-2002 (Million Euro)**

Priority Title	Actual Expenditure, Million Euro	Planned Expenditure, Million Euro	Actual as Percentage of Planned (%)
1. Economic Renewal	2.21	21.39	10.3
2. Social Integration, Inclusion and Reconciliation	6.61	19.55	33.8
3. Locally-Based Regeneration and Development Strategies	0.11	13.4	0.8
4. Outward and Forward Looking Region	0.00	2.00	0.0
5. Cross-Border Co-operation	1.91	30.92	6.2
TOTAL	10.84	91.39	11.9

The largest amount of funding had been committed to Priorities 1 and 2, namely “Economic Renewal” and “Social Integration, Inclusion and Reconciliation”, and these Priorities had also committed the greatest proportion of their allocations. In a survey of those undertaking projects under the programme, 88 per cent said that their project was cross-community in nature, and 95 per cent of those said that the cross-community dimension had a positive or strongly positive effect on the project’s contribution to the aim of promoting peace and reconciliation.



### 9.3 Lessons from OP Evaluation

#### PRIORITISATION AND SELECTION

There appear to be some issues concerning the “distinctiveness criteria”, which aim to ensure that funded projects are distinctively linked to the conflict and its legacy or that they take opportunities arising from peace. The Mid-Term Evaluation by PriceWaterhouseCoopers (2003, p.289) found that the concept of “distinctiveness” and the way in which it is defined had resulted in more effective targeting of areas, sectors and groups, partly reflected in the fact that one-third of applications are rejected for failing to meet the distinctiveness criteria. But it was found that there appeared to be some variation in the way in which the distinctiveness criteria are applied in practice. It was recommended that the criteria should be used in a more constructive way at an earlier stage of the application process. An independent report by Harvey (2003, p.10)<sup>40</sup> found that some funding bodies would not or could not say how they were operationalising the distinctiveness and reconciliation criteria.

#### EFFECTIVENESS OF THE OP

Some implementing bodies have had difficulties in achieving target expenditure levels for their Measures, while other Measures have been greatly in demand. Measures that have been much in demand include: 1.5 Positive Action for Women, 2.1 Reconciliation for Sustainable Peace, 2.4 Reconciliation of Victims, 2.5 Investing in Childcare, 2.6 Promoting Active Citizenship and 5.3 Developing Cross Border Reconciliation & Understanding (Mid-Term Evaluation of the Peace II OP, p.291).

There are some deficiencies in the recording of monitoring information and data (Mid-Term Evaluation, pp. 259, 292/3).

Despite any difficulties that may have occurred, the Mid-Term Evaluation (Executive Summary, p.17) states “nevertheless Peace II is playing an indispensable role in promoting peace-building actions and strategies. Almost 2,000 projects have been supported and a large number of people have been engaged at a grass-roots level in building peace and advancing reconciliation.”

Although Harvey (2003) expresses a number of forthright criticisms, he found that voluntary and charitable organisations, as well as some limited companies, have benefited substantially; that the programme is supporting new work; that the programme should enable there to be a significant expansion of peace-building and reconciliation work; and that “positive outcomes should be expected” (Harvey, 2003, p.9).

<sup>40</sup> Harvey, Brian, 2003. *Review of the Peace II Programme*, York: The Joseph Rowntree Charitable Trust.

## DELIVERY OF THE OP

There appear to be problems with excessive complexity and perceived bureaucracy in the delivery of the programme (Mid-Term Evaluation of the Peace II OP, pp.177, 293; Harvey, 2003, pp. 5, 9, 10). However, efforts have been made to simplify application processes. There is a need for a better and broader consultative structure (Mid-Term Evaluation, pp. 295/6; Harvey, 2003, p.11).

### 9.4 Recommendations

This OP is still at a very early stage, with new projects still being developed. Without any experience of the projects in action it is difficult to judge the value of the different Measures. For completeness we summarise our recommendations in a similar format to that for the other OPs. Set out in Table 9.3 is a breakdown of the expenditure for the 2000-2002 period and the recommendation for the direction of changes in funding for the 2004-2006 period. Given the very limited experience to date, these recommendations are more in the nature of an indication of priorities.

**Table 9.3: Recommendations on the PEACE Operational Programme**

Measure	Total Expenditure 2000-2002, €million		Recommendation
	CSF	NDP	
Total Economic Renewal Priority	2.2	2.2	same
Total Social Integration, Inclusion and Reconciliation Priority	6.6	6.6	increase
Total Locally-based Regeneration and Development Strategies Priority	0.1	0.1	same
Total Outward and Forward Looking Region Priority	0.0	0.0	same
Total Cross-Border Cooperation Priority	1.9	1.9	same

The recommended overall allocation to the OP is given in Table 9.4. Unlike the other OPs, the allocation of funding for the PEACE OP is effectively determined already. It is not possible to reallocate the CSF funding elsewhere. With the CSF funding is associated the necessary national co-funding. The NDP figure for 2003 and 2004 is less than the CSF figure reflecting the fact that the CSF numbers reflect commitments, whereas the NDP numbers reflect expected expenditure.

**Table 9.4: Allocation for 2002-2006, €million**

	CSF	CSF	CSF	CSF	NDP	NDP	NDP
	2002	2003	2004	2004	2002	2003	2004
	Expend- iture	Commit- ments	Preliminary Commit- ments	Recomm- ended	Expend- iture	Estimates	Recomm- ended
Peace OP	11	29	29	29	11	27	27

One of the problems facing this OP is that funding has been available from many different sources over the last decade for projects in the border area of the Republic and Northern Ireland. The International Fund for Ireland, Interreg and of course the NDP have all funded projects of this type. Thus there could be a danger that this OP could end up supporting projects that have failed to find funding elsewhere as a result of their having a low prospect of success. The danger of this happening in the NDP/CSF process was highlighted in Honohan (1997) and Fitz Gerald, *et al.* (1999). However, considerable care has been taken in managing this OP to ensure that genuine value added is achieved and the project selection process to date suggests that appropriate standards are being maintained.

The programme has started quite recently and expenditure to end 2002 was very limited. As a result, the sums of money committed to this programme, which must be spent by 2006, are large. There must be concerns about the prospective very rapid build up in expenditure in a short space of time. As discussed elsewhere in this report, such a rapid build up can give rise to significant problems. This is going to make management of the OP difficult over the period to 2006. It will be important that the rigorous approach to project selection to date, identified in the evaluation of the OP, is maintained, even if this means that some of the money does not get spent. It would be better if the period of the Programme could be extended by two years so that the expenditure, already allocated, could be deployed over a longer time scale. With the benefit of hindsight, it would have been preferable if the allocation for this OP had been more flexible.

As regards allocations within the programme, both the Mid-Term Evaluation and Harvey (2003) include quite similar recommendations that consideration should be given to reallocating resources from under-spent Measures to Measures that are relatively over-subscribed and that have a strong social and reconciliation focus (Mid-Term Evaluation, pp. 288-291; Harvey, 2003, p. 11). These recommendations make good sense. The Mid-Term Evaluation indicates that the Measures to benefit could include: 1.5 Positive Action for Women, 2.1 Reconciliation for Sustainable Peace, 2.4 Reconciliation of Victims, 2.5 Investing in Childcare, 2.6 Promoting Active Citizenship and 5.3 Developing Cross Border Reconciliation & Understanding. Harvey's list is similar but he does not include 1.5 or 2.5. To improve flexibility, it is recommended that a new measure for "Innovative Actions" be introduced (Mid-Term Evaluation Peace II OP, p. 288). Provided that projects meet the required criteria in addressing areas of market failure and promising a satisfactory social rate of return they should be funded.



# 10. TECHNICAL ASSISTANCE OP

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## 10.1 Rationale

This OP is very small and provides specialised support for the management of the NDP. It has been an established feature of the CSF process since the first CSF that such special assistance be devoted to building aspects of management capacity. In the case of the current CSF, some of the Measures funded under the OP are directly driven by the needs of the CSF process whereas others support directly the management of the CSF in Ireland.

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## 10.2 Current Activity

Table 10.1 sets out the five Measures funded under the Operational Programme. The expenditure in 2000 was affected by the carry-over from funding under the previous CSF. As a result, it does not give a true picture of activity funded under the OP.

**Table 10:1: Technical Assistance OP, NDP Expenditure, €million**

	2000	2001	2002	2000-2002
IT	0.000	0.020	0.248	0.268
Evaluation	0.000	0.230	0.707	0.937
Financial Control	0.000	0.058	0.399	0.457
Information	0.063	0.903	1.037	2.000
PPP Unit	0.000	0.145	0.701	0.846
Administration	0.002	0.020	0.020	0.042
Total	0.063	1.360	3.090	4.552
Of which: CSF	0.000	1.227	3.029	4.256

The IT unit has been responsible for the development of a management information system to underpin the management of the NDP/CSF. It includes provision for collection of data on a regional basis. However, there have been some problems in obtaining compliance with the provision of the required data in a suitable format from all those involved in the NDP/CSF. As a result, the system, while essential to effective management, has not been able to deliver fully on all information requirements. The issue of continuity of staff also posed temporary problems but they have been resolved. With the development work complete, it should now become fully effective.

The financial control unit is independent of the Department of Finance and its work is fully directed at the need to comply with the requirements of the EU Commission. It effectively operates a parallel control system to that operated by the Irish authorities for their own budgetary purposes. While some of the staff come from

the Comptroller and Auditor General's office the methodology implemented is prescribed by the EU. It is likely that, when funding from the EU ends, this unit will be wound up.

The evaluation unit in the Department of Finance was set up following on a recommendation made in the *ex ante* evaluation of the second CSF for the EU Commission (Honohan and O'Connell, 1994). Since it became operational in the late 1990s it has played a very important role in undertaking evaluations itself, in providing quality control on evaluation elsewhere in the public service, and in helping to manage the evaluations of the CSF and the NDP. Its independence has been underpinned by the fact that its funding has come from both the CSF and the NDP. It has quite limited resources, relying extensively on consultancy services to undertake large projects. Because of its small scale it is vulnerable to staff mobility.

In the longer term it would probably be wise if the considerable expertise and reputation developed by the evaluation unit was built on so that it can provide a service across the public service as a whole. In addition, its expertise in evaluation, looking at medium-term issues of public policy, could prove valuable to the Public Expenditure Division of the Department of Finance. A closer working relationship with that division could prove useful to the Department, provided it did not impinge on the unit's independence.

The information unit is responsible for publicity and information concerning the NDP/CSF process. The work of this unit is required to comply with the requirements of the EU Commission. However, its informational role is also significant (Section 14.8).

The PPP unit offers advice to the Department of Finance and other Departments and agencies concerning the technical issues in using PPPs to provide goods and services. Because of the significant legal, institutional and financial complexities in such arrangements it makes sense to have a specialised unit dealing with such issues. However, it is not clear how separate a role there is for it with the establishment of the NDIFA.

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### 10.3 Effectiveness and Efficiency

Overall the separate units funded under this OP have made a significant contribution to the success of this NDP/CSF. The role played by the evaluation unit has been very important and it should be expanded. The difficulties with the management information system need to be overcome to bring the system into full use. The problems in achieving this relate more to the management issues for the other OPs, discussed in Chapter 12. However, if more resources were needed to achieve this then they would be well spent. The work of the information unit seems to be quite successful, maintaining the considerable profile of past NDP/CSFs as playing an important role in developing the economy.

**Table 10.2: Recommendations on the Technical Assistance Operational Programme**

	CSF 2002 Expenditure	CSF 2003 Commitments	CSF 2004 Preliminary Commitments	CSF 2004 Recommended	NDP 2002 Expenditure	NDP 2003 Estimates	NDP 2004 Recommended
Technical Assistance	3	1	1	3	3	2	4

## 10.4 Recommendations

For completeness we summarise our recommendations in a similar format to that for the other OPs. Set out in Table 10.2 is our recommendation showing an increase in funding for the OP over the rest of the period 2004-2006.

The management of the CSF/NDP has been a very onerous task, given its size and complexity. As discussed in summary form in Chapter 12, some management problems have manifested themselves over the first three years of the planning period. The expenditure under this OP has been used to strengthen the management systems through supporting certain specialised functions.

In particular the computerisation of the accounting and management information systems has been developed. This needs to be fully implemented and this will require continuing resources. It will also require full co-operation from all those managing OPs.

The evaluation unit itself carries out a very important role. It would be desirable to see greater resources devoted to this activity. While the ability to hire consultants to undertake evaluation work is very important, it does involve a loss of human capital – the expertise developed by the consultants. It is desirable to resource more fully central management of the NDP. With additional resources, the central evaluation unit should be much more involved in evaluation (including project appraisal) and prioritisation across the NDP.

The information unit and the audit unit are specific requirements of the CSF and are appropriate to fund out of this OP.





# 11. HORIZONTAL ISSUES

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## 11.1 Social Inclusion

Social inclusion is one of the four key objectives of the NDP/CSF for Ireland and some €19 billion is earmarked in the Plan to promote social inclusion (NDP, p. 187).<sup>41</sup> Social inclusion is also identified as a cross-cutting theme to be considered within all sections of the Plan. While the NDP states that there will be ‘a multi-faceted approach to the promotion of Social Inclusion’ there is a strong emphasis on inclusion through employment. It states ‘The objective is that employment is opened up to all sectors of society as this is the best way to counter poverty and social inclusion’ (NDP, p. 11).

Each of the operational programmes is believed to promote social inclusion indirectly – ‘their combined effect will be to generate employment opportunities for the socially disadvantaged and to create extra resources to enable the State to raise the living standards and quality of life of the elderly and those incapable of work.’ (p. 189). Five of the OPs also have a direct role in promoting social inclusion; the ESI OP through investments in housing and public health, the EHRD OP through its programmes for the unemployed and educational disadvantage and the two regional OPs which each include a Social Inclusion and Childcare Priority. Finally the PEACE II OP includes a Social Integration, Inclusion and Reconciliation Priority.

The EHRD OP has a central role in tackling social exclusion. One of the seven programme objectives is to ‘promote social inclusion with particular reference to the re-integration of the socially excluded and the long-term unemployed into the labour force’. This is particularly emphasised under the employability pillar. The National Anti-Poverty Strategy has identified that unemployment and educational disadvantage are strongly linked to poverty, therefore the EHRD OP programmes to tackle early school leaving, and to provide training and employment for disadvantaged groups have the potential to have a significant impact on social exclusion.

Within the two Regional OPs a substantial budget (€1,343 million) is devoted to the Social Inclusion and Childcare Priority. Key objectives in relation to social exclusion are to:

<sup>41</sup> However we should note that the *ex ante* evaluation of the NDP (CSF Evaluation Unit, 1999) felt that this estimate of €19 billion was somewhat overstated.

- alleviate poverty and social disadvantage in both rural and urban areas;
- integrate/re-integrate the socially excluded into the community and labour force;
- reduce long-term unemployment and support the achievement of the NAPS targets;
- tackle the causes of social disadvantage amongst young people and communities at risk.

In this review we synthesise the OP level evaluations to assess the relevance, role and impact of social inclusion across the NDP/CSF.

The review is ordered in the following way – section one considers the extent to which social inclusion is incorporated into project selection, section two looks at reporting on social inclusion, section three considers the impact of the Measures on social inclusion. In the final section we consider the mechanisms put in place (e.g. co-ordinating committees) to address social inclusion in the NDP.

## PROJECT SELECTION

In order to mainstream the Horizontal Principles at programme level the NDP requires that environment, equal opportunities, poverty and rural impact are included in the project selection criteria for all Measures (p. 224). In practice, these criteria are not included in many Measures (see Table 11.1). None of the Measures in the Economic and Social Infrastructure OP mention this among their project selection criteria. In the regional OPs and the Productive sector OP it is mentioned in around half the Measures and in the EHRD OP it is included in a quarter. In some cases this is because there is no project selection within the Measure e.g. where the State is the direct provider of a service, this is partly the cause of the low percentage in the EHRD OP (see footnote 43).

**Table 11.1: Reference to Social Inclusion in Project Selection Criteria**

Operational Programme	Measures/Sub-Measures	
	Number <sup>42</sup>	%
ESI OP	0	0
PSOP	24	50
EHRD OP <sup>43</sup>	12	24
BMWOP	30	49
SEOP	30	48
PEACE II	34	100

*Sources:* OP Mid-Term Evaluations, except SE OP where information was derived from Programme Complements, and PEACE II where information was provided by the CPA (figures exclude technical assistance Measures).

<sup>42</sup> The number of measures in which any of the Horizontal Principles is incorporated into project selection.

<sup>43</sup> The Terms of Reference suggest project selection applies to only 17 of the 51 EHRD OP measures, as a percentage of this subset, 71 per cent incorporate the Horizontal Principles.

A further limitation is that these figures do not indicate whether the principle is incorporated into project selection in a meaningful way. In most cases there is simply a statement that projects must comply with horizontal impacts and only in a minority is there a more detailed description of how this criterion is assessed e.g. using deprivation index score for the area. The PEACE II OP provides an exception in this regard. A set percentage of the project selection score goes toward impact on Horizontal Principles and the Mid-Term Evaluation maps the relationship between the distribution of projects and an indicator of disadvantage in local areas, but this is only available for Northern Ireland.

## REPORTING ON SOCIAL INCLUSION

In this section we discuss the extent to which social inclusion is reported across the OPs. This discussion captures the degree to which this principle is seen as relevant in different sections of the development plan, and the actions taken to tackle social exclusion. Reporting can take a number of forms. First, the potential impact of the measure on social exclusion may be discussed in the Programme Complements, second, progress reports may report on actions taken in this area, and third, indicators may be produced which capture the extent to which Measures benefit socially-excluded people.

The discussion of reporting on Social Inclusion in the OP evaluations suggests that there is a wide degree of variation both between and within OPs. Many Measures do not consider social exclusion to be relevant and when its relevance is acknowledged discussion in programme complements and Progress Reports often takes the form of highly generalised comments. The evaluation of the EHRD OP (p. 153) notes:

*Issues relating to social exclusion.....are broadly considered and acknowledged while specifics on the Measure effects on these issues are never discussed with any rigour. In many cases within agencies, an identical narrative is provided across all its implemented Measures.*

The EHRD OP Evaluation reports that, overall twenty nine of the Measures<sup>44</sup> provide this generalised type of commentary, only seven make a more specific comment, and only three provide data to support their assertions.

This type of vague and unsupported commentary on social inclusion is also common across the other OPs. The BMW Evaluation notes the progress reports simply restate what the Programme Complement said about the Principles. Within the two Regional OPs there is substantially better reporting on social inclusion within the Social Inclusion & Childcare Priority than in other priorities, with the Equality and Local Development Measures singled out for good practice in reporting on social inclusion.

<sup>44</sup> These forty-seven Measures exclude technical assistance and infrastructure Measures.

Overall, 40 per cent of Measures in the SE OP reported a poverty dimension (SEOP Evaluation Report, p. 58). This included all Measures in the Social Inclusion & Childcare Priority but only four Measures in the Local Infrastructure Priority and six Measures in the Rural Development Priority.<sup>45</sup> The lack of information on progress on social inclusion in the Regional OP reports is also echoed in Harvey's (2002) assessment for the Combat Poverty Agency.

Within the Productive Sector OP thirty-one Measures note that poverty/social inclusion is not applicable or appropriate. Where social inclusion is seen as relevant reporting seems to be highly generalised. There is an assumption that employment growth and wealth creation will reduce poverty and social exclusion but no evidence is provided to show that the opportunities created are going to the socially excluded nor any discussion of actions taken to target socially excluded groups.

The ESI OP reiterates the employment-focused approach to poverty alleviation. It states that 'As poverty is correlated with unemployment and dependency on the social welfare system generally continuing the high level of job creation is the most effective means of tackling poverty' (p. 50). Discussion of social inclusion appears to be confined to the Health and Housing Priorities. The issue receives little attention in the Public Transport Priority despite its significant potential to promote social inclusion. In both the PS and ESI OPs there is a reluctance to take on board the relevance of social inclusion in programmes where this is not a central aim, and to consider how mainstream programmes might impact upon disadvantaged individuals or communities.

### **SOCIAL INCLUSION/POVERTY INDICATORS**

In Table 11.2 we outline the degree to which poverty/social exclusion is included in the Measure indicators, which have been defined in order to measure outputs, results and impacts of each programme. The NDP states that 'where appropriate and feasible, specific indicators to assess impact on the horizontal issues will be developed at programme and Measure level'. However, Table 11.2 reveals that indicators relating to social inclusion are extremely under-developed. For example, only three of the sixty two Measures in the Regional OPs have indicators that relate to social inclusion, as Harvey (2003) notes "This is quite insufficient to test if the aims of an overarching objective are being met or not".

<sup>45</sup> It is not clear from the evaluation report how many measures in the Local Enterprise Priority see poverty as relevant. However the discussion suggests that it is only a minority that mention an impact on poverty.

**Table 11.2: Number of Indicators that Incorporate Poverty/Social Inclusion Dimension**

Operational Programme	N Measures/Sub-Measures
ESI <sup>46</sup>	3
PS <sup>47</sup>	5
EHRD <sup>48</sup>	11
BMW	3
SE <sup>49</sup>	3
PEACE II	0

Where indicators relating to social inclusion exist this is usually because a disadvantaged/vulnerable group are the sole target of the Measure. For example, some of the EHRD OP Measures are confined to the long-term unemployed, lone parents or early school leavers, therefore indicators that relate to the participants, address social inclusion by definition. Indicators that assess the impact of more general programmes on the disadvantaged are extremely rare.

The availability of appropriate data over-time is the basic building block of monitoring, therefore the lack of indicators or data on social exclusion/poverty within the NDP is a serious barrier to evaluating progress. However, there is considerable scope to improve this deficit.

Within the EHRD OP, FÁS already provides statistics on the pre-training status, educational qualifications and social welfare status of participants for eight of its twelve Measures. Other educators and trainers also collect relevant information on participants' education and benefit status because these are part of the eligibility requirements for some courses (e.g. CERT Entry Level Training, Dept. of Education and Science BTEI Measure), useful information may also be collected for more general schemes. This information could and should be used to analyse the extent to which programmes reach the most disadvantaged. It would also be useful to establish some indicator of the extent to which in-company training is reaching the most disadvantaged in work (e.g. low paid, poorly educated).

Considerable work has been undertaken by the Combat Poverty Agency to develop social inclusion indicators for the Regional OPs

<sup>46</sup> Indicators for three housing supply Measures (Local Authority, Voluntary Housing and Affordable Housing) are deemed to incorporate social inclusion because access is based on means and need. This would also be true of the homeless Measure but there is no data available for this Measure.

<sup>47</sup> These figures are taken from the Tables 10.3, 10.7, 10.11 and 10.15 of the Mid-Term Evaluation of the Productive Sector Operational Programme. The columns are labelled 'Quantitative Indicators Available and reported'. However it is not clear if this corresponds to the defined programme indicators.

<sup>48</sup> Measures 1, 3, 7, 8, 11A, 11B, 12b, 13, 15, 20, 21. Eight measures are judged to incorporate social inclusion because they are designed for specific socially excluded groups.

<sup>49</sup> Harvey (2003).

(Harvey, 2002a; Harvey, 2003; CPA, 2002). This work provides a very useful model of how these issues can be incorporated into both mainstream and targeted programmes. The project suggests four types of indicators: location indicators (what percentage of projects going to most disadvantaged areas), target group indicators,<sup>50</sup> participation indicators (that Measure socio-economic status of participants) and outcome indicators (to test whether the personal circumstances of participants improve). The research outlines which, if any, of the indicators are most appropriate for each Measure bearing in mind the issue of proportionality. The approach is conservative, building on existing indicators and information systems and prioritising areas most amenable to measurement (Harvey, 2003). The CPA report that progress on this pilot project has been slow and note that “the responses of most Departments while positive did not translate into practical actions with many reluctant to engage in or progress changes.” (CPA, 2003).

It is recommended that the valuable work done for this pilot project is implemented in the Regional OPs and extended to the other OPs. Given that we are already at the mid-point of the NDP it is important that the development of appropriate indicators on social exclusion and the collection/ extraction of the relevant data is progressed quickly.

### **IMPACT ON SOCIAL INCLUSION**

Here we draw on the discussion in the MTEs and other NDP documentation, wider research literature and consultations with key informants and stakeholders<sup>51</sup> to assess the impact of the NDP on social exclusion and poverty. Particular attention is paid to elements of the NDP that have greatest scope to impact on poverty and exclusion.

At a societal level significant progress has been made towards meeting the global poverty and unemployment targets in NAPS since the initiation of the NDP. Total unemployment and long-term unemployment declined to lows of 3.7 per cent and 1.2 per cent respectively in 2001, and although the rates have since risen somewhat they are not close to 1999 levels. Similarly, consistent poverty rates have fallen since the initiation of the NDP. The latest figures contained in Whelan *et al.* (2003) show that the consistent poverty rate fell from 5.8 per cent in 2000 to 5.2 per cent in 2001 (down from 9.7 per cent in 1997 when NAPS was initiated). The NAPS Review (2002) also made a commitment to monitor progress in relation to the proportion falling below relative income lines,

<sup>50</sup> These assess the extent to which funding reaches vulnerable groups identified in poverty-proofing guidelines: unemployed (especially LTU), households with four or more children, lone parents, people with disabilities, older people, travellers, homeless, ethnic minorities, and small farmers.

<sup>51</sup> Consultations were held with CPA, Department of Social and Family Affairs, NWCI, European National Anti-Poverty Network, INOU, Equality Unit DJELW, ICTU, Brian Harvey and Kathy Walsh.

particularly for a sustained period, and there the trends have been less favourable. The percentage of persons falling below a relative income threshold set at 60 per cent of median income rose from 20 per cent in 1998 to 22 per cent in 2001, while the percentage also persistently below such a line for two of the previous three years rose from 10 per cent in 1998 to over 15 per cent in 2001. However, it is difficult to determine the influence of the NDP in prompting these trends especially as these trends were already in train prior to the NDP.

As mentioned at the outset, the Employment and Human Resources OP has a central role in this area, by giving access to education, training and employment for excluded groups. The analysis contained in the Mid-Term Evaluation of the EHRD OP suggests that a number of these Active Labour Market programmes (Traineeships, Job Training, Specific Skills Training, Linked Work Training, Community Youth Training, Alternance) are successful in integrating the unemployed into employment. Others, including Community Employment (CE) do not perform well on this assessment. However, CE serves a social inclusion function in that it provides supported employment (and additional income) for a number of vulnerable groups e.g. lone parents, those with disabilities. The scheme provides these participants with necessary supports such as flexible working hours and affordable childcare, which are not generally available in the open economy.

The non-targeted education schemes are notably lacking in information about the socio-economic background of participants. This is regrettable, as equal access to education is central to longer-term social inclusion, and education level has a positive impact on employment chances and earnings (EHRD OP MTE, p. 110).

Of those schemes that are highly targeted towards the socially excluded only three, the Traveller education, CERT sectoral entry training and Back to Education Initiative are found to have met or exceeded their mid-term key effectiveness targets (MTE of EHRD OP Table 5.16). Even here the nature of the indicators does not fully capture the impact on social exclusion, for example the MTE notes that ‘the data on the number of travellers accessing formal education would appear to show strong progress, particularly at primary level. However, there is little or no record of retention rates and outcomes and less again on the experience of participation.’ (p. 156).

Within the ESI OP the greatest impact on social exclusion is likely to be through the Housing Priority. There has been a large investment in this area (€3.8 billion to date). A total of 13,306 new local authority and 3,564 new voluntary housing units were built by the end of 2002. Additionally, 5,515 households had been assisted to buy under the affordable housing Measure. A total of 27,131 households are reported to have been removed from the waiting list and 268 Traveller families have been housed. Access to these schemes is based on income and need and is therefore generally well

targeted in terms of social inclusion.<sup>52</sup> However, the relatively high earning cut-off for the affordable housing Measure (€32,000 gross for single earners households and up to approximately €41,000 gross for two earner households<sup>53</sup>) means that this Measure is not as focused on the most disadvantaged groups. There is unfortunately no data available on progress on the Homeless Measure.

While good progress has been made in the Housing Measures it is a matter of concern that house-prices continued to rise over the first half of the NDP, and that the total number on the housing list continued to rise.<sup>54</sup> Furthermore, there are still major problems in the private rented sector, which are not addressed in the NDP. Recent research has found that those in the private rented sector experience the highest levels of secondary deprivation and spend the highest proportion of household income on housing costs (Fahey *et al.*, 2003). While some of this group are on housing lists and will benefit from the Social Housing and Affordable Housing Measure there are a proportion for whom renting is preferable (e.g. those who want greater mobility and flexibility) and who are not benefiting from current Measures. The implementation of the recommendations on the Commission on Private Renting are important in this regard.<sup>55</sup> Additionally, consideration should be given to broadening the Affordable Housing Measure to include assistance for 'affordable rented accommodation'.

The Health Priority also has considerable potential to tackle social inclusion primarily through the Measures directed at the elderly, disabled and mentally ill who are vulnerable to poverty. The ESI OP Mid-Term Evaluation judged that the impact has been positive but their evaluation consists mainly of a repetition of the very general statement on the topic contained in the operational programme (Indecon, MTE, p. 223-4). While progress has been made on the Measures for these target groups, some of the targets are extremely modest. For example, the mid-term target for new day care places for the elderly was 700,<sup>56</sup> which is paltry in the context of an elderly population of 436 thousand and growing.<sup>57</sup> A further limitation in assessing the social inclusion impact of this investment is the lack of information provided on the quality of the services or the satisfaction of those using the service. Information is also lacking on the extent to which community care facilities are located in or accessible to disadvantaged communities. Consultations also revealed a concern that the human resource requirements for these

<sup>52</sup> There is evidence that a significant proportion of the homeless do not appear on the housing waiting list (Williams *et al.*, 2002), so they will not benefit from these measures. There is an additional homeless measure.

<sup>53</sup> The earnings ceiling for dual earner households is worked out on the basis of the following formula (2.5\* main earners salary) + subsidiary salary < €80,000).

<sup>54</sup> From 39 thousand in 1999 to 48 thousand in 2002 (ESI OP MTE, p. 189).

<sup>55</sup> The Housing (Private Rental) Bill was published in 2002 on foot of this report.

<sup>56</sup> This target has been exceeded by 200.

<sup>57</sup> CSO figures for 2002.



infrastructural developments were not being addressed elsewhere in the NDP, for example the shortage of care workers.

The public transport investment in the ESI OP is also important for social inclusion since disadvantaged groups have less access to private transport. Indecon's evaluation states "in relation to social inclusion/poverty, ease of access to the employment market is vital. Increased frequencies, new services and new routes ...will open up a wider range of employment opportunities to help address these concerns." (Indecon, p. 220). However, there are no concrete examples of how services to disadvantaged communities have been improved. Social and community groups report that the pilot Rural Transport Initiative is proving successful in providing those in rural areas with access to vital services. Finally, recommendations in the ESI OP MTE would need to be poverty proofed e.g. the introduction of water charges.

The two Regional OPs also have considerable potential to impact on social inclusion, particularly through the Social Inclusion and Childcare Priority. The provision of childcare is an important tool for increasing social inclusion since it can remove one of the barriers to participation among deprived groups such as lone parents and those on low incomes. It also has the potential to address the needs of disadvantaged *children* by providing play and developmental opportunities.

Under the scheme, an additional 3,102 net new childcare places have been created in the SE region and 2,157 in the BMW region (up to end 2002), which is well below the projected output.<sup>58</sup> In addition 1,624 new staff have been funded (NDP/CSF 2003, p. 57). There is little information on how this provision has impacted on social inclusion for parents or children. The NDP/CSF (2003, p. 71) evaluation of the Childcare Measure notes "Social inclusion and poverty is well built into the application, assessment and appraisal process (for projects)" but "It is not possible to comment on the impact of the programme on social inclusion given the absence of relevant indicators or other data in respect of named target groups or areas." The only pertinent information cited is that of 1,440 approved projects, 585 are located in disadvantaged areas or are focused on tackling disadvantage. A survey of beneficiaries conducted by ADM should fill some of this gap, however, further information is required on the range of childcare needs of disadvantaged groups and price of childcare places created (especially those in the private sector). Given capacity constraints in the voluntary sector to provide sufficient subsidised childcare places and broad geographical coverage we support the NDP/CSF recommendation that alternative ways of subsidising costs of childcare to disadvantaged groups should be considered<sup>59</sup> e.g. capitation fees, appropriate fees structures based on ability to pay,

<sup>58</sup> Approvals are running closer to the targets but there are considerable delays in drawing down funding.

<sup>59</sup> Recommendation 14, pvi-vii.

direct state provision. Another alternative adopted by the majority of EU member states is direct state provision of childcare, which means that the government can directly control both price and quality issues.

The non-childcare elements of this Priority are allocated €192.5 million in the BMW and €883 million in the SE region. This money is devoted to community development/family support, crime prevention,<sup>60</sup> youth services, services to the unemployed and equality. A number of these Measures have made significant physical progress which is likely to have impacted on disadvantaged groups, for example the setting up of family support projects and community resource centres and the provision of services and facilities for disadvantaged youth. The BMW report suggests that progress has been good in the Local Development Measures (including services to the unemployed), community development, equality and family support, but is behind target in the crime prevention Measures and some of the youth services. The Youth Service Grant Scheme is not specifically targeted at socially excluded groups and as such perhaps does not belong in this Priority.

However, as mentioned above, there are very few impact or result indicators for any of the Social Inclusion and Childcare Priority Measures. The exception to this is the local development Measure run by ADM, which record baseline and result figures for the proportion of target groups achieving certification, employment or business start-ups, however on a number of these the out-turn figures are lower than the baseline. Generally the lack of data and indicators prevent any quantification of the impact of the OP on social inclusion.

The SE evaluation also reports difficulty in assessing the impact of the OP on the Horizontal Principles due to inadequate reporting and the lack of baseline material, and conclude that ‘while these [Community Development and Local Development] and other Sub-Measures are undoubtedly having an impact in terms of alleviating poverty..., that impact is not quantifiable under the current reporting regime and is understated in the reports to the monitoring committee.’ (MTE, p. 96).

It is also worth noting, that there is little evidence within the regional reports, that the targeting of the most disadvantaged areas proposed by the RAPID and CLAR programmes is being pursued in practice. This may be due to a failure to report this process. Consultations suggest that there is considerable frustration on the ground with the implementation of the RAPID programme.

Within the PEACE II programme there is a Social Integration, Inclusion and Reconciliation Priority. Within this, four Measures/Sub-Measures operate in the Border Region these are:

<sup>60</sup> The crime prevention measure are training programmes for prisoners and support structures for those on supervision orders in the community. These are both socially excluded groups.

Measure 2.2 Developing Children and young People, 2.6 Promoting Active Citizenship, 2.7 Developing Weak Community Infrastructure and 2.8 Infrastructure & Equipment support. To date these programmes have spent €6.9 million in the Border Region, which amounts to approximately 24 per cent of their budget. The OP Mid-Term Evaluation report states that 31 indicators in this Priority have been met (p. 253) however, it is not clear which indicators have been achieved and what proportion have been met north and south of the border. On the impact of PEACE II on poverty the evaluators conclude that while they are satisfied that this is being applied as part of the selection process “it is not yet evident that the impact is being demonstrated on the ground.”

Finally, the productive sector OP is not centrally concerned with social inclusion, nor is there widespread integration of this issue as a Horizontal Principle. Thirty-one of the fifty-one Measures note that poverty/social inclusion is not applicable or appropriate to their Measure. The Indecon Mid-Term Evaluation examined a sample of seven Measures across the OP to assess the impact on social inclusion. Only two activities in relation to poverty were reported – research on the causes and consequences of rural poverty (Teagasc Research) and consultation with local voluntary organisations (Indigenous Industry – Regional Networks).<sup>61</sup> The other Measures either report that it is inappropriate or simply make general statements about the potential impact on poverty (e.g. by increasing employment, or funding students) but do not report on any steps to ensure that this might benefit the socially excluded. Therefore, the impact of this OP on social inclusion is unknown but given the lack of focus on this issue it is likely to be low.

## MONITORING AND CO-ORDINATION MECHANISMS

Social inclusion issues within the NDP are monitored by the *Equal Opportunities and Social Inclusion Co-ordinating Committee*. The Combat Poverty Agency is also represented on the Regional OP monitoring committees. Members of the community and voluntary sector, the Trade Union movement, and the Equality Authority, who are likely to promote this issue of social exclusion are represented on all of the monitoring committee. Representatives of the DSCFA also participate in a number of monitoring committees but are included as an implementing body, rather than in the role of the Social Inclusion Unit.

Consultations with members of monitoring committee suggest that there is a need to reform their structure: they are too large and they do not prioritise business.

There is a need for the Combat Poverty Agency (CPA) to be given a formal role in all OPs so that they can provide the type of

<sup>61</sup> Note one of the sample measures (food sector measure) is not actually assessed for poverty/social inclusion but for gender equality instead (Indecon, second draft p396).

technical advice and training support that is currently available to the Regional OPs. This is particularly important in relation to issues of health, housing, public transport and employment/training. While the CPA already provides such advice it is currently under-utilised by implementing agencies. The proposed change would allow the CPA to be proactive and to overcome the bureaucratic inertia on this issue. In this role the CPA could provide advice on how the principle of social inclusion can be included in a meaningful way across the NDP. The Gender Equality Unit at the DJELR supplies this type of support and training on equal opportunities across the NDP and should be used as a model.

The NDP/CSF Evaluation Unit (2003b) has recently undertaken a comprehensive review of the co-ordination mechanisms around social inclusion. The study evaluates the role of the County/City Development Boards (CDBs) and the Social Inclusion Measure (SIM) working groups which were established for the purpose of co-ordinating the NDP (and other) social inclusion programmes at local level, to reduce duplication, confusion and competition, and identify gaps in provision. Given that the social inclusion Measures are managed by eight government departments, implemented by thirteen different agencies and delivered by a very wide number of organisations (*ibid.* Fig. 1.1) the co-ordination task involved is very substantial.<sup>62</sup> The study concludes that the SIM groups have played an important networking role at local level, however, the effectiveness of both the SIM and CDBs has been limited for a number of reasons. First, timing problems mean that these groups were set up after the NDP social inclusion Measures and their delivery mechanisms had already been agreed and were under way. Second, the level of national level co-operation has been weak. Third, there is no obligation or incentive to stakeholders to participate in the process. Fourth, the lack of data at local/county level has limited the ability to co-ordinate efforts. Fifth, in policy terms the SIM co-ordination process is detached both from the NDP and the NAPS.

The study recommends that the CDB social inclusion co-ordination focus should shift to *outcomes* for socially excluded groups, which would 'shift attention away from territorial issues around the roles of...delivery organisations towards a problem-solving agenda'. (*ibid.* p. 77). This change in focus is entirely consistent with our discussion of the need to focus on the *impact* of the NDP Measures. Additional recommendations centre on improving the co-operation on national government (departments) in the process, establishing formal reporting requirements to both NDP and NAPS monitoring structures, and an allocation of some of the Social Inclusion budget in the two Regional OPs to support co-ordination Measures. The report also recommends some streamlining of the social inclusion Measures by amalgamating programmes with similar aims and target groups (e.g. young persons

<sup>62</sup> These estimates do not include measures in the PEACE II OP.

sports and facilities Measures which is directed at drug users/areas with problem drug use and the drugs element of the Local Development measurement). Such amalgamation is sensible since it should reduce duplication of efforts and delivery costs without reducing investment in the groups targeted.

## CONCLUSION

The NDP expenditure includes areas that are of key importance to socially excluded individuals and their communities. Access to housing, healthcare, childcare, education, training and employment are fundamental to people's quality of life, as is identified in the National Anti-Poverty Strategy. There is a high potential for the NDP to impact on social inclusion due to the nature of the interventions themselves and the targeting of certain Measures on disadvantaged groups and communities. However, there is a problem in how social inclusion is incorporated into the evaluation process. The lack of data and indicators on social inclusion, particularly on the longer term impact, prevents any rigorous assessment of the impact of the NDP on this Horizontal Principle.

Given that social inclusion is a key objective of the overall Plan, and the main objective of a number of priorities, it is a very serious shortcoming that progress on this issue can not be tracked in most cases. While many Measures say that social inclusion is incorporated into project selection criteria, there is little evidence on how this followed through, therefore we cannot judge whether there has been an impact or where opportunities have been missed. Even in areas where social inclusion is central there is a failure to measure this impact: for example in health spending, in the Measures targeting educational inequality, and in many elements of the social inclusion/childcare Measures of the regional OPs.

Our discussion has highlighted the continuing importance of the voluntary and social housing provision and Measures tackling the needs of travellers and homeless people. It has highlighted the absence of interventions in private rental accommodation and the targeting of affordable housing at those most in need. The social inclusion dimension of the health Measures should be strengthened so that the provision is guaranteed to be within the public sector (i.e. for public patients and medical card holders). Additionally greater targeting of community care facilities within disadvantaged communities is warranted as is the expansion of services to vulnerable groups, because in some cases current commitments are so low that their impact will be negligible (e.g. day care places for the elderly). The discussion of the EHRD OP suggests that a number of programmes have demonstrated a positive effect on socially excluded groups, in others there is a strong basis/rationale for expecting positive social inclusion outcomes, for example, in Measures tackling educational disadvantage, but this needs to be verified and quantified. Similarly, our discussion described how the social inclusion and childcare elements of the regional programmes are likely to impact on social inclusion, but only if the project

selection procedures and allocation of funding is being targeted in accordance with the stated commitments. There is currently a lack of evidence of this, although it should be possible for agencies to produce such evidence.

There are currently no sanctions for those who fail to deliver on commitments to address social inclusion (or on reporting requirements) nor are there rewards for those who do deliver. If part of funding was contingent on showing that Measures had made progress toward meeting their social inclusion objectives this would encourage more useful reporting and make it possible to monitor and evaluate progress more effectively.

Additional technical assistance funding to help implementing agencies meet their horizontal commitments would also be useful, the experience of the pilot exercise with the regional OPs suggests that this assistance is needed to help develop and extract the data necessary for monitoring and evaluation. Resources within departments and agencies are not currently devoted to these tasks as is clearly evident from the significant information gaps, outlined above. In this respect the development of up-to-date, basic data on poverty and deprivation at a more detailed regional and area level is a Priority, as is the need to make such information widely accessible to those selecting and delivering programmes.

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## 11.2 Regional Balance

While not a specific horizontal issue, one of the overarching objectives of the NDP is to achieve a more balanced regional development, reducing the disparities between and within the two Regions. The NDP aims to achieve this, not merely through the regional OP's, but also through the other OP's and related government policies and regional strategies of agencies such as Enterprise Ireland and the IDA. As such it is appropriate to evaluate the progress towards balanced regional development as part of the horizontal issues.

### **POLICY DEVELOPMENTS**

An important objective of the NDP is the achievement of balanced regional development. Thus, the NDP aims to "...achieve a more balanced regional development in order to reduce the disparities between and with the two Regions and to develop the potential of both. (NDP, p. 43). The National Spatial Strategy (NSS) objective is slightly different as it aims at "Developing the full potential of each area to contribute to the optimal performance of the State as a whole – economically, socially and environmentally" (NSS, p. 11). Thus, there has been a subtle change in the meaning of balanced regional development away from reducing disparities and towards developing potential. In the NSS potential is defined as: "The capacity that an area possesses, or could in the future possess, arising from its endowment of natural resources, population, labour, its economic and social capital, infrastructure and location (NSS, p. 12). However, it is not clear how this is to be measured, and indeed,

measurement could prove rather difficult, which will also impede any evaluation of the NSS in the future. On the other hand disparities are readily measurable.

Another important issue is that potential is clearly endogenous; that is, it can be changed through the actions of individuals, enterprises and government. Indeed, the NDP will impact on the potential of all regions. Of course some areas and regions have a lower potential than others. Thus, even if they reach their full potential they may still lag behind. The question for policy makers then is, whether this gap should be closed and what policies will help in this. This is an important issue that is not addressed by the NSS.

The most important policy contained in the NSS is that development should follow a centre-based approach, which had previously been proposed by a number of researchers and public bodies. This type of strategy is based on the realisation that much of the economic and social development that is taking place is urban based, but that the pattern of urbanisation in Ireland does not allow all parts of the country to benefit equally from this urban driven growth. Thus, economic growth is highly correlated with urbanisation, where there appears to be a threshold effect, such that urban centres need to be above a certain size to benefit from higher growth. This phenomenon is strongly related to the agglomeration economies, which form a central pillar of recent economic research. However, the impact of the sub-optimal distribution of urban centres and the high degree of primacy of Dublin, also impact on non-economic issues and especially the quality of life of people. This includes issues such as congestion and environmental damage due to over-concentration as well as rural decline.

### **PRIORITISATION OF THE OPS**

Since balanced regional development is not an explicit horizontal issue, no particular indicators have been identified for evaluation purposes. Nevertheless, the evaluations of the Productive Sector OP and the Economic and Social Infrastructure OP deal with the issue of balanced regional development. An important aspect of evaluating the impact of the OPs is the extent to which financial and physical progress varies between the regions as well as the initial prioritisation chosen in the NDP.

Table 11.3 shows the planned expenditure and progress for the priorities of the three Inter-Regional OPs. This table shows that for all priorities the Southern and Eastern Region was to receive a substantially larger allocation of resources than the Border, Midlands and Western region. This is not surprising given the different relative size of the regions in terms of population. However, an interesting pattern with regard to progress emerges from the table. The relative allocations within OPs vary in some cases. In the Productive Sector OP, there is a heavier emphasis on RTDI in the Southern and Eastern region which perhaps reflects the concentration of the Third Level Education institutions in that

region, while there is a higher weighting given to the Industry Priority in the BMW region. These differences are actually magnified in the outturn, in that progress in the RTDI Priority in the BMW region has been behind that in the Southern and Eastern Region. This is to a significant extent explained by the differences between the regions with regard to the number and type of third level institutions and the types of firms located in the regions. In the ESI OP the BMW region is given a higher proportion of resources for national roads than the Southern and Eastern region. However, due to substantially slower progress in the BMW region the actual relative allocations in that OP have turned out to be quite similar. Finally, the relative distribution of resources between the regions is quite even.

**Table 11.3: Planned Expenditure and Progress 2000-2002 (Million €)**

	Planned Expenditure		Progress (%)	
	BMW	Southern and Eastern	BMW	Southern and Eastern
<b>Employment and Human Resources</b>				
<b>Development</b>				
Employability	993.568	2485.044	104.0	91.3
Entrepreneurship	89.504	247.582	35.6	19.6
Adaptability	516.625	940.795	71.8	90.5
Equality	0.984	10.873	29.9	20.5
Other Measures	364.863	1090.952	94.5	92.6
Total EHRD OP	1965.544	4775.246	90.6	87.6
<b>Productive Sector</b>				
Research, Technological Development & Innovation (RTDI)	273.211	646.631	25.2	51.8
Industry	396.952	595.741	37.8	68.0
Marketing	47.268	104.550	66.5	74.1
Sea Fisheries Development	14.290	10.370	13.8	19.2
OP Technical Assistance	0.423	0.799	9.2	19.3
Total PS OP	732.143	1358.091	34.4	60.3
<b>Economic and Social Infrastructure</b>				
National Roads	829.627	1393.97	71.4	144.2
Public Transport	302.189	1267.248	51.4	103.7
Environmental Infrastructure	393.421	1049.273	112.1	104.4
Sustainable Energy	15.24	29.95	11.2	52.8
Housing	724.852	2754.32	113.8	107.6
Health	338.28	789.58	104.0	103.8
OP Technical Assistance	0	1.16		143.0
Total ESI OP	2603.609	7285.501	90.9	112.8

*Note:* Figures refer to the total public funding over the period.



**Table 11.4: Planned Expenditure and Outcome, 2000-2002**

	Per Capita Planned Expenditure		Per Capita Actual Expenditure	
	BMW	Southern and Eastern	BMW	Southern and Eastern
<b>Employment and Human Resources Development</b>				
Employability	994.3	891.5	1,034.3	813.9
Entrepreneurship	89.6	88.8	31.9	17.4
Adaptability	517.0	337.5	371.3	305.4
Equality	1.0	3.9	0.3	0.8
Other Measures	365.1	391.4	345.1	362.5
Total EHRD OP	1,966.9	1,713.0	1,782.8	1,500.0
<b>Productive Sector</b>				
Research, Technological Development & Innovation (RTDI)	273.4	232.0	68.8	120.1
Industry	397.2	213.7	150.0	145.4
Marketing	47.3	37.5	31.5	27.8
Sea Fisheries Development	14.3	3.7	2.0	0.7
OP Technical Assistance	0.4	0.3	0.0	0.1
Total PS OP	732.7	487.2	252.3	294.0
<b>Economic and Social Infrastructure</b>				
National Roads	830.2	500.1	593.1	721.2
Public Transport	302.4	454.6	155.5	471.6
Environmental Infrastructure	393.7	376.4	441.2	392.8
Sustainable Energy	15.3	10.7	1.7	5.7
Housing	725.4	988.1	825.1	1,063.3
Health	338.5	283.2	352.0	293.9
OP Technical Assistance	0.0	0.4	0.0	0.6
Total ESI OP	2,605.4	2,613.5	2,368.7	2,949.0

*Note:* Figures refer to the total public funding over the period.

Although progress of the EHRD OP is behind target it appears to be better in the BMW region than the Southern and Eastern region. However, the opposite is true for the other two OPs where the progress in the Southern and Eastern region is often substantially ahead of that in the BMW region. This is especially true in the PS OP, where even though progress is slow, that in the Southern and Eastern Region is almost twice that of the BMW region. This also applies to the Public Transport Priority in the ESI OP. In the case of the Sustainable Energy Priority progress in the BMW region is a mere fifth of that in the Southern and Eastern Region.

Of course, given the differences in size between the regions it is more informative to scale the data. The most appropriate weight is population and per capita planned allocations and outturn are shown in Table 11.4. This table shows that in terms of planned expenditure there is an overall bias in favour of the BMW region, however due to the differences in progress there is a bias in the outturn in favour of the Southern and Eastern Region. This is particularly driven by poor progress on national roads, public transport and RTDI in the BMW region. However, it must be taken into account that some investments that have taken place in the Southern and Eastern region can also have a significant positive

impact on the BMW region. This is particularly relevant in the case of transport. Thus, an improvement of a section of national road in the Southern and Eastern region can help improve market access and reduce transport costs for businesses in the BMW region.

## CONCLUSIONS

Overall our assessment suggests that the NDP has had a positive impact on balanced regional development. This assessment is based mainly on the fact that the NDP has increased the stock of infrastructure and other resources in all regions. Furthermore, the available data on employment shows faster growth in the BMW region than in the S&E region. However, the recent trends of output also point to an increase in disparities between both regions. While a continuation of these trends may suggest that the NDP has had a negative impact on regional balance it should be borne in mind that in the absence of the NDP the output disparities between the two regions might have been even larger. To fully assess the impact of the NDP on regional balance more research needs to be carried out. In any case, the impact of the NDP could be maximised if a number of steps are taken.

First of all the selection of projects within the Measures should take account of the following criteria:

- the Measures that are implemented must be justified on economic grounds or on grounds related to the horizontal issues. Thus, the Measure should address a market failure or externality. In this respect these may differ between regions. For example, there may be a larger risk or information asymmetry in the less developed areas. With regard to Measures that are not directly economic such as some of the Measures under the Social Inclusion and Childcare Priority, these must be justified under the horizontal issues.
- the Measures need to be appropriately designed for the weaker regions. Thus, a Measure that addresses the needs of some regions may be completely inappropriate in other regions.
- the Measures should reflect the goal of achieving balanced regional development in accordance with the NSS. In particular, specific Measures that contribute to critical mass building in the designated centres should be designed.
- the project selection criteria used to select actual projects needs to reflect the need for balanced regional development, and in particular priorities set out in the NSS (e.g. is the project in a designated gateway?).
- more data at the NUTS III level must be made available.

With regard to all five criteria, some shortcomings in the NDP can be identified. In relation to the first, the evaluations of the OPs contained in this study give adequate detail, so in this section the focus is on the latter four.

There is little evidence that the Measures have been specifically tailored to the needs of regions. Of course there are a few exceptions such as public transport, which is largely targeted at urban areas, and in particular Dublin. Generally, the Measures contained in the NDP are not tailored to the differential needs of the regions. There appear to be no Measures specifically aimed at critical mass development, and those Measures that can contribute to critical mass development do not appear to be specifically targeted. While it is not possible to completely redesign the Measures contained in the NDP, we have recommended that a special fund be set up under the Regional OPs that is specifically focused on investment in the centres designated in the NSS.

The selection criteria do not appear to take account of balanced regional development and the NSS. Of course the delay in publishing the NSS has contributed to this, but going forward, where possible, amendments should be made in the selection criteria. Overall, the lack of a regional focus in the NDP that the potential contribution of the OPs to more balanced regional development is less than it might be. However, the NDP has undoubtedly helped in improving the potential of all regions.

In order to make progress on regional development, all aspects of the NDP must adhere to the strategy set out in the NSS. In this respect the forthcoming Regional Plans/Planning Guidelines will give further focus for investment prioritisation. These plans will elaborate the NSS at a regional level, and in order to get local buy-in it is necessary that the NDP prioritise investments along the lines suggested in these plans, subject to rigorous assessment of all projects.

Finally, if progress on achieving more balanced regional development is to be measured, the appropriate data at the NUTS III level will need to be collected. This includes data on the spending as well as output/impact indicators, as part of the monitoring and evaluation of the NDP. Furthermore, the evaluation of the impact of the NDP is severely restricted by the lack of up to date general socio-economic data.

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### 11.3 Rural Development

Many progress reports on the NDP/CSF refer to the rural development potential of the National Development Plan (outlined in Chapter 11 of the Plan). All elements of the Government's Rural Development Strategy, outlined in the *White Paper on Rural Development* (1999) were to be covered by the Operational Programmes for Economic and Social Infrastructure, Employment and Human Resources Development, the Productive Sector and the two Regional OPs.<sup>63</sup> The rural development effort of the NDP was to "give real substance to the strategy set out in the White Paper where particular attention would be paid to plan implementation

<sup>63</sup> Overall NDP investment to impact on rural development is €8.5 billion for the duration of the plan.

and monitoring to the effective delivery of NDP Measures and more importantly ensure they have a tangible effect on the ground in rural areas” (National Development Plan, 1999, p. 207.)

Under the auspices of the then Department of Agriculture, Food and Rural Development, a rural development Co-ordinating Committee was established for the implementation of the NDP. Its brief was to help ensure that the social well being of rural communities remained a Priority throughout. It has a broad membership drawing from the managing authorities, implementing departments and the social partners. Its first meeting was not held until November 2001.

## **RURAL DEVELOPMENT INDICATORS**

Several implementing agencies report that they are having considerable difficulties with the application and monitoring of this Horizontal Principle and cannot capture the rural development effect succinctly within the existing programme indicators. The primary difficulties reported in each OP Mid-Term Evaluation cited (1) lack of clarity in relation to the parameters of rural development and (2) lack of guidance in relation to their implementation.

Many Measures and Sub-Measures are having a significant impact in terms of assisting rural development but that impact is not quantifiable under the current reporting regime and is understated in their Monitoring Committee reports. A certain degree of this is understandable. However, the quality of reporting on the rural development Horizontal Principle across the OPs ranges from fair to very poor. Progress report comments, for the most part, are very general with some rare attempts at a specific reference to rural development action under some Measures. For the majority of Measures, reporting on rural development comprises of repetition of the *ex ante* statement provided in the programme complement. Often the information reported in the third year of programme delivery has been identical to that reported in the first year and little or no effort has been made to actually assess the impact of individual Measures on rural development at all.

Coverage of the rural development Horizontal Principle is particularly disappointing given its obvious relevance to the Agriculture and Rural Development Priority in the Regional OPs. Agriculture and Rural Development is one of four priorities in the BMW and E&S Regional OPs. There are eighteen Sub-Measures where fifteen reported that rural development was relevant.<sup>64</sup> Despite the dedicated Priority to the issue, most BMW and S&E implementing agencies indicate a lack of satisfactory guidelines for reporting on rural development. This has led to cases where if rural

<sup>64</sup> Only one Sub-Measure across both regional OPs reported that it had difficulty in incorporating the rural development principle on the grounds that its target group (i.e. those with contact with Teagasc Advisory Services) were described as low-skill and would be unable to participate in the general workforce, other than on low pay, without support (E&S OP MTE, p. 88).

development effects are mentioned in reporting at all, a general comment has been accepted as sufficient. Specific comments relating to rural dwellers were normally an extension of the general context of the Measure with some attempt to specify a deliberate effort to target services by location. Where other priorities relate in a corresponding manner to one of the other Horizontal Principles, a direct impact on the environment, equality or social exclusion are often directly reported on, using the dedicated Measure as a showcase of how adequately to “proof” policy for the Horizontal Principle effect. This has not happened with the Agriculture and Rural Development Priority within either of the Regional OPs. This leads to the overall impression that rural development continues to be underrated across all OP priorities.

The most common reason given by the individual mid-term evaluations of the individual OPs for the lack of impact of the Horizontal Principles on the management and delivery of the individual OPs was the lack of data. This arises from a lack of understanding of the role of the rural development principle and of how to balance making a contribution to this principle fit with meeting core Measure/Sub-Measure objectives, such as the creation of jobs, development of alternative rural enterprises etc. For a number of Measures the data were not available for any comprehensive mid-term evaluation of relevant Measures under the individual OPs despite some **explicit** references to the rural development potential of particular Measures and Sub-Measures in the programme complement documentation. While reporting on progress on Rural Development in most cases is generic and unspecific, some programme indicators have obvious but **implicit** rural development implications that have been addressed in a satisfactory manner. A recognition of both these rural development dimensions within established programme indicators should be emphasised in future reporting.

## REPORTING ON RURAL DEVELOPMENT

Because Rural Development Performance Indicators have not been included in any OP or accompanying sets of programme complements, it is difficult to objectively evaluate the extent to which Measures/Sub-Measures support rural development from data provided. At the time of this Mid-Term Evaluation, the NDP Rural Development Co-ordinating Committee has stated that it is preparing terms of reference for a study to examine the feasibility of establishing performance indicators for rural development.

Given the geographic coverage of NDP Measures and Sub-Measures and the capacity to target within counties, a significant contribution is undoubtedly being made under the heading of rural development based on locational targeting. However, if some of the wider socio-economic impacts of the agriculture and rural development Sub-Measures cannot be captured and reported on in a quality manner, it is less likely that Horizontal Principle impacts will be given a higher Priority. Taking for example the Forestry Sub-

Measures of the NDP: location and landscape effects are easily reported on. However, there is considerable scope for further research into the effects of forestry developments on the rural economy.

In relation to the application of the concept of rural development, the National Spatial Strategy provides a taxonomy of policies for rural areas that could be adopted particularly in light of the closer integration required between the NDP and the NSS.<sup>65</sup> Rural development indications should start from the broad premise of identifying the policy effects of each Measure or Sub-Measure on *people*, and by extension, communities working and/or residing *in rural areas* as distinct from urban-based people. These are the simplest units of analysis in a rural proofing exercise.

### **PROJECT SELECTION**

BMW regional development by its nature tends to have a larger differential impact on non-urban areas (higher geographical area) and higher per capita effects (due to lower population densities). Where higher weighting is given to area-based criteria over resource usage based on per capita metrics, rural areas will be favoured in project selection terms. Targeted support to rural areas should then have a higher differential effect and impact in rural development terms, by definition.

Farm-related Sub-Measures are generally based on a queuing system where funding is approved and guaranteed when specified pre-determined eligibility conditions are met. Problems relating to eligibility criteria and income thresholds for the structural improvement schemes have impeded their implementation under both the regional OPs. The conditions have contradictory objectives from a rural development point of view: they aim to ensure a minimum level of income viability before the grants are made but at the same time aim to bring about structural change which is probably most needed for the sub-sector of the population excluded by the previous objective. However, explicit criteria related to rural development are not included in the eligibility conditions for most rural-based schemes.

### **MANAGEMENT AND DELIVERY**

The dimensions to which rural development implications of OP Measures and Sub-Measures arise can be broadly defined as those relating to location (i.e. targeting), landscape (i.e. physical impact) and living standards in rural areas (i.e. socio-economic effects). These dimensions imply direct and indirect effects that can be positive, neutral or negative in nature. In relation to the extent to which the rural development Horizontal Principle is being addressed by Measures and Sub-Measures within each of the OPs,

<sup>65</sup> See The National Spatial Strategy: People, Places and Potential (2002), pp. 51-54.

the pattern of reporting is best where the Measure is designed to address a relevant target group or location.

To assess the impact of the NDP on the Horizontal Principles and rural development in particular, the bottom-line net impact of relevant Measures and Sub-Measures will require quantitative and qualitative capture of the socio-economic effect on these groups (rather than describing the targeting of resources). Arbitrary estimates of impact, keeping in line with the maxims of the *White Paper on Rural Development* has heretofore been made in relation to targeted Measures in terms of location or population subgroup. Likewise, the impact of the rural development HP on management and delivery is only evident in the case of Measures that are broadly targeted at rural dwellers. It must be emphasised that rural development encompasses much more than the farm sector and includes the socio-economic effects of policy on all rural dwellers.

## CONCLUSIONS

The rural development Horizontal Principle is an important feature of the NDP and all its OPs and reflects genuine concerns that need to be addressed on a continuing basis. There is a lack of dedicated monitoring indicators, even in Measures specifically related to agricultural and rural development policies. This has led to an unacceptably low level of reported progress or otherwise on rural development and the reported impacts across the OPs appear piecemeal. There is an absence of baseline material against which progress on rural development can be assessed at this mid-term stage. A lack of a common language or terminology for reporting on rural development makes it difficult to integrate information at disparate levels within each of the OPs to produce a comprehensive assessment of the overall impact of the NDP/CSF.

A common conclusion across all the individual OP Mid-Term Evaluations is that there is widespread uneasiness in relation to how the rural development Horizontal Principle is being dealt with. This is shared by the implementing agencies. This is an unsatisfactory situation that is likely to continue for the remaining NDP/CSF term unless some concerted effort goes in to giving rural development some real substance. The result of the past lack of attention to this issue means that Measures with genuine rural development effects are not highlighted due to the reported lack of physical progress along this key dimension.

Monies spent appear to be under-achieving and have limited impact on rural development. Lack of clarity combined with a low level of understanding as to what rural development promotion can achieve will perpetuate this conclusion unless there is a change at the level of the individual OP Measures. While it is concluded that there probably have been some tangible rural development effects on the ground, not captured by the current measurement, a more focused approach is required over the rest of the planning period. For this reason it is recommended in Chapter 5 that special

attention be devoted to refocusing resources to promote rural development.

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## 11.4 Environment

### INTRODUCTION

The six-year investment programme of the NDP has the potential to make a big impact on the environment. The long-term effects of the NDP on the environment depend on the projects undertaken and the types of assets invested in. The manner in which these assets are subsequently used or operated can also have continuing implications for the environment.

Ireland has a high quality environment on the whole, but it faces several severe challenges. The main ones identified by the Environmental Protection Agency (EPA), and that the NDP says should be addressed, can be grouped under five headings: the decline in the quality of waterways (though there are recent signs of improvement); better management of solid waste; the introduction of Measures to meet Ireland's commitment under the Kyoto agreement on greenhouse gas emissions; protection of the urban environment; and protection of flora and fauna. Other related aspects of the environment have been added by the NDP to a checklist described below, as 'areas to be considered'.

In the face of these environmental challenges, of the NDP itself and of the requirements of EU Directives, the NDP states that it places a premium on promotion of economic efficiency with less intensive resource use and less environmental stress (NDP, Appendix 4). To further this aim, the NDP and its OPs were subjected to an eco-audit and "Guidelines" were set up to help the Programme Managers in this task. An initial screening was to be undertaken which entailed completing the checklist that asked if the proposed action would have a significant effect on the environment. The areas to be considered were water; air; biodiversity; land use; resource conservation; waste; architectural and archaeological heritage; health and welfare (noise, safety) and dangerous substances. If a significant effect was expected then the policy should be subjected to a fuller procedure within the eco-audit. This would investigate the environmental impacts, quantifying them in so far as it is possible, report on the alternative policy options considered, and describe preventive or mitigating Measures and identify policies, standards etc, with which the project would comply. Finally, the eco-audit would provide for assessment of impact following implementation.

The extent to which the NDP has benign environmental effects or otherwise depends to a considerable extent on the existence of concurrent environmental policies. For example, growth arising from the positive impact of the NDP/CSF will result in increased emissions of greenhouse gases. Whilst this must be considered an undesirable environmental outcome, increased emissions could be offset by the adoption of appropriate accompanying Measures, such as carbon taxes. Potential benefits from investment in



environmental improvements could be undermined if appropriate regulations, pricing and know-how were absent. Another consideration is the fact that environmental results of projects can take time to materialise.

This section on the environment considers the role of environmental principles in project selection and how they have influenced the management, delivery and the likely impact of the programme. There follows a discussion of how environmental principles are reported on at measure level and the extent to which the indicators capture environmental effects. It concludes with some suggestions for re-balancing, that are additional to those made elsewhere, and makes suggestions as to how to improve the indicators to help to assess the overall effects of the programme.

## **PROJECT SELECTION**

In the case of the ESI OP, environmental principles have played a key determining role in the selection of the priorities. These include the Public Transport Priority, selected because it holds out the prospect of, among other things, reduced congestion and emissions and a better spatial distribution of habitation, though the balance with respect to roads is not spelt out. The Environmental Infrastructure Priority addresses environmental concerns including those of EU Directives (Urban Waste Water and Drinking Water), pollution of rivers and lakes and inadequate access to public waste water treatment facilities. The aims of the Priority for Sustainable Energy include improved local air quality and reduction of pollutants, especially of CO<sub>2</sub> emissions, to levels agreed in the Kyoto Protocol on combating climate change. Where the Roads Priority is concerned, environmental principles are to affect its manner of delivery so that the investment will ensure 'a high level of environmental protection'. The selection of projects in the PS OP indicates a sizeable role played by environmental concerns. RTDI in Education promotes a science centre (CIT) and institute (NUIG) engaged in researching environmental issues. RTDI in Agriculture has the objective of developing and adapting farming practices so that they impact favourably on the environment. A portion of marine research aims to support sustainable (non asset-degrading) development. RTDI in Forestry investigates techniques of forest operations and environmental interactions. The Environment RTDI addresses a broad range touching on most of the major environmental areas requiring attention. The Marketing Priority that addresses tourism aims to improve the seasonal and regional spread, thereby 'contributing to environmental protection'. It also promotes 'special interest' tourism products that are environmentally friendly. Consideration of fish stocks, which includes use of more selective fishing techniques, and protection and development of aquatic resources are the stated objectives of the Sea Fisheries Development Priority. Meanwhile, the Industry Marketing Measure, though not overtly environmental in nature, has environmental protection built in to the procedures for selecting projects.

Many of the projects in the BMW OP and SE OP are guided by environmental objectives, especially in the Local Infrastructure Priority, which includes waste management, habitat protection and heritage conservation. The Agriculture and Rural Development Priority includes farm waste management and animal carcass disposal. Support for Special Interest Pursuits and Management in Tourism, and for environmentally compatible machinery in Forestry are further cases in point.

From this necessarily brief description of the Measures it can be seen that a sizeable portion of the projects in the NDP address environmental concerns and that all the challenges mentioned above are addressed to some extent. It would be difficult to say, however, which challenge receives most attention. A significant part of the large investment in Waste Water is driven by environmental directives. While natural habitats may be adversely affected by investment in roads, though this is mitigated to some extent by use of protection Measures, they may potentially be improved by increased use of (upgraded) public transport and habitat protection projects. Further comments follow on these aspects.

## **CSF**

CSF expenditure is considerable in the areas of major potential environmental impact in the programme. The main areas are roads, public transport and waste water treatment. The roads programme, being so large, appropriately pays considerable attention to environmental considerations and this attention could justifiably be increased by more resourced analysis of effects. CSF expenditure on public transport could better achieve its aim to attract passengers by a switch in the fiscal treatment of public transport. If the rebate became as subsidy on numbers of passengers carried, rather than on diesel purchased, there would be the same incentive to use public transport but a more appropriate environmental message (Scott and Feeney, 1998). Improvements to the aquatic system from wastewater treatment could be raised by a better balance with other policies, including Measures aimed at agriculture.

The lesser areas of CSF expenditure also hold out prospects for potential environmental effects. The rural water measure could encourage excess scatter of habitation (and future costs) though, in the absence of national charging of domestic users of water, there is a difficulty in asking rural dwellers to pay. Provided that Architectural Heritage Guidelines are adhered to, urban and village renewal has a positive environmental impact, and so do support for E-Commerce and Communications and for micro-enterprise in so far as these revitalise activity, especially in remote peripheral areas that could become rundown. Forestry, again provided that Guidelines are conformed with, has the good environmental effect of sequestering carbon dioxide though the habitat effects, including effects of forest roads, have to be considered. In addition to the role of education in raising environmental awareness generally, the education measure can promote educational establishments to be

energy efficient by applying benchmarks (such as energy use per square metre, per student, per department type and per computer, elaborated under the energy conservation measure). CSF expenditure on RTDI in Education and Industry could also be environmentally effective if there is a clear policy signal that there will be a shift in the relative costs of environmental resources compared to labour costs, which could result in an impetus for firms to undertake R&D to improve their resource efficiency (O'Malley *et al.*, 2003, SEI, 2003). In environmental terms many schemes in the PEACE OP, which is all funded by the CSF, are overtly of the improving variety.

### **DELIVERY**

There is much variation in the extent to which environmental principles influenced management and delivery. This can be gauged from the progress reports on the OPs and from the manner in which the eco-audits were undertaken. As described in the report *Evaluation of Eco-Auditing in the Context of the NDP 2000-2006*, though a serious attempt was made to consider environmental implications at OP level, with some exceptions this was largely qualitative (Scott *et al.*, 2003). It did not on the whole fulfil all the requirements for the eco-audits laid down in the Guidelines (a major exception was Roads). In filling out the checklists described above for the programmes, the verdict of 'no impact' was recorded when in some cases this verdict might only have been valid on the assumption that protective Measures were put in place and compliance with regulations would render it true. An example of a questionable verdict would be that for aquaculture. Another example was the ESI OP, where the checklist as filled out (where negative impacts of "some significance" were flagged) should have triggered the eco-audit actions outlined above, but these do not appear to have been undertaken.

Nevertheless a useful start was made in implementing an eco-audit procedure and the exercise raised awareness and constituted a valuable learning experience. A recurring observation by the OP managers was that the pilot eco-audit was constrained by the short time available to undertake the exercise, by the late stage at which it was introduced, and by the lack of resources, particularly of know-how. Routine access to technical expertise and information that could support the exercise was not put in place and some managers felt ill-equipped to judge the information coming to them and the effectiveness or otherwise of protective Measures.

In other instances managers could be fortunate in that there were well established procedures already in place. For example, Non-National Roads would generally require an Environmental Impact Statement and the procedures for these were quite well established. Similarly, the implementing body for much of the PS OP is Enterprise Ireland and its personnel are already familiar with the work entailed to ensure that the environment is protected and seen to be so. Some project managers were also able to obtain

feedback and respond to changes indicated for their own programmes. The Environment RTDI is a case in point where the successive calls for tenders take into account earlier results and deal with feedback on issues arising. Another example of responsiveness of management is the Sea Fisheries Development Priority, which switched emphasis away from aiding new fishing vessels. This, however, was in response to concerns about stocks reflected in EU Regulations of December 2002 rather than to internal considerations.

The progress reports tend to back up the *Eco-Auditing* report's statement that a serious attempt was made to consider environmental principles. Reporting in the annual Implementation or Progress Reports has generally been in line with the statements of intent set out in the Programme Complements – though “vague or generalistic” as the MTE describes the environmental reports in the BMW OP on the Local Infrastructure Priority, or indeed of “a poor level”, referring to the Local Enterprise Development Priority.

On the issue of management overall, the attention paid in the OP Mid-Term Evaluations themselves to assessing the environmental management and outcomes is patchy and understanding is occasionally poor. At NDP level, environmental representatives participate in the OP Monitoring Committees and there is an Environment Co-ordinating Committee. While one has the impression that the procedures laid down were adhered to, there was an inadequate sense of urgency about the need for a process for developing the necessary environmental data. Comments in the Mid-Term Evaluations bear this out and it is evident that there was virtually no data process, about which more is said below. As for the likely environmental **impacts** of the programme, not unexpectedly given the data situation these are difficult to assess at present. Even in ideal circumstances difficulties would arise in reporting so soon because (a) as stated, environmental responses are often slow, (b) projects have only been in operation for two years, if that, and (c) the analysis of environmental data can often take time.

## REPORTING

In rare cases the EPA may have recorded environmental information that exactly conforms to the location and the timing of the project in question. That is, it relates to immediately before, the middle, the completion and, very important, to various periods thereafter. Non-governmental organisations (NGOs) might also have helped bring an environmental impact to light. As these sources can be expected to provide far from comprehensive coverage of project-related impacts, the question has to be addressed as to how the results can realistically be reported on and what indicators the programme managers can be expected to produce themselves.

In the circumstances, informed qualitative **information** can have a very important role to play and this has often been given. Again

the level of qualitative information is varied. The MTE for the BMW OP, commenting on the Local Infrastructure Priority, states:

*Often the information reported in the third year of programme delivery has been identical to that reported in the first year and very little effort has been made to actually assess the impact of individual Measures...*

and concludes that:

*...there is no evidence that Horizontal Principles have been taken into account in measure delivery or project selection, above statutory requirements.*

On the other hand in the case of Roads, the progress report gives good qualitative information on how the environmental damage of transport infrastructure can be reduced. The benefits to humans of roads are sometimes matched in reverse by 'Berlin Wall' effects on wildlife. For example, there can be fragmentation of habitats, noise, pollution – these effects can be mitigated by careful planning, design, implementation and maintenance of road schemes. To this end the Implementing Body shows evidence of keeping abreast of the latest research and it has prepared Guidelines for National Road Schemes. Research on other highly important questions is noted in the Progress Report, concerning the effects of road drainage on waterways, nuisance and pollution from transport, air quality, transport planning, and environmental and economic planning of road schemes. An environmental manager has been appointed for most of the above-mentioned tasks including landscaping, and archaeologists have been engaged to oversee archaeological related works and to develop a Code of Practice for a "more consistent and coherent approach to archaeological resolution". There is a high economic return from roads (though a number of environmental costs would be omitted from the calculations) and the attention to environmental principles is well described, and justified.

## INDICATORS

Environmental effects are generally not well captured by the indicators, for many of the reasons outlined above. Ideally, where relevant, the indicators should relate to the major environmental challenges – water quality, climate change and so forth – listed in the introduction.

A few indicators can be discussed here. In the ESI OP, numbers of schemes is given as a measure of the output of the Environmental Services Measure (and Water Supply and Management and Rehabilitation). It is suggested by the MTE that population equivalents could be a better measure. While compliance with EU Directives is given, improvements in river condition due to the measure would be the ideal indicator. (In their analysis of water quality for the period up to 2000, the EPA had found improvements from phosphorous removal in certain treatment plants. It would then be a small step to calculate improvements for money spent, which would be an ideal management tool.) The accompanying qualitative information is good and the Complete

Information System under development holds out the promise of providing further valuable management information. Calculation of the subsidy per cubic metre of water to domestic customers, estimated only roughly in a recent Eurostat report (2001), will hopefully emerge soon to meet the declared objective of providing transparency about funding to domestic users. The Energy Conservation indicators as specified do not help estimation of possible energy saved for money spent.

Environmental information on the Roads Priority could be improved with indicators of impacts on habitats, wilderness areas, areas of ground covered, size of contiguous land areas, and qualitative information on future maintenance requirements. Data could also be assembled on historic structures and houses removed. For the Public Transport Priority, in addition to passenger numbers, COMHAR propose indicators of customer satisfaction (or perhaps an indication of modal shift), travel time and ease of access to public transport (e.g. distance to nearest bus stop or station).

Likewise in the PS OP appropriate indicators appear to be difficult to derive. For example, under Forestry RTDI, it is difficult to assess the results and impacts under the Technology Transfer Measure, particularly in the short time that has elapsed. The indicators for the Seafood Marketing Measure raise more questions than they resolve. The indicators comprise value of fish exports, gross output of fish processing and aquaculture output. Environmental indicators would need to address questions of sustainability of stocks and the impact of aquaculture on its surrounding eco-system.

Similarly with the aquaculture measure *per se*, under the BMW OP and the SE OP, the measure includes an environmental quality programme and it would be helpful to see this reflected in indicators of environmental impact. Indicators could be derived from samples taken from the estuary bed, from the surrounding water and from relevant sea trout censuses, with assurance of continued monitoring. The Programme Complements of the Regional OPs show some appropriate indicators, such as CO<sub>2</sub> sequestration as an indicator for Woodland, and imaginative ones, such as Tidy Towns Competition marks, as a result of Urban and Village Renewal. (Further discussion of the indicators is given in the report *Evaluation of Eco-Auditing*.)

The environmental effects of the PEACE OP are flagged by a different process that entails use of development path analysis (DPA). Although the PEACE OP is small, its environmental assessment described in Annex E of the Draft Final Report of the MTE of Peace II is worth commenting on. DPA involves categorising programme expenditure into six development paths. In addition to the 'business as usual' path, there are five other potential paths, ranging from cleaning up the 'mess from past activities' to 'economic activity/behaviour which use less environmental resources'. DPA allots expenditure into the six potential paths, and this is to be done periodically throughout the life of the Programme (Ecotec, 2001). In the *ex ante* DPA, something over a third of the

budget was found to be of the kind using 'less environmental resources', another third was on 'business as usual' type of development and the rest was spread over the remaining four potential paths. In addition, the *ex ante* study did an environmental criteria analysis (ECA), which allocated the programme budget to 'positive', 'negative, and 'neutral' effects on key environmental criteria, the latter criteria being similar though more numerous than the 'areas to be considered' in the environmental checklist for the NDP. The results of the *ex ante* environmental criteria analysis can be summarised here as a likely increase in air pollution (CO<sub>2</sub> and SO<sub>2</sub>/NO<sub>x</sub>) and in water consumption, and improvements in urban rural regeneration. The advantage of DPA and ECA is the low demands on data, as allocation of projects to categories is all that is required.

While there was an intention to update the DPA and ECA annually (PMC 6/2002/10) and to improve the path profile of the programme, there is no evidence of action along these lines. By end-March 2003 it appears that 90 per cent of the information for the development path analysis had not been submitted, despite two training courses aimed at implementing bodies. An Environmental Working Group has recently been set up with as yet unspecified priorities and role. What is interesting is the manner in which experience with Peace II's process for addressing the environmental Horizontal Principle echoes the NDP's experience, namely the patchy application of the process, the lack of environmental know-how and the shortage of data.

## CONCLUSIONS

On the one hand significant progress has been made through individual Measures, due largely to the selection of projects such as the CSF-aided schemes for public transport and waste water treatment. On the other hand, the economic success of the NDP/CSF has contributed to the increased emission of greenhouse gases.

Scarcity of indicators means that suggestions for rebalancing are drawn from general observations. A part of the research of the Energy Conservation Measure could be more strongly focused on benchmarks and monitoring and on supplying evidence of financial viability of energy efficiency investments. There is a shortage of published reader-friendly case studies (such as described in SEI, 2003) and these could help to convince people that they are worth adopting. When carbon taxes and, later, emissions trading are introduced there will be more user-driven demand for research results on the financial viability of the various energy conservation Measures.

The recommendation is made by an MTE that project selection and funding be re-targeted to give higher Priority to considerations in the National Spatial Strategy. This means redirecting investment relating to habitation, transport and work to the intended locations

of growth areas and considering the infrastructural costs and spatial implications in the long term.

The existence of conflicts between promotion of aquaculture versus angling raises the strategic question as to whether there should be re-balancing towards tourist angling. The issue should be considered as to whether more emphasis should be placed on angling, to promote the profile of tourist angling in Ireland to something similar to that of skiing in Switzerland.

The **indicators** were of variable quality and usefulness. The fact that there are so few indicators of environmental effects does not imply that environmental improvements are absent, but that it is hard to judge their extent, what is value for money spent and what are the impacts on the major environmental challenges outlined in the introduction above.

The NDP/CSF committed itself to eco-auditing, prescribing a straightforward procedure. Though an effort was made to apply it, it was not carried through in a consistent manner. The MTE of Peace II also reports inconsistent management and monitoring of environmental issues, except that the *ex ante* appraisal using development path analysis and environmental criteria analysis did provide a baseline which monitoring can refer to.

The similarity of message from the MTE of Peace II and from the report *Evaluation of Eco-Auditing* of the NDP/CSF suggests that help is required with the environmental principle. Mechanisms put in place to address the environmental principle, including the mechanism of an Environmental Committee, show a commitment to incorporating environmental considerations. However, it has become clear from the MTEs and on talking to some managers that extra support for the process is needed and with indicators in particular. The immediate need is for help with environmental data. Suggestions for addressing the data deficiencies were made in Section 5.1 of the report *Evaluation of Eco-Auditing*. It was recommended that an interim forum be set up to help with specification and production of environmental indicators. As a Centre of Excellence has been scheduled to be set up in the EPA to work on information systems for programmes, it seems efficient to establish this forum in the interim, properly resourced, consisting of on the one hand the Managing Authorities and relevant implementing agencies and, on the other hand, EPA personnel with expertise in the data. It was suggested that the forum should function pending the establishment of the Centre of Excellence and a seamless transition should be made when the Centre takes up the reins. It is understood from discussions with the secretariat of the Environment Co-ordinating Committee that this is happening. Short of comments about the sparse nature of environmental indicators, the mid-term evaluations of the OPs do not make recommendations or advise on how to bring about improvement in the indicators.

Indicators assessing the effects of the NDP should consider quantification of the effects on the environmental areas and challenges, listed in the introduction. To take an example, to



consider effects on flora and fauna means instigating the kinds of assessment cited in the European Environment Agency's *Third Assessment*. The European biodiversity monitoring and indicator framework is another useful aid. At present one can only hazard the direction of change, such as: the effects on flora and fauna of roads and of new rural housing will be negative, and the effects of improvements to water quality will be positive. For each Priority, and for each of the challenges and areas to be considered, the latest thinking on relevant data and measurements should be assessed and adopted where relevant. Development and production of indicators such as these should be the task of the interim forum and Centre of Excellence.

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## 11.5 Equality

Equal opportunities is one of the four Horizontal Principles that must be considered throughout the NDP. The Priority given to equal opportunities varies across OPs. In the EHRD OP the promotion of equal opportunities between women and men *is* one of the programme objectives and Gender Equality is one of the four priorities around which the programme is structured. The ESI OP does not explicitly include gender equality among its objectives but highlights the programme's impact on gender equality in public transport, health and housing. Equal opportunities is not among the stated programme objectives of the Regional OPs, however, the social inclusion/childcare Priority includes among its aims "to promote equality and facilitate greater participation of women in the workplace and business and, more broadly, the achievement of equal opportunities generally." The Productive Sector OP does not focus on equal opportunities but mentions tackling gender imbalances in occupational positions and training. The PEACE OP includes equal opportunities primarily as a Horizontal Principle, however, one of the four stated aims of the Employment Priority is to 'encourage greater participation by women in the labour market'.

The EHRD OP and the Regional OPs explicitly undertake to adopt a gender mainstreaming approach, which involves the incorporation of a gender equality perspective into all policies at all levels and at all stages of policy development, and to adopt positive action Measures that particularly target women.

The wider equality grounds were not originally defined among the Horizontal Principles, however at the monitoring committees it was agreed that wider equality grounds would be incorporated into the Mid-term review process. The four groups identified for monitoring are: people with disabilities, older people, refugees and travellers, these are a subset of the nine grounds contained in the new equality legislation.

This section of the report assesses the relevance, role and impact on equal opportunities of interventions under the NDP/CSF. The discussion synthesises the findings of the OP evaluations as laid down in the terms of reference, however it also draw on wider documentation and research, and on consultations with key informants. The review is structured in the following way. First we

consider the extent to which equal opportunities, have informed the project selection procedures within the six OPs. Then the impact of the OPs on equal opportunities will be discussed drawing on information in NDP documentation and in other relevant research documents. The final section discusses the effectiveness of the structures set in place to implement equal opportunities in the NDP.

## **PROJECT SELECTION**

As part of the commitment to gender mainstreaming the NDP states that it will be mandatory to include equal opportunities among the project selection criteria for all Measures (NDP, paragraph 13.37). Table 11.5 outlines the extent to which equal opportunities are incorporated into project selection.

The consideration of gender and other equal opportunities issues in project selection is highly variable across OPs. In the ESI OP where none of the nineteen Measures incorporate equal opportunities in project selection reflecting the fact that a number of Measures e.g. national roads were exempted from this requirement. However, there is scope for other Measures to incorporate this criterion in line with NDP commitments. The EHRD OP figure is low mainly because there was no project selection for many of the Measures (see footnote 83). Many projects in this OP were pre-selected as part of the National Employment Action Plan, which also had an equal opportunities focus. The two regional OPs and the PS OPs incorporate equal opportunities into project selection criteria in approximately half of their Measures. The evaluation for the BMW and PS OPs do not distinguish between gender and wider equal opportunities in project selection, this is partly because the statements in the programme complements do not outline which of the Horizontal Principles are incorporated.

While these OPs appear do be doing relatively well in implementing equal opportunities at this level there is little information on how these criteria are implemented in practice or the weight given to them in the selection procedure. One exception to this is the PEACE OP in which an explicit portion of project selection scores (10-12 per cent) was allocated to Horizontal Principles criteria.<sup>66</sup> A survey of unsuccessful applications under the PEACE OP suggested that 15 per cent were rejected because they failed to meet the Horizontal Principles.

<sup>66</sup> The SE evaluation questionnaire contains an item which asks what weighting is given to each Horizontal Principle in the project selection process but the results are not reported.

**Table 11.5: Inclusion of Equal Opportunities in Project Selection Criteria**

OP	Gender Equality		Wider Equality Grounds	
	N	%	N	%
ESI OP	0	0	0	0
PSOP	25	52	24 <sup>67</sup>	50
EHRD OP <sup>68</sup>	9	18	6	12
BMWOP <sup>69</sup>	30	49	30	49
SEOP	30	48	30	48
PEACE II	n.a.	n.a.	n.a.	n.a.

Source: McGauran (2001) and OP MTE reports.

## ACTIONS AND IMPACT

In order to assess how the NDP has impacted on equal opportunities we examine each Operational Programme looking at their commitments in this area and the extent to which they have implemented actions that will affect gender and the four wider equality grounds. This discussion will incorporate a review of the reporting on equal opportunities issues across the NDP as this is fundamental to assessing progress.

### *Regional OPs: BMW and SE*

Over a third of the Measures in SE OP report an equal opportunities dimension (FGS MTE Report, p. 58). As might be anticipated the recognition of the importance of this Horizontal Principle varied across the priorities within the OP. All but three Measures in Social Inclusion and Childcare Priority report an equal opportunities dimension whereas this is true of only three Measures in the Local Infrastructure Priority and only four Measures in the Rural Development Priority.<sup>70</sup>

To assess the impact of the BMW OP on equal opportunities the Mid-Term Evaluation looks at a sample of ten Measures for their impact on gender equality and six Measures for their actions on wider equal opportunities. This analysis showed that of the ten sample Measures, only four were found to have taken specific actions on gender equality. These were, Entrepreneurial and Business Development, which had promoted a women in business initiative, Advisory Services (within the Agricultural & Rural Development Priority) which made efforts to encourage both partners in farm families to participate, Childcare Capital Grants Measure, where equal opportunities for men and women is a key

<sup>67</sup> This refers to the number of measures in which any of the Horizontal Principles is incorporated into project selection.

<sup>68</sup> Terms of Reference suggest project selection applies to only 17 of the 51 EHRDOP measures, as a percentage of this subset, 53 per cent incorporate gender equality.

<sup>69</sup> The BMW evaluation does not distinguish between the two equality criteria.

<sup>70</sup> The evaluation report does not state how many measures in the Local Enterprise Priority see equal opportunities as relevant, however, the discussion suggests that around four measures mention this Horizontal Principle.

rationale of the programme, and Local Development, which had produced guidelines on gender proofing. Additionally, although it was not one of the sample of Measures the Area-based Rural Development initiative is singled out in the report for positive action on gender equality due to its targeting of projects on rural women.

Over and above this sample a number of targeted Measures in the two Regional OPs directly address gender equality. There is a specific Equality Measure which funds projects addressing: women's access to employment/education/training, career development for women, disadvantaged older women, gender balance in decision making, gender proofing personnel practices, family-friendly policies and research. The measure currently funds thirty-two projects in the SE region and fifteen in the BMW region, some examples of the work include the provision of flexible training to local groups, services for women returners, and funding for political parties to increase female participation. Although this programme was slow to get started it is likely it will have a positive impact on equal opportunities.

All three childcare Measures play a central role in promoting equal opportunities between men and women. Although these Measures provide little information on beneficiaries (see the discussion in the section on social inclusion), it is clear from research that the absence of affordable childcare is a very significant barrier for women, especially the low paid, lone mothers and returners (Russell *et al.* 2002, DSFCA, 2000, NESF 2001, Russell and Corcoran, 2000). A survey of the end users of the childcare services could provide valuable information on the direct impact of this NDP investment.

Unfortunately across both regional OPs there is little data with which to measure the *impact* of their activities on equal opportunities. The BMW evaluation state that for about a quarter of Measures/Sub-Measures (out of sixty) some data is provided on gender equality, normally in the form of a gender breakdown of participants. Surprisingly, it is the rural development Priority Measure which provides most gender disaggregated data and not the Social Inclusion/Childcare Priority.

On wider equality issues, the BMW Evaluation found that of the sample of six Measures, two incorporated wider equality considerations. The Urban and Village Renewal Measure was found to take the needs of people with disabilities and older people into account at a general level in programme design (e.g. accessibility). Within the Local Development and Social Inclusion Measures, the evaluators note that "attention is paid to the needs of different target groups (travellers, refugees, people with disabilities and to a lesser extent older people) in the design of projects, the implementation guidelines and the selection of relevant projects." (Fitzpatrick's MTE, p. 154). In an additional two sample Measures (Community Development Programme and Special Projects for Disadvantaged Youth) the wider equality grounds are believed to be

taken into account under the general principle of addressing disadvantage.

**Table 11.6: Inclusion of Gender Equality in Indicators by Operational Programme**

	Number of Measures
ESI OP <sup>71</sup>	0
PSOP <sup>72</sup>	30
EHRD OP <sup>73</sup>	30
BMWOP <sup>74</sup>	6 + 'vast majority' of ag./rural devt. Priority Measures
SEOP <sup>75</sup>	16
PEACE II <sup>76</sup>	N/A

It is arguable that the results on the sample of Measures overstate the extent to which wider equality grounds are addressed in the OP. Outside the sample of Measures only one other (the Equality Measure) explicitly addresses these issues and, as Table 11.7 below shows, none of the indicators within the OP address the output, result or impact of the sixty Measures on the wider equality grounds. Only the Local Development Measure collects data on these groups but they are not reported (MTE, p. 151). Therefore, there is no means of measuring progress on these issues.

**Table 11.7: Indicators on Wider Equality Grounds**

	Disabled	Older People	Ethnic minorities/ Refugees	Travellers
ESI	8	4	0	2
PS	0	0	0	0
EHRD <sup>1</sup> : Output	9	17	11	8
Result	6	10	6	6
Impact	0	5	0	0
BMW	0	0	0	0
SE				
PEACE II				

EHRD figures based on thirty-eight Measures only (total of fifty-one in OP).

### *Employment and Human Resource Development OP*

Reflecting the nature of the OP the principle of equal opportunities appears to be relatively well integrated into the EHRD OP, despite

<sup>71</sup> ESI OP – no gender disaggregated information reported in Evaluation.

<sup>72</sup> These figures are taken from Tables 10.2, 10.6, 10.10 & 10.14 of the MTE. It appears that most refer to a break-down of beneficiaries/employees by sex.

<sup>73</sup> Twenty-six Measures produced *Output* indicators by sex, eight did so for *Result* indicators and seven for *Impact* indicators. An additional five measures provide some gender disaggregated data on participation/throughput, which is either not related to a specific indicator or that refers to baseline year (1999) only.

<sup>74</sup> There are sixteen measures in the Agriculture/Rural Development Priority.

<sup>75</sup> Based on Programme Complements.

<sup>76</sup> Not available in Evaluation Report.

the lack of project selection criteria relating to gender. This is likely to reflect the importance given to equality issues in the National Employment Action Plan and other policies under which the Measures were set up. The MTE (Fitzpatrick/ESRI) reports that all of the Measures consider that gender equality is relevant, and all but two discuss these issues in their progress reports. However, the nature of this commentary is variable, with a minority making only vague statements without supporting data. Almost 70 per cent of the Measures provide some gender disaggregated data. In most cases the data provided relates to gender breakdown of participants, while disaggregated statistics on the results indicators (which measure immediate effects) and impact indicators (which track the longer-term effects) are more rare (see Table 2 footnote 3). Therefore, it is difficult to quantify the effects of interventions on male and female participants.

In relation to the specific steps taken to address equal opportunities, the evaluation of the EHRD OP shows that there were a significant number of actions taken to promote gender equality. The most commonly reported action was promotion activity, where implementing agencies for seven Measures distributed promotional literature or conducted outreach activities to encourage participation among women (or men where they were under-represented). Six Measures introduced flexible provision/delivery such as part-time and evening courses, while nine Measures had conducted research into gender equality issues. A smaller number of Measures had provided childcare, or consulted with women's/men's groups or had taken actions relating to the content of programmes. These positive actions include steps taken in Measures that are entirely or partially targeted at women (e.g. the Educational Disadvantage, Equality for Women, Gateway for Women programme). On a more negative note, a significant number of Measures (eighteen) failed to deliver on commitments on gender mainstreaming actions. Furthermore, the lack of impact indicators and data mean it is impossible to Measure the effects of the efforts made by many agencies. The data on participants show that there are still considerable gender gaps favouring men in Enterprise Ireland In-Company Training, Apprenticeships, Rural Enterprise Courses, forestry training, Fisheries/Food training, Life-long Learning – General training FÁS, and favouring women in Literacy, and Community Training (MTE, Equal Opportunities and Social Inclusion Monitoring Committee, 2<sup>nd</sup> meeting). The EHRD OP is also found to provide a greater level of reporting on the wider equality grounds than the other OPs. This is largely because nine of the Measures are explicitly targeted at one or more of the four groups (travellers, older people, people with disabilities, refugees/ethnic minorities). Where these groups are the sole target, as in the case of three Measures, the progress reports provide *de facto* reports on progress on wider equality issues. Additionally, a considerable number of Measures collect data on these grounds see Table 11.7, with older people being the group most frequently covered (Fitzpatrick/Equality Authority, 2002).

*Economic and Social Infrastructure OP*

Gender issues are of particular relevance to a number of the areas addressed in this OP. There are significant gender differences in the use of public and private transport: women are less likely to own cars and make greater use of public transport (Fitzgerald and Michie, 2001; Polverari and Fitzgerald, 2002). In the health arena, morbidity and mortality figures vary by sex, as do patterns of health service usage (Nolan 1991; Nolan and Nolan 2003; Wilde and Balanda, 1991). Women make up a higher proportion of people on the housing list, while the majority of those living on the streets are male, these factors mean that gender is also relevant to the Measures dedicated to housing and accommodation. The local authorities compiled useful baseline information on the characteristics of those on the housing lists, which covers three of the four wider equality grounds, in 2002 (MTE, Table 10.12).<sup>77</sup> These Measures in the ESI OP are also crucial for groups identified under the wider equality grounds: older people, disabled, travellers and refugees. Although the national roads Measures are exempted from equal opportunities reporting there are aspects of road provision that have an equal opportunities dimension for example the provision of adequate pedestrian crossings are important for older people, young children (and their parents) and the mobility impaired.

Despite the central relevance of equal opportunities in these areas the principle has not been well integrated into the ESI OP. There are very few commitments to gender equality and no gender disaggregated data or indicators are provided (see Table 11.6). The Equal Opportunities and Social Inclusion Monitoring Committee has noted that this OP is developing indicators that incorporate gender in the transport, housing and health priorities, however nothing has been produced to date.

The equality commitments originally signed up to in this OP were: conducting surveys of public transport users to address gender issues and needs of other groups, and in Non-acute Medical Care Health Centres to Measure the provision of changing areas, breastfeeding areas and easy access for buggies. The Local Authority Housing Measure mentioned that the provision of childcare facilities was a Priority in relation to communal buildings and infrastructure. No information on public transport usage by gender, age etc. is cited in the Mid-Term-Evaluation, which suggests that the surveys have not been undertaken. While in the Health Measures the commitment to providing 'family-friendly' facilities is simply repeated and no information on progress is reported.

The ESI OP performs somewhat better in integrating and acting on the wider equality grounds. Seven of the programmes within the health Priority and one Measure in the Housing Priority relate to the provision of services/grants for people with disabilities. Each of

<sup>77</sup> The table does not show the number of refugees and ethnic minorities on the housing list.

these produces output indicators on the number of places/grants provided for this group. While progress has been made on all seven health Measures for the disabled, the mid-term targets were met/exceeded for only two, and are behind target on the remaining five. Furthermore, the total number of places created under the NDP is relatively modest in some cases (e.g. the mid-term target for respite spaces is only 103 extra places). The mid-term targets on housing grants for disabled persons have been exceeded, which suggests there has been a direct positive impact on this group. However, the MTE notes that 'demand continues to exceed available funds' (MTE, p. 197) which suggests that funding for this programme should be increased.

One of the objectives of the Public Transport Priority was to increase accessibility for the mobility impaired and has provided some tangible outputs – 34 per cent of Dublin Bus fleet now accessible, resulting in thirty-four fully accessible routes. There are no figures on the extent to which train stations have been made accessible. More importantly, no information has been provided on the extent to which this investment has impacted on the mobility of the disabled for example in terms of usage of public transport. It is recommended that appropriate indicators be developed to quantify the impact of investments in this regard.

Three Health Measures are targeted at older people and the output indicators show that two of these are on target in terms of number of new beds/places provided. However, there is no information on the quality of the service provided or the satisfaction of those using the service. For example, the provision of extra beds for older people might be complemented with information on the length of wait for a bed. Additionally one housing Measure, Special Housing Aid for the Elderly, is specifically targeted at the elderly and nearly 3,000 homes have been improved under this Measure.

#### *Productive Sector OP*

Overall twenty-nine Measures in this OP note that the Equal Opportunity Horizontal Principle is not applicable/appropriate. Within the OP there was an initial commitment to developing and collecting forty-seven gender disaggregated statistics/indicators. Table 11.7 above shows that thirty such indicators were produced up to the Mid-term point.

The commitments to mainstreaming activities in this OP are generally vague. For example quite a few Measures mention that they will encourage job/research funding applications from men and women and promote gender balance on selection committees and panels of experts. However, few mention concrete steps that will be taken to achieve these ends. Nor is there sufficient information on the extent to which these goals have been achieved. While outcome Measures on the sex of those finally employed or given grants are provided in thirty cases this needs to be placed in the context of the composition of applicants. Furthermore, there is no follow up information on the composition of selection boards.



In some Measures minimal steps were reported such as adding the line ‘applications are welcomed from both males and females’ which does not constitute a significant action to promote equality.

Additionally, the six FDI Measures say that they will seek balanced gender representation among mentors, however, again there is no specification of how this is to be achieved. Only one Measure – *Seafood Processing*, undertook to introduce more flexible training including modular courses. The provision of flexible training and employment options is a well-established strategy of encouraging greater female participation and is one which should be much more widely applied across this OP.

## MONITORING AND CO-ORDINATION MECHANISMS

As part of the gender mainstreaming approach within the NDP there is a commitment to achieving gender balance on monitoring committees. However, the figures in the table below show that such balance is far from being achieved. Recommendations to improve the gender balance on such committees were devised by a working group under the Peace OP.<sup>78</sup> These guidelines should be circulated to all bodies who are represented on the monitoring committees.

**Table 11.8: Gender Composition of Monitoring Committee Members**

Monitoring committee	% Female (initial)	% Female (Attendance 2000-1)
ESI OP	29	24
PSOP	20	31
EHRD OP	38	38
BMWOP	26	23
SEOP	24	30
Peace OP	n.a.	23
NDP/CSF	22	25

There is also a commitment in the NDP that a representative of the equal opportunities interest, from a relevant government department or statutory body, be represented on all monitoring committees.

The NDP Gender Equality Unit in the Department of Justice, Equality and Law Reform was set up to provide technical support and research on equality issues across the NDP. The Unit has undertaken extensive training programmes and produced accessible guides and fact sheets to help implementing bodies meet gender mainstreaming requirements. This provides a good model of technical support that is not so advanced for other horizontal Measures.

An Equality Unit has also been established in the Department of Education and Science which has launched a programme of research and training. It is recommended that this unit apply additional pressure to its own department to meet its monitoring

<sup>78</sup> Guidelines were reported at the third Equal Opportunities and Social Inclusion Co-ordination Committee.

and data requirements, as it is found to perform poorly in providing appropriate data compared to other implementing agencies (EHRD MTE, Fitzpatrick/ESRI).

## CONCLUSIONS

The NDP made important commitments to gender mainstreaming and has raised the profile of gender equality issues in policy formation and implementation. The NDP has funded important investments in the area of childcare, which is crucial to creating more equal opportunities between men and women in the labour market. However, this investment must keep pace with the demand for care. Moreover, the price of the places produced under this Measure must be tracked to ensure that parents on low incomes are adequately provided for. Recent evidence suggests that average costs for pre-school childcare are still prohibitively high – €105 per week nationally, rising to €131 per week in Dublin (CSO, 2003). This means that the very welcome introduction of childcare payments to FÁS trainees of €63 per week will still leave a wide gap in costs for many potential participants. Steps taken within the EHRD OP to provide more flexible training and education opportunities are also important for promoting equal opportunities. However, there is still considerable opportunity to extend this type of provision both within the EHRD OP and across other elements of the NDP, for example within the PS OP. There has also been a missed opportunity to address the documented gender differences within the health and public transport sectors to date.

The impact on the wider equality grounds is likely to have been weaker, this is partly because these issues have not been formally incorporated into the NDP process, however, areas within the plan e.g. health, targeted education and training programmes and a number of social inclusion Measures have been directed at the four groups and there is an opportunity to monitor the extent to which these groups are benefiting from expenditure in a number of areas (Fitzpatrick/Equality Authority).

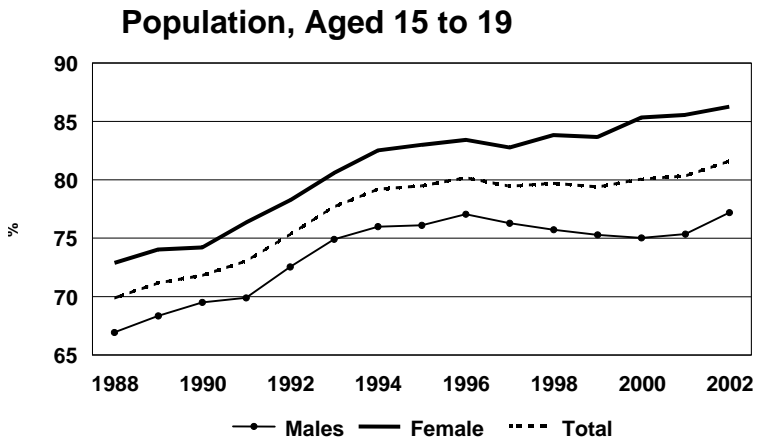
However, there persist some barriers to progress. First, commitment to equal opportunities is varied. Some managers of “Measures” within the NDP/CSF and some implementing agencies appear to judge equality to be irrelevant to their Measure without a proper assessment. There also appears to be an acceptance of the status quo of sex segregation in certain sectors and a lack of proactive steps to address this segregation. Second, the lack of data and appropriate indicators severely restricts the ability to Measure progress and to assess the impact of individual Measures on equal opportunities. It is disappointing that even those Measure that have equal opportunities as an explicit aim do not provide adequate information and data on their impact. Therefore, incentives and penalties need to be built into the NDP to ensure that programmes meet their equal opportunity commitments.

### Broader Trends

While this section has considered the impact on equality of the NDP/CSF on a Measure by Measure basis it is also worth considering some of the broader trends and issues which the NDP has addressed. The analysis in Chapter 3 has shown that over the period of the NDP/CSF there has been a significant increase in female participation, and the growth in the employment of mothers has been particularly strong in recent years (CSO, November 2001).<sup>79</sup>

While these trends have not reduced the gender pay gap in the short term nor made significant inroads into gender segregation in the labour market (Russell, 2002, Hughes 2002) it is likely that these trends, coupled with the increasing educational achievement of women will have a positive impact on these issues in the longer run (see Section 3.2 on the gender pay gap).

**Figure 11.1: Participation in Education**



Source: CSO Labour Force Survey micro-data.

A final trend worth noting is the continuing gender gap in the education completion rates of young men and women (see Figure 11.1). In this area, the Measures trying to tackle early school leaving may have been a victim of the wider economic success, which has led to greater employment opportunities for these young men (albeit opportunities that offer significantly lower lifetime rewards than educational qualifications). These figures highlight the continuing importance of efforts to address this issue (e.g. the School Completion Initiative, and Youthreach). Innovative ways of allowing young people in employment to combine education and work on a flexible basis should also be considered. The results of research funded under the NDP into the reasons for male under-

<sup>79</sup> For example the participation rate of married mothers increased from 44 per cent to 50 per cent in just three years.

participation in education and into differences into the learning styles of men and women should also be acted upon.

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## 11.6 North-South

This section aims to summarise and synthesise the analysis relating to North-South co-operation that is contained in the Mid-Term Evaluations of the individual OPs. This will cover just five OPs since the sixth one, the Peace OP, has North-South co-operation as a key component, and not just as a Horizontal Principle or cross-cutting theme.

The importance of promoting North-South cooperation was highlighted in the original NDP. However, the problems with the institutions set up under the Good Friday Agreement, especially the suspension of the Northern Ireland Assembly and Executive, have made the development of co-operation difficult in a number of areas. Hopefully, when the Northern institutions are fully up and running again, more rapid progress will be possible over the remainder of the planning period.

### *The Economic and Social Infrastructure OP*

The Mid-Term Evaluation of this OP says nothing about co-operation with Northern Ireland. It does include an assessment of the “four OP Horizontal Principles”. But these are poverty, rural development, equal opportunity and the environment – and they do not include North-South co-operation. It is not entirely clear whether the absence of reporting of North-South co-operation means that there has actually been no such co-operation, or whether it means that the Evaluators felt that there was nothing important enough to report.

### *The Employment and Human Resource Development OP*

The Mid-Term Evaluation of this OP assesses the role of North-South co-operation in the OP alongside its assessment of the four Horizontal Principles – namely equal opportunities, poverty, rural development and the environment.

The report notes that it is intended in the EHRD OP that North-South co-operation should become more operational, and that the OP allocates €10 million to support this. This sum appears to represent elements of the budget for various different Measures since it is not identified separately in budgetary tables.

The Mid-Term Evaluation points out that intended North-South co-operation was outlined in the Programme Complement for each Measure. Of the fifty-one Measures and Sub-Measures, thirty-nine explicitly mentioned North-South co-operation, mainly taking the form of exchange of experience, co-operation in provision of training, and the fact that EHRD OP financed courses are open to participants from Northern Ireland. Only four Measures specified the actual costs of North-South co-operation, amounting to a total of €66,000.

According to the Mid-Term Evaluation, the Measures that made commitments in relation to North-South co-operation mostly report that this has occurred in practice, although the reports do not usually give a good sense of the actual substance of what this has involved. Also, the cost of North-South co-operation is not given in progress reports, suggesting either that costs were minimal or were not provided. But overall, the Evaluation concludes that, taken at face value, OP reporting suggests that the level of North-South co-operation being achieved is reasonable. Areas where scope for more co-operation may exist include mutual recognition of qualifications, education and training capacity in the Border Region and Northern Ireland, and use of Northern Ireland providers as part of more open competitive selection of delivery bodies.

### *The Productive Sector OP*

The Mid-Term Evaluation of this OP reports examples of North-South co-operation occurring, or likely to occur, in the RTDI Priority and the Industry Priority – but not in the Marketing Priority or the Sea Fisheries Development Priority.

In the RTDI Priority, the extent or likelihood of co-operation varies between different Measures. In some cases, notably within the Industry RTDI Measure, the OP did not explicitly provide for North-South co-operation. The Education RTDI Measure does include a North/South Co-operation Sub-Measure in order to support cross-border research initiatives on a collaborative basis between institutions. There had been no expenditure on this North-South Co-operation Sub-Measure at the time of the evaluation, for several reasons including the political situation. However, the evaluators report that the period of inactivity has ended and that activities will now accelerate. The Mid-Term Evaluation also reports that significant elements of North-South co-operation will occur in the Agriculture, Marine and Forestry RTDI Measures.

In the Industry Priority, the extent of North-South co-operation varies across the different Measures. In the case of the Food Sector, Gaeltacht, and Seafood Processing Measures, the OP Complement says that such co-operation is not applicable, although some co-operation has been noted in the Food sector. In the Indigenous Industry and Film Sector Measures significant co-operation activities have been noted.

### *The Border, Midland and Western Regional OP*

The Mid-Term Evaluation of this OP includes quite extensive consideration of the extent of North-South co-operation, and it concludes that such co-operation in the OP has been distinctly limited compared to the expectations outlined in the Programme Complement.

In the case of the Local Infrastructure Priority, six Measures/Sub-Measures were originally identified as having potential for North-South co-operation. These included non-

national roads, rural water, waste management, e-commerce and inland waterways. However, apart from the inland waterways Sub-Measure, which is delivered by a North-South Body, little co-operation has actually taken place.

In the Local Enterprise Development Priority, the Programme Complement envisaged that there would be scope for co-operation on most Measures and Sub-Measures. But the Mid-Term Evaluation reports that there has been no direct progress on North-South co-operation under any Measure or Sub-Measure. This applies not only to spending to date but also to applications that are pending. Also, those responsible for some Measures think that the scope for co-operation is really more limited than the statements of intent in the Programme Complement suggest.

For most of the Sub-Measures in the Agriculture and Rural Development Priority, it was not expected that there would be much scope for North-South co-operation, and there has been little co-operation in practice.

In the case of the Social Inclusion and Childcare Priority, there were only modest expectations concerning the scope for North-South co-operation. In line with this, there has been only a limited amount of co-operation in practice, with five of the fourteen Measures/Sub-Measures involved in some form of co-operation. The Mid-Term Evaluation finds that it is clear that this north-south co-operation is "... a relatively marginal activity; where it occurs, the initiative seems to come from projects on the ground rather than from a general ethos emanating from the implementing departments and agencies."

Overall, therefore, North-South co-operation has been non-existent or limited in most Measures in this OP, despite expectations that there would be scope for co-operation on a considerable number of Measures.

The Evaluators also comment that NDP and OP planning appears to have greatly underestimated the extent of the change processes and tasks involved in incorporating the "Horizontal Principles" generally into the OP in a practical way. The Horizontal Principles, including North-South co-operation, are much more easily promised than delivered.

### *The Southern and Eastern Regional OP*

The Mid-Term Evaluation of this OP reports rather little in the way of co-operation with Northern Ireland. At the level of the OP as a whole, in the context of explaining a scoring system for assessing managerial efficiency, it mentions (on p.102) that "fourteen Measures/Sub-Measures report co-ordination in respect of North-South issues". An estimate of the expenditure incurred is given for only three of these and this amounts to a total of €1.03 million for 2000-2002.

In the case of the Local Infrastructure Priority, the Evaluation mentions that North-South co-operation was indicated to be relevant only in the case of the "Inland Waterways" Sub-Measure,

where Waterways Ireland is a designated cross-border body under the Belfast Agreement, and in the case of the “Rural Water” Sub-Measure.

The Evaluation reports that little in the way of North-South co-operation is recorded in the Local Enterprise Priority, although there is some activity under the Peace II programme under the Aquaculture Measure.

As regards the Social Inclusion and Childcare Priority, it is reported that three Measures had been engaged in North-South activities, with expenditure in this area amounting to €274,000.

No North-South co-operation is reported in the remaining Priority, the Agriculture and Rural Development Priority.

## CONCLUSIONS

Overall, across the five OPs, there has been quite a low level of co-operation with Northern Ireland. In the Mid-Term Evaluation of one of the OPs – the ESI OP – no such co-operation is reported to date. (It may not be entirely clear whether this means that there really was no co-operation at all, or whether it means that the evaluators saw nothing of sufficient importance to be worth reporting.) Just a few examples of North-South co-operation are reported in the Evaluation of the S&E OP, and co-operation under the BMW Regional OP has not been a great deal more extensive. In the Productive Sector OP, little North-South co-operation has occurred in most Priorities and Measures, although the Evaluation does expect that more significant co-operation will be happening in future. The EHRD OP is the only one where North-South co-operation is reported to have occurred across a wide range of Measures and Sub-Measures, roughly in line with expectations. However, the evaluators of this OP did note that they had not gained a good sense of the actual substance of what this co-operation involved.

## 11.7 Conclusions

This chapter examines the extent to which the NDP/CSF has impacted on the range of Horizontal Principles identified at the time the original plan was drawn up. It reviews the conclusions of the detailed evaluations of the different Operational Programmes. It concludes that there has been a certain amount of success on some of the Horizontal Principles (social inclusion, balanced regional development and the environment), with less success on rural development and North-South co-operation.

NESC (2001), in examining how policies such as the NDP/CSF should be examined for compliance with such Horizontal Principles, identified two objectives: sensitising policy-makers to the Horizontal Principles and policy impact assessment. The approach taken within the NDP/CSF has been directed more to the first of these objectives, with a necessarily limited analysis of compliance across quite a wide range of different Measures. While it was recognised that, realistically, not all Measures should be considered

for all of the Horizontal Principles, it is clear that significant resources have been devoted to this analysis.

For the future, it might be more effective to devote less effort to this across the board analysis and to concentrate efforts on what NESOC referred to as “policy impact assessment”. This is probably best undertaken at the level of the NDP/CSF, outside the framework of individual OP evaluations. This is because the horizontal issues generally cross the boundaries of individual OPs. Key policies or areas could be targeted for special examination. An example of the possible benefits of this approach is the examination in Chapter 3 of the impact of the NDP/CSF on social inclusion through its effects on the dispersion of earnings. Realistically this could not have been considered within the confines of an evaluation of the EHRD OP.

An example of a policy area which would benefit from a broader “policy impact assessment” is investment in childcare under the Regional OPs. Expenditure on this area of activity can impact on both social inclusion and gender equity. It can affect participation in EHRD programmes, as well as having a wider economic and social impact. If viewed within the confines of the Regional OPs or the EHRD OP some of these linkages might not be taken into account and the full potential impact of the policy might not be fully understood.



# 12. MANAGEMENT ISSUES

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## 12.1 Overview

This chapter reviews the efficiency of management and delivery systems of the National Development Plan (NDP) and the Community Support Framework (CSF) for Ireland for the period 2000 to 2006 based on the reports of the consultants engaged to review the Operational Programmes (OP) for the mid-term evaluation.

Three principal concerns identified in this review of management issues are outlined below and affect, or may affect, all main components of the NDP/CSF. They are:

- Project Selection and Prioritisation,
- Cost Estimation and Control, and
- Programme Management.

The analysis provided under these headings highlights significant issues in relation to the management of the operational programmes that have emerged from the reviews of the individual operational programmes.

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## 12.2 Project Selection and Prioritisation

Project Selection and Prioritisation has been a central issue in framing the NDP into OPs, Measure and Sub-Measure levels. Monitoring indicators (physical and financial) specified at the outset by the monitoring committees are used at this mid-term stage to evaluate performance under each level.

### PROJECT SELECTION CRITERIA

Project selection has been a critical determinant of the socio economic impact of the National Development Plan.<sup>80</sup> A number of criteria are explicitly incorporated into the project selection procedures. These criteria, which follow directly from the overall objectives underpinning the NDP 2000-2006, are as follows:

- Programme and Measure objectives;
- Economic impact;
- Financial viability;
- Cost-effectiveness;

The NDP specifically identified four Horizontal Principles or cross cutting issues which are intended to underpin all operational

<sup>80</sup> Project selection criteria are listed in the NDP 2000-2006, paragraph 12.14 and are also specified in the programme complements for individual measures and interventions.

programmes, they are poverty/social inclusion, rural development, sustainable development and equal opportunity. Each implementing body/managing authority is required to report to their respective monitoring committee on the progress of the Horizontal Principles in their programmes.

### **PROJECT SELECTION ISSUES**

Based on the evaluation reports on the individual OPs the consultants have considered the processes of project selection and their location in Priority schedules and timetables. Particular issues which have been highlighted are:

- weaknesses evident in relation to transparency in terms of the decision process and clarity in relation to decision timetables;
- a need to improve the project prioritisation process;
- financial viability and programme Horizontal Principles are not frequently applied across Measures/Sub-Measures;
- a need for a more formalised review process for project appraisals where the basis for the original decisions has changed due to changes in costs or changes in the external environment;
- a considerable level of provision by State providers and the voluntary/community sector, with a high level of 'external' delivery but with limited competition overall (specifically for the EHRD OP).

In particular the degree to which project selection guidelines have been followed is not well defined. It is noted that a lack of information on project selection was reported in the annual progress reviews.

Regarding the application of agreed NDP criteria in project selection procedures, the mid-term evaluations found that the Measure objectives are generally reflected in the selection procedures used. However, published eligibility and evaluation criteria do not seem to have been widely available in some OPs.

### **PROJECT PRIORITISATION ISSUES**

There is a need to upgrade the capacity of Managing Authorities to conduct and to appraise cost/benefit studies. We believe that the Cost-Benefit Analysis (CBA) technique is potentially of great value in project selection and also in devising optimal schedules for multi-annual investment plans. In Ireland there has been a tendency for CBA's to be conducted or commissioned by the departments or agencies promoting the projects concerned. In some cases the CBA has been done only after public political commitment to a project, or only to comply with an EU requirement. Studies have failed to use common or agreed assumptions across the different sectors, and there is little evidence of projects being halted because of a negative CBA.

If the quality of project appraisal is to be enhanced and the potential of this powerful appraisal tool maximised, CBAs must be

conducted rigorously and independently of project promoters. Consideration should be given to the establishment of a unit in the Department of Finance devoted exclusively to the conduct/commissioning of cost/benefit studies on major projects and the exercise of quality control on studies delegated to Departments/agencies.

We believe that the attainment of better value for money across the Public Capital Programme would be greatly facilitated by the input of a properly resourced Cost Benefit unit located at the Department of Finance.

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### 12.3 Cost Control and Competition

Cost Control for the NDP 2000-2006 has been approached in a context where cost overruns in some areas of the NDP have become a problem capable of undermining programme delivery. Cost overruns (the gap between final delivered cost and the initial figure on which project sanction was first based) need to be decomposed into their principal constituents, which include amongst others:

- erroneous initial estimates,
- construction cost inflation,
- design changes,
- project management weaknesses,
- failure to provide at all for certain cost components.

It was not possible to review specific project cost issues within the timescale of this review. It is recommended that this be done so that lessons can be learned.

The Consultants' reports on the Mid-Term Evaluation noted generally that the procedures in relation to the disbursement of funding are transparent and no particular issues were identified.

#### COMPETITION ISSUES

Emphasis has recently been placed by the Government on increasing competition in project selection and delivery under the National Development Plan. As discussed in Chapter 4, generally queue based grant approval systems (providing grant aid to the private sector), is being replaced by competitive processes where appropriate.

The ESI OP review recommends the introduction of more competition and demand management Measures as a key Priority particularly for improving public transport in the Greater Dublin Area (GDA) and in addition notes that the Minister for Transport has announced plans for the introduction of competition in the Dublin bus market. This would have implications for the nature and role of future Exchequer investment. Access to the inter-urban bus market has also been liberalised, and Government is in the process of splitting out the three State airports from the Aer Rianta umbrella.

The EHRD OP review notes that:

- Competition in provider selection is limited: for one-third of Measures administrative choice was the main method of provider selection, and no details were provided for how providers were selected in a further one-third of Measures;
- Increased use of competition should be possible at all levels including the selection of overall delivery agencies (particularly where existing state agencies have difficulties in providing the necessary supports to the Departments, e.g. in-company training), at the level of education and training providers, and in terms of selection of individual trainees.

The PS OP Mid-Term Evaluation of the project selection procedures in place across the Priority areas revealed the following findings in relation to the extent to which competition is used:

- RTDI Priority – a competitive process features in respect of all Measures/Sub-Measures within the Priority, where such a process is applicable;
- Industry Priority – A competitive process currently applies only in respect of the Gaeltacht Land and Building Sub-Measure and the FDI Sites and Premises Sub-Measure, where competitive tendering applies;
- Marketing Priority – Competition does not feature in areas where project selection applies;
- Sea Fisheries Development Priority – Competition is not currently applied in project selection.

The Regional OPs review highlighted the following:

- Competition is widely used on the Local Infrastructure and Local Enterprise Priority Measures – much less on Measures under the Agriculture and Rural Development and Social Inclusion and Childcare Priorities. On these last Priorities, the position is that when eligible farmers/communities meet the criteria set, then they are funded on a queuing basis;
- A lesson from the Tourism Measure is that moving to a competitive process has knock-on organisational implications – for Fáilte Ireland, it coincided with (and perhaps led to) a big increase in applications, which caused delays due to a lack of appropriate agency personnel to review the applications. Therefore, implementing desirable competition can itself have an administrative cost.

## **PUBLIC PRIVATE PARTNERSHIPS**

The adoption of Public Private Partnership was anticipated to accelerate investments and introduce expertise where this method of project delivery would reduce costs or involve sharing of risks and greater use of charges for service provision. This was particularly signalled for transport infrastructure and waste management but the uptake has been much lower than expected.

A report by the CIF, O'Rourke (2003), highlights the construction industry experience in implementing PPPs over recent

years and makes recommendations for the changes necessary to accelerate infrastructure delivery through this mechanism. The Institute of Engineers of Ireland (2003), made a submission to government which states that at the current investment levels the plan will not be implemented until 2013 and called for major changes to the planning approval and appeals process.

Public Private Partnerships (PPPs) represent an important element within the overall capital investment included in the OPs. The objectives of PPPs are to increase value for money in the development of infrastructure, accelerate the delivery of the Public Capital Programme, support the long-term growth potential of the economy; and, to transfer risk to the party that can manage it best and at least cost.

We would support the recommendation that the overall approach to managing this issue and the roll out of the PPP Projects under this Measure needs to be examined to consider how best the obstacles to their deployment can be overcome so that they can play an appropriate role in the NDP, as discussed in Chapter 13. We note below in Chapter 13 that the PPP route can, where charges are being introduced, raise micro-economic policy issues that do not arise where it is purely a financing/risk transfer mechanism.

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## 12.4 Programme Management

The OP overall management and supervision structures were designed for oversight and supervision of the implementation of the OPs, so that progress and performance is reported upon and monitored and that decisions are taken in relation to any necessary adjustments to ensure continued effectiveness of the OPs in meeting their overall objectives and targets.

The Managing Authority for the NDP/CSF is the Department of Finance who drafted the NDP and negotiated, in consultation with other Government Departments, the CSF with the Commission. As Managing Authority it examines the progress of interventions and expenditure under the NDP/CSF; monitors compliance with the requirement to spend money within two years of the year for which the funding was allocated; provides the European Commission with the appropriate information to permit the verification of additionality and chairs and provides the secretariat for the NDP/CSF Monitoring Committee.

This committee is comprised of Managing Authorities; Implementing Departments; Social Partners; bodies representing the interests of equal opportunities, the environment, poverty and rural development. The European Commission; NDP/CSF Evaluation Unit, Equality Unit and Information Office are represented in an advisory capacity. The NDP/CSF Monitoring Committee meets twice a year in early summer and late autumn, after the Operational Programme Monitoring Committees and NDP/CSF Co-ordinating Committees have had their meetings

The management arrangements for the NDP/CSF are working well. By mid-2003, six NDP/CSF Monitoring Committees meetings have been held ; expenditure and physical performance has been

monitored and actions taken when necessary to ensure the successful implementation of the NDP/CSF.

A monitoring committee supervises each Operational Programme and the CSF. The main role of the OP Monitoring Committee is to monitor the implementation of the Programme by the managing authority. This includes the achievement of targets set for different Measures/Sub-Measures and proposing to the Managing Authority any adjustments to Measures/Sub-Measures supported by the ESF.

The central evaluation unit within the Department of Finance has the responsibility of providing ongoing evaluative input into the work of each of the monitoring committees and carrying out or commissioning any evaluations at the operational programme or CSF level.

### **PROGRAMME MANAGEMENT ISSUES**

Programme Management of the NDP is a substantial issue. Weaknesses are manifested both in excess costs and in delayed project delivery. The mid-term evaluations of individual OPs reviewed the overall performance in the delivery of projects and highlighted specific issues, principally:

- management structures do not always “enable” management of the programmes, for example sanctions are not imposed on Measures that are not performing;
- varied reporting of performance indicators across all programmes affects the monitoring and evaluation of the programmes and therefore the effective management of the Measures and Sub-Measures;
- programme structures do not provide for unified executive and budgeting responsibility and accountability for the OPs as a whole;
- Implementing Bodies do not see themselves as being accountable for the discharge of their roles in implementing the OP to either the Managing Authority or to the Monitoring Committee other than for the provision of information, the making of progress reports and compliance with financial rules and regulations;
- Managing Authorities do not have the authority or the responsibility for promulgating or ensuring the implementation of models of best practice by the Implementing Bodies.

### **RESOURCE ISSUES**

Regarding the adequacy of resourcing of the programme management function at various levels the evaluators of the Operational Programmes noted some issues:

- the lack of progress and reporting across some of the Measures in all of the OPs<sup>81</sup> demonstrates that the roles of the Management Authorities and Monitoring Committees as defined in terms of fulfilling their Administration and Management tasks may not be sufficient for effective management of the programmes;
- opportunities exist to enhance the management structures through the creation of smaller working groups or smaller committees to deal with specific issues with identifiable tasks and actions to be achieved.

Generally, for an investment plan of this magnitude the resources available for management are very limited. Serious consideration needs to be given to substantially increasing the resources available to the managers of the Operational Programmes, including the Department of Finance. In any commercial organisation significantly greater resources would be devoted to the management of much smaller investment programmes. To try and remedy the limitations of in-house resources considerable resort has been made to consultancy services. However, such an approach loses much of the human capital developed by the consultants, human capital that the managing authorities could benefit significantly from. Greater reliance on in-house expertise, supplemented by necessary consultancy services could provide a better balance of resources to management.

Given their very limited resources, the Managing Authorities have performed very satisfactorily. However, if many of the shortcomings identified by the evaluations of the OPs are to be addressed there will have to be significantly greater resourcing of central management. This should include professional expertise across a range of disciplines such as accounting, economics, engineering, and project management. While such additional resources would involve additional expense, the expense would be small in the context of managing an NDP amounting to €50 billion. Ireland will in all likelihood be undertaking a substantial public investment programme for many years to come, and there is in our view little risk of resource misallocation in strengthening the capability of the public administration in this vital area.

## **PROJECT INFORMATION ISSUES**

The reporting of information to Management Information Systems for project management would seem to be inconsistent at Implementing Agency and Managing Authority levels. The effectiveness of the computerised data information system, which all Managing Authorities and implementing departments are required to use for the NDP 2000-2006, should be further evaluated. This management information system provides

<sup>81</sup> In particular, problems were noted especially with EHRD OP measures managed by the Department of Education and Science.

information for reports and draw down of EU funds under the CSF and other programmes. It was decided to extend this information system to the entire NDP under the 2000-2006 Programme but the population of the database and the regular updating of this information have not been successful.

Insufficient Priority is attached to measuring the impacts of Measures. For example, the Mid-Term Evaluation of the EHRD OP notes the failure of all implementing agencies, with the single exception of FÁS, to implement an agreed approach to collection of past-programme follow-up surveys to Measure the impacts of Measures. This prevents the systematic evaluation of Measure impact.

The NDP is estimated to account for 90 per cent of capital expenditure by government departments and agencies. Funding under the NDP and CSF is provided through the annual estimates to government departments through a negotiation process conducted by the Public Expenditure Division of the Department of Finance with the spending departments. The NDP Managing Authorities are not directly involved in the allocations to these spending departments and the operation of the parallel process of annual estimates and NDP expenditure must consume considerable resources. The Public Expenditure Division of the Department of Finance receives monthly reports from the spending departments. The design and implementation of a management information system for the NDP must operate within this context and should be used to provide reliable data appropriate to the needs of its users. Active consideration should be given to addressing the difficulties encountered in establishing an effective management information system for the NDP.

In tackling these problems it would be a good opportunity for the annual Public Expenditure Estimates process to learn from the NDP/CSF evaluation process. Much of the additional data which would be available from a fully operational management information system for the NDP/CSF would be of considerable value to the Department of Finance in undertaking its annual estimates cycle. In addition, as discussed in Chapter 13, there is a need to integrate decisions on current expenditure affecting the utilisation of infrastructure with the investment decisions that put the infrastructure in place.

## **PROJECT VISIBILITY ISSUES**

NDP information visibility is achieved by an informative website, public notices, newsletters and reports. Public awareness of the impact of the NDP seems to be good.

Specific projects are listed in the NDP website by county with information on Project name, Project Description, Operational Programme, Measure, Implementing Body, Website and Funding. Limited information is available on budget or actual costs and implementation timeframe for these projects on this public website.



The publication of NDP newsletters in February and June 2003 is a positive addition to NDP visibility. Consideration should be given to providing quarterly reports on each OP with appropriate performance indicators updated.

Early action on the recommendations which have been made in a number of the mid-term monitoring and evaluation reports on specific issues which inhibit the effective management of the programmes is required so as to improve delivery on the objectives of the NDP.



# 13. SUPPLEMENTARY MEASURES

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## 13.1 Introduction

It is desirable that future infrastructure requirements are met in the most timely and efficient manner possible and that policies are applied to ensure that scarce infrastructure resources are used in an economically efficient way. It is considered that improvements can be made through a number of initiatives that would ensure a better return on investment under the CSF and the NDP:

- The first relates to developing pricing policies for infrastructure services, which reflect the true social cost of their provision. The current practice of widespread under pricing of certain types of infrastructure should be ended, e.g. in the areas of urban road usage, water abstraction and use of environmental goods.
- The second relates to the management of the infrastructure. In a number of cases existing infrastructure could produce greater benefits if actively managed. Examples include the stock of buses and trains, the stock of hospital beds, and avoidance of road closures.
- The third relates to the appropriate management of demand and supply in the building and construction sector. Unless Measures are taken to deal with the demand side of the housing market significant Priority areas of the NDP/CSF may fail to realise their potential through excessive inflation. For example, the uncontrolled expansion of the second dwelling market is eating up resources, raising house prices, and may also inhibit balanced regional development.
- The fourth relates to the need to plan the physical development of the country and of our major urban areas. While the physical planning process itself has undergone significant improvement in recent years, there are still significant issues to be addressed if infrastructural investment is to be delivered on time.
- The fifth relates to a shift in the scope of infrastructural services that should be provided by the public as opposed to the market sector of the economy. There should be a related change in the role of Government in the provision of such services: from provider to regulator of the 'public good'. There are different ways of implementing such a change. The state can restructure public utilities, introducing competition

and encouraging new firms to enter the market. The state can contract out a range of services it currently provides itself, introducing competition by those who tender to provide the services.

A short elaboration of these initiatives is given below.

## 13.2 Appropriate Pricing

Where the prices charged for infrastructural services do not reflect their true social costs, then there will be a misallocation of resources. Indeed the Mid-Term Evaluation (MTE), Honohan, (1997) and Fitz Gerald *et al.* (1999), in respect of transport and water, highlighted shortcomings in this respect and recommended that economic pricing should be applied where possible. Furthermore, Honohan (1997), noted that with respect to at least some of the interventions considered to be public goods, cost recovery would be feasible. Therefore, it is considered that a policy should be adopted aimed at establishing economic prices across a broad range of infrastructure and other public services.

### COMMERCIALISE THE WATER INDUSTRY

The water and wastewater industry in Ireland should be commercialised, resulting in full cost recovery (including capital and operating costs and a return on capital) from all users. Consequently, Exchequer funding should cease. Consideration should be given to developing a water utility or utilities covering at least the major river catchment areas. The dispersed nature of the industry results in higher costs due to the failure to reap economies of scale.

The failure to implement domestic water charges, given the value of the water infrastructure and its replacement cost, its cost of operation, and the rapid expansion of the household sector, is untenable. In the absence of charges the scarce resource of clean water will continue to be overused, imposing major costs on society and entailing serious damage to the environment. Experience elsewhere has shown that when charges for use are introduced, consumers make much more efficient use of the scarce resource (Scott and Lawlor, 1994). The successful implementation of the tax on plastic bags in Ireland has also shown that suitably targeted fiscal incentives can achieve significant environmental gains.

Charges should be use-related where possible, which implies metering. Retro-fitting water meters to existing houses may not be economic, but there should be an immediate return to the requirement (used by many local authorities pre-abolition) to fit meters to all new domestic dwellings, to enable use-related water charges for this section of the housing stock.

The operators of a commercialised service will deliver the level of system rehabilitation and serviced sites that make commercial sense. Exchequer funds by-and-large would not be required in these areas. The issue of cost recovery for major new investments needs

to be considered: serious waste of scarce national resources will result from a failure to address this issue.

Some form of economic regulation may be necessary to ensure that social considerations are addressed and that the actions of commercial operators coincide with the economic optimum, as water services are in the nature of a natural monopoly. Private access to the water resource, in those areas where scarcity has emerged, should not be free.

## THE ECONOMICS OF ROAD TOLLING

The tolling of congested urban facilities, such as the existing tolled bridges in Dublin, or the busy Lee Tunnel in Cork or proposed river crossings in Limerick or Waterford, raise economic issues quite different from those arising from the toll on the Drogheda by-pass or the proposed tolls on a number of inter-urban sections of the National Primary network. Tolls on facilities in congested cities can be seen as a rationing device, more efficient than rationing through congestion, and as part of broader schemes to charge for road use and for parking. But in inter-urban use, on uncongested routes, tolls create prices which exceed marginal costs, and discourage use of uncongested facilities.

An additional difficulty is created where traffic is likely to be diverted by the tolls in significant volume from new to old routes. Where the new routes are, or encompass, by-passes, and the old route is through cities and towns, this problem is compounded, since the impact of the toll is to drive traffic from the uncongested to the congested route. Tolling in these circumstances reduces the potential benefits of a project. It would appear that road tolls in Ireland are being introduced essentially as a mechanism for raising finance for the road investment programme, without adequate reference to the micro-economic impact of the charging scheme chosen. Thus the Lee Tunnel is free, but it is apparently planned to levy tolls on inter-urban sections which will operate well below capacity. The Drogheda by-pass is, we understand, carrying 18,000 vehicles per day versus capacity presumably 55,500 at Level of Service (LoS) mid-D. It is a busy route by comparison with some others where tolling is contemplated, but will operate well below capacity for many years to come.

The raising of revenue is not an adequate basis for levying tolls on lightly trafficked inter-urban sections, given the undesirable economic side effects. Plans to do so should be reviewed in the light of opportunities to impose charges on congested, but currently free-to-the-user, urban facilities. Whether a road is newly constructed or not should be ignored when deciding if it should be tolled.

With regard to urban road usage it is considered that much greater need and scope exists to apply user charges. In the long run the creation of a sustainable city will require the introduction of urban road pricing to help achieve improved balance between demand and supply for urban road usage. Such a scheme has been successfully introduced in London, in Singapore and in some

Scandinavian cities, and its introduction in Dublin should be timed to coincide with a major upgrade in the urban public transport system. The use of road pricing will also be essential to support the National Spatial Strategy and the strategic plans for the Dublin area. Without recourse to such pricing there will be a continuing trend for a pattern of long-distance commuting to develop that is unsustainable environmentally and which will impose heavy costs on society. Building motorways to cater for long-distance commuters is an exceptionally expensive way of providing urban transportation and it will pre-empt resources urgently required to build a sustainable urban environment.

Pending the advent of road-use pricing, the encouragement to excessive urban driving should be curtailed by use of correct parking charges. In particular, this means addressing the zero-charge on parking which applies to many motorists at their place of work and in large shopping centres. Employees who enjoy free parking at their place of work should face benefit-in-kind taxes under the income tax code. At present, an employer who offers a company car will create a tax liability for the employee. But a free parking space does not, so this is a popular tax-efficient method of remuneration in all sectors of the economy public and private. Reform is overdue in this matter. The introduction of such charges must be co-ordinated with the regulation and charging of on-street parking.

## **SOLID WASTE**

Current policy calls for a series of regional waste plans to be implemented with each of 8 regions disposing of its own waste. This plan will be implemented through current regulations and the provision of waste disposal will be done on a commercial basis. Thus, there is likely to be only a limited direct need for public funding under the NDP. However, this plan is likely to impose a huge excess burden of cost on the economy compared to an economically efficient outcome. It is also progressing so slowly as to give serious cause for concern on both economic and environmental grounds.

Barrett and Lawlor (1995), showed that there were major economies of scale in waste disposal. It is likely that two or three plants, not eight plants as currently required, could effectively serve the country as a whole. The imposition of potentially billions of additional capital expenditure, paid for out of user charges, will adversely affect competitiveness and welfare. In addition, because of the slow progress in implementing the current policy, it is exposing the country to unnecessary environmental dangers.

Given that progress has been so slow and so little achieved in implementing the regionalisation strategy, it should be possible to shift to a national strategy, which would be cost efficient and could be implemented rapidly. This would avoid the potential significant damage to the competitiveness of the economy which the current regional strategy entails and it would deal with the serious environmental challenge facing the country.

## EMISSIONS TRADING AND A CARBON TAX

The rapid growth Ireland has experienced, and is likely to experience out to 2010, has put serious pressures on the environment. Already Ireland exceeds its target for emissions of greenhouse gases by a wide margin and dealing with this problem over the coming decade will prove difficult. To the extent that the NDP/CSF contributes further to raising the level of output, it will add further to emissions. Tackling this problem will require supplementary policy Measures outside the NDP/CSF if Ireland is to meet its emissions targets by 2008-2012. The adoption of supplementary Measures, such as a carbon tax, is needed to complement the EU-wide emissions trading regime designed to bring emissions within the limits set by the Kyoto protocol.

### 13.3 Management of Infrastructure

A significant problem that has been identified in some of the evaluations of the OPs has been that when infrastructure is built it is not fully utilised immediately on completion. For example, this has occurred with the suburban rail investment where the failure to expand services on completion of the infrastructure has been discussed in the previous chapter.

A second example is the failure to make appropriate usage of the stock of urban buses. The failure to minimise dwell times means that buses spend significantly longer stopped, leading to longer journey times, slower turnaround and delay to other buses and traffic. This is aggravated by the failure to introduce integrated ticketing. With the present ticketing system buses spend a significant part of the journey time stopped while people pay their fares. From St. Petersburg to Seville urban public transport is designed to allow customers to board rapidly and validate pre-purchased tickets while the bus is moving. The combined effects of these delays is to significantly reduce service levels to customers and to reduce utilisation of the expensive capital stock.

The failure to introduce a simple integrated ticketing is a symptom of a wider problem – the failure to develop an integrated public transport system in Dublin. The most obvious example of this is the decision not to connect the two LUAS lines.

While 30 years ago the pattern of passenger movement was generally in and out on radial corridors, today the size of the city of Dublin and the pattern of passenger movements is rather different. If public transport is to be an option for many of these journeys it will involve at least one change of bus or train or tram, as well as more cross-city through-routes. The future development of the system must recognise this reality if it is to deliver a reasonable rate of return and if it is to maximise patronage, minimising congestion.

### 13.4 Managing Demand for Housing

If the supply of housing was very flexible then there would be limited need for public intervention in the market, other than to provide for social housing. However, the sector can not adjust supply very rapidly to meet demand changes without significant costs. While output rose dramatically over the second half of the 1990s, it was at a very significant cost in terms of inflation. Costs were driven up by the need, *inter alia*, to attract labour from outside the sector and from Ireland. Significant benefits accrued to owners of land that was rezoned close to developing cities and towns. The result is that the cost of accommodation is now higher in Ireland than almost anywhere else in the EU. Successive reports have made recommendations on reforms aimed at expanding the supply capacity of the industry relieving or reducing inflationary pressures.

Some of the benefits from the boom are accruing to landowners as a result of the major investment in infrastructure by the state and the rezoning of the land for development. It would be appropriate for a significant part of this development gain to be used, through appropriate taxation, to part fund the infrastructural investment that creates the gain. Any such Measures should also be designed to encourage liquidity rather than to encourage hoarding of land.

The State is intervening in a number of different ways to encourage demand for housing, pushing up the price. This rise in price, in turn, makes it very difficult for the state to achieve its objectives under the NDP/CSF. Given inelastic supply of housing in the short run, the tax relief on mortgage payments, the encouragement of second dwellings through tax breaks, and the under-pricing of infrastructure all encourage higher demand and higher prices. Restrictive zoning, while popular with existing suburban residents, fuels an artificial shortage and encourages urban sprawl.

Similarly higher State expenditure on social housing drives up prices. As it is considered socially desirable to house those families who would never be able to house themselves, the result must be that other households delay forming an independent household because of the price rises. Those households who temporarily lose out are probably those just above the threshold eligible for social housing and in recent times some of them have helped swell the housing lists. In the short run the reallocation of the housing stock between households can be achieved by bidding up prices or through reducing private sector demand. Obviously, the most efficient solution is for the state to manage demand through taking money out of the market, and through relaxing artificial supply constraints, leaving capacity for the sector to provide the social housing that is needed at an affordable price.

An important driver of the price of building houses is the demand for second dwellings. As shown earlier, on average over the last five years second or replacement dwellings have accounted for up to 20,000 dwellings a year. This demand is well above that experienced in any previous five-year period. This greatly enhanced demand has put further pressure on the resources of the building industry, driving up prices. If the cost of such dwellings reflected



their true economic cost, then this would be an economically efficient outcome. However, there is a major problem with second dwellings<sup>82</sup> in rural areas in that the cost to the individual greatly underestimates the true cost. Apart from the visual impact of such dwellings, they impose substantial additional costs on society, costs that the owners do not have to pay for.

The provision of electricity, telephone, post, water supply, sewerage, roads and other services in rural areas is much more expensive than the provision of such services in villages or urban areas. For example, in the NDP/CSF there is provision for major infrastructural investment to deal with the problems of providing water and sanitary services to such isolated dwellings. While the provision of subsidised services to those living **and** working in rural areas may well be justified, this is hardly justified for second dwellings. Because such dwellings are only used for part of the year they make a much smaller contribution through existing user charges to meeting the capital cost of service provision than do those permanently resident in rural areas. Even those resident full time do not cover anything like their full costs. The model described in Appendix 1, suggests that the effect of the very large demand for second/replacement dwellings over the last five years has been to raise national house prices by at least 10 per cent.

Because many of these dwellings are outside Dublin, in particular in the BMW region, the effect on house prices outside Dublin has probably been much more extreme. The result has been an especially adverse effect on the cost of living outside Dublin, narrowing substantially the differential between house prices in Dublin and regional locations. This runs totally counter to the needs of balanced regional development, making it unnecessarily expensive for individuals to live and for businesses to operate in regional locations. By pre-empting the resources of the building industry, those buying or building second dwellings are pricing those wanting to live and work in regional locations out of the market.<sup>83</sup>

A policy of charging the full economic costs of infrastructure to second dwellings<sup>84</sup> located outside traditional villages or towns would meet two objectives. It would promote more balanced regional development. It would also reduce the pressure on the building industry generally, cutting the cost of reducing the infrastructural deficit.

In addition to tackling the problem of excess demand for second dwellings, it is recommended that the necessary other supplementary Measures are taken to reduce private sector demand until such a time as there is spare capacity in the housing sector and

<sup>82</sup> Defined here as a dwelling that is not the principle residence of any household.

<sup>83</sup> See, for example, "Donegal priest warns of fall in local population", Theresa Judge, 2<sup>nd</sup> February 2000, and "Building boom as county faces new planning curbs", *Irish Times*, 16th June 2000.

<sup>84</sup> Dwellings that are not occupied for much of the year.

prices are stable or falling. There has been some move in this direction with the abolition of the first time buyers' grant in the December 2002 budget. The Indecon report recommends that additional resources be allocated to some Measures under the NDP through the abolition of various reliefs and grants. After that some combination of eliminating mortgage interest relief, estimated at some €200 million, abolition of other tax incentives, or a property tax, etc. could contribute to a non-inflationary outcome by reducing demand pressures. All these Measures would also contribute towards the costs of funding social housing.

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### 13.5 Physical Planning

Since work first began on drawing up the current CSF/NDP major developments have taken place under two important headings: the implementation of the strategic physical planning process and the reform of the regulatory physical planning process. However, further reforms are needed if infrastructure is to be delivered and used efficiently.

In the case of major public infrastructural investment the number of stages that must be gone through in implementing a particular project is contributing to serious backlogs. For the future it will be important to streamline the process further. In addition, all projects to be implemented over the next decade should go through the planning process as soon as possible so that projects are ready to be implemented as and when it is appropriate. The delays still being encountered in major projects, such as the M50, indicate that further work needs to be done in this area.

While the details of further reforms in the physical planning process for major infrastructure have yet to be finalised, this initiative holds out the hope of a significant streamlining in the process. The delays encountered in planning and delivering major infrastructure in Ireland are abnormal by the standards of our EU neighbours.<sup>85</sup> This is affecting all aspects of infrastructure – roads, public transport, telecommunications, energy etc. For example, a big obstacle to revising specifications for parts of the M50 or the LUAS (crossing the Red Cow junction on the M50) to deal with changing traffic needs prior to entering into contracts is the need for a whole new entry into the planning process. The delays in the planning process has severely impacted on the deployment of new electricity transmission lines and this may severely hamper the NSS and prevent significant further economic development in the West and the North-West.

Even when the planning process itself has been fully streamlined there is still a potential problem arising from the frequent recourse to the courts resulting in significant delays on major projects. It would be desirable that wherever possible, rather than delaying projects, the courts would provide for financial compensation where

<sup>85</sup> The United Kingdom process of public inquiry is in some ways inferior to the current unsatisfactory Irish system.

the complainant establishes a case. At present the cost to society at large of the delay due to failure to complete vital projects is never considered by the courts. Because of the impossibility of so doing, the large number of substantial losers arising from delays, in some cases society as a whole, are never compensated, even when the complaint is deemed to be unfounded. While the benefits to society from new infrastructural projects are normally assessed as part of any cost-benefit study these benefits, if foregone through delays, can not be restored through the judicial process.

The NSS is now in place, Regional Planning Guidelines are following and will be spatially targeted. With better planning frameworks, attention must turn to how the State's investment priorities and the priorities identified in strategic planning frameworks might be aligned. Gateways particularly, but also other centres identified under the NSS need to be looked at in terms of how State investment might boost critical mass. A limited number of "flagship investments" highly supportive of the NSS are ready to go in land-use and strategic planning terms. As recommended in Chapter 5, reprioritisation within the NDP/CSF should make provision for such strategic needs under the NSS.

While the strategic planning guidelines for Dublin and the National Spatial Strategy (NSS) represent very important developments, their implementation is still to be accomplished. Therefore, our recommendations on reallocation of funding take particular account of the NSS. However, there remains a major problem in the Dublin area where the city spreads out over at least seven different counties. Unless urgent action is taken to implement the guidelines so as to achieve a dense city along public transport corridors, there will be little prospect of implementing a fully efficient public transport system. An example of such a failure was the decision not to zone for high density around the DART extensions to Malahide and Greystones. In the absence of higher density this investment will not prove to have been justified.

With the cities of Ireland, including Dublin, likely to expand the numbers of dwellings by 30 per cent over the next twenty years there still remains the opportunity to influence this development so as to allow efficient public transport to be put in place. Few other European cities face the likelihood of such expansion and, as a result, few have the same opportunity to "design" efficient and sustainable cities. Failure to impose the necessary guidelines across all relevant counties will render much potential investment in public transport uneconomic – producing an "unsustainable" city. In many cases expensive new public transport initiatives will not be economically viable without full implementation of strategic planning guidelines in the hinterland of the relevant cities.

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### 13.6 PPPs

While the State is good at providing the finance, it is often not good at directly producing other goods and services. Thus direct construction by the State of infrastructure will generally be much less efficient than the purchase of construction services from the

private sector through a competitive tendering process. In planning the provision of necessary infrastructure the objective is to provide the necessary infrastructural services to the consumer (taxpayer) at minimum cost over a suitable time horizon.

However, there is a cost in contracting out provision of goods and services. This cost drives the substantial vertical integration normal in business throughout the world. For example, a bank integrates into one business branch banking, corporate finance, risk management, merchant banking, human resource management etc. rather than the alternative of a small core of people buying in all of these services through legal agreements with a wide range of separate companies. So too, the choice as to when to contract out the provision of goods and services to the private sector through Public Private Partnerships (PPPs) or whether to undertake it directly will depend on the relative costs of the two approaches.

With major physical infrastructure, where future demand is uncertain, there may be a high cost to a long-term contract unless it is very flexible. However, there may be a high price for flexibility. Whether it is desirable to use a PPP depends on what the expected savings are from using it and locking in to a contract, compared to possible future costs of alternative forms of provision.

The introduction of Public Private Partnerships into the National Development Plan takes two essential forms. The first is where no new charge is made to end-users for the service resulting: the PPP procedure is a *financing* mechanism only. This is the case with the schools projects or would be the case if shadow tolls were used for roads or similar schemes, or where charges would be identical under the PPP or traditional models. The second is where such charges to the public are introduced, as with so-called 'hard' (cash) tolls for road projects, and the PPP procedure is a *financing plus charging* mechanism.

For the first category, the computation of the desirability of the PPP approach, as against traditional methods of finance, is less complicated than it is where new charges to end-users are introduced. Demand will be unaffected, and the principal impacts will be confined to the impact of the PPP mechanism on capital and operating cost savings, versus any higher payments to providers of finance. But where charges are introduced, the impact on demand must be factored in, and this can complicate the assessment of the desirability or otherwise of the PPP model.

PPP involves costs which do not arise with traditional financing, regardless of the charges regime. These include legal fees arising from the various contractual relationships created, and items such as the sunk costs of bidders. A PPP method *must* generate adequate savings under some heading to offset these items. But where charges are also introduced, and demand affected, as with 'hard' tolls, the micro-economics of the comparison with traditional financing becomes more complex. The cost-benefit analysis must now take account of the impact of these charges on consumer surplus, and it is not clear that this has been systematically addressed where PPP schemes have been chosen. The resulting charges may

or may not be set at levels which correspond to optimal prices, that is, prices which attain economic efficiency through a full reflection of social cost. Unless this is the case, the resultant volume of demand and hence usage could differ from the economic optimum, and the associated costs of this inefficiency must be set in the balance of the cost-benefit calculation against cost savings under other headings.

Given prospective constraints on Government borrowing, should the limits arising from the EU Stability and Growth be approached, a further consideration is whether PPP creates headroom for off-balance sheet financing. The economics of the choice of financing technique are further complicated in these circumstances. Of course, if a borrowing constraint is deemed unlikely to bind, this factor does not arise, and no shadow premium to the cost of traditional funds, low in the prevailing environment, will arise. If a constraint is likely, explicit calculation of the correct shadow premium needs to be undertaken.

More generally, the capacity of PPP to generate 'fresh' or 'additional' resources for public capital spending is, from an economic standpoint, necessarily equal to zero. This is an *alternative* method of finance, not some special arrangement which yields economic resources not otherwise available. An excessive concentration on this aspect can cloud the real micro-economic issues which require to be addressed.



# PART 3

## **Conclusions**





# 14. CONCLUSIONS

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## 14.1 Appropriateness of the NDP/CSF Strategy

While there have been significant changes in the broad economic environment since the NDP/CSF was formulated in 1999, the overall strategy underlying the plan is as valid as it was when it was first drawn up. The deficit in key types of infrastructure was apparent by the end of the last decade and it was clear at the time that it would take at least a decade to deal adequately with this problem. The latest research, described in Chapter 3, highlights the importance of tackling this deficit in physical infrastructure as a stepping stone to realising the economy's full economic potential. The importance of continuing investment in human capital had long been recognised and this Priority was also integral to the current plan. Even when the medium-term forecasts on which this Evaluation is based are subjected to sensitivity tests, this does not change the conclusions. A "no regrets" policy would still make tackling the infrastructural constraint a key Priority whatever is likely to happen to economic growth over the rest of the decade.

Both the world and the Irish economy have seen a significant slowdown since 2000. However, this slowdown has not provided relief from the pressure on infrastructure in Ireland. In spite of the economic slowdown, the period since the National Development Plan was drawn up has also seen a continuing high rate of inflation in both wage rates and in the cost of housing and other types of building and construction. The resulting disimprovement in the competitive position of the economy has probably been more significant than was envisaged at the time the plan was drawn up. As a result, it is more important than ever to tackle the causes of this deterioration, both through the NDP/CSF itself, and also through adopting other appropriate Policy Measures.

Looking over the period to 2006, finance should not be the major constraint. If a project is worth doing, and if it can be delivered efficiently without adding to inflationary pressures, it should be financed; if the rate of return on a project (allowing for risk) is greater than the cost of borrowing then it could be funded by taxation or by borrowing. The choice of whether it should be financed by borrowing or by taxation is one that concerns the possible transfer of burdens between the generations. In the unlikely event that the public finances prove consistently weaker in 2004 and 2005 than anticipated, and that the ability to borrow is constrained by the Stability and Growth Pact (SGP), it would be better to raise taxation or cut current expenditure to pay for the investment rather than to leave a valuable project undone. By funding the bulk of investment in infrastructure out of taxation over the last decade the

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## 14.2 Achievements of the NDP/CSF

State has been building up physical assets without offsetting financial liabilities. When the infrastructural programme is largely completed, some time in the next decade, the State will then have a large asset that will continue to provide services for future generations.

The four key objectives of the NDP/CSF were:

- Continuing sustainable national economic and employment growth;
- Consolidating and improving Ireland's economic competitiveness;
- Fostering balanced regional development;
- Promoting social inclusion.

To date the NDP/CSF has undoubtedly contributed significantly to the first two of its key objectives. As discussed in Chapter 2, the Irish economy has performed well in a difficult international environment since 2001. It still has the potential to grow rapidly over the rest of the decade once the EU economy recovers. The analysis in Chapter 3 shows that the NDP/CSF has made a significant short-term contribution to sustaining activity in the domestic economy. It also shows that it will have a substantial sustainable positive effect on the productive capacity of the economy in the long term. The analysis in the chapter indicates that the beneficial long-term effects from the NDP/CSF are greater than was estimated in previous evaluations. The investment in physical infrastructure is playing a vital role in expanding productive capacity and enhancing competitiveness. The investment in human capital is both reducing the cost of skilled labour and enhancing the productivity of labour. Taken together these effects will result in a substantial improvement in competitiveness.

In the case of balanced regional development the evidence suggests that the NDP/CSF has made a positive contribution. The fact that the economic backdrop has been unfavourable to balanced development tends to mask the successes of the NDP/CSF. Without the policies implemented as part of the Plan the imbalances would be greater than they are today.

In the case of social exclusion the NDP/CSF has made a significant contribution, both through specially targeted Measures, and also through the impact of all the programmes taken together. The single biggest item of expenditure has been social housing. There has been a dramatic increase in resources devoted to this Priority: in 2003 the resources were roughly double what they were in 2000. However, there have been related problems with inflation in the sector. As discussed in Chapter 11, a range of other Measures, taken individually, have had a positive impact in terms of social inclusion. The analysis in Chapter 3 indicated that the overall impact of the investment in human capital made a significant contribution to the reduction in wage dispersion in the economy.

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### 14.3 Recommended Allocations

This report has suggested a number of ways in which the NDP/CSF can be reprioritised to accommodate the lessons learnt over the last three and a half years. The recommended reallocation of funding across the different Priority areas is quite small relative to the levels of expenditure in 2002 and the estimates for 2003. In addition to the reprioritisation, there are other suggested policy changes that are needed if the NDP/CSF is to realise its full potential and if the investment programme is to achieve its objective at a reasonable cost and within a realistic time scale.

The ideal approach to determining the appropriate level of investment under the NDP/CSF would be to undertake all those projects that promised a specified rate of return. With a limited number of projects, an assessment would be made as to the likely rate of return on each of them. The projects that exceeded the hurdle rate of return, equal to the opportunity cost of public funds, would then be undertaken. The funding “envelope” required would then be the sum of the financing needs of the approved projects. It would be a separate decision as to whether the funding would come from current taxation or from future taxation through borrowing.

In approaching the task of deciding on the reprioritisation within the NDP/CSF, information is limited and the benefits from many projects do not lend themselves to a single scientific metric. In this report the elements of the NDP/CSF have first been classified according to the rationale for undertaking the investment. Based on this rationale a formal screening process is then applied. This screening is a useful first step in highlighting projects that may be especially beneficial or especially problematic. However, this screening process is crude in nature and is only one input into the selection process. The financial and physical progress of different Measures, the efficiency with which they are being implemented, the cost of delivering them in the relevant time scale are all considered, and the extent to which they contribute to the Horizontal Principles underlying the NDP/CSF.

The analysis in the previous chapters sets out detailed recommendations on the possible reallocation of funding both within the CSF and within the NDP. These recommendations have taken account of a wide variety of factors affecting the likely costs and benefits of the different “Measures” and “Sub-Measures”. As discussed in Chapter 4, these recommendations must be fitted within an indicative “envelope” of funding for the 2004-2006 period specified by the Department of Finance. This indicative envelope involves a rather similar level of funding for 2004 relative to that for 2003. For 2005 and 2006 the envelope envisages a roughly unchanged volume of resources for the NDP. For the CSF the funding available is on a downwards trajectory, with funding for 2005 being around €520 million and for 2006 around €450 million.

As discussed in Chapter 4, there is some uncertainty concerning the commitments already entered into for projects in the 2004 to 2006 period. Thus, it may not be practicable to cut some projects that are already under way. The recommendations must be read with this restriction in mind. If significant funding is already

committed to projects not favoured in the recommendations in Chapters 5 to 11, then it will be necessary to reduce funding for more attractive projects compared to the recommended level. However, the broad outlines of an overall prioritisation of projects should be clear from the analysis in this report, so that if funding is to be reduced relative to the indicative “envelope”, or additional funding becomes available, then suitable adjustments can be made.

A further area of uncertainty concerning the future prioritisation of investment is the level of spare capacity in key building and construction sectors. As discussed in Chapter 2, currently there appears to be reasonable capacity availability in the non-housing sector of building and construction. This capacity should be adequate to accommodate the proposed increase in resources for infrastructural investment. If capacity proves tighter than anticipated and inflation higher, then it may well be desirable to change the phasing of investment in some high Priority areas. For housing, there is evidence of continuing capacity constraints. In order to deliver the required investment in social housing at reasonable cost it will probably be necessary to take action to reduce private sector demand.

## **NDP**

Set out in Table 14.1 is a summary of the recommendations for the allocation of the indicative funding “envelope” for 2004. The allocations under the NDP for 2005 would be broadly indexed relative to the allocation for 2004, while the “envelope” envisages unchanged funding for 2006.

The detailed recommendations in earlier chapters translate into a reduction in funding for the Productive Sectors OP compared to 2003. The likely rate of return from further investment in that sector is felt to be generally lower than in the other OPs, with more limited evidence of market failure requiring public sector intervention. The one exception is the RTDI Priority, where funding for 2004 is unchanged compared to 2003. Within the OP it is recommended that funding for the business sector generally be allocated on a competitive basis, with businesses from all sectors of the economy competing for the same pool of funding.

It is recommended that the Regional OPs receive similar funding in 2004 to 2003. This funding should be used to reprioritise within the OP to support the changed policy environment entailed by the National Spatial Strategy. As part of this reprioritisation, it is recommended that there be a significant increase in funding for the local infrastructure Priority. This should include an increased level of funding for non-national roads to enhance the development potential of the regional gateways. There should also be funding available, allocated on a competitive basis, for regional strategic plans.

**Table 14.1: Summary of Recommendations on the Allocations for the CSF / NDP, 2004, € million**

	CSF 2002 Expend- iture	CSF 2003 Commit- ments	CSF 2004 Preliminary Commit- ments	CSF 2004 Recomm- ended	NDP 2002 Expend- iture	NDP 2003 Estimates	NDP 2004 Recomm- ended
<b>Total NDP envelope *</b>	<b>1,219</b>	<b>1,025</b>	<b>582</b>	<b>582</b>	<b>7,702</b>	<b>7,328</b>	<b>7,540</b>
<b>Economic &amp; Social Infrastructural OP*</b>	<b>683</b>	<b>426</b>	<b>148</b>	<b>258</b>	<b>4,239</b>	<b>3,698</b>	<b>3,967</b>
National Roads	318	258	94	148	1,084	1,270	1,445
Public Transport	203	58	25	60	524	441	500
Environmental Infrastructure	160	92	12	50	504	382	390
Sustainable Energy	1	17	16	0	9	13	13
Housing*	0	0	0	0	1,615	1,081	1,142
Health Facilities	0	0	0	0	504	510	475
Technical Assistance	1	1	0	0	1	0	2
<b>Employment and Human Resources Development OP</b>	<b>179</b>	<b>201</b>	<b>141</b>	<b>95</b>	<b>2,099</b>	<b>2,045</b>	<b>2,056</b>
Employability	108	119	84	50	1,131	1,030	1,040
Entrepreneurship	25	40	28	20	40	49	60
Adaptability	44	39	27	25	422	470	500
Equality	1	2	2	0	2	6	6
Other Measures	1	1	1	0	504	489	450
<b>Productive Sector OP</b>	<b>73</b>	<b>80</b>	<b>58</b>	<b>49</b>	<b>468</b>	<b>527</b>	<b>451</b>
RTDI	71	69	49	49	196	232	235
Industry	0	0	0	0	235	240	185
Marketing	0	0	0	0	34	47	30
Sea Fisheries	2	12	9	0	2	8	0
Technical Assistance	0	0	0	0	0	0	1
<b>Regional OPs</b>	<b>271</b>	<b>287</b>	<b>205</b>	<b>148</b>	<b>882</b>	<b>1,031</b>	<b>1,035</b>
Local Infrastructure	153	134	90	148	563	662	730
Local Enterprise	67	62	50	0	91	81	40
Agriculture & Rural Development	16	33	23	0	41	54	30
Social Inclusion & Childcare	34	58	41	0	188	235	235
<b>Peace OP</b>	<b>11</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>11</b>	<b>27</b>	<b>27</b>
<b>Technical Assistance OP</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>

Notes: For 2002 and 2003 the CSF expenditure includes Cohesion and TENS funding as well as public funding. These are not relevant for 2004. The 2002 NDP expenditure includes a small amount of PPP funding. The table only includes public expenditure by the EU and the State.

\* The 2002 figure for investment in housing, for the Economic and Social infrastructure OP and for the total NDP includes investment funded from local authorities' own resources. For 2003 and 2004 the NDP, ESI OP and housing investment figures do not include investment in housing funded out of Local Authorities' own resources.

The funding for the EHRD OP is recommended to stay broadly unchanged compared to 2002, with some reprioritisation within that OP.

The 2002 NDP figures for the Economic and Social Infrastructure OP and for housing investment include additional local authority own resources over and above the exchequer contribution. However, these resources are excluded from the estimates for 2003 and from the "indicative envelope" for 2004. When the Local Authority own resources are taken into account for

2003 and 2004 this should leave the funding for housing investment broadly unchanged in 2004. It will also mean that, on a comparable basis, the resources available for the ESI OP are recommended to rise in 2004. It is recommended that there should be an increase in funding for the National Roads Priority. However, this is conditional on the use of appropriate project selection criteria and a rigorous assessment of the ability of the economy to deliver the required investment within budget. The increase in funding for public transport is aimed at further developing urban public transport. The main-line rail Measures are adjudged to have a much lower Priority.

For environmental services a similar allocation is recommended in 2004 compared to 2003, well down on 2002. With the completion of a number of major projects this should be adequate for the implementation of the Urban Waste-Water Directive. For housing it is recommended that investment continue at its current high level. However, as discussed in Chapter 13, there is a need to implement Measures to reduce private sector demand ensuring that prices stabilise or even fall.

## **CSF**

In considering the appropriate allocation of the CSF funds there are a number of additional issues which need to be taken into account. In particular, the CSF funds can not be reallocated across Measures or priorities as easily as the non co-financed (domestic) resources. In addition, if the EU resources are not drawn down they are lost to the Irish economy, whereas exchequer funds that are not needed can be applied to other uses. This means that, in addition to requiring an appropriate minimum rate of return, CSF funded projects must have a high probability of delivering the required results within the appropriate time frame.

In addition, to the requirement that the projects funded under the CSF must be certain to deliver on time, a secondary consideration is the need to minimise transactions costs. Some projects, especially small projects, may involve unacceptably high transactions costs if funded under the CSF. These costs will apply both to the EU administration and the local administration. Because of the parallel control mechanisms necessary for such co-funded projects it is desirable to ensure that projects are chosen where the necessary administrative overheads are likely to represent a small proportion of the total funding. This is a special concern on some of the agricultural Measures. The compliance costs for farmers can be very high, with the result that a significant part of the funding does not end up as farmers' incomes.

The Berlin profile, which required front-end loading of activity, also posed problems in the 2000 to 2002 period. It required some projects to be implemented more rapidly than was desirable, given the constraints on the economy in the period 2000 to 2002. Where new Measures were being introduced, for example the support for

R&D, better results might have been obtained through a slower build-up in expenditure.

Finally, because of the dangers that CSF funding may be lost altogether, it imposes inappropriate incentives on managing authorities, especially towards the end of the window when the funds are available. (This is a particular concern with the PEACE OP where substantial funding is available and must be spent before 2006.) If it becomes clear to the managing authority that further investment in a particular measure may not be very productive, the possibility of losing the funding altogether provides a strong incentive to spend the money any way. If the funding came from national resources, the penalties for surrendering the resources, so they could be used more appropriately elsewhere, are much lower. This problem argues for using the CSF funding for projects with more certain rates of return, even if these rates of return are somewhat lower than might be obtained from other more risky projects.

Table 14.1 shows the CSF commitments for 2003 and preliminary commitments for 2004. These 2004 figures are what is currently planned. The task of this report is to recommend how these resources for 2004 can be reallocated to maximise the return. The recommendations as to the reallocation are shown in the "Recommended" column.

As shown in Table 14.1 it is recommended that the declining CSF resources be concentrated on a smaller number of Priority areas for the period 2004-2006. Because of the Lisbon agenda, which is an important EU Priority, it is recommended that some CSF funding be used to fund RTDI under the Productive Sector OP. It is also recommended that some limited funding be allocated to key priorities under the EHRD OP. Because of the prospective high rate of return on infrastructure projects under the ESI OP it is recommended that this area should receive a higher allocation than currently planned. While the PEACE OP is likely to experience high transactions costs in drawing down CSF funding, there is no scope for reallocating these resources.

For the performance reserve it is recommended that for the BMW Region the funds be allocated to the Non-National or the National Roads Priorities to support the implementation of the National Spatial Strategy. This would be likely to guarantee a safe and substantial rate of return, while also contributing significantly to the objective of promoting balanced regional development.

For the Southern and Eastern Region the performance reserve could be allocated to urban public transport if projects could be identified that promised a high rate of return, for example through eliminating bottlenecks in the system. This would also contribute to the environmental Horizontal Principle under the CSF. If such projects are not available or if there is any uncertainty about their delivering on time within budget, then it would be better to use the resources to fund part of the National Roads Priority under the ESI OP. The failure to include other projects for consideration is not because they are not likely to be valuable. It is rather that they are

less certain to deliver as planned or else may involve high compliance costs for the Irish authorities, paralleled by significant transactions costs for the EU authorities.

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#### 14.4 Lessons

While according infrastructural investment a high Priority, there are concerns about value for money. Failure to tackle such concerns will see less roads or public transport being built within the budget allocated and will delay the completion of the very onerous programme of infrastructural investment. These concerns take two forms: first, there is a concern that the cost of building the roads is too high; second, there is a concern that the level of service, and hence cost, provided for may be excessive relative to prospective demand. In the case of LUAS there was very serious “cost creep” from the time the project was first adopted. Subsequent to the initial decision, major design changes were made which changed both the potential costs and benefits of the system. However, a full cost-benefit analysis (CBA) of the revised scheme was not undertaken before the revised scheme was finally chosen. As with the experience in revising the roads programme, this case shows the importance of undertaking a full cost-benefit analysis of all major infrastructural projects before committing finally to their implementation. With full information better decisions would be made in the future on such major infrastructure projects.

An important benefit to the Irish economy from the CSF process over the last decade and a half has been the introduction *de facto* of multi-annual budgeting for capital purposes, producing more efficient delivery of investment and a higher rate of return. However, under the current NDP there has been some reversion to annual budgeting. Some projects, which had geared up on the basis of a seven year funding profile, have found that their resources were unexpectedly cut back. This has led to waste and inefficient delivery. Where projects were funded under the CSF there was a higher level of continuity. It is recommended that there be a return to multi-annual budgeting for the rest of the planning period. This is particularly important given that henceforth the vast bulk of Irish public investment will be funded by the Irish taxpayer, rather than by the EU.

The fact that only some of the investment in human capital is included in the NDP/CSF has given rise to problems. The bulk of expenditure on primary and secondary education is excluded from the NDP. This makes management of the large resources devoted to this important area very difficult. For the future all the investment in human resources should be managed together, whether or not it is included in future NDPs. This would facilitate a common evaluation and management process, to the benefit of areas not currently covered.

Many of the problems that have occurred since the plan was drawn up result firstly from the higher than planned rate of inflation, partly due to capacity constraints in the building industry. Second, there have been significant problems in building up the



investment programme in key areas due to the very rapid rate of increase in investment. Third, in some cases there have been problems with project selection. Fourth, there have been problems with project management, especially the management of some large infrastructure projects. Improvements can be made through a number of initiatives that would ensure a better return:

- Unless Measures are taken to deal with the demand side of the housing market, significant Priority areas of the NDP/CSF may fail to realise their potential through excessive inflation. For example, the various tax reliefs and grants that add to demand should be abolished. In addition, the uncontrolled expansion of the second dwelling market is eating up resources, raising house prices, and militating against balanced regional development. Such dwellings should pay the full infrastructural costs that they impose on society.
- It is important to develop pricing policies for infrastructure that reflect the true social cost of their provision. The current widespread under-pricing of certain types of infrastructure should be ended, e.g. road congestion, water abstraction and use of environmental goods.
- There is a concern that current regulations requiring waste to be dealt with on a regional rather than on a national basis may result in unnecessary capital investment, adversely affecting competitiveness and living standards. Building eight or nine facilities for waste disposal where two or three would do will prove very expensive.
- In a number of cases existing infrastructure could produce greater benefits if appropriately managed.
- While the physical planning process itself has undergone significant improvement in recent years, there are still important issues to be addressed if infrastructure is to be delivered on time. In the case of urban centres, improved public transport will require a major increase in the density of the urban environment if it is to operate efficiently.
- In a range of areas there should be a change in the role of Government in the provision of services: from provider to regulator of the 'public good'. However, Public Private Partnerships (PPPs) should only be used where they bring efficiency gains. They are likely to be an expensive means of financing new investment.

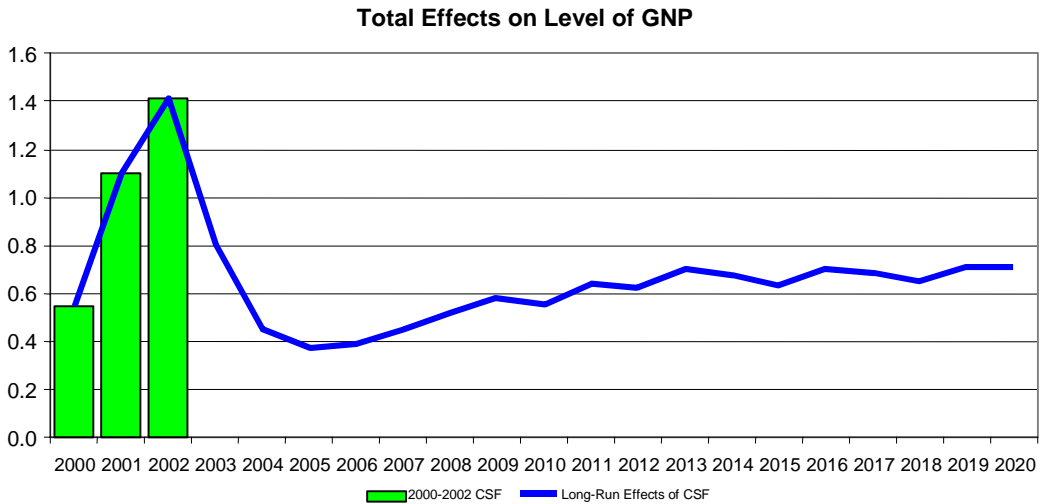
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## 14.5 Community Value Added

The Berlin profile, which involved front-end loading the CSF expenditure has caused some problems in implementation. It has required a very rapid start up in some programmes. As discussed in Chapter 4, in some cases this has had inflationary consequences or otherwise resulted in poor value for money. In future, especially with the accession countries, it will be better to build up funding

gradually. Managing authorities should be incentivised to get the best value for money rather than pressurised into spending the money before they are ready. In many cases, such as the Productive Sector and the PEACE OPs, there is evidence that the managing authorities have resisted the temptation to act hastily but have concentrated on making best use of the funding. In these cases it should be no criticism that the money needs to be reallocated elsewhere. While this issue will be of declining importance with the ending of EU funding, it will remain an important issue for EU policy in future years in other countries.

**Figure 14.1: Total Effects of CSF on GNP**



The macro-economic effects of the NDP, and specifically of the CSF, were analysed in Chapter 3. This analysis incorporated new evidence on the returns to investment in physical infrastructure and investment in human capital. In both cases the new evidence suggested a significantly higher rate of return than was previously supposed. These results are summarised in Figure 14.1 for the expenditure under the CSF for the years 2000 to 2002. For the years 2000 to 2002 the effects are dominated by the demand side impact of the major investment programme. However, the demand side impact ends in 2002 and the long run impact comes from the permanent supply side effects.

The short-run effects from 2000-2002 cumulate to an increase in the level of GNP of 1.4 per cent by 2002. The long-run supply side effects amount to between 0.6 per cent and 0.7 per cent of GNP. As the initial injection over the three years amounted to just over €2.7 billion or around 2.7 per cent of GNP this represents a very high rate of return of around 18 per cent. This rate of return is enhanced because of the very substantial rate of return on physical infrastructure around the time the NDP/CSF began. The return on

investment in human capital is also higher than previously estimated.

In addition to its direct effect on the level of output in the economy, the structural fund process has also had an important impact through encouraging changes in the administrative and political system in Ireland. The increase in funding under the first CSF encouraged the government to raise public investment from its extremely low level in the late 1980s. Without such a stimulus Ireland could have found itself suffering from under investment in the face of rapid growth in recent years. As such it had a positive influence on the overall stance of public policy.

The CSF process has also encouraged the introduction of effective long-term planning of public investment. In the 1980, investment projects stopped and started in line with short-term economic pressures on governments, resulting in significant waste of resources. The formulation of a national development plan and its subsequent implementation without major interruption should lead to a more rational allocation of resources. There is a danger that, with the disappearance of an EU involvement in the process, future NDPs will not be taken as seriously as they are today. As discussed above, already there has been some evidence of a reversion to annual budgeting under the NDP. It is important for the future that multi-annual budgeting is restored for the rest of the current NDP and for its successors.

In addition to the need to plan investment in a medium-term time frame, the need to satisfy the donor countries, through the EU Commission, that their money is well spent has resulted in the introduction of a set of evaluation procedures that has helped change the way the administration approaches public expenditure. Before the CSF process began the only question, once the Oireachtas had voted money, was whether it had been spent in accordance with regulations. Now there is increasing interest in assessing how effective the expenditure has been. In many cases these evaluations have been published and, while not always listened to, they have had a significant influence on policy. This Report represents the end product of the most comprehensive and wide-ranging evaluation process yet undertaken of an NDP.

The programme approach to public investment has also focused attention on particular policy problems, so that those involved in the planning process have to consider the wider implications of individual Measures. For example, each of the so-called operational programmes under the CSF has its own monitoring committee consisting of relevant public servants, representatives of the EU Commission and some representatives of outside interests. While patchy in its coverage and effectiveness (see Chapter 12), this wider involvement in the decision-making process has helped in achieving a successful outcome.



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- INDECON, 2003, Economic and Social Infrastructure OP.
- INDECON, 2003, Productive Sector OP.
- PRICE WATERHOUSE COOPERS, 2003, PEACE OP.

## GLOSSARY

AADT	Annual Average Daily Traffic
AHI	Affordable Housing Initiative
ALMP	Active Labour Market Programmes
BERD	Business Expenditure on R&D
BMW	Border, Midland and Western region
BMW OP	Border, Midland and Western Operational Programme
BTEI	Back to Education Initiative
CAP	Common Agricultural Policy
CBA	Cost Benefit Analysis
CDBs	County/City Development Boards
CE	Community Employment
CFP	Common Fisheries Policy
CLÁR	Ceantair Laga Ard Riachtanais
CPA	Combat Poverty Agency
CSF	Community Support Framework
DED	District Electoral Division
DETE	Department of Enterprise Trade and Employment
DoEHLG	Department of the Environment, Heritage and Local Government
DoT	Department of Transport
DTO	Dublin Transport Office
EES	European Employment Strategy
EHRD	Employment and Human Resource Development
EHRD OP	Employment and Human Resource Development Operational Programme
ESF	European Social Fund
ESI	Economic and Social Infrastructure
ESI OP	Economic and Social Infrastructure Operational Programme
FDI	Foreign Direct Investment
GDA	Greater Dublin Area
GDP	Gross Domestic Product
GERD	Gross Expenditure on R&D
GNP	Gross National Product
GVA	Gross Value Added
HP	Horizontal Principle
IAB	Irish Agrément Board
ILO	International Labour Organisation
KEI	Key Effectiveness Indicators
LoS	Level of Service
LTU	Long-Term Unemployed
MIUs	Major Inter-Urbans
MTE	Mid-Term Evaluation
MTR	Medium-Term Review
NAPS	National Anti-Poverty Strategy
NAPs/Incl	National Action Plans against Poverty and Social Exclusion
NEAP	National Employment Action Plan

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NDP	National Development Plan
NGO	Non-Governmental Organisation
NRA	National Roads Authority
NSS	National Spatial Strategy
NUTS	Nomenclature of Territorial Statistical Units
NUTS II	The Regional Assembly regions; BMW and SE
NUTS III	The Regional Authority regions defined as Border, Dublin, Mid East, Midlands, Mid West, South East, South West and West
PEACE II	Peace Operational Programme
PLC	Post-Leaving Certificate
QBC	Quality Bus Corridor
OECD	Organisation for Economic Cooperation and Development
OP	Operational Programme
PS	Productive Sector
PS OP	Productive Sector Operational Programme
PPF	Programme for Prosperity and Fairness
PPP	Public Private Partnership
RAPID	Revitalising Areas by Planning, Investment and Development
R&D	Research and Development
RTDI	Research, Technological Development and Innovation
SBTC	Skills Biased Technological Change
SE	Southern and Eastern region
SE OP	Southern and Eastern Regional Programme
SGP	Stability and Growth Pact
SIM	Social Inclusion Measure
SWOT	Strengths, Weakness, Opportunities and Threats
TENs	Trans-European Networks
UWWTD	Urban Waste Water Treatment Directive
VEC	Vocational Education Committee
VPTO	Vocational Preparation and Training Programme
VTOS	Vocational Training Opportunities Scheme.

# APPENDIX 1: HOUSING MODEL

In order to model the effects on the housing market of increased demand by the public sector for social housing we use the housing equations from the ESRI's *HERMES* macro-economic model. These are based on the model of the housing market developed by Murphy in the first Bacon report on the housing market.

Real house prices (both new and second hand) are modelled as a function of the contemporaneous change in real income per head, lagged level of real income per head, the housing stock per head, the real mortgage rate and a demographic variable.

The results for new house prices are shown here first. The coefficient on the change in income measures the responsiveness of house prices to income volatility and suggests quite a rapid pass through of short run changes in income. Per capita real income is also highly significant with an elasticity slightly greater than one. Thus rising standards of living have a strong effect in increasing the demand for housing, leading to a more than proportionate increase in new house price. The housing stock per capita variable can be considered as capturing a "scarcity" effect – given a rapid growth in the population, as witnessed in the 1990s, and the inevitably slower growth in the stock of houses, the consequent housing scarcity quickly puts upward pressure on house prices. In addition to this scarcity effect, changing demographics, which increase the proportion of the population in the house-buying age group, will put upward pressure on house prices although this effect (A6\_PHNEW) is not significant in the new house price equation.

$$\begin{aligned} \text{LOG}(\text{PHNEW}/\text{PC}) = & \text{A1\_PHNEW} + \text{A2\_PHNEW} * \text{DEL}(1: \text{LOG}((\text{YRPERD} - \text{GCTNT}/\text{PC})/\text{NT})) + \text{A3\_} \\ & \text{PHNEW} * \text{LOG}((\text{YRPERD}(-1) - \text{GCTNT}(-1)/\text{PC}(-1))/\text{NT}(- \\ & 1)) + \text{A4\_PHNEW} * \text{LOG}(\text{HSTOCK1}/\text{NT}) + \text{A5\_P} \\ & \text{HNEW} * (\text{RMRL}/100 - (\text{LOG}(\text{PHOLD}) - \text{LOG}(\text{PHOLD}(-3)))/3) + \text{A6\_PHNEW} * \text{NT}2534/\text{N1564} \end{aligned}$$

NOB = 21 NOVAR = 7 NCOEF = 7

RANGE: 1979A to 2000A

RSQ = 0.993495 CRSQ = 0.990708

F(5/0) = 356.386659 PROB&gt;F = 0

SER = 0.023151 SSR = 0.007504

DW(0) = 2.123989 COND = 287.92429

MAX:HAT = 0.655325 RSTUDENT = 2.778214

DFFITS = 2.904741

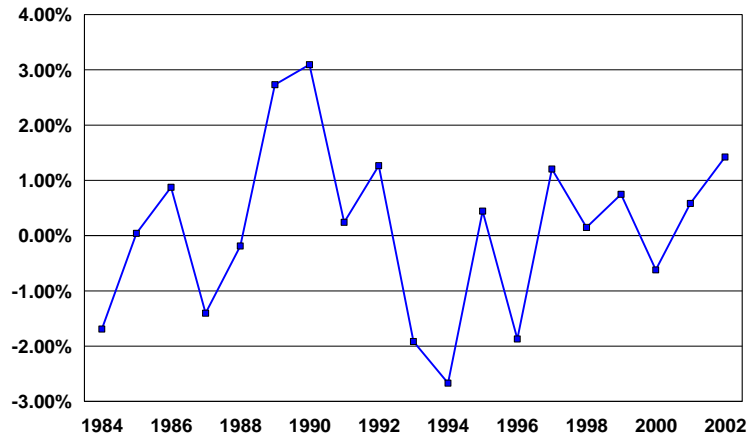
COEF	ESTIMATE	STER	TSTAT	PROB> T
A1_PHNEW	2.559234	0.698367	3.664597	0.00255
A2_PHNEW	0.451538	0.197132	2.290543	0.038026
A3_PHNEW	1.071473	0.17638	6.074811	0
A4_PHNEW	-2.20409	0.475877	-4.631639	0
A5_PHNEW	-0.488476	0.099825	-4.893342	0
A6_PHNEW	2.12194	3.613318	0.587255	0.566383
AR1.73	0.436953	0.203659	2.14551	0.049933

GCTNT	=	National debt interest
HCOMP	=	Housing Completions
HSTOCK1	=	Stock of houses
NT	=	Population
N1564	=	Population aged 15 to 64
N2534	=	Population aged 25 to 34
PC	=	Deflator for consumption
PHNEW	=	Price of new houses
PHOLD	=	Price of second-hand houses
PTQGIB	=	Cost of building
RMRL	=	Mortgage interest rate
YRPERD	=	Real personal disposable income

In deriving the real cost of capital for housing the expectation for future housing inflation is proxied by the rate of inflation in the price of second-hand houses. In this case the price of second-hand houses is used as an instrument because of problems of simultaneity if the new house price is used.

The graph below shows the errors in this equation for the period 1984 to 2002. As the estimation period ended in 2000 the graph shows quite a good out of sample performance for 2001 and 2002. The equation has also proved quite stable in the face of successive re-estimations of the model as new data have become available.

Figure A1.1: Forecast Errors for the Equation for New House Prices



The HCOMP equation estimates the number of **house completions**, essentially the supply of new houses. HCOMP is modelled as a function of the volatility in new house prices, lagged new house prices and the mark-up on building costs (PHNEW/PTQGIB). The fit of the equation is very poor. It implies a sluggish adjustment of housing supply to rising prices. Experimentation with a wide range of other formulations which used other measures of the real cost of production in the sector did not improve the fit.

$$\text{LOG}(\text{HCOMP}) = \text{A1\_HCOMP} + \text{A2\_HCOMP} * \text{LOG}(\text{HCOMP}(-1)) + \text{A3\_HCOMP} * \text{DEL}(1 : \text{LOG}(\text{PHNEW}/\text{PC})) + \text{A4\_HCOMP} * \text{LOG}(\text{PHNEW}(-1)/\text{PC}(-1)) + \text{A5\_HCOMP} * \text{LOG}(\text{PHNEW}/\text{PTQGIB})$$

NOB = 28      NOVAR = 5      NCOEF = 5

RANGE: 1972A to 1999A

RSQ =	0.838278	CRSQ =	0.810153
F(4/23) =	29.80486	PROB>F =	0
SER =	0.107404	SSR =	0.265317
DW(0) =	0.955701	COND =	530.152294
MAX:HAT =	0.396643	RSTUDENT =	2.891762
DFFITS =	1.400964		

COEF	ESTIMATE	STER	TSTAT	PROB> T
A1_HCOMP	-2.851675	2.342001	-1.217623	0.235712
A2_HCOMP	0.73432	0.126687	5.796311	6.61177049e-006
A3_HCOMP	0.477021	0.475256	1.003715	0.32596
A4_HCOMP	0.250474	0.292039	0.857675	0.399921
A5_HCOMP	0.082513	0.377585	0.218528	0.828945

The model is completed with an equation for the housing stock assuming depreciation of 0.005 per cent a year:

$$\text{HSTOCK1} = \text{HSTOCK1}(-1) * .995 + \text{HCOMP} + \text{HSTOCK1\_FIX}$$

The HSTOCK1\_FIX variable allows the model to be shocked by reducing the stock of houses. The effect of public purchase of social housing, reducing the stock available of the private sector, is proxied by a reduction in the housing stock equal to the number of



houses built or acquired. For simplicity it is assumed that market expectations about future house prices do not change as a result of social housing policy decisions.

The effects of the public sector purchase or construction of social housing in the years 2000 to 2002 was examined using this model. The stock of houses was reduced each year by roughly the number of social houses bought or built. The model was simulated first to assess the impact of these purchases on prices. The results suggested that after the three years the cumulative effect on new house prices would have been 2.25 per cent. This effect would persist for many years to come even if there were no further purchases because of the permanent reduction in the stock of houses available to private sector buyers. While the higher price would evoke some response in terms of increased supply, this response would be very slow. Even after 10 years there would still be an appreciable effect on house prices. Obviously, because of the poor performance of the supply equation much less weight can be put on these dynamic results. A faster supply response could well see the persistence of the price shock considerably reduced. Nonetheless, the short term (to 2002) effects should be reasonably robust.

A second simulation was also undertaken to see how much the mortgage interest rate would have had to rise to hold house prices unchanged. Because of a slow response of demand to changes in the cost of capital interest rates would have had to rise by around 5 percentage points to reduce private sector demand enough to free up the required resources to provide the approximately 15,000 social houses being acquired or built.

# APPENDIX 2: SWOT ANALYSIS OF THE NDP/CSF

In the NDP a SWOT analysis was carried out focusing on strengths and weaknesses. Here we revisit this analysis considering how it may have changed as a result of developments over the first three years of the planning period. This analysis summarises some of the analysis in Chapter 3.

**Table A2.1: Strengths**

NDP SWOT ANALYSIS	MTE COMMENT
Strengths Macroeconomic stability	Comment. While growth in the short term has proved less than expected, the medium term growth potential of the economy has not changed. The economy remains reasonably robust in the face of shocks, though the pressures on the public finances are greater than might have been anticipated.
Social Consensus Educated Work-force	New partnership agreement in 2003. This remains a very important strength. As a result of investment over the last decade, there will be a continuing upgrading of the average educational level of the labour force for some time to come.
Positive Demographics	The demographic profile remains exceptionally favourable compared to most other European economies. It will remain very favourable for the next decade.
Attractiveness for Foreign Direct Investment	While still reasonably attractive for FDI, the economy is less competitive than it was when the NDP was formulated. However, in spite of this loss and of increased competition for mobile investment from EU accession countries, the economy is likely to attract a continuing significant inflow of new investment.

**Table A2.2: Weaknesses**

<b>NDP SWOT ANALYSIS</b>	<b>MTE COMMENT</b>
Strengths	Comment.
Infrastructural deficits	Significant work has been undertaken in tackling these deficits. However, the ongoing growth in the economy has meant that the deficit still remains acute. In the area of sanitary services a significant reduction in the deficit has been achieved. In the case of roads progress has also been significant but the outstanding deficit still remains very large. The progress has been hampered to a significant extent by the rate of inflation in the building and construction sector.
Housing Shortage	The house-building sector has achieved a remarkable increase in output. However, the factors affecting demand have seen house prices continue to rise. A significant part of the output has gone to second or replacement dwellings so that progress in meeting the growing number of households has been less than might have been anticipated.
Unbalanced Regional Development	The NDP has had an impact in promoting regional balance. However, the underlying factors driving the economy have offset these positive effects.
Underdeveloped indigenous manufacturing	While the indigenous manufacturing sector came through the 1990s reasonably well, it is seriously affected by the recent deterioration in competitiveness.
Agriculture	The prospects for this sector increasing output look bleak. Also the external price environment is unfavourable.
Social Exclusion	There remain serious problems to be tackled. However, some progress has been made over the last three years, helped by measures in the NDP. However, there still remains a problem in the sphere of housing.

**Table A2.3: Opportunities**

<b>NDP SWOT ANALYSIS</b>	<b>MTE COMMENT</b>
Strengths	Comment.
Globalisation	For an economy as open as Ireland's this represents an opportunity
EU enlargement	By enlarging the market for Irish output, enlargement is likely to benefit the economy. This should more than offset losses through increased competition.
Growth in IT sector world-wide	This sector is likely to see further growth.
Potential to attract skilled labour	This has proved important in the past and it will be important in the future in attracting global businesses in both industry and services.

**Table A2.4: Threats**

<b>NDP SWOT ANALYSIS</b>	<b>MTE COMMENT</b>
Strengths	Comment.
Exchange Rate	The economy is very vulnerable to a major appreciation of the euro.
Competitiveness	A continuing loss of competitiveness could prove very serious.
Environmental congestion	The development of the economy is adding to environmental pressures. While the NDP is achieving some significant improvements, the task of complying with the requirements of the Kyoto protocol is significant.

# APPENDIX 3: THE SMALL LABOUR MARKET MODEL (HK)

In order to explore the mechanisms through which investment in human capital impacts on the economy we have developed a small structural model of the labour market, separately distinguishing skilled and unskilled labour.<sup>1</sup> This model allows us to examine the mechanisms through which a range of different factors has contributed to the current growth.

The model includes five key behavioural relations; output determination; labour supply; migration; labour demand and the wage/unemployment equilibrium. The equation specifications and variable definitions are listed at the end of this Appendix.

Output determination: This is based on a small open economy model where multinational enterprises select a location for production on the basis of world demand and Ireland's relative cost competitiveness (Bradley and Fitz Gerald, 1988). To estimate the effect of the recent acceleration in FDI flows in the 1990s we include an additional term in US GDP from 1990 onwards; this increases the elasticity of Irish output with respect to foreign output from 1990 onwards. Effectively this causes the demand curve for Irish output to shift outwards in the 1990s.

Labour supply: The Irish labour market is modelled differently depending on the educational qualifications of workers. Those with high levels of education are typically more mobile and will emigrate (immigrate) in periods of low (high) labour demand, so that participation rates and unemployment rates among these workers are relatively stable. Those with lower levels of education have more volatile participation rates, so that in periods of low labour demand they either withdraw from the workforce or are unemployed. Because of these important distinctions, we model the participation decision for high-skilled and low-skilled workers separately. High-skilled is defined as workers who have completed second-level education to at least Leaving Certificate level. Estimates of the elasticity of the labour supply decision with respect to the wage are

<sup>1</sup> See Fitz Gerald, J. and I. Kearney, 2000, and Duffy, D., J. Fitz Gerald, J. Hore, I. Kearney and C. MacCoille, 2001. *Medium-Term Review: 2001-2007*, No. 8, Dublin: The Economic and Social Research Institute.

taken from Doris (2001) based on detailed micro simulation analysis of the participation decision.

Migration is modelled as a function of the expected real after tax earnings in Ireland relative to the UK. While in the 1960s and 1970s most emigrants were unskilled, since 1980 most migration both into and out of the country has been skilled (Fahey, Fitz Gerald and Maitre, 1998). As a result, all migration is assumed to be high-skilled, and it is through this mechanism that the high-skilled labour market is cleared.

The demand for labour is modelled as a function of output, the real wage and a time trend based on the assumption that all firms are profit-maximisers. To explore the effect of changing educational attainment on the demand for labour a second equation estimates substitution between high-skilled and low-skilled employment within the total labour bundle.

Equilibrium determines the wage and unemployment rate for both types of worker. In the high-skilled labour market equilibrium occurs through the migration mechanism and changes in participation. Labour supply will adjust to match labour demand and there is no structural high-skilled unemployment. In the low-skilled labour market, low wage rates until recent years meant there has been a high effective replacement rate which acted as a floor on the wage rate. With no adjustment in wages, equilibrium in the low-skilled labour market is reached through adjustments in the unemployment rate. This latter is a simplified representation of the wage determination process for unskilled labour. Furthermore, while such an assumption was reasonable for the 1980s and much of the 1990s, in the last few years with significant reductions in unskilled unemployment and the general tightening of the labour market, it is no longer realistic.

1. Output Determination: this equation determines GDP

$$\log(GNP)_t = c_{31} + c_{32} \log\left(\frac{W}{W_{GER} * e_{GER}}\right)_t + c_{33} \log\left(\frac{W}{W_{UK} * e_{UK}}\right)_t + c_{34} \log(GDP_{USA})_t + c_{35} \log(GDP_{USA})_t * D_{90} + c_{36} \log(GNP)_{t-1}$$

RANGE: 1970A to 2001A

RSQ =	0.998522	CRSQ =	0.998238	
SER =	0.01398	SSR =	0.005082	
DW(0) =	1.656857	COND =	692.860926	
COEF	ESTIMATE	STER	TSTAT	PROB> T
C31	2.328074	0.60508	3.84755	0.000695
C32	-0.12703	0.026972	-4.709695	7.23241264e-005
C34	0.331509	0.084957	3.902096	0.000603
C35	0.289024	0.0479	6.033951	2.25574043e-006
C36	0.749267	0.049568	15.115965	0
C33	-0.138799	0.058074	-2.390026	0.024385

2. Labour Force Participation: these equations determine  $WH$ ,  $NL$ ,  $POPH$ ,  $POPL$

$$\left(\frac{N_H}{POP_H}\right)_t = c_{11} + 0.32 \log\left(\frac{W_H}{P_C}\right)_t + c_{13}T_t$$

RANGE: 1980A to 2001A

RSQ =	0.240984	CRSQ =	0.203034
SER =	0.010671	SSR =	0.002277
DW(0) =	1.110661	COND =	627.495099

COEF	ESTIMATE	STER	TSTAT	PROB> T
C11	1.497513	0.713777	2.098012	0.048811
C13	-0.000904	0.000359	-2.519905	0.020349

$$\left(\frac{N_L}{POP_L}\right)_t = c_{21} + 1.74 \log\left(\frac{W_L}{P_C}\right)_t + c_{24}T_t$$

2 : NL/POPL = C21+1.74\*LOG(WL/PC)+C24\*TYEAR

RANGE: 1980A to 2001A

RSQ =	0.913186	CRSQ =	0.908845
SER =	0.064535	SSR =	0.083294
DW(0) =	0.549725	DFFITS =	-1.132924

COEF	ESTIMATE	STER	TSTAT	PROB> T
C21	58.734429	4.31681	13.60598	0
C24	-0.031456	0.002169	-14.504376	0

where

$$POP_{H,t} = POP_{H,t-1} + \Delta POP_{H,t} + 0.75M_t$$

$$POP_{L,t} = POP_{L,t-1} + \Delta POP_{L,t}$$

3. Migration: this equation determines  $M$

$$M_t = c_{61} + c_{63} * \left(\frac{W * (1 - RGTY P)}{P_C}\right)_{t-1} / \left(\frac{W_{UK} * (1 - RGTY P_{UK})}{P_{C\_UK}}\right)_{t-1} + c_{64}M_{t-1} + c_{65}D_{1990} + c_{66}D_{1978}$$

RANGE: 1964A to 2000A

RSQ =	0.825658	CRSQ =	0.803865
SER =	7.743941	SSR =	1918.995967
DW(0) =	2.226384	COND =	69.502496

COEF	ESTIMATE	STER	TSTAT	PROB> T
C61	-95.323728	33.466164	-2.848361	0.007618
C63	66604.01135	23163.807587	2.875348	0.007121
C66	-20.133969	5.511169	-3.653303	0.000917
C65	17.542676	3.819577	4.592832	6.46252285e-005
C64	0.601251	0.104511	5.75298	2.22171983e-006

4. Labour Demand: these equations determines  $LNA$ ,  $LNA_H$  and  $LNA_L$ 

$$\log(LNA)_t = c_{41} + c_{42} \log\left(\frac{W}{PGNP}\right)_t + c_{43}T_t + c_{44} \log(GNP)_t + c_{45} \log(LNA)_{t-1}$$

RANGE: 1970A to 2000A

RSQ =	0.996914	CRSQ =	0.996271	
SER =	0.009672	SSR =	0.002245	
DW(0) =	2.002655	COND =	4454.899232	
COEF	ESTIMATE	STER	TSTAT	PROB> T
C41	8.959786	2.188459	4.094108	0
C42	-0.009656	0.045508	-0.212173	0.833764
C43	-0.005074	0.001211	-4.191261	0
C44	0.416018	0.04311	9.65004	0
C45	0.534613	0.065748	8.131204	0
AR1.7	-0.052537	0.208018	-0.252562	0.802757

$$S_H = \left(\frac{W_H \cdot LNA_H}{YWNA}\right)_t = c_{51} + c_{52} \log\left(\frac{W_H}{W_L}\right)_t + c_{53}T_t$$

RANGE: 1966A to 2000A

RSQ =	0.995383	CRSQ =	0.994922	
SER =	0.008425	SSR =	0.00213	
DW(0) =	2.158058	COND =	512.475679	
COEF	ESTIMATE	STER	TSTAT	PROB> T
C51	-22.187533	2.20977	-10.040655	0
C52	0.150092	0.038671	3.881231	0
C53	0.011456	0.001107	10.352955	0
AR1.8	0.862846	0.076655	11.256236	0

ELASTICITIES OF DEMAND FOR YEAR 1970A  
SKILLED                      UNSKILLEDSKILLED                      -0.205877                      0.193145  
UNSKILLED                      0.205877                      -0.193145ELASTICITIES OF DEMAND FOR YEAR 2001A  
SKILLED                      UNSKILLEDSKILLED                      -0.010333                      0.042032  
UNSKILLED                      0.010333                      -0.042032ELASTICITIES OF substitution FOR YEAR 1970A  
SKILLED                      UNSKILLEDSKILLED                      -0.425326                      0.399022  
UNSKILLED                      0.399022                      -0.374344ELASTICITIES OF substitution FOR YEAR 2001A  
SKILLED                      UNSKILLEDSKILLED                      -0.012873                      0.052364  
UNSKILLED                      0.052364                      -0.213012

$$LNA = LNA_H + LNA_L$$

where

$$YWNA = W_H * LNA_H + W_L * LNA_L$$

5. *Labour Market Equilibrium: these equations determine  $W_L, \bar{W}, N_H$*

$$W = \frac{W_H LNA_H + W_L \cdot LNA_L}{LNA}$$

Given LA as exogenous the following identities close the model:

$$L_L = LNA_L + LA_L, \quad L = L_H + L_L, \quad N = N_H + N_L,$$

$$U = N - L, \quad UR = \frac{U}{N} * 100, \quad UR_H = \frac{N_H - L_H}{N_H} * 100$$

D_90	Dummy variable: =0 before 1990, =1 1990 onwards		
e_GER	IR£/DM exchange rate	e_UK	IR£/Sterling exchange rate
GDP	GDP in constant prices	GDP_USA	US GDP in constant prices
LNA	Non-agricultural employment	L	Total employment
M	Net immigration	N	Labour Force
PGNP	Deflator for GNP at market prices on an output basis		
POP	Population	RGTYP	Income Tax Wedge
RGTYP_UK	UK Income Tax Wedge	T	Time Trend
UB	Unemployment benefit payments for adult with 3 dependants		
UR	Unemployment Rate	UR_UK	UK Unemployment Rate
W	Non-agricultural average annual earnings		
W_GER	Manufacturing wage rate in Germany		
W_UK	UK wage rate	YWNA	Non-agricultural wage bill

*Effect of NDP/CSF on Human Capital*

**Table A3.1: Throughput of EHRD OP Schemes, 2002**

Measure	Scheme	Change in educational attainment	Weighted Conversion unskilled to skilled	
			Numbers	
1	Unemployed FÁS Training	Junior-Leaving	6,976	833
11	Early School Leavers	Junior-Leaving	7,158	855
12	Sectoral Entry Training	Junior-Leaving	8,760	1,046
13	Unemployed skilled training	Junior-Leaving	13,027	3,890
16	Disability Training	Junior-Leaving	5,394	483
	Training		41,315	7,108
14	Apprenticeships	Leaving-Diploma	10,498	888
21	LLL -(PLCs)	Leaving-Diploma	28,656	10,911
25	MLT/HTBS (3rd level dips)	Leaving-Diploma	33,137	7,010
26	Undergrad skills	Leaving-University	3,556	708
27	Postgrad. conversion	University-University	1,407	0
	Education		77,254	19,17
	Education + Training		118,569	26,25

We assume that all of the expenditure classified as education or training is used to upgrade the human capital of those participating. We have assumed that all the expenditure goes on the costs of



training or educational establishments and that none of it is paid as living allowances to participants in the designated schemes.<sup>2</sup>

Table A3.1 sets out the throughput through the relevant major schemes under the EHRD OP in 2002. In each case an assumption, shown in Table A3.1, was made about the extent to which the participants' educational attainment was upgraded as a result of the EHRD intervention. When account was taken of the duration of the courses it was estimated that the equivalent of almost 27,000 individuals were upgraded from unskilled to skilled.

### *Effect of Increased Human Capital on Labour Market*

This change in educational attainment of the population is imposed on the HK model and the model is run for 11 years. The change in numbers of skilled and unskilled is imposed in the first three years, assuming that the throughput each year was broadly in line with the 2002 figures, and the effects of the changes cumulate over the three years. The model was run assuming that migration was endogenous so that the change in skilled wage rates reduced the incentive to live in Ireland.

**Table A3.2: Results of Changing Educational Composition of the Population, % Compared to Base**

Year	Labour Supply			Wage Rates	GNP
	Skilled and Unskilled	Skilled	Unskilled	Total	
1	0.21	0.64	-0.21	-2.35	0.63
2	0.64	1.45	-0.14	-3.80	1.51
3	1.22	2.15	0.26	-4.79	2.46
4	1.68	2.29	0.98	-3.36	2.77
5	1.88	2.38	1.28	-2.13	2.65
6	1.87	2.25	1.39	-1.30	2.34
7	1.74	1.99	1.39	-0.82	1.97
8	1.56	1.78	1.26	-0.73	1.67
9	1.40	1.59	1.12	-0.46	1.37
10	1.20	1.33	0.97	-0.43	1.14
11	1.03	1.13	0.84	-0.46	0.98

The impact of the increase in the supply of skilled labour was to reduce skilled wage rates, albeit only temporarily. The impact effect on skilled wage rates is quite high in the model – because it assumes that there is no short-run skilled unemployment and because the short-run elasticity of labour supply through changing participation is quite low. The overall effect on average wage rates across the

<sup>2</sup> All of the expenditure under the EHRD OP is treated as education or training with the exception of the “Other Measures” Priority and the following Measures: Action Programme for the Unemployed, National Employment Service, Active Measures for LTU and Socially Excluded, Employment Support Services. In previous analysis of the effects of successive CSFs in Ireland, the expenditure on training was assumed to include substantial support payments to those receiving the training.

economy is shown in Table A3.2. Reality was probably rather different, with effects coming through more slowly and some temporary unemployment effects. In *HERMES* the effects of introducing these estimates is smoothed over time with a smaller impact effect.

In the long run the effects in the HK model are rather different from the short-run impact. Through migration, the supply of skilled labour is extremely elastic and immigration is reduced because of the fall in the skilled wage rate emanating from the increase in supply. In addition, the lower wage rate results in a lower participation rate for the albeit increased skilled population. The result is that in the long run the positive effect on skilled labour supply falls and the skilled wage rate returns towards its baseline value.

For unskilled labour the impact effect is to reduce supply. However, the positive effect on the unskilled wage rate of reduced supply will tend to produce an increase in participation. As shown by Doris, 2001, the elasticity of supply for unskilled female labour is very high, so that even quite a small rise in wage rates is likely to evoke a significant response in terms of labour availability.

The reduction in the average wage rate (skilled and unskilled combined) in the short to medium term has a substantial effect on the competitiveness of the economy. In the HK model the level of GNP is shown to be very sensitive to such changes in competitiveness<sup>3</sup>. As shown in Table A3.2, this model would suggest that the impact on GNP would peak in year 4 (the upskilling having been completed by end year 3) with an increase in the level of GNP of 2.8 percentage points compared to the base line. However, with continuing migration, the competitiveness gain would be gradually eroded, reducing the ultimate positive effect on GNP. The *HERMES* model, with more attention to sectoral differences, would suggest a somewhat smaller competitiveness impact – generally a more realistic result.

The productivity effects of the investment in human capital are modelled using the *HERMES* model and the results are combined with those from the HK model shown here.

<sup>3</sup> The long-run elasticity with respect to the own wage is around -1.

# APPENDIX 4: MACRO- ECONOMIC IMPACT OF NDP/CSF

In this Appendix we present the detailed results on the macro-economic impact of the NDP/CSF.

## *Effects of the NDP*

Table A4.1 shows the combined demand and supply side impacts annually over the period 2000 to 2010 with additional figures for 2015.

**Table A4.1: Macroeconomic Consequences of Public NDP Expenditure 2000-2002**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015
GDP (%)	2.9	5.3	6.3	3.7	2.9	2.7	2.8	2.8	2.8	2.9	2.9	3.0
GNP (%)	3.4	6.2	7.3	3.6	2.1	2.1	2.3	2.1	2.2	2.5	2.6	2.8
Balance of Payments as % of GNP	-2.8	-3.6	-3.7	0.3	1.4	1.3	1.1	0.6	0.8	0.9	1.0	1.2
Exchequer Surplus as % of GNP	-4.3	-4.1	-3.8	2.2	0.6	0.2	0.1	0.3	0.4	0.6	0.7	1.0
Debt/GNP Ratio (as % of GNP)	2.7	4.0	6.9	6.0	6.7	5.8	5.3	4.5	3.7	2.7	1.8	-2.8
Consumer Prices (%)	0.0	1.0	1.5	1.4	0.0	-0.3	-0.6	-0.5	-0.5	-0.3	-0.3	0.0
Average Wage Rates	-0.5	1.4	2.4	2.8	0.2	-0.5	-0.8	-0.7	-0.6	-0.3	-0.2	0.2
Unemployment Rate (as % of Labour Force)	-3.1	-4.3	-3.9	0.3	0.9	1.2	1.6	1.2	1.0	0.6	0.3	0.0
Total Employment (thousands)	59.9	100.2	116.5	58.0	56.6	57.0	49.0	52.0	49.5	51.5	51.3	53.0
Labour Force (thousands)	7.6	27.1	52.3	69.5	80.3	85.8	84.6	79.8	73.1	67.1	60.9	56.0
Net Immigration (thousands)	0.0	16.1	24.1	21.8	-0.1	-5.5	-7.2	-8.9	-7.1	-5.5	-3.4	0.7

## *Effects of the CSF and EU*

The results for both the CSF on its own and for the EU financed expenditure on its own (excluding co-funding) are shown in Table A4.2. As can be seen from Table A4.2 the CSF results are greater, with one important exception, than the EU expenditure on its own. The exception, the substantial impact of EU funding on the exchequer and external positions, is shown in the estimated impact of these funds on the balance of payments and the exchequer

surplus, equivalent to an increase of 0.3 and 0.4 percentage points respectively (see Table A4.2 EU funding alone). This knocks 1.4 percentage points off the debt/GNP ratio by 2003.

**Table A4.2: Macroeconomic Consequences of Structural Intervention 2000-2002**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2015
<b>EU Funding Alone</b>											
GNP (%)	0.3	0.7	0.9	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Balance of Payments as % of GNP	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2
Exchequer Surplus as % of GNP	0.1	0.3	0.4	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.2
Debt/GNP Ratio (as % of GNP)	-0.3	-0.9	-1.4	-1.4	-1.3	-1.1	-1.0	-1.1	-1.2	-1.3	-1.8
Unemployment Rate (as % of LF)	-0.3	-0.5	-0.4	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1
<b>EU Funding plus National Co-financed Public Expenditure - CSF</b>											
GNP (%)	0.6	1.1	1.4	0.8	0.5	0.4	0.5	0.6	0.6	0.7	0.7
Balance of Payments as % of GNP	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.3
Exchequer Surplus as % of GNP	0.0	0.1	0.2	0.5	0.2	0.1	0.0	0.1	0.2	0.2	0.3
Debt/GNP Ratio (as % of GNP)	-0.2	-0.8	-1.2	-1.2	-1.0	-0.9	-0.8	-0.9	-1.1	-1.2	-2.5
Unemployment Rate (as % of LF)	-0.6	-0.8	-0.6	0.2	0.3	0.4	0.4	0.3	0.3	0.1	0.0

# APPENDIX 5: SCORING MODEL

In order to identify the measures which are justified and those that are not a scoring method is particularly useful. It provides a means to formalise what are otherwise purely subjective choices and ensures that all measures are treated equally. We have used this type of method before (last MTE and Investment Priorities report). Here we follow the last MTE (Honohan, 1997).

## ***Step 1. Classify Spending by Type of Intervention***

- I public goods
- II corrective subsidy
- III targeted intervention
- IV redistribution

Since III is a very diverse group this is broken down further by target area:

- IIIa enterprise management development
- IIIb strategic position of enterprises
- IIIc other market skills
- IIId labour market skills for the disadvantaged
- IIIe enterprise or applicable R&D
- IIIf other

## ***Step 2. Select Criteria for Assessing Different Forms of Public Spending***

This involves first choosing an appropriate set of criteria which are to be used to assess each type of intervention. Here a judgement is required to identify the criteria and limit them to those that are essential in order to keep the analysis tractable. Below are the ones used by in Honohan (1997).

### *I. Public Goods*

1. Is the target area important?
2. Is the measure contributing to the target; is it excluding other measures that might be more effective?
3. Is delivery at least cost; could delivery be more competitive?
4. Is this necessarily a public good or might it be provided privately without subsidy? Is there displacement of private providers?

## II. Corrective subsidy

1. Is the adjustment to relative prices correct (given the externality being corrected for, and including the effects of deadweight)?
2. Is the externality itself policy-induced, suggesting the possibility for a more direct correction?
3. Is the budgetary provision in line with current projections of demand?

## III. Targeted intervention

1. Is the target area important?
2. Is there a genuine information gap, or specific externality?
3. Is behaviour changing as intended?
4. Are the value-added services being delivered in a cost effective manner; to the extent possible, are the value added services being competitively provided. Is there displacement?
5. How great is deadweight?

## IV. Redistribution

1. Does this redistribute an appropriate amount to the members of the target group?
2. Are there training and experience side effects?
3. What is the deadweight (including funds spent exceeding redistribution)?

For each of these criteria each measure (sub-measure) is assessed and given a score of +1, 0, or -1. For example for the public goods the marking scheme was as follows:

<i>I. Public Goods</i>	Score:	+1	0	-1	Weight
Importance		very	a bit	not very	0.3
Contribution		much	fair	poor	0.3
Cost of Delivery		good	not great	bad	0.2
Truly public good		yes	maybe	no	0.2
<i>II. Corrective subsidy</i>	Score:	+1	0	-1	Weight
Correct relative prices?		not enough	just right	too much	0.4
Externality itself policy?		no		yes	0.2
Budget?		insufficient	OK	excessive	0.4
<i>III. Targeted intervention</i>	Score:	+1	0	-1	0.2
Importance		very	a bit	not very	0.3
Genuine distortion?		yes	maybe	no	0.3
Behaviour as intended?		yes	don't know	no	0.2
Cost of Delivery		Yes	not great	bad	0.1
Deadweight?		little		much	0.1
<i>IV. Redistribution</i>	Score:	+1	0	-1	Weight
Targeting?		well	adequate	arbitrary	0.4
Training – side effects?		favourable	none	adverse	0.3
Deadweight		little		much	0.3

### Step 3. Choosing Weights for Each of the Criteria

The criteria are not all equally important. For example Importance and Contribution are more important than Environmental Side Effects. Thus, appropriate weights need to be chosen for each of the criteria. The weightings are shown above for each of the criteria.

For both corrective subsidy (2) and redistribution (4) there are only three selection criteria. Given the weightings a measure that might appear quite reasonable could score quite poorly. For example, if a measure that is a corrective subsidy (II) if the measure scores 'just right-no-OK' with respect to the criteria it would score just 0.2. A similar problem could also occur for the redistribution (IV) interventions. In order to overcome this 0.5 is added to each aggregate score so that for the above example the aggregate score is 0.7 (remember the cut off is 0.5, so this will be above the cut off).

Priority	Measure	Sub-Measure	CSF	Type	Score	Criteria - rating given:					
						1	2	3	4	5	
BMW OP Local Infrastructure	1 Non-National Roads	Specific Improvement Grant Scheme	CSF	I	0.8	1	1	0	1	0	
		Restoration Programme		I	0.8	1	1	0	1	0	
		Miscellaneous Grants		I	0.8	1	1	0	1	0	
	2 Rural Water	3 Waste Management		CSF	I	0.4	1	1	-1	0	0
					I	0.4	1	1	-1	0	0
	4 Urban and Village Renewal		CSF	I	0.7	0	1	1	1	0	
	5 E-Commerce and Communications		CSF	I	0.4	1	1	-1	0	0	
	6 Seaports	Seaports Disengagement Seaports Infrastructure and Capacity Development		I	0.3	0	1	0	0	0	
			I	0.4	1	1	-1	0	0		
	7 Regional Airports			I	0.6	1	1	0	0		
8 Culture, Recreation and Sports	Recreation and Sports Facilities Habitat Protection and Conservation Heritage Conservation Inland Waterways Nat. Cultural Coll. Institutions Arts and Culture Facilities		I	0.5	0	1	0	1	0		
		I	0.5	0	1	0	1	0			
		I	0.5	0	1	0	1	0			
		I	0.3	0	1	-1	1	0			
		I	0.5	0	1	0	1	0			
		I	0.5	0	1	0	1	0			
Local Enterprise	9 Technical Assistance		CSF	III	0.7	1	0	1	1	1	
	1 Tourism	Development of major Attractions		I	0.3	0	1	0	0	0	
		Special Interests Pursuits		II	-0.1	-1	1	-1	0	0	
		Tourism Environmental Management		I	0.3	0	1	0	0	0	
		Tourism and Recreational Angling		I	0.3	0	1	0	0	0	
	2 Micro enterprise	Marine Tourism		I	0.3	0	1	0	0	0	
		Selective Financial Intervention		CSF	II	0.5	0	0	0		
	3 Regional Innovation Strategies	Entrepreneurial and Capability Development		CSF	III	0.4	0	0	1	1	1
				CSF	I	0.5	1	0	0	1	0

Agriculture and Rural Development	4 Forestry	Woodland Improvement	CSF	II	0.7	0	1	0	0	0	
		Harvesting	CSF	II	-0.1	-1	1	-1	0	0	
		Forestry Development		III	0.3	0	1	0	1	-1	
		Forest Roads		II	-0.1	-1	1	-1	0	0	
	5 Fishery harbours, Gaeltacht/ Islands harbours	Gaeltacht/Islands Harbours Development		I	0.5	1	0	0	1	0	
		Fishery Harbour Infrastructure	CSF	I	0.3	1	0	-1	1	0	
	6 Aquaculture Development		CSF	II	0.7	0	1	0	0	0	
	1 General Structural Improvement	Installation Aid for Young Farmers		IV	0.2	0	0	-1			
		Farm Waste Management	CSF	III	0.2	0	0	1	1	-1	
		Dairy Hygiene		III	0.2	0	0	1	1	-1	
		Animal Welfare		III	0.2	0	0	1	1	-1	
		Animal Carcase Disposal		III	0.6	1	1	0	1	-1	
		2 Alternative Enterprises	Grain Storage Facilities Development of the Horticulture Sector		III	-0.1	0	-1	1	1	-1
			Development of the Potato Sector		III	0.2	0	0	1	1	-1
Development of the Organic Sector				III	0.5	1	0	1	1	-1	
Improvement in Equine Quality on Farms				III	0.2	0	0	1	1	-1	
3 General Rural Development		Housing/Handling Facilities for Alternative Enterprises		III	0.2	0	0	1	1	-1	
	Area-Based Rural Development Initiative	CSF	II	0.7	0	1	0	0	0		
	Western Investment Fund		III	0.5	1	0	1	1	-1		
4 Services for Agricultural and Rural Development	Rural Development Fund		I	0.7	1	0	1	1	0		
	Teagasc Advisory Services		III	0.5	1	0	1	-1	1		
	Farm Relief Services		IV	0.2	0	0	-1				
	1 Childcare	Capital Grant Scheme for Childcare Facilities	CSF	IV	0.8	0	0	1			
Support for Staffing Costs		CSF	IV	0.8	0	0	1				
Quality Improvement		CSF	III	0.5	1	0	0	1	1		
2 Equality	3 Community Development and family Support	Community Development		IV	0.8	0	0	1			
		Family Services Projects		IV	0.8	0	0	1			
4 Crime Prevention	Probation and Welfare		III	0.7	1	1	0	0	1		
	Prison Services Training and Development		III	0.7	1	1	0	0	1		
5 Youth Services	Youth Services Grant Scheme		IV	0.2	0	0	-1				
	Special Projects for Disadvantaged Youth		IV	0.8	0	0	1				
	Youth Information Centres		IV	0.5	0	0	0				
	Young Peoples' facilities and services		IV	0.5	0	0	0				
	Garda Youth Diversion Programme		IV	0.9	1	0	0				



S&E OP Local Infrastructure	6	Local Development		IV	0.5	0	0	0			
	1	Non-National Roads	Specific Improvement Grant Scheme	CSF	I	0.8	1	1	0	1	0
			Restoration Programme		I	0.8	1	1	0	1	0
			Miscellaneous Grants		I	0.8	1	1	0	1	0
	2	Rural Water		CSF	I	0.4	1	1	-1	0	0
	3	Waste Management		CSF	I	0.4	1	1	-1	0	0
	4	Urban and Village Renewal		CSF	I	0.7	0	1	1	1	0
	5	e-Commerce and Communications Infrastructure and capacity Development		CSF	I	0.4	1	1	-1	0	0
	6	Seaports			I	0.3	0	1	0	0	0
			Disengagement		I	0.4	1	1	-1	0	0
	7	Regional Airports			I	0.6	1	1	0	0	
	8	Culture, Recreation and Sports	Recreation and Sports Facilities		I	0.5	0	1	0	1	0
			Habitat Protection and Conservation		I	0.5	0	1	0	1	0
			Heritage Conservation		I	0.5	0	1	0	1	0
			Inland Waterways		I	0.3	0	1	-1	1	0
			Nat. Cultural Coll. Institutions		I	0.5	0	1	0	1	0
			Arts and Culture Facilities		I	0.5	0	1	0	1	0
Local Enterprise	9	Technical Assistance		CSF	III	0.7	1	0	1	1	1
	1	Tourism	Development of major Attractions		I	0.3	0	1	0	0	0
			Special Interests Pursuits		II	-0.1	-1	1	-1	0	0
			Tourism Environmental Management		I	0.3	0	1	0	0	0
			Tourism and Recreational Angling		I	0.3	0	1	0	0	0
			Marine Tourism		I	0.3	0	1	0	0	0
	2	Micro enterprise	Selective Financial Intervention Entrepreneurial and Capability Development	CSF	II	0.5	0	0	0		
				CSF	III	0.4	0	0	1	1	1
	3	Regional Innovation Strategies		CSF	I	0.5	1	0	0	1	0
	4	Forestry	Woodland Improvement	CSF	II	0.7	0	1	0	0	0
		Harvesting	CSF	II	-0.1	-1	1	-1	0	0	
		Forestry Development		III	0.3	0	1	0	1	-1	
		Forest Roads		II	-0.1	-1	1	-1	0	0	
Agriculture and Rural Development	5	Fishery harbours, Gaeltacht/ Islands harbours and Acquaculture	Aquaculture Development Programme	CSF	I	0.5	1	0	0	1	0
			Gaeltacht/Island Harbours Port Infrastructure Improvement	CSF	I	0.3	1	0	-1	1	0
	1	General Structural Improvement	Installation Aid for Young Farmers	CSF	II	0.7	0	1	0	0	0
			Farm Waste Management	CSF	III	0.2	0	0	1	1	-1
			Dairy Hygiene	CSF	III	0.2	0	0	1	1	-1
			Animal Welfare		III	0.2	0	0	1	1	-1

		Animal Carcase Disposal		III	0.6	1	1	0	1	-1
		Grain Storage Facilities		III	-0.1	0	-1	1	1	-1
		Cattle Breeding Infrastructure		I	-0.2	0	0	0	-1	0
		Equine Breeding Infrastructure		I	-0.2	0	0	0	-1	0
	2	Alternative Enterprises		III	0.2	0	0	1	1	-1
		Development of the Horticulture Sector		III	0.2	0	0	1	1	-1
		Development of the Potato Sector		III	0.2	0	0	1	1	-1
		Development of the Organic Sector		III	0.5	1	0	1	1	-1
		Improvement in Equine Quality on Farms		III	0.2	0	0	1	1	-1
		Housing/Handling Facilities for Alternative Enterprises		III	0.2	0	0	1	1	-1
	3	General Rural Development								
		Area-Based Rural Development Initiative	CSF	II	0.7	0	1	0	0	0
		Western Investment Fund		III	0.5	1	0	1	1	-1
		Rural Development Fund		I	0.7	1	0	1	1	0
	4	Services for Agricultural and Rural Development								
		Teagasc Advisory Services		III	0.5	1	0	1	-1	1
		Farm Relief Services		IV	0.2	0	0	-1		
Social Inclusion and Childcare	1	Childcare								
		Capital Grant Scheme for Childcare Facilities	CSF	IV	0.8	0	0	1		
		Support for Staffing Costs	CSF	IV	0.8	0	0	1		
		Quality Improvement	CSF	III	0.5	1	0	0	1	1
	2	Equality		III	0.5	1	1	-1	0	1
	3	Community Development and Family Support								
		Community Development		IV	0.8	0	0	1		
		Family Services Projects		IV	0.8	0	0	1		
	4	Crime Prevention								
		Probation and Welfare Prison Services Training and Development		III	0.7	1	1	0	0	1
		Youth Services Grants Scheme		IV	0.2	0	0	-1		
	5	Youth Services								
		Special Projects for Disadvantaged Youth		IV	0.8	0	0	1		
		Youth Information Centres programme		IV	0.5	0	0	0		
		Young peoples Facilities and Services Fund		IV	0.5	0	0	0		
		Garda Youth Diversion Programme		IV	0.9	1	0	0		
	6	Local Development								
		Local Development		IV	0.5	0	0	0		
		Drugs		IV	0.5	0	0	0		
<b>EHRD OP</b>										
Employability	1	Action Programme for the Unemployed		III	0.7	1	1	0	1	0
	2	National Employment Service	CSF	III	0.9	1	1	1	1	0
	3	Active Measures for LTU and Socially Excluded	CSF	IV	0.5	0	0	0		
	4	Early Education		I	0.8	1	1	1	0	0
	5	School Completion Initiative	CSF	I	0.8	1	1	0	1	0
	6	Early Literacy		I	0.6	1	1	0	0	0
	7	Traveller Education		III	0.7	1	1	0	0	1
	8	School Guidance Service		I	0.7	1	0	1	1	0

	9	Third Level Access	CSF	I	0.8	1	1	0	1	0
	10	Schools Modern Languages		I	0.45	0.5	1	0	0	0
	Early School Leaver	11A Progression	CSF	III	0.6	0.5	1	0	1	0.5
		11B Youthreach and Travellers	CSF	III	0.6	0.5	1	0	1	0.5
	Sectoral Entry Training	12A Tourism School Leavers		III	0.3	0	1	0	0	0
		12B Tourism		III	0.5	0	1	1	0	0
		12C Tourism (Education)		III	0.5	0	1	1	0	0
		12D Agriculture		III	0.3	0	1	0	0	0
	13	Skills Training for Unemployed and Redundant Workers	CSF	III	0.9	1	1	1	0	1
	14A	Apprenticeship/Traineeship - FÁS	CSF	III	0.6	1	1	0	0	0
	14B	Apprenticeship - Education		III	0.6	1	1	0	0	0
	15	Employment Support Services		IV	0.2	0	0	-1		
	16	Vocational Training & Pathways Employment people with Disabilities		III	0.8	1	1	1	0	0
	17	Refugee Language Support Unit		III	0.8	1	1	1	0	0
Entrepreneurship	In Company Training	18A FÁS	CSF	III	0.7	1	1	0	1	0
		18B Enterprise Ireland	CSF	III	0.3	1	0	0	0	0
	Social Economy	19A Programme	CSF	IV	0.5	0	0	0	0.5	
		19B Local Social Capital		IV	0.2	0	0	-1		
Adaptability	20	Lifelong Learning - General Training		III	0.8	1	1	1	0	
	21	Lifelong Learning - Back to Education Initiative	CSF	III	0.8	1	1	1	0	
	22	Lifelong Learning - National Adult Literacy Strategy	CSF	III	0.8	1	1	1	0	
	23	Lifelong Learning - Further education Support services		III	0.35	0	0.5	1	0	0
	Ongoing Sectoral Training	24A Culture, Gaeltacht and Film		III	0.55	0	0.5	1	1	1
		24B Seafood		III	0.4	0	0	1	1	1
		24C Forestry		III	0.55	0	0.5	1	1	1
		24D Equine Institute		III	0.55	0	0.5	1	1	1
		24E Agriculture		III	0.55	0	0.5	1	1	1
		24F Tourism		III	0.55	0	0.5	1	1	1
		24G Tourism Education		III	0.55	0	0.5	1	1	1
	25	Middle-Level Technician/Higher Technical Business Skills		I	0.7	1	1	0.5	0	0
	26	Undergraduate Skills	CSF	I	0.65	0.5	1	1	0	0
	27	Postgraduate Courses		II	0.5	0	0	0		0
	Training of Trainers	28A Primary, Post-Primary & Further Education		III	0.6	0.5	0.5	1	1	0
		28B FÁS		III	0.6	0.5	0.5	1	1	0
	Quality Assurance	29A Training of Trainers		III	0.6	0.5	0.5	1	1	0
		29B Certification & National Qualifications Framework	CSF	III	0.75	0.5	1	1	1	0
Equality	30	Educational Disadvantage	CSF	III	0.7	1	1	0	1	0
	Equal Opportunities Promotion and Monitoring	31A Education	CSF	III	0.65	0.5	1	0.5	1	0
		31B NDP	CSF	III	0.65	0.5	1	0.5	1	0

Other Measures	Infrastructure	32A Education		I	0.5	0.5	0.5	0	1	0		
		32B Training		I	0.5	0.5	0.5	0	1	0		
	Technical Assistance	33A Equality Studies		CSF	I	0.7	1	0	1	1	0	
		33B OP		CSF	I	0.7	1	0	1	1	0	
<b>PS OP</b> Research, Technological Development & Innovation (RTDI)	Education	Basic Research Support		I	0.8	1	1	0	1	0		
		Project based and Individual Research		I	0.5	1	0	0	1	0		
		Technological Sector Research		I	0.3	1	0	0	0	0	0	
		Strategic Research		CSF	I	0.7	1	0	1	1	0	
	Industry	Competitive RTDI (ERDF)		CSF	III	0.7	1	1	1	0	-1	
		Innovation Management			III	0.6	1	0	1	0	1	
		R&D Capability Grant			III	0.6	1	1	0	0	0	
			International Collaboration		III	0.7	1	1	1	0	-1	
			National Collaboration Infrastructure, Research Capability and Training		CSF	III	0.7	1	1	1	0	-1
			Technology Foresight		I	0.5	1	0	0	1	0	
	Agriculture	Teagasc Research			I	0.2	0	0	0	1	0	
		Research Stimulus Fund			I	0.4	0	0	1	1	0	
	Food - Institutional R&D				I	0.2	0	0	0	1	0	
	Marine	Research Vessel			III	-0.1	0	0	0	0	-1	
		Laboratory Infrastructure			I	0.4	0	0	1	1	0	
			Marine RTDI		I	0.4	0	0	1	1	0	
	Forestry	R&D			I	0.4	0	0	1	1	0	
		Technology Transfer			I	0.5	0	1	0	1	0	
			Researcher Training		I	0.2	0	0	0	1	0	
			COFORD		I	0.4	0	0	1	1	0	
	Industry	Environmental RTDI	Environmentally Sustainable Resource Management		I	0.4	0	0	1	1	0	
			Sustainable Development		I	0.4	0	0	1	1	0	
				Cleaner Production		I	0.7	0	1	1	1	0
				Centre of Excellence Dedicated Support Organisations		I	0.5	0	1	0	1	0
		Indigenous Industry	Strategy Assessment and Formulation		III	0.2	1	0	0	0	0	-1
			Production & Operations Capacity		III	0.9	1	1	1	0	0	1
				Production & Operations Capability		II	0.7	0	1	0	0	0
			Production & Operations Capability		III	0.4	1	0	1	0	-1	
			Finance - Venture Capital		II	1.1	0	1	1	0	0	
			Regional Networks		III	0.1	1	-1	1	0	-1	
		Finance - Equity		II	0.7	0	1	0	0	0		
		Food Sector - Agricultural Products		II	0.3	0	1	-1	0	0		
		Seafood Processing		II	0.3	0	1	-1	0	0		
		Film Industry		II	0.7	-1	1	1	0	0		
Gaeltacht		Finance for Industry		II	0.7	0	1	0	0	0		
		Land and Buildings		IV	0.2	0	0	-1	0	0		

	Foreign Direct Investment	Employment Grants		II	0.3	0	1	-1	0	0
		Equity		II	0.3	0	1	-1	0	0
		R&D Grants		II	0.3	0	1	-1	0	0
		Sites and Premises Scheme		II	0.3	0	1	-1	0	0
		Training Grants		III	0.1	1	-1	1	0	-1
		Capital Grants		II	0.7	0	1	0	0	0
Marketing	Industry			I	0.2	1	1	-1	-1	0
	Food Sector			I	0.2	1	1	-1	-1	0
	Seafood			I	0.2	1	1	-1	-1	0
	Tourism			I	0.2	1	1	-1	-1	0
Sea Fisheries Development	Adjustment of Fishing Effort			IV	0.2	0	0	-1	0	0
	Fisheries Development	CSF		II	0.3	0	1	-1	0	0
	Renewal and Modernisation of Fleets	CSF		II	0.3	0	1	-1	0	0
<b>ESI OP</b>										
National Roads Public Transport	Total National Roads Priority	CSF		I	0.8	1	1	0	1	0
	National			I	0.7	0	1	1	1	0
	DTI			I	0.6	1	1	-1	1	0
Environmental Infrastructure	Waste Water	CSF		I	0.6	1	1	-1	1	0
	Water Supply			I	0.6	1	1	-1	1	0
	Management and Rehabilitation of infrastructure			I	0.8	1	1	0	1	0
	Support for Economic Activity			I	0.5	0	1	1	0	0
	Coast Protection			I	0.4	-1	1	1	1	0
Sustainable Energy	Energy Conservation	CSF		III	0.7	1	1	0	1	0
	Alternative Energy	CSF		II	0.3	0	1	-1		0
Housing	Local Authority Housing			IV	0.9	1	-1	1	0	0
	Voluntary Housing			IV	0.9	1	-1	1	0	0
	Access to Affordable Housing			IV	0.6	1	-1	-0	0	0
	Improvements to Existing Housing			III	0.5	1	0	1	1	1
	Groups with Special Needs			IV	0.9	1	-1	1	0	0
Health	Acute Hospitals			I	0.6	1	1	-1	1	0
	Non-Acute/Continuing Care			I	1	1	1	1	1	0
	ICT and Research			I	0.8	1	1	1	0	0
<b>PEACE OP</b>										
	Total Economic Renewal Priority	CSF		III	0.6	0	1	1	1	0
	Total Social Integration, Inclusion and Reconciliation Priority	CSF		IV	0.6	1	-1	0	0	0
	Total Locally-based Regeneration and Development Strategies Priority	CSF		II	0.5	1	0	-1	0	0
	Total Outward and Forward Looking Region Priority			I	0.5	0	1	1	0	0
	Total Cross-Border Cooperation Priority	CSF		III	0.6	1	0	1	1	0

# APPENDIX 6: UNIT COSTS OF REGIONAL OPS

**Table A6.1: Efficiency Measured by Unit Costs for the Border, Midlands and Western Region**

Priority, Measure, Sub-Measure	Physical Indicator	Output	Unit Cost	Original Target	Planned Unit Cost
1 - Non-National Roads					
Specific Improvement Grants Scheme	Km improved	475	240,181	384	105,469
Restoration Programme	Km improved and maintained	13,124	20,698	11,875	29,405
Miscellaneous Grants	No. of schemes	150	795,893	108	630,000
2 - Rural Water	No. of persons supplied	47,282	1,704	6,250	23,400
3 - Waste Management					
4 - Urban and Village Renewal	No. of projects	124	65,121	186	98,871
5 - E-Commerce and Communications	Kilometres of fibre	600	13,500		
6 - Seaports					
7 - Regional Airports					
8 - Culture, Recreation and Sports					
Heritage Conservation	No. of heritage sites improved	7	377,143	6	1,610,000
Inland Waterways	Length of improved waterways	7.7	1,809,091	15	1,072,667
Nat. Cultural Coll. Institutions	No. of institutions	2	0	2	0
Arts and Culture Facilities					
9 - Technical Assistance					
Local Enterprise					
1 - Tourism					
2 - Micro enterprise					
Selective Financial Intervention	No. of new full time jobs	3,637	4,431	4,000	5,728
Entrepreneurial and Capability Development	No. of participants on recognised courses	1,326	8,667	2,000	5,790
3 - Regional Innovation Strategies					
4 - Forestry					
Woodland Improvement	Hectares	9,491	1,058	7,880	1,363
Forestry Development	No. of projects	140	24,993	140	59,643
Forest Roads	Kilometres	222	16,392	190	20,789
5 - Fishery harbours, Gaeltacht/Islands harbours					
Gaeltacht/Islands Harbours Development	No of piers	Na		4	5,040,000
Fishery Harbour Infrastructure	No. of facilities improved	50	777,880	15	1,524,000
6 - Aquaculture Development	Value of output	80.81 million	41,987	72.95 million	71,419

**Table A6.1: continued**

Priority, Measure, Sub-Measure	Physical Indicator	Output	Unit Cost	Original Target	Planned Unit Cost
Agriculture and Rural Development					
1 - General Structural Improvement					
Installation Aid for Young Farmers	No. of assisted farmers	134	9,224	880	7,091
Farm Waste Management	No. of animals housed	6662	716	100,000	564
Grain Storage Facilities	Storage capacity	54,421	8	50,000	16
Cattle Breeding Infrastructure	Percentage of animals in recording	Na	Na	Na	Na
Equine Breeding Infrastructure	Records collected	Na	Na	Na	Na
2 - Alternative Enterprises					
Development of the Horticulture Sector	% of growers in quality approved scheme	15	62,800	26	98,077
Development of the Potato Sector	No. of growers in quality scheme	32	8,688	28	30,357
Development of the Organic Sector	Area converted	19,241	10	19,000	90
Improvement in Equine Quality on Farms	No. of stallions	95	5,000	93	6,129
Housing/Handling Facilities for Alternative Enterprises	No. of beneficiaries	1,639	84	1,775	2,237
3 - General Rural Development					
Area-Based Rural Development Initiative	No. of new jobs created	120	26,833	275	61,855
Western Investment Fund	No. of new jobs created	122	27,352	168	70,774
4 - Services for Agricultural and Rural Development					
Teagasc Advisory Services	No. of plans prepared	523	29,774	2,700	5,767
Farm Relief Services	No. of operators obtaining cert	221	1,149	400	2,125
Social Inclusion and Childcare					
1 - Childcare					
Capital Grant Scheme for Childcare Facilities	Additional childcare places	2,636	2,093	4,215	3,006
Support for Staffing Costs	No. of childcare workers supported	571	12,007	450	40,933
2 - Equality					
3 - Community Development and Family Support					
Community Development	No. of projects	56	281,964	70	209,286
Family Services Projects	No. of customers	277	1,087	100	5,400
4 - Crime Prevention					
Probation and Welfare	Number of programme places	20	0	52	39,423
Prison Services Training and Development	No. of participants securing labour market participation	0		160	43,375
5 - Youth Services					
Youth Services Grant Scheme	No. of youth beneficiaries	76,809	1	51,281	0
Special Projects for Disadvantaged Youth	No. of projects	80	72,238	42	127,381
Youth Information Centres	No. of clients	97,531	16	42,881	17
Young Peoples Facilities and Services Fund	No. of projects	3	127,000	6	871,667
Garda Youth Diversion Fund	No. of projects	12	180,833	12	192,500
6 - Local Development					
Local Development	% of target supported into employment	Na	Na	Na	Na
Drugs	No. of drug misusers availing of training & employment	Na	Na	Na	Na

**Table A6.2: Efficiency Measured by Unit Costs for the Southern and Eastern Region**

Priority, Measure, Sub-Measure	Physical Indicator	Output	Unit Cost	Original Target	Planned Unit Cost
1 - Non-National Roads					
Specific Improvement Grants Scheme	Km improved	373	371,475	416	461,851
Restoration Programme	Km improved and maintained	13,402	25,457	11,825	24,237
Miscellaneous Grants	No. of schemes	236	854,703	196	519,337
2 - Rural Water	No. of persons supplied	97,879	580	75,000	826
3 - Waste Management					
4 - Urban and Village Renewal	No. of projects	138	132,674	239	167,799
5 - E-Commerce and Communications	Kilometres of fibre	805	11,662	815	32,515
6 - Seaports					
7 - Regional Airports					
8 - Culture, Recreation and Sports					
Heritage Conservation	No. of heritage sites improved	19	1,506,316	30	1,823,667
Inland Waterways	Length of improved waterways	10.2	634,314	15	788,667
Nat. Cultural Coll. Institutions	No. of institutions	9	305,889	2	3,028,263
Arts and Culture Facilities		80,000	57	60,000	143
9 - Technical Assistance					
Local Enterprise					
1 - Tourism					
2 - Micro enterprise					
Selective Financial Intervention	No. of new full time jobs	4,516	6,584	6,000	5,716
Entrepreneurial and Capability Development	No. of participants on recognised courses	2,464	10,956	2,250	12,012
3 - Regional Innovation Strategies					
4 - Forestry					
Woodland Improvement	Hectares	1,933	2,230	5,320	1,454
Forestry Development	No. of projects	65	86,215	28	175,000
Forest Roads	Kilometres	136	29,118	200	11,000
5 - Fishery harbours, Gaeltacht/Islands harbours					
Gaeltacht/Islands Harbours Development	No of piers	28.72	63,162	33.09	97,008
Fishery Harbour Infrastructure	No. of facilities improved	1	1,532,000	1	7,220,000
6 - Aquaculture Development	Value of output	26 million	708,615	18 million	1,296,111



**Table A6.2: continued**

Priority, Measure, Sub-Measure	Physical Indicator	Output	Unit Cost	Original Target	Planned Unit Cost
Agriculture and Rural Development					
1 - General Structural Improvement					
Installation Aid for Young Farmers	No. of assisted farmers	300	9,543	1,320	2,406
Farm Waste Management	No. of animals housed	9767	488	168,000	336
Grain Storage Facilities	Storage capacity	186,857	7	20,022,000	0
Cattle Breeding Infrastructure	Percentage of animals in recording	27	65,889	40	12,000
Equine Breeding Infrastructure	Records collected	356,800	6	410,000	2
2 - Alternative Enterprises					
Development of the Horticulture Sector	% of growers in quality approved scheme	13	203,077	26	156,846
Development of the Potato Sector	No. of growers in quality scheme	60	10,150	47	22,362
Development of the Organic Sector	Area converted	20628	5	25000	50
Improvement in Equine Quality on Farms	No. of stallions	83	13,964	93	5,183
Housing/Handling Facilities for Alternative Enterprises	No. of beneficiaries	29	8,000	693	3,737
3 - General Rural Development					
Area-Based Rural Development Initiative	No. of new jobs created	30	140,867	225	62,929
Western Investment Fund	No. of new jobs created	5	63,400	32	70,781
4 - Services for Agricultural and Rural Development					
Teagasc Advisory Services	No. of plans prepared				
Farm Relief Services	No. of operators obtaining cert	624	407	600	1,415
Social Inclusion and Childcare					
1 - Childcare					
Capital Grant Scheme for Childcare Facilities	Additional childcare places	4,550	3,263	12,829	2,469
Support for Staffing Costs	No. of childcare workers supported	1,052	14,604	1,100	47,918
2 - Equality					
3 - Community Development and Family Support					
Community Development	No. of projects	204	245,382	170	233,765
Family Services Projects	No. of customers	629	1,399	250	19,120
4 - Crime Prevention					
Probation and Welfare	Number of programme places	20	74,300	100	73,300
Prison Services Training and Development	No. of participants securing labour market participation	170	8,741	650	28,585
5 - Youth Services					
Youth Services Grant Scheme	No. of youth beneficiaries	151,030	199	167,309	182
Special Projects for Disadvantaged Youth	No. of projects	244	109,980	104	234,231
Youth Information Centres	No. of clients	137,838	22	115,978	26
Young Peoples Facilities and Services Fund	No. of projects	26	1,344,538	120	314,167
Garda Youth Diversion Fund	No. of projects	23	159,826	9	655,556
6 - Local Development					
Local Development	% of target supported into employment	15	4,912,933	22	6,931,818
Drugs	No. of drug misusers availing of training & employment	1,119	43,816	1,000	0

# APPENDIX 7: RESEARCH AND DEVELOPMENT IN IRELAND

## A COMPARISON WITH THE EU AND THE OECD

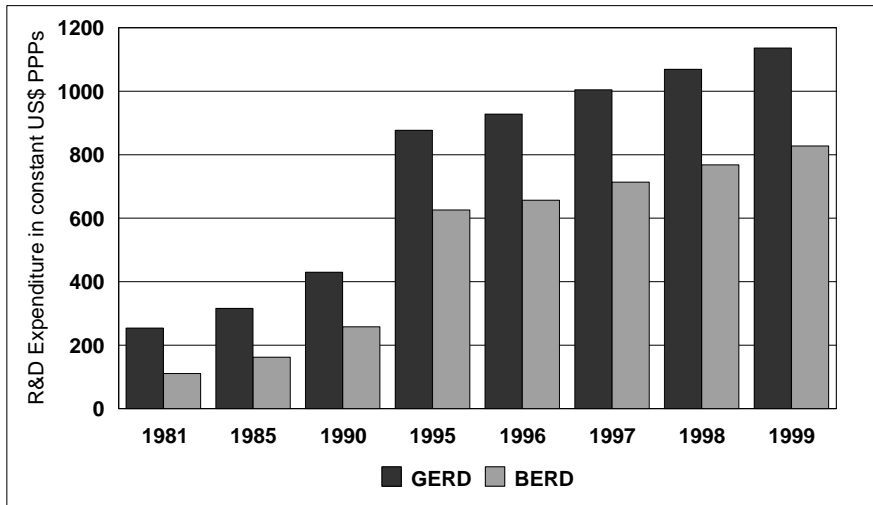
Capital accumulation in form of “knowledge capital” has been identified as one of the driving forces of economic growth and comprises a diverse set of activities such as Research and Development (R&D), Technology transfers, as well as Scientific and Technical Services. This crucial determinant in the transmission mechanism from capital to growth has been especially recognised in business R&D activities, which have evolved significantly in recent years.<sup>4</sup> In relation to these activities the OECD believes that not only has industry funding for R&D risen in many member countries throughout the last decades, but also the ways in which firms manage and conduct R&D seem to have changed.

Such changes have potentially far-reaching implications for science and technology policies, which play an ever-larger role in the political debate. To be most effective, government policies generally intended to stimulate R&D activities, must address the challenges and obstacles firms face when financing and conducting R&D. Changes in the pattern of R&D activities may show a need to adapt the government’s science and technology policies.

In order to guide those policy actions, we outline some crucial “stylised facts” of recent spending on R&D in Ireland, focusing on most of the common indicator variables such as gross expenditures on R&D (GERD) as well as business expenditures (BERD), both on an aggregate and disaggregated sector level.

We also take a closer look at additional variables on R&D and innovation related activities such as the number of professionals in research-intensive industries or the international equipment with research personnel. Furthermore, we point out factors hampering R&D and innovation activities in Ireland. The aim of this short overview is to provide a background analysis for the arrangement of technological policy actions under the NDP that are aimed at enhancing Ireland’s sustainable long-term growth.

<sup>4</sup> See OECD (2002) for a detailed discussion.

**Figure A7.1: GERD and BERD Volumes in Constant US\$ PPP Between 1981 and 1999**

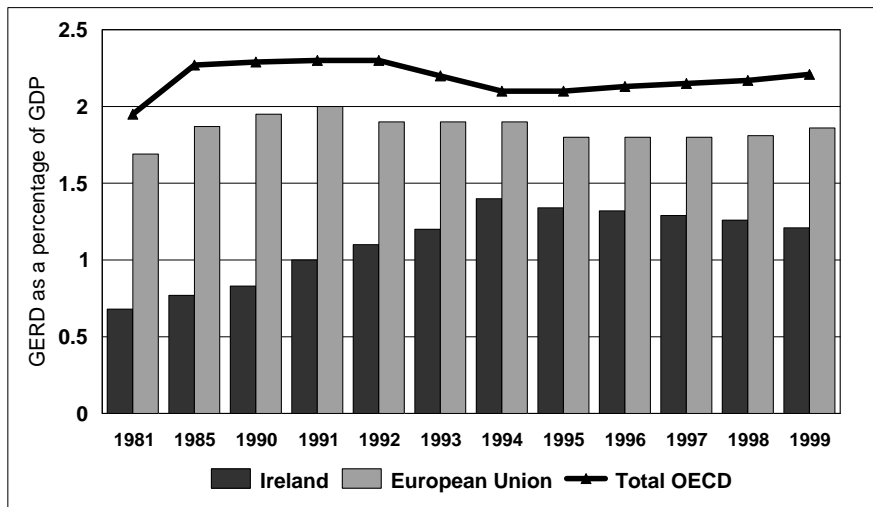
Source: OECD (2002).

At the aggregate level, the available R&D data indicate that R&D activities in Ireland have been expanded immensely within the last two decades. While gross expenditures in constant terms grew from a value of \$254m in 1981 up to \$1136m in 1999, and therefore more than quadrupled, business R&D expenditure even outperformed this general trend, growing from \$111m in 1981 to \$828m in 1999 reaching the eightfold value of the initial expenditure amount (Figure A7.1).<sup>5</sup> Starting from an initially low level in the 1980s, the first half of the 1990s show a remarkable increase in absolute volumes of GERD and BERD, though this dynamic development decelerated in the second half of the 1990s, Figure A7.1 still indicates a continuous development with significant positive growth rates for that period (the average growth rate for BERD and GERD between 1996 and 1999 was still around 7 per cent).

In comparison to Ireland's exceptional expansion phases, EU and OECD total expenditures on GERD and BERD for the same period merely doubled. The relative boost of R&D activity in Ireland, especially within the 1980s and early 1990s, can also be observed when taking GERD and BERD values as percentage of the national gross domestic product (GDP) in comparison to the EU and OECD shares. Figures A7.2 and A7.3 plot the time series trends for the last two decades.

<sup>5</sup> Based on calculations by the OECD using Purchasing Power Parity (PPP) adjusted values.

**Figure A7.2: Development of GERD in Ireland Compared to EU and OECD Shares**



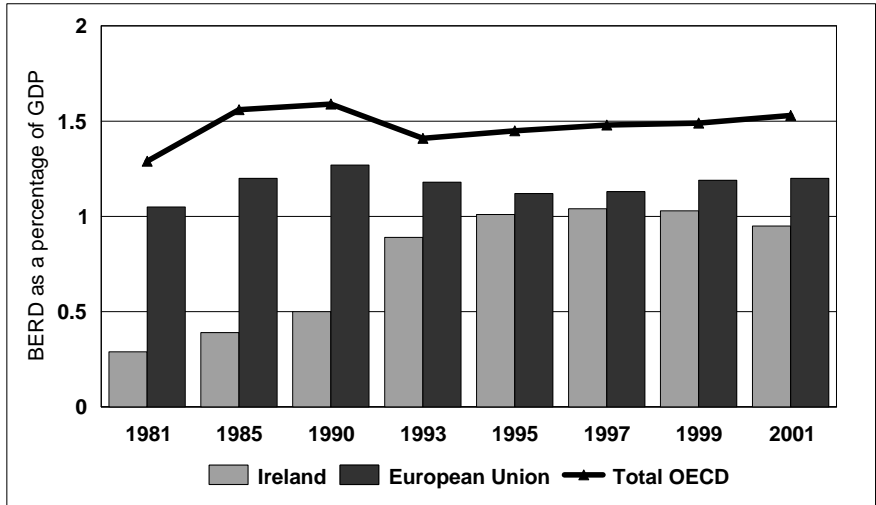
Source: OECD (2002).

With respect to the time pattern of GERD as a percentage of GDP, Ireland experienced a strong growth phase up to 1994. Thereby gradually closing the gap to EU and OECD values, which grew only marginally on an aggregate level in the respective period. This convergence can be seen in that in 1981 Ireland did not even have half of the GDP share of the aggregate EU value, whereas by 1994 this had risen to more than two-thirds of the EU share. However, in the second half of the 1990s the picture changed slightly. The time series indicates that with shrinking GERD per GDP volumes for Ireland starting from 1995, the gap between Ireland and the EU and OECD average is widening again.

However it is important to keep in mind that Figure A7.2 does not account for the strong growth in Ireland's GDP within the second half of the 1990s which exceeded R&D growth such that the ratio is falling. To make this point more clear: Irish GDP in per capita terms rose from \$18,200 in 1995 to \$27,200 in 2000, whereas the EU (\$20,000 in 1995, \$22,400 in 2000) and OECD (\$19,600 in 1995, \$22,100 in 2000) per capita income almost remained constant. That means, even if the absolute GERD value for Ireland has outperformed the EU and OECD GERD growth, the gap may have widened in the late 1990s due to the strong impact of Ireland's GDP growth dynamics.

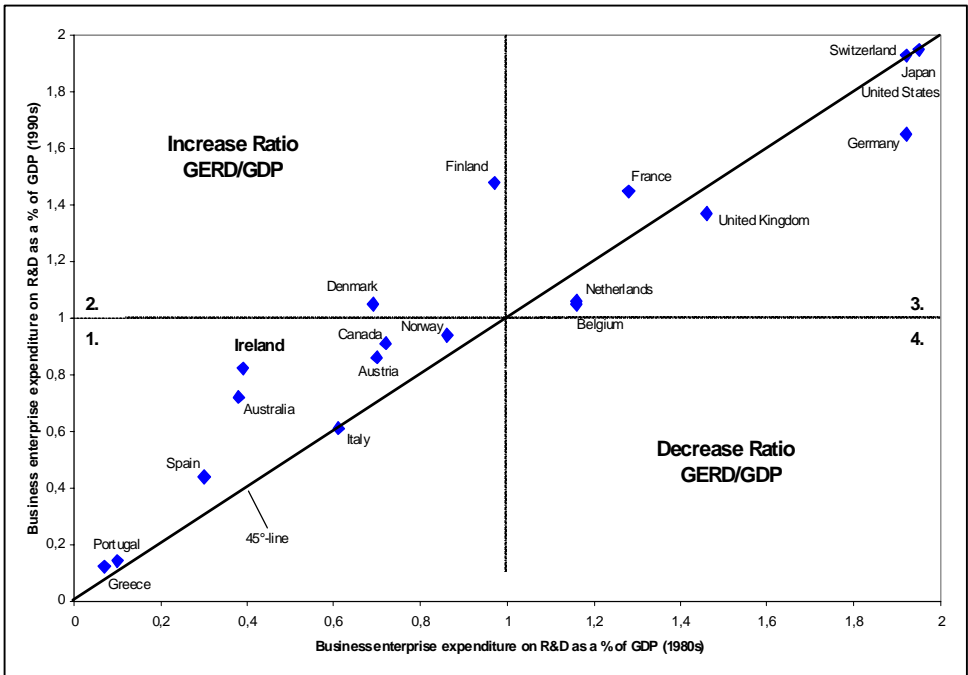
Nevertheless, in order to catch up with the international level of GERD as a percentage of GDP, the Irish economy needs to further increase R&D activities in order to compensate for the fast growth of GDP volume and to maintain future income growth through the transmission mechanism from knowledge capital to income growth.

**Figure A7.3: Development of BERD in Ireland Compared to EU and OECD Values**



Source: OECD (2002).

**Figure A7.4: Cross Country Comparison BERD per GDP Values**



Source: Serres (2003).

Almost identical to the pattern of gross expenditure, the share BERD as a percentage of GDP shows a convergence to the EU and OECD level until mid-1990s, where it almost reaches the EU level in 1997, then however the share as percentage of GDP reduces –

though significantly increasing in absolute terms as shown in figure A7.3 – while EU and OECD business expenditure on R&D continue to grow slightly.

In order to analyse the relative performance of Irish business and non-business R&D activities in more detail, figures A7.4 to A7.6 augment the analysis of R&D expenditure by a cross-country comparison among OECD countries. In doing so, we especially account for the Irish performance within the last two decades compared to the R&D development pattern in the other EU periphery and cohesion countries (e.g. Spain, Portugal and Greece).

Figure A7.4 reveals two important characteristics concerning business enterprise expenditure:

First, the majority of OECD countries have experienced a growth in BERD volumes between the 1980s and 1990s. This general tendency is indicated by the countries' position with respect to the 45° – line in Figure 4. If a country's position is above this line, the relative BERD per GDP share has increased from the 1980s to the 1990s. While Finland, Denmark and Ireland strongly outperform the other OECD countries in terms of growth rates (measured as their distance to the 45°-line), Belgium, the Netherlands, the UK and Germany perform rather poor remaining significantly below the 45°-line indicating that their BERD per GDP shares have been reduced for the respective period.

Second, both throughout the 1980s and 1990s we observe a strong heterogeneity with respect to R&D to GDP ratio. While Japan, the US, Switzerland and Germany have the highest levels of R&D expenditure, on the opposite the three cohesion countries Portugal, Greece and Spain present the poorest investment pattern with respect to the level of R&D per GDP.

In order to make this classification more straightforward, we separate Figure A7.4 into 4 equal sized segments, corresponding with high and low BERD levels respectively. That is, we define a low BERD per GDP level as  $BERD < 1$  per cent of GDP for both periods. In separating the cross-country table we get the following four ranking positions:

- Both for the 1980s and 1990s the BERD per GDP ratio is rather low ( $<1$ ). The bottom left section describes this rather poor track record in the international comparison.
- In the upper left position, a low BERD share throughout the 1980s corresponds with a high share in the 1990s .
- In the upper right position, “top” segment high shares in the 1980s are combined with high shares in 1990s.
- Finally, the right down position is characterised by high shares in the 1980s combined with lower shares throughout the 1990s.

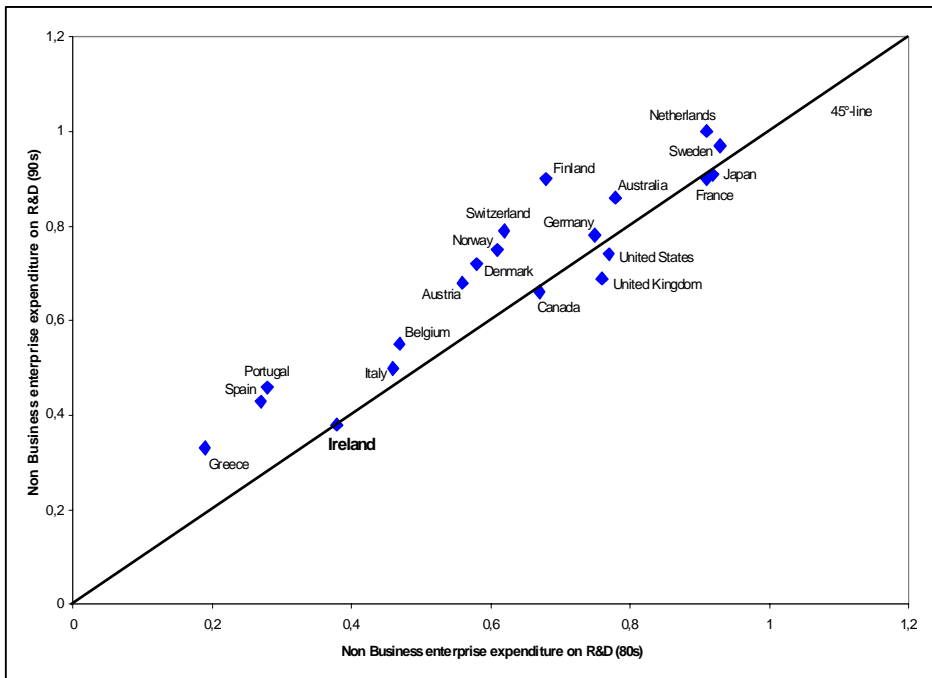
According to this ranking scheme we can identify different categories of countries and their relative position among the OECD sample, e.g. catching up from a low level to high R&D expenditure corresponds to the upper left position, losing relative advantages over time accounts for the right down position etc. This allows us to give a more profound rating of the national BERD performance.

Although Ireland seems to have improved the BERD per GDP share significantly with high growth rates as stated above, it is still ranked within the bottom left section, indicating that the overall BERD level is still lower in the 1990s than the international average and that Ireland – though strongly growing in R&D expenditure up to the present does not fully succeeded in catching up with the majority of EU countries, but at least managed to significantly outperform Italy and the three cohesion countries.

As Serres (2003) argues, the observed differences in business R&D spending across countries with comparable industries, could partly reflect the important influence that the policy environment may have on the private incentives to engage in R&D activities.<sup>6</sup>

With respect to non-business R&D expenditures in Figure A7.5, Ireland performed rather poorly with respect to both growth rates and absolute level of non-business R&D. In contrast to the majority of OECD countries Ireland did not increase the R&D per GDP share within the observed period indicated by the position on the 45°-line. Moreover, while Ireland managed to outperform the other cohesion countries with respect to BERD values, in terms of non-business R&D expenditure Ireland is being outperformed by Spain and Portugal in the 1990s, with only Greece having still a lower GDP share.

**Figure A7.5: Cross country Comparison Non-Business R&D Expenditure**



Source: Serres (2003).

<sup>6</sup> See Serres, A. (2003), page 15.

In order to get further insights into the structural components of Irish expenditure in R&D we split the total GERD per GDP values into disaggregated shares and especially account for:

- performers and
- source of funds.

Thereby focusing on the most dominant industry and government sector, with respect to GERD values and their relative share of total R&D expenditure. Figure A7.6 shows the international comparison for the years 1981 and 2001 (1999).<sup>7</sup>

Regarding the Irish GERD as a percentage of national GDP performed by the private industry/business sector we observe that Ireland significantly outperformed the other OECD countries. The GERD share increased from a value 43.6 per cent in 1981 up to 72.9 per cent of all R&D expenditure in 1999. In comparison: the EU value was about 64.5 per cent for the respective period.<sup>8</sup>

For the government sector (as a performer) Ireland's share remained almost constant in analogy to the majority of OECD countries around a value of about 20 per cent of total R&D expenditure, with only a minor increase from 1981 to 1999. Only for Greece the share of government performed R&D activity expanded in the 1999 compared to 1981.

With respect to the source of funds in Ireland, the indicated change in R&D activities from public to private activities is apparent: Whereas in 1981 almost 60 per cent of R&D activities were financed by the government sector, the amount was reduced to merely 20 per cent of all R&D expenditure in 1999. It is important to note that the increased importance of the private sector in R&D activities implies that business interests and concerns will have greater influence over R&D agendas and spending in the future.<sup>9</sup> While this change links R&D efforts more closely to market needs, it also makes R&D more sensitive to business cycles.

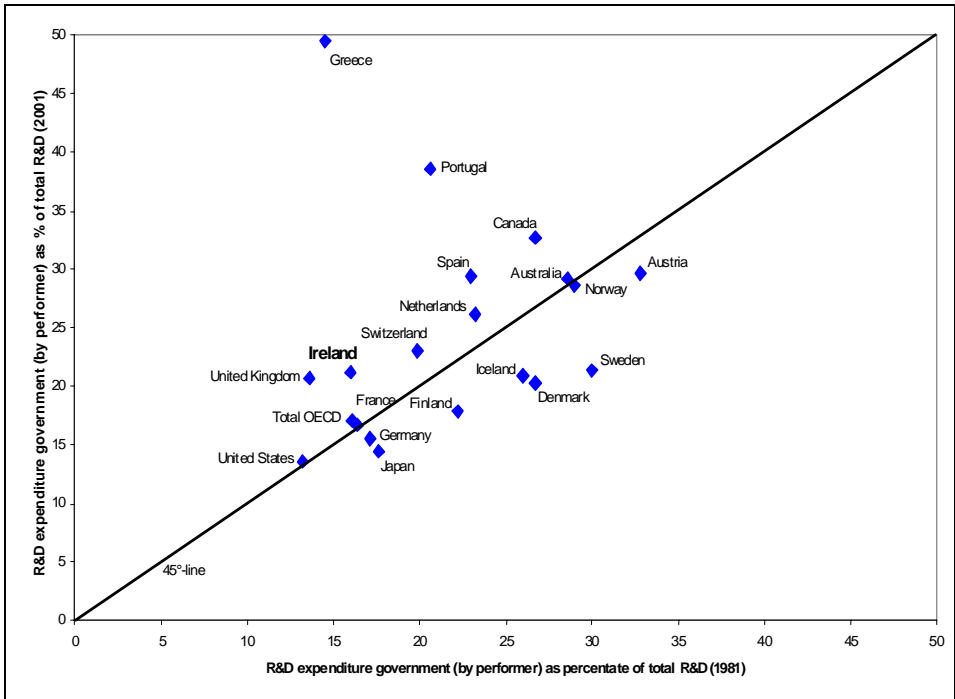
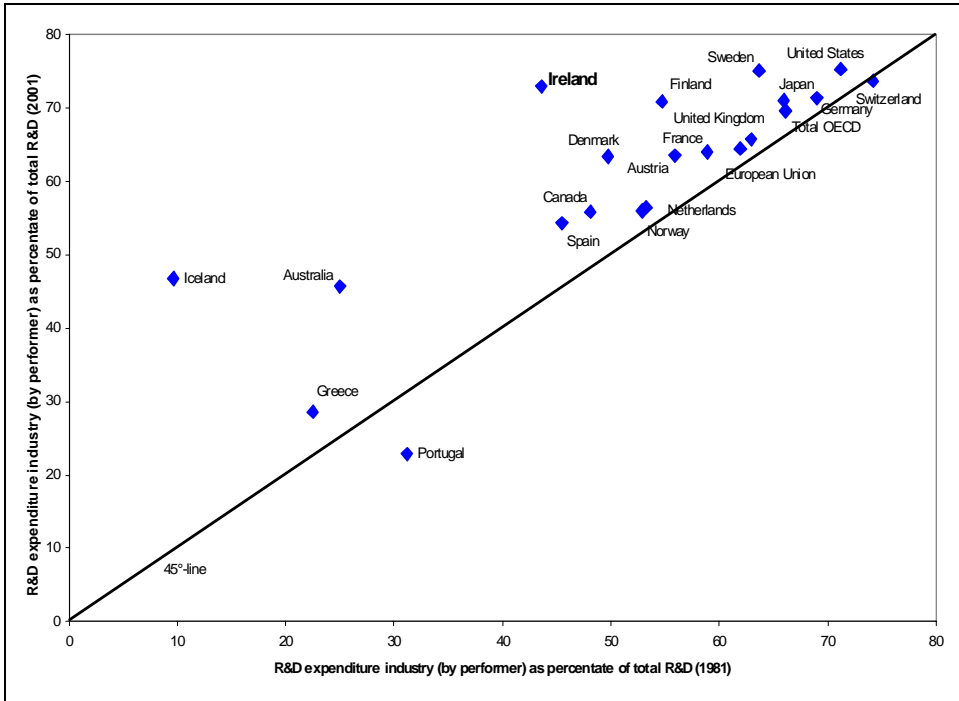
<sup>7</sup> See data descriptions of the OECD for availability. For a number of countries (including Ireland) only data up to 1999 is available. We base our analysis for each country on the most recent data available.

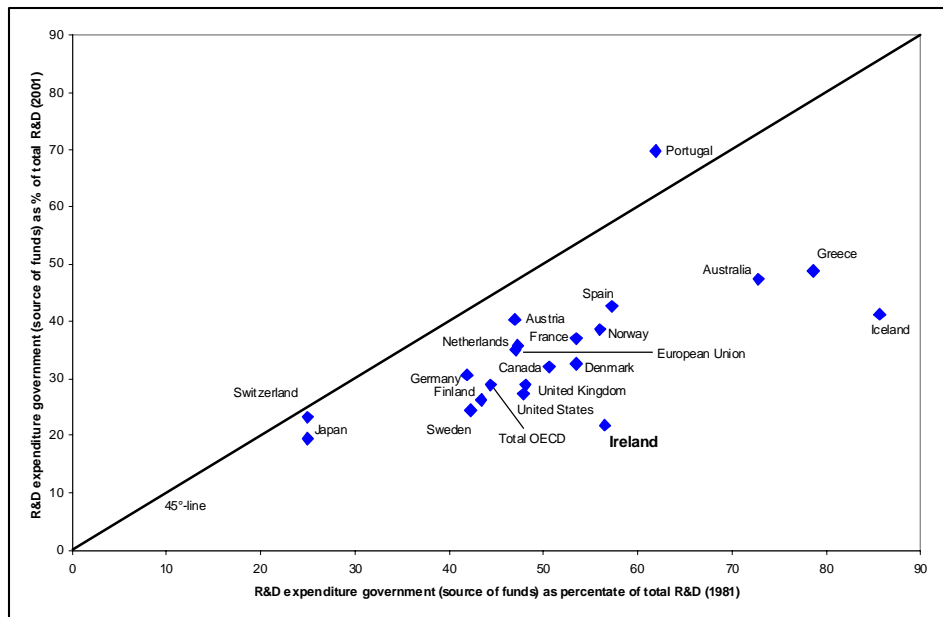
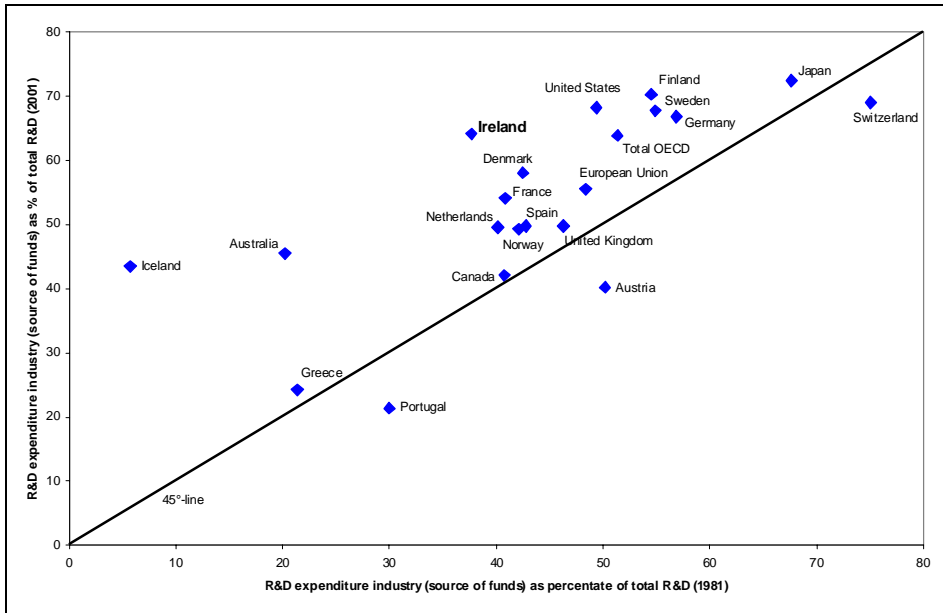
<sup>8</sup> For the EU data up to 2000 was available.

<sup>9</sup> See OECD (2002), page 100.



**Figure A7.6: Decomposition of GERD Shares as a % of Total Expenditures for 1981 and 2001**





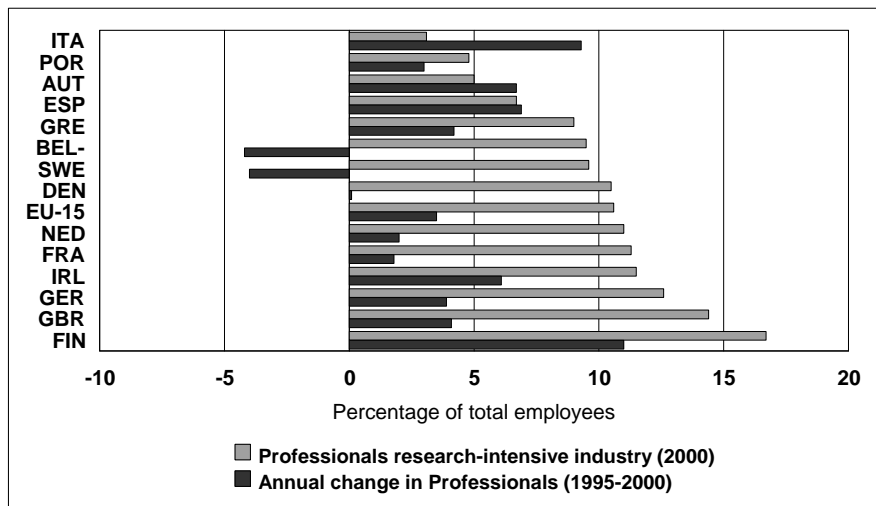
Not reported in Figure A7.5 are percentage shares of other national and foreign sources (both as source of fund and performer), since their overall share is relative small. However, it is worth noting that for Ireland the R&D performed by other national agents declined drastically throughout the observed time period (against a constant OECD trend) and also the share of R&D by performers from abroad reduced slightly, this however conforms to the general international trend (only reversed by Portugal and Japan with high and still growing shares of R&D from abroad). However, in terms of source of funds for these categories, other national

sources in Ireland remained constant over the 1980s and 1990s while R&D expenditure financed from abroad grew significantly (still encompassing only 10 per cent of total R&D expenditure).

Besides GERD and BERD volumes we can use some additional indicators in order to analyse the R&D activity in Ireland compared to the EU and OECD countries. We first take a look at the number of professional employees in research-intensive industry for the year 2000. With 11.5 per cent of all employees in research-intensive industry, (EU average 10.6 per cent) the relatively high level for Ireland supports the impression already given by the decomposition of GERD shares in Figure A7.5 that Ireland is performing well in industry/business R&D.

Figure A7.7 plots employment figures of professionals in research-intensive industries as a percentage of overall employees as well as an average growth rate for the period (1995-2000) in an international comparison among EU countries.

**Figure A7.7: EU-wide Comparison of Professionals in Research-Intensive Industry**



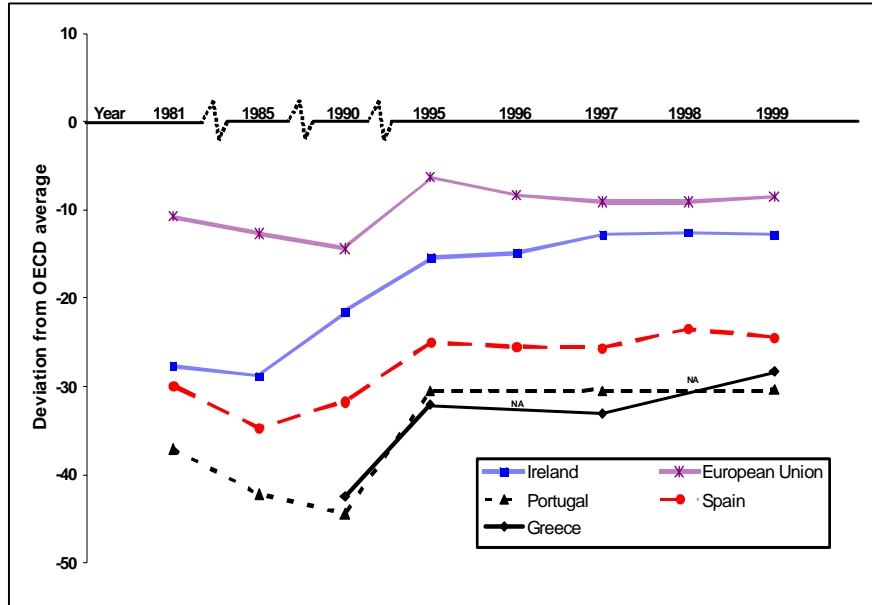
Source: German Federal Ministry of Education and Research (2001).

Almost all EU countries with the exception of Sweden and Belgium/Luxembourg experienced positive growth rates in professional employment rates. Together with Finland, Great Britain and Germany, Ireland belongs to the group of countries that have the highest share of research related professionals employed. Also, Ireland together with other small periphery countries experienced the highest growth rates in this period, possibly hinting at a gradual convergence within the EU with respect to this R&D activity indicator.

To take a closer look at this convergence hypothesis we additionally analyse the relative endowment of researchers within an economy: With 48.7 researchers per 10,000 labour force, Ireland is below the EU (53) and OECD average (61.5) in 1999. Figure A7.8 compares the relative convergence of the EU average, as well as

selected periphery and cohesion countries in comparison to the OECD benchmark value (zero line).

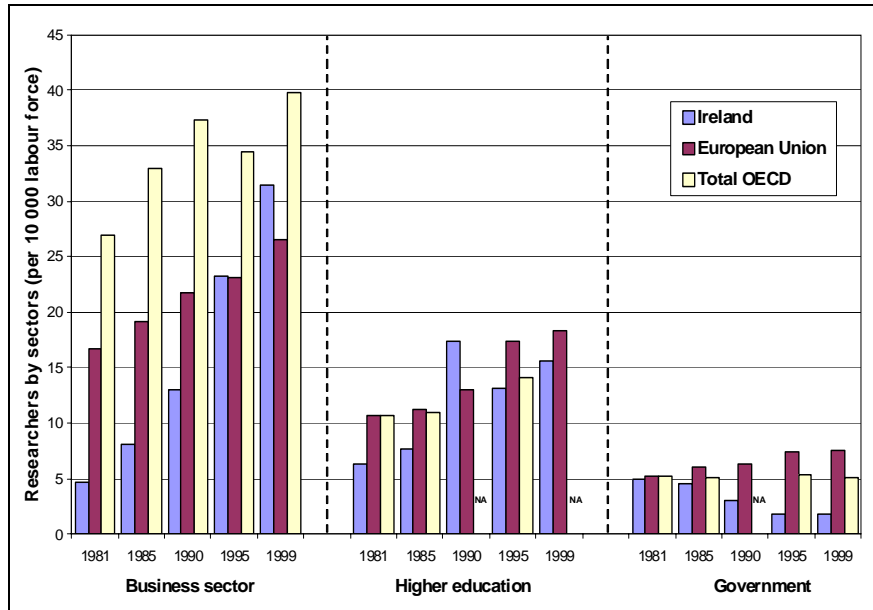
**Figure A7.8: No. of Researchers Compared EU and OECD Average**



Source: OECD (2002).

Figure A7.8 shows that although Ireland manages to gradually close the gap to the EU average level and enlarge the relative advantage in comparison to the other cohesion countries, both EU and Ireland do not manage to converge to the OECD average throughout the 1990s. However, the other cohesion countries Portugal, Spain and Greece still significantly lag behind the positive development of Ireland over this period which contradicts the hypothesis that there is convergence within the EU on R&D activities.

Taking a disaggregated view, Figure A7.9 compares the share of researchers per 10,000 of labour force in the business sector, the sector of higher education and the government sector between Ireland and the EU, as well as the OECD average. Again the findings support the general impression that Ireland is especially targeting business/industry R&D. While starting from a rather poor level in 1981, in 1991 the values converged fast to the EU/OECD average and even outperformed the EU value in 1999.

**Figure A7.9: Number of Researchers by Sectors in Ireland, EU and Total OECD**

Source: OECD (2002).

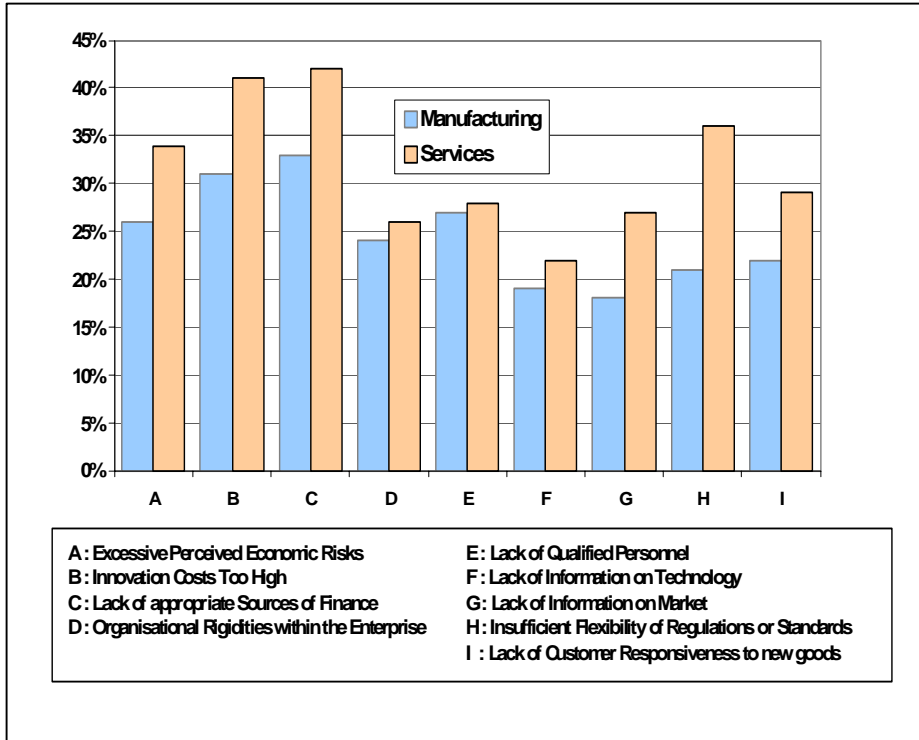
Also with respect to the sector of higher education Ireland closed the gap to the EU and OECD average. Still, here the share of Ireland is reducing again in the second half of the 1990s, thereby widening again the gap to the EU average. Regarding researchers in the government sector, the Irish share is rather low and still decreases in the second half of the 1990s.

As already pointed out, in order to guide policy actions intended to stimulate R&D activities, we also need to draw attention to factors hampering those activities in Ireland. Figure A7.10 indicates the importance of different barriers to innovation – including R&D activities but also other factors creating a culture in which the introduction of new technologies can thrive – for the period 1998-2000 as reported by an innovation survey undertaken by Forfás (2003).

According to the survey lack of financing, high innovation costs and insufficient flexibility of regulations or standards are the greatest barriers to innovation in both the manufacturing and service sectors. Specifically, in the service sector excessive perceived economic risks were seen to hamper innovation and in the manufacturing sector a lack of qualified personnel reduced innovations.

Summing up, the Irish economy experienced a strong growth in R&D related activities within the last two decades. Still, due to the fact that GDP grew even faster than R&D expenditures the gross and business R&D expenditure shares as percentage of GDP are still lacking behind the average of both EU and OECD.

Figure A7.10: Factors Hampering Innovation



Source: Forfás (2003). Forfás on Business and Expenditure in Research and Development, [www.forfás.ie](http://www.forfás.ie)

The international comparison shows that relative R&D performance is rather heterogeneous among OECD countries. With respect to the Irish performance, both the business and non-business R&D expenditures show that Ireland can still be ranked into the low level segment with small R&D per GDP shares in both the 1980s and 1990s. However, at least with respect to BERD volumes Ireland experienced a strong growth phase and is now converging more rapidly to an international average than other cohesion countries such as Spain, Portugal and Greece.

Taking a disaggregated point of view, the Irish R&D activities are especially dominated by industry performed R&D expenditure, which accounts for more than 70 per cent of the overall R&D activities in Ireland and sources more than 60 per cent of R&D expenditure. The shares of government R&D and other sources, both domestic and foreign have been reduced throughout the last decade.

Taking into account additional innovation and R&D indicators such as the number of professionals in R&D intensive industries or the equipment of researchers per labour force, the following findings are supported: Ireland has experienced a strong growth in R&D related activities which are again dominated by the business/industry sector. With respect to researchers and

professionals, Ireland is catching up faster to the EU and OECD average than other periphery/cohesion countries.

Taking finally factors hampering R&D into account, both in the service and manufacturing sector, especially high innovation costs and lack of financing opportunities slow down the growth process and should be taken into account in the design of policy actions aimed at enhancing R&D activities.

Though the public share of R&D in overall expenditure for Ireland reduces over time, governments will continue to have an important role in supporting business R&D. Consequently, the public sector appears to have a growing role in creating the basic scientific and technical knowledge, which firms incorporate into new products, processes and services.