Final Report

Study on Measuring Employment Effects

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# Contents

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>1.1 Study Aims</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Structure of the Document</td>
<td>1</td>
</tr>
<tr>
<td><strong>2. Existing Guidelines and Experience</strong></td>
<td>2</td>
</tr>
<tr>
<td>2.1 Key Issues</td>
<td>2</td>
</tr>
<tr>
<td>2.2 Existing Guidelines</td>
<td>2</td>
</tr>
<tr>
<td>2.3 EU Policy Context</td>
<td>5</td>
</tr>
<tr>
<td>2.4 Review of Past Experience</td>
<td>8</td>
</tr>
<tr>
<td><strong>3. Best Practice Framework</strong></td>
<td>15</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>15</td>
</tr>
<tr>
<td>3.2 EU Policy Framework and Jobs</td>
<td>16</td>
</tr>
<tr>
<td>3.3 Bottom Up Approach to Measuring Employment Effects</td>
<td>18</td>
</tr>
<tr>
<td>3.4 Key Definitions and core Indicators</td>
<td>20</td>
</tr>
<tr>
<td>3.5 Structural Fund Intervention Logic and Jobs</td>
<td>23</td>
</tr>
<tr>
<td>3.6 Best Practice Framework</td>
<td>26</td>
</tr>
<tr>
<td>3.6.1 Step 1 – Estimating Gross Employment Effects</td>
<td>27</td>
</tr>
<tr>
<td>3.6.2 Step 2 – Converting Gross Employment Estimates into Net Effects at the Programme Level</td>
<td>35</td>
</tr>
<tr>
<td>3.6.3 Step 3 – Overall Assessment of Structural fund Employment Effects at the Programme Level</td>
<td>40</td>
</tr>
<tr>
<td>3.7 Project Life Cycle and Measuring Employment Effects</td>
<td>53</td>
</tr>
</tbody>
</table>
# Contents

<table>
<thead>
<tr>
<th>3.8</th>
<th>Next Steps and Critical Success Factors</th>
<th>54</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## APPENDICES

<table>
<thead>
<tr>
<th>A.</th>
<th>Definitions and Indicators</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.</td>
<td>Worked Example – Net Effects</td>
<td>58</td>
</tr>
<tr>
<td>C.</td>
<td>Benchmarks for Cost Per Job</td>
<td>59</td>
</tr>
<tr>
<td>D.</td>
<td>Structural Fund Employment Effects and the Lisbon Strategy</td>
<td>60</td>
</tr>
<tr>
<td>E.</td>
<td>Review of Existing Experience</td>
<td>63</td>
</tr>
<tr>
<td>F.</td>
<td>Case Studies</td>
<td>88</td>
</tr>
<tr>
<td>G.</td>
<td>Bibliography</td>
<td>110</td>
</tr>
</tbody>
</table>
Introduction

1.1 Study Aims

The purpose of this assignment was to help prepare updated guidance on measuring Structural Fund employment effects using a ‘bottom-up’ methodology. The tasks to be undertaken were, in summary, to:

- Review the methodology used to measure the employment effects of public interventions using a bottom-up approach;
- Draw lessons from good practices in past and current Structural Fund programming periods;
- Update the current guidance on measuring Structural Fund net employment effects.

The study, which was undertaken in late 2005/early 2006, involved desk research to review existing guidelines, academic literature on measuring employment effects, and a review of previous evaluations and other material highlighting experience with regard to measuring Structural Fund employment effects.

To support this research and to provide a more up-to-date insight to practices ‘on the ground’, seven case studies and other consultations were undertaken. The case studies were selected to provide broad coverage of different EU Member States and types of regions.

1.2 Structure of the Document

The document is structured as follows:

- **Section 2: Existing Guidelines and Experience** – defines key issues, examines existing guidelines, the changing EU policy context and experience with regard to measuring Structural Fund employment effects.
- **Section 3: Best Practice Framework** – sets out the suggested text for the updated guidelines. Three main steps are defined: estimating gross employment effects (Step 1), converting gross employment estimates into net effects (Step 2) and an overall assessment of Structural Fund employment effects (Step 3).
The ‘Best Practice Framework’ has been prepared in a way that should make it possible to use as a free-standing document. For this reason, there is some repetition of the text in Sections 2 and 3 of the report. The report is supported by several appendices – Appendix A to D which provide a summary of key definitions and worked examples and benchmarks (we suggest that these should be appended to the ‘Best Practice Framework’ if this is extracted as a free-standing document); Appendix E containing the full version of the review of past experience (Section 2.4 of the report); and Appendix F which provides write-ups of the case studies.

Section 2 of the report starts by defining key issues with regard to existing guidelines on measuring Structural Fund employment effects. We then consider the strengths and weaknesses of existing guidelines, developments in the EU policy framework and other factors justifying updated guidance together with past experience in measuring employment effects.

2.1 Key Issues

The Commission’s terms of reference defined a number of key issues with regard to measuring Structural Fund employment effects:

- Does the current guidance provide a clear and workable set of definitions and methodologies for measuring net employment effects?

- To what extent have complications have arisen in trying to apply current guidance on measuring net employment effects and why?

- What modifications, if any, are needed to existing concepts and methods to take into account the priorities set out in the Structural Fund Regulations for the 2007-13 programming period and the changing EU policy context – in particular, the renewed Lisbon Strategy?

In this section (and Section 3) we address these issues. We begin by providing an overview of existing Commission material on measuring Structural Fund employment effects. After this, specific issues relating to the measurement of employment effects are considered in more detail.

2.2 Existing Guidelines
There are a number of key sources of Commission guidance on measuring employment effects:

- **MEANS** – the various guidelines published in the mid 1990s include several with guidance on evaluating employment effects;

- ‘**Counting the Jobs**’ which was published in 1997 and focuses specifically on how to measure Structural Fund employment effects;

- The ‘**Evaluating Socio Economic Development**’ website which was launched in 2003 and provides guidance on various aspects of Structural Fund evaluations.

The **MEANS** publications were one of the earliest sources of Commission guidance on measuring Structural Fund employment effects. The guidance is mainly set out in two publications - the third MEANS handbook *Measuring the Employment Effects of Community Structural Interventions* (1995) and the sixth MEANS handbook entitled *Evaluating the Contribution of the Structural Funds to Employment* (1996).

Another important source is ‘**Counting the Jobs: How to Evaluate the Employment Effects of Structural Fund Interventions**’ (1997). The methodological approach set out in this publication was based on the broad framework set out in the MEANS guidance but further developed certain aspects.

The advantages of a bottom-up approach were stressed:

‘Developing estimates of employment effects from the ‘bottom-up’, i.e. by individual measure has a number of advantages. The most important of these is that it clearly identifies how each component of the programme contributes to the overall employment effect. It also allows the experience of the previous programming period to be taken into account’.

The Guidelines emphasised the need for common definitions, suggesting that the focus should be on measuring ‘employment generated in the process’ of Structural Fund interventions, employment created or transformed as a direct consequence of interventions and employment and ‘employment created or transformed as an indirect consequence’ of programmes. Another notable feature of the Guidelines was the emphasis on converting gross employment estimates into net effects which it argued is important in arriving at an accurate estimate of
Existing Guidelines and Experience

Structural Fund outcomes. The publication also had the merit of being concise and focused solely on employment effects.

In 2003, DG Regio launched a website ‘Evaluating Socio Economic Development’ which provides guidance on various aspects of Structural Fund evaluations. This defines Structural Fund employment effects as an ‘improvement in employability, creation and maintenance of jobs, or structural modification of the labour market, following an intervention’.

The guidance provides examples in a number of policy areas (e.g. Alternative Labour Market Policies) on measuring employment effects and conversion of gross into net estimates. Sourcebook 2 on evaluating socio-economic development includes definitions of the various concepts involved (additionality, displacement, indirect effect, etc) and gives more consideration to indirect/multiplier effects than the original MEANS documentation. However, there is still relatively little guidance on methodologies for applying the concepts relating to net employment effects in practice.

In addition, the Commission produced a number of working papers and other guides that include references to measuring employment effects.¹ These do not, however, give detailed guidance on practical procedures for measuring Structural Fund employment effects. Evaluation studies themselves have also helped to push forward the 'state of the art'.

Conclusions – Existing Guidance

Firstly, whilst existing guidance explains how, in theory, to measure Structural Fund employment effects, and there is broad agreement on basic definitions, there is still a lack of specific guidance on how ‘bottom-up’ approaches should be applied in practice.

Key issues that need tackling to overcome this shortcoming are:

¹ See for example, Framework for Ex-Post Evaluation’ (1993); 'Guidelines for the Monitoring and Interim Evaluation of CSFs, SPDs and Assistance (1995); 'Common Guide for Monitoring and Interim Evaluation (undated). More recent working papers include one on ‘Indicators for Monitoring and Evaluation: A Practical Guide’ (draft, January 2006) which is intended for the 2007-13 period.
Existing Guidelines and Experience

- Defining more clearly the sort of information that should be collected at a project level on employment effect as part of routine monitoring and reporting;

- At the programme level, providing more precise guidance on measuring the employment effects arising from different types of Structural Fund interventions;

- Guidance on specific methodological issues, e.g. the parameters required to make adjustments for additinality, displacement and indirect effects.

Taking the first point, the information required for an assessment of most Structural Fund employment effects is based ultimately on the feedback from individual projects. Therefore, unless data collection requirements and methods are clearly set out at the project level, any attempt to construct a ‘bottom-up’ system for quantifying Structural Fund employment effects at the Measure, Priority and Programme level is not likely to be successful.

The distinction between direct and indirect employment effects is important here: project level data should provide the information needed to estimate jobs directly attributable to Structural Fund interventions (‘outputs’ and ‘results’). Estimating the number of jobs indirectly attributable to such interventions has more to do with assessing programme ‘impacts’ and is only partly based on an analysis of data on direct jobs.

Secondly, much of the existing guidance on measuring employment effects is generic in nature and not specific to particular types of Structural Fund intervention and not comprehensive in terms of covering both the ERDF and ESF aspects. At the programme level, there is a need to distinguish more clearly between ESF and ERDF interventions and their specific employment effects. At the Priority and Measure level in the case of the ERDF, there is a need for more precise guidance on employment effects associated with different types of interventions and how these should be measured (business support, training, technology transfer and R&D, risk capital financing, physical infrastructure, etc).

Thirdly, there is a need for more specific guidance on specific methodological issues. This includes the methodological steps involved in converting gross Structural Fund employment outcomes into net effects where there is, for example, very little guidance on the parameters to use. Similarly, if a survey-based approach is advocated as a way of helping to estimate employment effects, then guidance should be provided on how this type of exercise should be conducted.
Secondly, guidance on measuring jobs needs to be aligned more closely with the new Structural Fund Regulations for the 2007-13 programming period and changing regional priorities and EU policies generally. This consideration is examined in further detail below.

2.3 EU Policy Context

The EU policies that are especially relevant from the point of view of measuring Structural Fund employment effects are:

- Cohesion policy for the 2007-13 period including the Strategic Guidelines and Structural Fund Regulations;
- Lisbon Strategy and in particular the objective of creating ‘more and better jobs’ and associated aspects relating to employment and growth which is stressed in other Community policies;
- EU enlargement and the need in the context of social and economic cohesion to reduce employment gaps and to tackle specific problems such as low employment rates and the side effects of modernising industrial structures and restructuring.

Taking the first of these considerations, in 2005, Strategic Guidelines for the new 2007-13 Structural Fund programming period were adopted. The Guidelines stress that the enlargement of the EU to 25 Member States, later to 27 or more, presents an unprecedented challenge for competitiveness, employment and internal cohesion of the European Union.

To meet these challenges, the Guidelines argue amongst other things for investment in regions with high growth prospects that have the potential to catch up rapidly with the rest of the EU; and more generally to invest in the drivers of growth and employment. Developments in the ‘old’ EU Member States also pose challenges that the Strategic Guidelines seek to address including the consequences of restructuring and promotion of competitiveness. Here, although the impact on employment is likely to be positive, at least in the long term, Structural Fund interventions to promote these priorities can lead to job losses in some circumstances in the short term.

In themselves, these EU regional policy priorities are not new. However, there is a greater and more explicit focus

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Existing Guidelines and Experience

on promoting regional competitiveness that in previous policies,

The Structural Fund Regulations for 2007-13 also introduce a simplified programming architecture with two main priorities - the ‘Convergence’ objective and the ‘Regional competitiveness and employment’ objective. Reflecting this strategic orientation, in the new Structural Fund Regulations for 2007-13, there is a more pronounced concentration of ERDF interventions in former Objective 2 regions on three priority themes:

3 Several objectives have been defined for the 2007-13 programming period: a ‘Convergence’ objective is to cover the Member States and regions whose development is lagging behind, i.e. those whose per capita GDP measured in purchasing power parities is less than 75% of the Community average. Member States targeted by the ‘Convergence’ objective whose per capita gross national income is less than 90% of the Community average will also benefit under the Cohesion Fund. The ‘Regional Competitiveness and Employment’ objective will cover the territory of the Community outside the ‘Convergence’ objective including former 2000-06 Objective 1 regions that no longer satisfy the ‘Convergence’ criteria and receive transitional aid as well as all other regions of the Community. A third ‘European territorial cooperation’ objective is to cover regions having land or sea frontiers, i.e. areas for transnational cooperation defined with regard to actions promoting integrated territorial development and support for interregional cooperation and exchange of experience.

innovation and the knowledge economy, environment and risk prevention, accessibility and services of general economic interest.

In the least developed (former Objective 1) regions a broader range of priorities is set out with a continued emphasis on the need to promote cohesion by creating new and durable jobs. A significant change in the Structural Fund Regulations for the 2007-13 period is the abandonment of a ‘zoning’ approach with whole regions becoming eligible for aid (national and regional authorities may of course still decide to target particular areas but the decision to do so now lies solely with them). These changes and the overall strategic orientation of the new Structural Fund programmes clearly needs to be reflected in methodologies for assessing impacts, including the measuring of employment effects.

There are also significant changes in Structural Fund management with an increased decentralisation of responsibilities to Member States. This includes the preparation of National Strategic Reference Frameworks (NSRFs) with objectives in regional

Existing Guidelines and Experience

programmes defined only at a Priority level. But at the same time the Regulations also stress the importance of monitoring and evaluation and the ability to demonstrate the contribution of structural interventions to reducing employment and other disparities between Member States and regions. This, coupled with a greater decentralisation of responsibilities, means that for evaluation of Structural Fund impacts including employment effects to be effectively undertaken, there is an even greater need than before for a common methodological framework.

Estimating the employment effects of Community interventions is not only important in assessing the impact of the Cohesion Policy but also in demonstrating the contribution to the Lisbon strategy. The Lisbon Strategy, which was launched in 2000, set the aim of making Europe by 2010 ‘the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion and respect for the environment’.

Progress towards this aim has, however, been disappointing with European productivity and growth rates lagging behind Asia and the USA, low rates of job creation and persistently high rates of unemployment, and poor economic performance generally. The scale of the challenge therefore remains considerable. For example, around 20 million jobs need to be created in the EU25 to meet the overall target of full employment. Moreover, the Lisbon Strategy seeks to not only create ‘more jobs’ but also ‘better jobs’ which means increasing new employment opportunities in occupations and sectors with good prospects together with measures to promote

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5 Although Member States are only obliged to define regional programmes at a Priority level for the Commission’s purposes, Priorities are likely to continue to include different Measures and this is reflected where appropriate in the ‘Best Practice Framework’.

6 The Structural Funds make a very important contribution to the Lisbon Strategy. A recent analysis shows that the share of Structural Fund support for Lisbon-type investments is frequently above 50% based at least on evidence from the 2000-06 programmes. Looking ahead, it is expected that new Structural Fund programmes for 2007-13 will earmark a proportion of their allocations to promote Lisbon Strategy objectives. However, these are very broadly defined

although there tends to be a focus on: knowledge-based economic activities and promoting competitiveness generally; attracting more people into employment; increasing the adaptability of workers and enterprises, and the flexibility of labour markets, to encourage job creation in growth sectors; modernizing physical infrastructure to make regions more attractive to investment; and investing more in human capital through better education and skills.
**Existing Guidelines and Experience**

Employability so that people can take advantage of these opportunities.

Being able to measure progress towards this aim at not just an EU level but also at a national and regional level is more important than ever. In March 2005, a new ‘Partnership for Growth and Jobs’ was launched. This placed emphasis on the need to ‘mobilise all appropriate national and Community resources – including Cohesion Policy’ in the effort to achieve Lisbon Strategy aims. As part of the renewed Lisbon Strategy, the Commission also proposes to publish an annual report (the ‘Joint Employment Report’) assessing the progress made EU Member States with their national reform programmes. Several key targets are suggested - the level of R&D expenditure and employment rates as well as other progress indicators and benchmarks. Assessing the contribution of Community interventions to Lisbon Strategy aims with regard to ‘more and better jobs’ is a central feature of this framework.

A further important justification for developing new guidance on Structural Fund employment effects is that EU enlargement poses a major challenge with regard to job creation and the capacity to measure progress towards closing the gap with the EU as a whole is therefore essential. The nature and scale of the challenge varies of course across the EU10: in particular, there is a distinction to be made between Cyprus and Malta (relatively small island economies) on the one hand, and the other eight new Member States (comparatively large populations, formerly state-controlled economies, more heavily industrialised, etc), on the other.

Overall, it has been estimated that four million jobs need to be created if the average level of employment in the ten new Member States is to be aligned with that of the rest of the EU. Appreciable employment gaps also persist according to location, age and gender.

In EU10 countries, there is not only a need for methodological guidance but also for capacity building. Efforts to estimate the employment effects arising/like to arise from structural interventions have so far taken place mainly in the context of the ex ante evaluations for the 2004-06 Structural Fund programmes and this exercise was led in most countries by experts from EU15 countries. As the programming cycle moves on, there is a need to develop local expertise in the techniques needed to accurately estimate the employment effects of future

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7 Most comments relating to EU10 counties made in this document relate to the eight new Member States.
Existing Guidelines and Experience

programmes, and for the ex post and interim evaluations of past interventions, together with institutional capacity building generally.

2.4 Review of Past Experience

It is clearly important that new guidelines on measuring Structural Fund employment effects take into account past experience. Especially relevant are:

- Interim and ex-post evaluations from the 1994-99 and 2000-06 periods;
- EU level thematic evaluations that have been undertaken for the Commission;
- Other factors including the systems in place at a regional and national level to monitor Structural Fund programmes and wider experience in measuring employment effects.

A detailed assessment of past experience is contained in Appendix F. Here, we present the main conclusions.

‘Bottom-up’ methods of measuring Structural Fund employment effects have been mainly applied in the evaluation of Objective 2 programmes. With Objective 1 programmes, ‘top-down’ (econometric) techniques have been generally used to estimate employment effects except in smaller regions. In the case of (former) Objective 6 regions, the emphasis has tended to be on a qualitative assessment of employment effects with only limited quantification.

Over the years, there has been some improvement in the extent to which evaluation studies have quantified and analysed Structural Fund gross employment effects. This reflects a number of factors - the increasing emphasis placed by the Commission on the need to quantify employment effects, more sophisticated monitoring systems, improvements on evaluation guidance and techniques, etc. However, shortcomings are still apparent.

8 Good examples from the case study work of the steps that have been taken to improve monitoring systems are provided by the Yorkshire & The Humber Objective 1 programme in the UK; at a national level, the PRESAGE system developed by the French authorities, and supporting guidance, is another. A monitoring system has also been developed at the national level in Italy by the Ministry of Economy in order to capture the key indicators related to the various aspects of Structural Funds. The monitoring system captures the data related to the jobs created and safeguarded, permanent and temporary, but only for infrastructure related projects. In the EU10, the SFMIS system was set up by the Ministry of Finance in Lithuania as part of the preparations for Structural
Existing Guidelines and Experience

Past evaluations have relied heavily on monitoring data to estimate gross employment effects. But in some cases other methods have been used, especially where monitoring data has not been available, or was considered unreliable. These methods included: using the job targets recorded on project appraisal forms; surveying a sample of projects/beneficiaries to identify job outputs and then scaling up the results to provide an estimate for programmes as a whole; and using benchmarks (typically, cost per job based) derived from other programmes and studies. Purely empirical methods, in particular surveys, to help estimate Structural Fund employment effects (or at least, to check estimates based on monitoring data) appear to have been rarely used and in most cases, monitoring data has been the main source of information for estimates.

There is, however, still a very mixed picture with regard to the analysis of different types of employment effects and beneficiaries. Quantifying ‘jobs created’ has posed less complications (although not across the full range of Structural Fund measures) than of deadweight. In Ireland, an annual survey of projects is also undertaken (see case studies).

9 As part of the methodological approach used in France to verifying whether ‘bottom-up’ monitoring data collated through regional monitoring systems and provided by beneficiaries in respect of employment outcomes is accurate, survey-based research is carried out at a regional level with a representative sample of final beneficiaries. The function of the survey work has been to cross-check the reliability of data as well as to probe issues around employment impacts in greater depth. National guidance states that surveys should be undertaken focusing on beneficiaries at the regional level to obtain more detailed information about employment effects, for example in respect of the type of jobs being created (full-time, part-time), job quality (assessed by examining the qualification level of new direct jobs created) and other factors such as the extent

Funds implementation in April 2005. SFMIS is composed of 3 modules the first dealing with the registration of applications, the second with the collation of financial data on payments and the third with the collation of monitoring data on ‘physical’ outcomes. Data is currently collated through the national monitoring system in respect of gross jobs created (direct) and net employment effects (direct).

10 There are some interesting comparisons to be made in this respect between the ex post evaluation of the 1994-99 Objective 1, 2, 5b and 6 programmes on the one hand, and the ESF ex post evaluation on the other. In particular, the ESF interim report suggests that the evaluators have been able to rely heavily on surveys and research undertaken at a regional level. For example, a longitudinal study was carried out on 32 Objective 3 measures in Belgium; likewise, in Portugal, the effects of Objective 4 was measured through a survey of 280 SMEs that had participated in ESF schemes and a control group of 200 SMEs that had not taken part. There was very little evidence of survey work of this type being undertaken at a regional level as an input to the Objective 1, 2 and 6 evaluations.
Existing Guidelines and Experience

other types of employment effects. In particular, far fewer evaluations have successfully provided reliable estimates of 'jobs saved'. Instead, there has been a tendency to count all the jobs in an assisted undertaking rather than those just at risk. There has also often been a failure to distinguish between 'jobs created' and 'jobs saved'. Where no distinction has been made, a variety of practices have been adopted - some studies have provided an estimate for 'jobs created' or 'new jobs' only; in other cases, separate estimates have not been given for 'jobs created' and 'jobs saved' and instead the two categories have been combined. Because of the difficulty of measuring 'jobs saved', this type of employment effect is no longer measured in some regions.

Another shortcoming of past practices is that very few evaluations have distinguished between temporary and permanent jobs. Likewise, very few evaluations have provided any insight into the durability of what are classified as permanent employment effects. In some cases, there has also been a failure to distinguish clearly Objective 2 area although they continue to be in the Objective 1 part of the region.

In the current 2000-06 programming period, experience in France is interesting in this respect. Here, benchmarks have been developed at a national level for the cost per temporary job as a basis for estimating the number of temporary jobs created by Structural Fund interventions. DIACT's calculations suggest that as at by 2005, 137,469 temporary jobs had been created across Objective 1 and 2 regions in France at an average cost per job of 79,000 euros. It is recognised that there are weaknesses with this approach notably the fact that the length of a temporary job may vary considerably from a few hours (e.g. trainers) to several years (e.g. construction workers involved in large-scale construction projects). To overcome this shortcoming, the French national authorities have suggested that the number of jobs should be divided by the duration of the programming period to give an annualised equivalent figure.

A good example of an exception was the 1994-99 Objective 1 evaluation for the Brandenburg region of Germany where a sample of businesses was surveyed to investigate whether the jobs created by Structural Fund assistance still existed. The results suggested that that some new jobs - albeit only 1.5 to 2% of the total - that had been 'claimed' earlier no longer existed.

11 The problems involved in accurately measuring 'jobs saved' are examined in more detail later in this document. However, in short, it is often very difficult to distinguish between the jobs directly at risk in an undertaking that are safeguarded through Structural Fund intervention and other jobs in the same undertaking which are not at risk. As a result, estimates of 'jobs saved' tend to overestimate the scale of Structural Fund employment effects by counting all jobs in an undertaking rather than just those that would be lost without intervention.

12 Example of where this is the case is Yorkshire & The Humber (UK) where 'jobs maintained' are no longer monitored in the
Existing Guidelines and Experience

enough between direct and indirect employment effects.\textsuperscript{15} There are also few examples of ERDF employment effects being analysed by gender or other socio-economic categories (e.g. young people, other disadvantaged groups).\textsuperscript{16} With regard to job quality, several evaluation studies have provided interesting examples of ‘meso-level’ analyses examining employment effects from a sectoral perspective\textsuperscript{17} and there are important lessons to be learnt

\textsuperscript{15} As one of our case studies shows, this has been a problem in France where the introduction of the PRESAGE monitoring system has encountered the problems with the reliability of data because some regions have entered information into monitoring systems that includes estimates of both direct and indirect employment effects.

\textsuperscript{16} An exception from the case studies is the Northern Norrland Objective 1 programme (Sweden) where apart from reporting on the number of jobs, the gender breakdown is also monitored in the current 2000-06 period.

\textsuperscript{17} In the 1994-99 Thuringen Objective 1 evaluation (Germany), for example, the evaluators proceed from micro-economic analysis, working up to the meso-level by examining the impact of Structural Fund projects on employment in different industrial sectors, sub-regions, social groups and finally on the region's economy as a whole (in this context, the term ‘micro-level’ relates to projects/individual undertakings and ‘meso-level’ to the sum of these interventions at a sectoral, regional or socio-economic grouping level. Programme level interventions/effects would be defined as ‘macro-level’). The case study research for this study also highlighted a similar approach in

Relatively few previous Structural Fund evaluations have provided an analysis of ERDF employment effects by target group, in particular by economic sector or area. However, there are some exceptions.\textsuperscript{18} In the case of ESF interventions, the classification of employment effects according to the labour market status of beneficiaries (employed, unemployed, etc) is standard practice.

\textbf{Relatively few studies have comprehensively addressed key programme evaluation issues - relevance, effectiveness, efficiency, impacts/added value\textsuperscript{18}}

Yorkshire & The Humber in the UK where job creation effects are analysed by postcode and GIS mapping.

\textsuperscript{18} In the mid term evaluation of the 200-06 Brittany Objective 2 programme (France), for example, the regional authorities carried out an analysis of job creation broken down on a geographic basis. This approach was not mirrored by regional authorities elsewhere however firstly because the approach was regarded as overly complex and secondly because of doubts as to whether the resultant data’s reliability. That being said, regions were generally able to provide examples of data broken down by département as well as by region - a good example being the Pays de la Loire region.
value and sustainability - from the perspective of Structural Fund employment effects. ‘Relevance’ has tended to be assessed in terms of a programme’s priorities rather than its outputs, including job outputs. Few studies have compared employment aims (assuming they are defined) at the outset of programmes with the outcomes actually achieved, i.e. ‘effectiveness’, still less the relative effectiveness types of interventions in generating positive employment effects. ‘Efficiency’ – cost per job – has, however, often been evaluated but not in terms of value for money. Likewise, very few evaluations have applied the concept of ‘sustainability’ to an analysis of employment effects.

There is a mixed picture from past experience with regard to the conversion of gross employment outcomes into net effects. Relatively few studies have done this and where it has been attempted, the methodologies and parameters used are often not transparent. Where an estimate of net Structural Fund employment effects has been provided, various methods have been used - deriving the parameters from other evaluation studies; carrying out surveys to estimate additionality, displacement, substitution and indirect effects; statistical techniques, such as shift-share analyses of regional employment trends; and using econometric models to estimate net Structural Fund employment effects. The first and second of these methods have tended to be the most common. There have been quite a large number of studies where the parameters for additionality, displacement and indirect effects have been derived from survey work, focusing either on projects or on final beneficiaries.

Few examples exist of evaluations using purely 'bottom-up' techniques to assess the overall impact of Structural Fund programmes on macro-economic trends. Quite apart from deficiencies with regard to the availability of monitoring data, the nature of Structural Fund programmes, in particular the fragmented geographical coverage of Objective 2 and 6 and their focus on small areas, have also made overall impact assessments using ‘bottom-up’ methods difficult (in Objective 1 regions, where as noted earlier macro-economic models have been used, overall assessments have of course been possible).

19 Thus in the 1994-99 Objective 1 Merseyside region of the UK, a ‘bottom-up approach was used to estimate employment effects for 1994-99. Here, some 29,082 jobs were recorded as having been created through Objective 1 interventions. Using benchmarks based on experience elsewhere in the UK (deadweight – 35%; displacement – 35%; multiplier for indirect effects – 1.25) the study estimated that there were 15,400 net jobs. Evidence from stakeholder interviews suggested that this may underestimate actual deadweight and displacement effects.
Existing Guidelines and Experience

That said, there have been a number of exceptions.20 The geographically fragmented nature of eligible areas and complications this causes for impact assessments should be less of a consideration in the 2007-13 period because Structural Fund programmes will no longer include a ‘zoning’ approach.

Turning to specific types of Structural Fund interventions, in the case of the ERDF there is comparatively good experience with the measurement of employment effects arising from business support measures but less so with other types of intervention. Examples from EU wide thematic evaluation studies include a thematic evaluation of Structural Fund impacts on SMEs.21 In the field of transport infrastructure, quantification of employment effects was also undertaken in a thematic evaluation.22 But otherwise, thematic evaluations covering other types of Structural Fund interventions (RTDI, information society, sustainable development, etc) have not addressed

20 In the Objective 1 Brandenburg mid-term assessment (Germany) where the evaluators estimated that based on first two years of programme and 5,000 net jobs were being created each year, the Structural Funds were contributing towards 25% of all new jobs in the region. The study also suggested that jobs in assisted firms were growing even faster (at 28%) than in the region as a whole. It was estimated that the combined effects of ERDF, ESF and EAGGF measures had led to 39,000 new jobs being created for the first two years of programme (1995-96) compared with 25,000 unemployed over same period. Reasons for the discrepancy (i.e. 50% more jobs than unemployed) were seen as being probably due to double counting.

21 ‘Thematic Evaluation of Structural Funds Impacts on SMEs’ (Ernst & Young, 1999). This research estimated that around two million net jobs were created or saved as a result of Structural Fund assistance to SMEs (about a quarter of all net Structural Fund jobs for the 1994-99 period). This estimate was arrived at by scaling up the jobs created or saved by the sample of assisted SMEs used for the survey work. Case study feedback was used to obtain the parameters for additionality, and possible displacement and indirect effects. The report examines the sensitivity of net job estimates by testing various scenarios relating to Structural Fund targeting, SME survival rates, and the parameters required to convert gross into net effects.

22 Thematic Evaluation of Structural Fund Impacts on Transport Infrastructure’ (ECOTEC, 2000). The methodology involved making assumptions for the cost per job (one person year of direct employment) for transport infrastructure projects. This enabled direct jobs creation – mainly construction-related – to be estimated. Based on this approach, the study calculated the total number of project related job opportunities created by the 1994-1999 programme to be over 900,000 person years in direct employment, with a further 1,400,000 person years in indirect employment. This was a demand-side employment impact estimate only and no attempt was made to quantify further jobs that would be produced in the long term by supply-side effects.
the question of employment effects. This picture is reflected in interim and ex post evaluations: whilst in many cases, there has been an estimate provided of employment effects associated with business support measures and investment in physical infrastructure, this has been less so with other types of interventions.

Overall, therefore, the review of recent experience in measuring Structural Fund employment effects suggests that there are still major shortcomings. To some extent this can be attributed to an absence of methodological guidance and imprecise definitions. But the explanation also lies in a failure to apply the definitions and guidance that exists. More positively, monitoring systems in many regions have been improved to enable a far more sophisticated analysis of employment effects than was previously feasible.
3.1 Introduction

This document sets out a ‘Best Practice Framework’ for measuring Structural Fund employment effects. Updated guidelines are needed for a number of reasons:

- There are still shortcomings in current practices with regard to the measurement of Structural Fund employment effects;
- Since earlier guidelines were produced the regional policy context has changed, in particular following EU enlargement. Given the substantially increased employment disparities, being able to accurately measure Structural Fund impacts in helping to reduce these disparities is more important than ever;
- At the same time, the new Structural Fund Regulations for the 2007-13 period introduce important changes with regard to the way in which Programmes are to be designed and implemented and new guidance is needed to reflect these changes;
- The Lisbon Strategy has the aim of creating ‘more and better’ jobs means that new guidelines are needed that take this and other EU policy developments fully into account.

The Framework is designed to provide a practical, step-by-step to measuring Structural Fund employment effects using a ‘bottom-up’ approach (this term is explained in Section 3.3). It is envisaged that the main users of the ‘Best Practice Framework’ will be those involved in preparing and implementing Structural Fund programmes – the Commission, national and regional authorities/programme managers, those involved with the implementation of projects, evaluators, etc.

To be workable, various factors need to be balanced, namely the need for a common approach to measuring Structural Fund employment effects so that information can be aggregated and compared; ensuring sufficient flexibility to take into account differing national and regional circumstances; and, last but not least, being practical and realistic in terms of what can be achieved and not adding unnecessarily to the work-load on those involved in implementing programmes. The ‘Best Practice Framework’ seeks to achieve a balance between these and other factors.

The ‘Best Practice Framework’ is structured as follows: Section 3.2 sets out the overall EU policy context; Section 3.3 explains what is meant by a ‘bottom-up’ approach to
Best Practice Framework

measuring Structural Fund employment effects and why this approach should be adopted; Section 3.4 provides key definitions; Section 3.5 relates the Structural Fund intervention logic insofar as it applies to jobs to key aspects of the proposed methodology; and Section 3.6 (supported by the Appendices A to C) sets out the ‘Best Practice Framework’.

3.2 EU Policy Framework and Jobs

The development of new guidelines on measuring Structural Fund employment effects needs to be seen against the backdrop of:

- **Cohesion policy** - the redefinition of Structural Fund priority objectives in the Regulations for the new 2007-13 programming period also has implications for the way in which employment effects are measured.

- **Enlargement** – the accession of the 10 new EU Member States poses a major challenge with regard to job creation and the capacity to measure progress towards closing the gap with the EU as a whole is therefore essential. Job creation is also a continuing priority in most ‘old’ EU Member States.

- **Lisbon Strategy** - there is a need to be able to measure the Structural Funds’ contribution to the aim of enhancing competitiveness and creating ‘more and better jobs’.

In 2005, Strategic Guidelines for the new 2007-13 programming period were adopted. The Guidelines stress that the enlargement of the EU to 25 Member States, later to 27 or more, presents an unprecedented challenge for competitiveness, employment and internal cohesion of the European Union.

To meet these challenges, the Strategic Guidelines argue amongst other things for investment in regions with high

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23 ‘Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines 2007-13’, COM 2005 (0299), July 2005. A key aim of the Strategic Guidelines is to reinforce links between the Structural Funds and other major Community policies such as sustainable development and the Lisbon Strategy. Based on the Guidelines, Member States are expected to prepare National Strategic Reference Frameworks (NSRFs). The Guidelines and draft Regulation also bring together the Structural Funds and Cohesion Fund in Operational Programmes for the 2007-13 period. In this ‘Best Practice Framework’, the term ‘Structural Funds’ is used and should be interpreted as covering the ERDF, ESF and Cohesion Fund.
growth prospects that have the potential to catch up rapidly with the rest of the EU; and more generally to invest in the drivers of growth and employment. At the same time, the Strategic Guidelines stress the need to promote cohesion by creating new and durable jobs in the least developed regions. A significant change in the Structural Fund Regulations for the 2007-13 period is the abandonment of a ‘zoning’ approach with whole regions becoming eligible for aid. This again has implications for assessing Structural Fund impacts including employment effects.

From a broader perspective, EU cohesion policy for the 2007-13 period has to meet challenges arising from an acceleration in economic restructuring as a result of globalisation, trade opening, the technological revolution, the development of the knowledge economy, an ageing population and a growth in immigration. This new strategic orientation clearly needs to be reflected in methodologies for assessing Structural Fund impacts, including the measuring of employment effects.

The Structural Fund Regulations for 2007-13 introduce a simplified programming architecture with two main priorities - the ‘convergence’ objective and the ‘Regional competitiveness and employment’ objective. There are also significant changes in Structural Fund management with an increased decentralisation of responsibilities to Member States. The continued emphasis on accountability and transparency, coupled with a greater decentralisation of responsibilities, means that for evaluation of Structural Fund

24 Several objectives are defined for the 2007-13 programming period: a ‘Convergence’ objective is to cover the Member States and regions whose development is lagging behind, i.e. those whose per capita GDP measured in purchasing power parities is less than 75% of the Community average. Member States targeted by the ‘Convergence’ objective whose per capita gross national income is less than 90% of the Community average will also benefit under the Cohesion Fund. The ‘Regional Competitiveness and Employment’ objective will cover the territory of the Community outside the ‘Convergence’ objective including former 2000-06 Objective 1 regions that no longer satisfy the ‘Convergence’ criteria and receive transitional aid as well as all other regions of the Community. A third ‘European territorial cooperation’ objective is to cover regions having land or sea frontiers, i.e. areas for transnational cooperation defined with regard to actions promoting integrated territorial development and support for interregional cooperation and exchange of experience.

25 Reflecting this and to give Structural Fund programmes a more strategic orientation, Member States are asked to define and agree with the Commission only longer term objectives at a Priority and Operational Programme level. The way in which these longer term objectives are then translated into more operational goals is to be set out at the Measure level but this level of programming now falls solely within the competence of national and regional authorities.
impacts including employment effects to be effectively undertaken, there is an even greater need than before for a common methodological framework.

Estimating the employment effects of Community interventions is not only important in assessing the impact of the Cohesion Policy but also in demonstrating its contribution to the Lisbon strategy. The Lisbon Strategy, which was launched in 2000, set the aim of making Europe by 2010 ‘the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion and respect for the environment’.

Being able to measure progress towards this aim at not just an EU level but also at a national and regional level is more important than ever. In March 2005, in an initiative to re-launch the Lisbon Strategy, the new ‘Partnership for Growth and Jobs’ was adopted. This placed emphasis on the need to ‘mobilise all appropriate national and Community resources – including Cohesion Policy’ in the effort to achieve Lisbon Strategy aims. The role of EU Member States was also stressed (e.g. through a guideline of devoting at least 3% of GDP to investment in R&D). As part of the renewed Lisbon Strategy, the Commission proposes to publish an annual report (the ‘Joint Employment Report’) assessing the progress made EU Member States with their national reform programmes. Several key targets are suggested - the level of R&D investment and raising employment rates as well as other progress indicators and benchmarks. Assessing the contribution of Community interventions to Lisbon Strategy aims with regard to ‘more and better jobs’ is a central feature of this framework.

A further important justification for developing new guidance on Structural Fund employment effects is that EU enlargement poses continuing and major challenges with regard to job creation and the capacity to measure progress towards closing the gap with the EU as a whole is therefore essential. For example, it has been estimated that four million jobs need to be created if the average level of employment in the ten new Member States is to be aligned with that of the rest of the EU. Appreciable employment gaps also persist according to location, age and gender.26

26 The nature and scale of this and other challenges varies across the EU Member States. In particular, there is a distinction to be made between Cyprus and Malta (relatively small island economies) on the one hand, and the other eight new Member States (formerly state controlled economies, relatively large industrial sectors and populations, etc) on the other. In this ‘Best Practice Framework’, references to EU10 mainly relate to the latter group of eight countries.
In EU10 countries, there is not only a need for methodological guidance but also for capacity building. Efforts to estimate the employment effects arising/like to arise from structural interventions has so far taken place mainly in the context of the ex ante evaluations for the 2004-06 Structural Fund programmes and relied heavily on external expertise. As the programming cycle moves on, there is a need to develop local expertise in the techniques needed to accurately estimate the employment effects of future programmes, and for the ex post and interim evaluations of past interventions. Similarly, institutional capacities need to be developed so that appropriate research is commissioned, data is handled efficiently and the results of analyses feed back into the policy-making process.

3.3 Bottom up Approach to Measuring Employment Effects

A ‘bottom-up’ approach to evaluating direct Structural Fund employment effects involves using monitoring data on projects (preferably backed up by surveys and other research) to estimate direct employment effects with an aggregation at the Measure and Priority levels leading to an estimate at the Programme level.

Additional analysis is needed to assess indirect employment effects but this can usually be combined with a ‘bottom-up’ approach and, indeed, is partially dependent on information on direct effects generated through this approach. The alternative – a ‘top-down’ approach – involves using econometric and/or statistical techniques to estimate the direct and indirect employment and other impacts achieved by Programmes. There are a number of advantages to a ‘bottom-up’ approach.

Firstly, there is greater scope to fine-tuning methodologies for estimating employment effects to reflect the particular characteristics of a Programme. Econometric techniques generally rely on standardised models and although these can be calibrated with assumptions about a region and local data, they cannot capture the finer detail of Programme workings and impacts. Also, it is difficult to control at a macro-economic level either for deadweight or substitution effects and to make the supply-side adjustment to the provision of grants, or for the long-run effects of structural measures, and this can in turn lead to impacts being over-estimated. Bottom-up techniques can more easily include adjustments for these factors.

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27 Experience of measuring employment effects was also gained from the evaluation of pre-accession instruments such as the PHARE programmes but there was generally less emphasis on evaluating job employment effects in these studies.
Secondly, a bottom-up approach is needed to identify the specific outcomes achieved by projects. Assuming a consistent approach is adopted, the aggregation of this information across different Measures and Priorities will give a better and more precise indication of the performance of the Programme as a whole, including the employment effects achieved. Moreover, such insights should be possible to obtain more quickly through a bottom-up approach with the monitoring of employment effects acting as a proxy indicator of wider Programme performance. As such, a bottom-up approach can provide an ‘early-warning’ tool capable of detecting factors affecting a Programme’s implementation that extend beyond strictly employment considerations in a way that is not possible if only a periodic assessment is undertaken as is usually the case when only ‘top-down’ methods are used. This presupposes of course that monitoring systems are developed that can provide accurate and timely analyses of project data.

Thirdly, a ‘bottom-up’ approach is better able to establish causality, i.e. the link between financial inputs and outputs, results and impacts. This is important in assessing precisely how a Programme has contributed to regional development and also in enabling lessons to be learnt from experience. Linked to this, the very process of implementation of a ‘bottom-up’ approach with Beneficiaries and Intermediary Bodies being required to provide information and ideally being involved in the interpretation of it, can strengthen Programme Management.28 In particular, the interaction should be mutually beneficial in promoting a shared understanding of key aims, how they can be best achieved, etc, contributing to efficient implementation and strengthening partnership working generally.

Notwithstanding the advantages, there are also drawbacks with a ‘bottom-up’ approach. This includes a tendency to overlook synergies and other wider effects, both of which are difficult to capture due to the focus on using project level data as a starting point to a process of estimating overall Structural Fund impacts. Also, ‘top-down’ approaches are much better able to capture the totality of Structural Fund employment impacts. From a more practical point of view, ‘top-down’ methods are less resource-intensive and can produce credible estimates of Structural Fund employment effects without the need for extensive data collection and the consequent work load on those involved with a Programme’s implementation.

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28 The term ‘Beneficiary’ is defined as an operator, body or firm, whether public or private, that is responsible for initiating and/or implementing operations, i.e. a project or group of projects. An ‘Intermediary Body’ is any public or private service that acts under the responsibility of the Managing or Certifying body to carry out duties on behalf of such an authority vis-à-vis implementing operations.
Given their strengths and weaknesses, a combination of ‘bottom-up’ and ‘top-down’ methods should ideally be used to estimate Structural Fund employment effects. However, this can be difficult: as noted earlier, econometric models cannot be used for smaller geographical areas. At the same time, certain aspects of a bottom-up approach can be difficult to apply on the scale required for larger Programmes. More particularly, whilst there should be no difference between larger and smaller areas with regard to the systems required to collect and analyse project data on employment effects, if this aspect of a bottom-up approach is supplemented by surveys it can be difficult to achieve an appropriate coverage of projects with a larger Programme.

Before turning to a detailed description of the key steps in measuring Structural Fund employment effects, some basic definitions are first provided in Section 3.4.

### 3.4 Key Definitions and Core Indicators

It is important that estimates of Structural Fund employment effects are based on a set of common definitions/indicators. Definitions and indicators derived from them are summarised below:

<table>
<thead>
<tr>
<th>Core Indicators for Employment Effects</th>
</tr>
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<tbody>
<tr>
<td><strong>Number of jobs created</strong> – new jobs that are created directly by Structural Fund intervention. These may be temporary or permanent;</td>
</tr>
<tr>
<td><strong>Number of jobs maintained</strong> – existing jobs that are at risk and would be lost without Structural Fund intervention;</td>
</tr>
<tr>
<td><strong>Number of employees receiving training</strong> – employees who receive training and other assistance to develop skills;</td>
</tr>
<tr>
<td><strong>Number of jobless receiving training</strong> – unemployed people benefiting from training that either improves employability and/or leads to actual employment.</td>
</tr>
</tbody>
</table>

The first two categories of Structural Fund employment effects relate to ERDF interventions and the last two categories to the ESF. At a NSRF level, the definition of some types of jobs (e.g. part-time jobs) may vary from one country to another. Below we concentrate on providing common definitions for the various types of employment effects that need to be measured as far as the Structural Funds are concerned.

In this guidance, it is assumed that the priority with regard to the ERDF for most Programmes should be on measuring permanent full-time equivalent jobs created directly by Structural Fund interventions. Jobs created directly by Structural Fund interventions are likely to account for the bulk of employment effects and are also likely to have the
Best Practice Framework

largest impact. In addition to this, other types of employment effects can be difficult to measure accurately.

In particular, previous experience suggests that there are major difficulties in estimating jobs maintained with, more often than not, all the jobs in an undertaking being counted as safeguarded rather than just those at risk. This has generally led to highly inflated estimates of employment effects for whole Programmes. However, in the new 2007-13 Structural Fund programming period, an estimate for jobs maintained will still be needed for certain types of intervention, in particular, major projects in the productive investment field. But with the exception of major projects of this kind, it is suggested that no attempt should be made to estimate jobs maintained for a Programme as a whole unless this is an important aim of a project (or group of projects) and it can be clearly demonstrated that only the jobs directly safeguarded have been counted.

There are several other important factors that should be examined in measuring ERDF-related Structural Fund employment effects – jobs created during the implementation/operational phase of projects, direct and indirect Structural Fund employment outcomes, temporary and permanent jobs, job quality, and gross and net effects.

Taking the first of these factors, it is important to distinguish between jobs created during the implementation/operational phases of projects. For example, a project to build a new road or power station will create (or possibly maintain) jobs during the period of construction. These will be mostly of a temporary nature (see definition below). However, once the new road or power station becomes operational, this should lead to a number of permanent jobs being created to help operate and maintain the facility.

A temporary job can be defined as one that lasts more than a total of six person-months during the course of the project (thereby being equal to one FTE job) but does not last beyond the period of assistance from the Structural Funds. Apart from the construction related example given above, temporary employment effects might also include seasonal (e.g. tourism-related) jobs. If a new job lasts at least two years beyond the programming period they can be defined as permanent employment effects. The concept of ‘job years’ is helpful as a way of measuring the durability of employment effects including jobs that have a seasonal character. A further distinction should be made between full-time and part-time jobs. A job can be defined as part-time if it provides employment for less than half the working week. Part-time job estimates should be translated into full-time equivalents (FTEs).
The distinction between direct/indirect employment effects is also important. The category of direct employment effects can be defined as those where causality is clear, i.e. there is a direct and immediate relationship between Structural Fund interventions and the creation, maintenance or improvement of jobs. These are job ‘outputs’ and they mainly in the organisations that benefit directly from assistance (e.g. grant aid to an entrepreneur leading to the launch of a business that takes on employees or, to take a second example, training that enables employees or people who are unemployed to gain new qualifications). 29

Direct employment ‘outputs’ of this kind should lead to ‘results’, i.e. secondary or indirect employment effects. Taking the earlier examples, ERDF supported job creation should lead to increased incomes and if there is higher consumer expenditure in an area, this will create additional jobs indirectly. Likewise, ESF support for the training of unemployed people, if it leads to them obtaining work, should lead to increased consumption with similar ‘results’ in the form of indirect job creation. Some Structural Fund interventions do not of course have an explicit objective of creating jobs (e.g. improved physical infrastructure) but can nevertheless have indirect employment effects (in the case of this example, improved transport links could result in additional trade leading to new jobs being created).

Although being able to quantify employment effects is the starting point, there should be an assessment of job quality to fully understand Structural Fund outcomes. In the past, this consideration has tended to be neglected largely because of the difficulties involved in assessing quality on an objective basis. However, looking ahead – specifically with the Lisbon Strategy objective in mind of not just creating ‘more’ jobs but also ‘better’ ones - it is clear that this shortcoming has to be addressed. In the ‘Best Practice Framework’ set out below, a way of measuring job quality is suggested.

Generally speaking, ESF interventions cannot, on their own, directly create jobs. However, such interventions can help improve the prospects of those already in work and enhance the contribution they make to the performance of undertakings that employ them. The performance indicator in this case is the ‘Number of employees receiving training’ (another term could be ‘jobs improved’) and ESF effects of this type clearly have an important bearing on job quality. As noted earlier, the ESF can also help those who are out of work to improve their chances of obtaining a job through training and other measures. The performance indicator for ESF effects of this type are described in the ‘Best Practice Framework’ as the ‘Number of unemployed people

29 The terms ‘outputs’, results and impacts are defined later in Section 3.5.
receiving training’ (another term could be ‘number of cases where ‘employability improved’). There could also be jobs maintained through ESF measures, for example wage subsidies.

Last but not least, it is important that Structural Fund employment effects are assessed on both a gross and net basis to provide an accurate estimate of impacts. To do this, estimates of gross employment outcomes should be adjusted to take into account additionality, displacement, substitution (in the case of the ESF) and indirect effects.

Experience suggests that there can be a significant difference between gross and net employment effects, and taking the above factors into account is therefore important. More detailed definitions and a suggested methodology for making the above adjustments is set out under Step 2 of the ‘Best Practice Framework’.

### Adjustments required to Estimate Net Effects

- **Additionality** can be defined as a situation where outcomes arise only because of Structural Fund intervention (the converse - 'deadweight' – is where the outcome would have occurred anyway).

- **Displacement** is where the positive effects of an intervention have negative side effects (e.g. support for SMEs improves competitiveness at the expense of non-assisted SMEs leading to job losses).

- **Substitution** effects are also relevant in the case of the ESF. Substitution applies in a situation where a person who has received training support obtains a job at the expense of either an existing employee or somebody who was also unemployed but did not receive assistance.

- **Indirect effects** come about through a combination of consumption multipliers where new jobs generate indirect employment and supplier effects have similar knock-on effects by increasing the turnover of local businesses and hence the incomes of employees.

### 3.5 Structural Fund Intervention Logic and Jobs

Structural Fund employment effects should be seen in the context of the overall intervention logic. In relation to all the types of effects defined earlier, there is a distinction between:

- **Outputs** – these are the project activities and immediate outcomes (e.g. new start-ups, physical infrastructure) that can have employment effects;

- **Results** – the number and type of gross jobs created, saved, improved, etc, as a result of actions supported by the Structural Fund;
Best Practice Framework

- **Impacts** – net employment effects and the impact on labour markets and the socio-economic situation generally in a region.

The basic Structural Fund intervention logic as applied to jobs is summarised in the following diagramme.

The diagramme traces basic ‘outputs’ through to ‘results’ and ‘impacts’ (highlighting the link between gross and net effects in the process). Key evaluation issues (examined later in Section 3.1 of the ‘Best Practice Framework’) and aspects of the overall EU policy context are also highlighted.
Best Practice Framework

Cohesion Instruments

Cohesion Fund  ERDF  Structural Funds  ESF

Physical infrastructure  Business support  Technology + innovation  Training + skills development  Other ALMPs

Employees  Unemployed  Other disadvantaged groups

Projects  Start ups  Existing firms

Jobs created  Jobs Saved  Jobs Improved  Employability Improved

Temporary/Permanent  Full Time/Part Time

Gross Employment Effects

Net Employment Effects

Deadweight  Displacement  Indirect Effects

Jobs that would have been created and/or saved anyway  Jobs that displace other existing jobs  Income multipliers, Supplier Effects

More and better jobs  Improved sectoral/occupational classification  Job quality

Impacts

Policy Context

Cohesion Instruments

Targets

Financial Inputs

Key evaluation issues

Relevance

Efficiency

Effectiveness

Sustainability

Impacts

Lisbon Strategy

Entrepreneurship

Growth and Competitiveness

Social Cohesion

R&D and knowledge-based activities

Convergence

Strategic and evaluation

Centre for Strategy & Evaluation
Best Practice Framework

Structural Fund intervention supported by the ERDF can be used for a variety of purposes of which the three highlighted in the diagramme – investment in physical infrastructure, business support facilities and services, and innovation, R&D and technology transfer – account for the bulk of funding. Basic ‘outputs’ include new facilities and services leading to new business activities, the improved performance of existing firms, etc. Higher levels of economic activity should then generate new jobs or help to maintain existing ones (‘results’).

As noted earlier, ESF interventions cannot on their own create new jobs; instead, the aim is typically to help the unemployed back into work or to improve the skills of those who already have jobs. By helping to improve employability, e.g. through training that leads to a qualification (‘outputs’), ESF measures should not only directly benefit the target groups assisted, e.g. by helping an unemployed person obtain a job (results), but also feed through to other positive economic and social impacts including key aims of the European Employment Strategy (EES).

As noted earlier, Structural Fund interventions may not have job outputs as a target but can nevertheless have (positive or negative) employment effects. A good example of this is a situation where Structural Fund aid is used to finance an R&D project. Although some jobs may be created or saved during the implementation phase of the project (e.g. to carry out research), the primary aim is likely to be to promote innovation.

However, if the business concerned becomes more competitive as a result and/or increases its turnover by selling new products and services, enabling additional employees to be recruited, then it could be argued that the Structural Fund aid contributes indirectly to increasing employment levels.

Commission guidance for the 2007-13 programming period argues that the focus should be on using a relatively limited number of core indicators to monitor and evaluate Structural Fund programmes, especially those that capture the ‘results’ and ‘impacts’. The number of (gross) jobs directly created by Structural Funds assistance is one such indicator.  

Commission working paper ‘Indicators for Monitoring and Evaluation: A Practical guide’. This argues that although the quality of indicator systems improved during the 2000-06 period, there was a tendency for an overly complex approach with insufficient attention paid to the needs of users. At the same time, the working paper argues that while output indicators deliver information on physical effects, more emphasis should be placed on using results indicators since these focus on social-economic effects and are the basis for evaluation of impacts. The use of a set of common minimum core indicators is advocated that...
The focus on a more limited range of indicators also reflects the more strategic orientation of Programmes since it is envisaged that expected ‘results’ will be defined for each Priority and that monitoring and evaluation activities will concentrate on assessing progress against targets at this level using a common set of core indicators.

3.6 **Best Practice Framework**

The Best Practice Framework set out below consists of three key steps:

- **Step 1** – Setting targets and estimating gross employment effects
- **Step 2** – Estimating net effects and regional impacts;
- **Step 3** – Overall assessment and contribution to key EU priorities.

These steps are designed to correspond broadly with the Structural Funds programming cycle, starting with tasks associated with the preparation of new programmes, moving on to the monitoring of employment effects and then the assessment of impacts. Underpinning the three main steps are common definitions for different types of employment effects and methodological guidance to ensure that the measurement of these effects is undertaken across different countries and regions on a consistent and comparable basis.

A partnership approach is necessary for effective implementation of best practices in the measurement of Structural Fund employment effects, as with other aspects of Programmes. That said different partners have differing but complementary inputs to make at each stage. Key responsibilities are highlighted in the diagramme opposite.

Thus, the steps that need to be taken to set up an effective framework for estimating gross employment effects at a Programme level should be primarily the responsibility of national and regional authorities; this also applies to various tasks of an on-going nature during the implementation process. However, with Steps 2 and 3 there should also be a strong lead at a national level with elements of Step 3 being undertaken at a European level.
Best Practice Framework

Step 1 – Setting Targets & Estimating Gross Employment Effects

The first step – providing an estimate of gross employment effects – represents the minimum that national and regional authorities responsible for Structural Fund programmes should undertake.

1.1: Baselines and targets – at the beginning of the new Structural Fund programming period, baselines should be established and targets/forecasts prepared for the employment effects that should/are likely to arise from future interventions. This is a task for the ex ante evaluation exercise and should involve:

- Establishing the baseline situation in a region for employment, unemployment and other key job-related indicators;
- Based on this analysis, setting targets for what Structural Fund interventions should achieve over the lifetime of a programme;
- Using cost per job data derived from previous programming periods and EU benchmarks to help set targets and to check that they are realistic.

At the outset of a programming period, as part of an ex ante evaluation, a baseline analysis should be undertaken for key employment-related indicators. Baseline data refer to the

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31 Ex ante evaluation, which is the responsibility of Member States, is defined in the draft Regulation as aiming to optimise the allocation of budgetary resources under Operational Programmes and improving.
initial value against which an indicator is subsequently measured. These data include rates/trends in employment and unemployment, productivity, and the sectoral and gender distribution of jobs. In the first instance, the baseline analysis should be aimed at helping to justify job targets by **identifying needs** and, if linked to projections (i.e. a ‘dynamic’ rather than ‘static’ concept of a baseline) giving an indication of what is likely to happen in the absence of Structural Fund intervention; in the second place, this analysis should also provide a basis for subsequently assessing programming quality generally. Key tasks include identifying an appraising the disparities, gaps and potential for development, the goals to be achieved, the results expected, the quantified targets, the coherence of the strategy, Community added value, the extent to which Community priorities have been taken into account, lessons from previous programmes, and quality of procedures for implementation, monitoring, evaluation and financial management. There is a requirement in the draft Regulation to define and quantify targets for each Operational Programme for a limited number of indicators for outputs and results. The intention is that these indicators should make it possible to measure progress in relation to the baseline situation and the effectiveness of the targets implementing the priority axes.

32 The ‘static’ concept, which is used for most baselines in Structural Fund programmes, involves a simple statement of a value for an indicator at a certain reference point in the past. The ‘dynamic’ concept of a baseline involves projecting the indicator forwards in time through a baseline scenario or counterfactual analysis.

progress and impacts. A **counterfactual assessment**, i.e. what is likely to happen in the absence of Structural Fund intervention, should form part of this forward-looking aspect (see Step 3.2).

Ideally, baselines should be reviewed at a later stage in the programming period: the **time-lag in the availability of statistics** for some indicators means that when a Programme is being prepared, the available data may be several years out of date. If this is the case, an updated analysis (for example, as part of on-going evaluation activities if Member States decide to do this) may suggest that the original job-related targets should be revised to reflect a more accurate understanding of the situation that prevailed when they were originally set. This could of course have implications for the continuing relevance or otherwise of key objectives.

The task of setting employment-related **targets** for new Programmes should also be informed by evidence from previous periods on the average cost per (gross) job for different types of interventions. Dividing the planned expenditure under the new Programmes for different types of intervention by an average cost per job for previous programmes (adjusted to take into account inflation) should provide an indication of the gross employment effects that might reasonably be expected to arise. If necessary, further adjustments will need to be made to the forecasts to reflect
changing circumstances and checking the jobs estimate against wider EU benchmarks.

This approach should make it possible to set realistic job targets for a new Structural Fund programme. However, it is important that cost per job benchmarks for earlier periods are reviewed because circumstances may have changed. For example, if there has been a deterioration in economic conditions in a region, forecasts for the new programming period that are based on previous experience may need to be adjusted downwards to reflect more challenging circumstances. Similarly, comparisons with wider EU benchmarks may suggest that the jobs forecasts for a particular Programme are not ambitious enough and that an upward adjustment is therefore appropriate. Last but not least, in some countries and regions (e.g. EU10), there may be insufficient evidence from earlier Programmes of job performance to be able to derive a reliable unit cost and, if this is so, the only option is to rely on wider EU benchmarks.

1.2: Monitoring and reporting framework – during the implementation period of a Programme, it is important that information on the gross job outcomes generated by projects is systematically monitored. The key steps are:

- Clear definitions and guidance together with a common template for Beneficiaries to use in collecting and reporting project data on jobs;
- Developing the necessary ICT systems at a Programme level so that jobs data on projects can be stored and analysed;
- Periodically carrying out an aggregation of job data at the Programme level so that progress against targets can be monitored.

In the 2007-13 Structural Fund programming period, national and regional authorities are only required to provide the Commission with monitoring information at a Priority (‘Priority axis’) level. As such the tasks summarised above with regard to monitoring and reporting systems are the solely responsibility of national and regional authorities and should reflect their needs.  

Some basic requirements are nevertheless defined with regard to monitoring in the draft Regulation which states that Member States shall provide the resources necessary for carrying out evaluations, organizing the production and gathering of the necessary data and the use of various types of information provided by the monitoring system. Annual reporting requirements should provide a clear view of the implementation of the Operational Programme, i.e. progress (quantified where possible) being made against targets at the Priority
Best Practice Framework

That said, it is clearly important that Beneficiaries should be provided with common guidance on definitions and procedures to ensure that the information from many different sources can be combined in a consistent way. Experience from the current and past Structural Fund programming periods suggests that imprecise definitions, for example, have led to new/safeguarded jobs and/or direct/indirect employment effects being confused, thereby undermining the credibility of data and in some cases leading to exaggerated overall employment estimates for a Programme.

Similarly, unless guidelines are provided making it clear when and in what format project data should be reported, there is a danger of information being made available from different sources in differing formats and at varying times, thereby again complicating overall collation and analysis (usually, submission of returns is timed to coincide with payment schedules). Some flexibility in the format for reporting jobs data from project is however needed. For example, where Beneficiaries have multiple funding sources and hence multiple reporting obligations, flexibility is needed to avoid a situation where data on jobs needs to be reproduced in varying formats and at different points in time.

At a Programme level, job data generated by project monitoring systems should be periodically collated, analysed and aggregated, and comparisons made with targets so that performance can be assessed and, if necessary, corrective action taken. The same information, once aggregated, will also provide the basis for reporting to the Commission at a Priority and Programme level.

<table>
<thead>
<tr>
<th>Monitoring Employment Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forecasting</strong> - Beneficiaries should be asked to forecast the eventual job outputs/results from a project at the application stage;</td>
</tr>
<tr>
<td><strong>Updating</strong> – at agreed points in the project lifecycle, Beneficiaries should provide an update on actual expected job outputs/results. Monitoring systems should be designed in a way that is versatile enough to handle revisions to the forecasts.</td>
</tr>
<tr>
<td><strong>Quality checks</strong> – checks should be periodically undertaken to ensure that project data on job outputs/results is accurate, e.g. there is no double or triple counting.</td>
</tr>
</tbody>
</table>

The development of ICT-based monitoring systems for the storage and analysis of project data on employment effects is necessary to enable information to be processed and
aggregated efficiently. Although generally a long-standing feature of the ESF, recent years have also seen most regions developing ICT-based monitoring systems for ERDF data and in several countries, these are integrated into monitoring systems at a national level. The development of ICT-based monitoring systems is now a requirement under the Structural Fund Regulations.

1.3: Surveys and other research – in addition to routine monitoring, surveys and other research should be undertaken to examine Structural Fund employment effects in more depth. Priorities in this respect might include:

- Examining in more detail the extent and nature, and duration of Structural Fund employment effects
- Helping to develop/refine the parameters needed to estimate net employment effects;
- Investigating the employment effects arising from Structural Fund interventions where quantification is otherwise difficult;
- Checking the accuracy of employment estimates based on monitoring data.

The research that could be undertaken to help develop a better understanding of Structural Fund employment effects includes: surveys of businesses to help assess the extent and durability of job creation effects; follow-up exercises to ‘track’ the destinations of people leaving training programmes; research to examine equal opportunities issues; and studies that are designed to provide an empirical assessment of additionality, displacement and indirect effects.

Examples of Research

- In one German Objective 1 region, SMEs were surveyed to investigate the durability of jobs created by Structural Fund assistance. This suggested that that some new jobs (albeit only 2% of the total) that had been 'claimed' earlier no longer existed.
- A review was undertaken by the National Audit Office in the UK of Regional Grants’ evaluations identified parameters used to estimate net jobs - additionality (45 to 48%), displacement (24 to 33%) and indirect effects (1.18 to 1.29). Projects creating jobs were found to demonstrate higher additionality than those safeguarding existing jobs.
- In the Emilia Romagna region, a panel of jobseekers was interviewed over a 12-month period to track destinations after completing their ESF-supported training and to establish the impact on employability,
**Best Practice Framework**

...in particular how jobseekers many had found jobs (the estimate arrived at was 50%).

Whilst it is likely that the focus will be on Structural Fund programmes, research involving purely nationally-funded schemes can also be relevant (e.g. by helping to develop the parameters for estimating net employment effects).

Apart from the specific examples given above, research can also have an important role to play in enabling employment effects to be estimated for Structural Fund interventions that are otherwise difficult to quantify. This includes interventions (e.g. support for innovation and R&D) that are aimed at promoting knowledge-based activities and which are central to the Lisbon Strategy, community economic development measures, etc. Cases studies may be the best form of research in these circumstances. As noted earlier, surveys and other research can also perform the useful function of **checking the accuracy of project data on employment effects** that is collected from Beneficiaries through monitoring systems and the extent to which suggested definitions for job outputs are being adhered to.

The **timing** of research activities is important. Ideally, research to investigate Structural Fund employment effects in more depth should be undertaken on an on-going basis throughout the programming period. In the past, there has been a tendency for such research to only be undertaken as part of interim and/or ex post evaluations. Experience suggests that this can, however, make it difficult to obtain good quality information. For example, if a survey of SMEs is carried out towards the end of a Programme that includes businesses that received assistance at the beginning of the period, the contacts in the firms concerned may have moved on. Even if this has not happened, they may be reluctant to provide information because their participation in a scheme has come to an end and was some time ago, or the contact person may simply have forgotten details of the circumstances that led to an application for Structural Fund assistance being made.

In many cases, **responsibility for carrying out surveys and other research** will be contracted out to consultants. However, there is a strong case for encouraging Beneficiaries to also carry out surveys and other research as part of a self-evaluation of their activities. For this to be possible, the contracts with Beneficiaries need of course to make adequate financial provision for such research and also allow enough time for it to be carried out.

1.4: Programme level assessment of gross employment effects – at the mid point and towards the end of the Programme, an estimate should be made at the Priority and Programme level of the scale and quality of
employment effects actually achieved. This should involve:

- Analysing monitoring data to estimate the number and quality of jobs created, jobs maintained (if appropriate – see Section 1.3), jobs improved and the number of cases of ‘employability improved’;

- Breaking employment effects down to provide an analysis (where relevant) by gender, age, size/sector of undertaking and other key variables, e.g. area;

- Aggregating the various types of gross employment effects at the Priority, Programme level and NSRF level;

- Comparing actual employment effects with the original targets so that the Programme’s performance can be assessed.

The focus in the case of the ERDF should as suggested earlier be on quantifying permanent full-time equivalent jobs that are created directly by Structural Fund interventions. No attempt to quantify ‘jobs maintained’ should be undertaken except in the case of major ‘productive investment’ projects and/or unless safeguarding employment is a key aim of a Programme and a reliable estimate can be provided; and in relation to ESF-supported interventions, at the very minimum, estimates should be made for the number of people in work benefiting from assistance (‘employees receiving training’ or ‘jobs improved’) and of those who were/are out of work that have received help to enhance employability/obtain jobs (‘jobless receiving training’ or ‘employability improved’). In both cases, these estimates should be preferably broken down by sector/occupational classification, age and gender.\(^{34}\)

In addition to quantifying Structural Fund employment effects, there should be an assessment of job quality. Assessing job quality is not easy to do – especially on the scale of Structural Fund programmes - and there are many differing methodological approaches that have been/could be adopted.

Some methods, for example assessing job quality in terms of the level of remuneration and/or qualifications and skills, are very demanding in terms of data and may not be workable on a large scale although this will depend on the sophistication of monitoring systems. The following approach is suggested for ERDF employment effects:

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\(^{34}\) The minimum requirement set out in the Regulation for the 2007-13 period with regard to disaggregation of monitoring data is for this to be broken down by gender and by the size of the recipient undertaking.
Best Practice Framework

- There should be a requirement at a project level to classify Structural Fund employment effects as far as possible by sector using the NACE classification system;

- At a Programme level, the NACE classification should be overlaid with a ranking of sectors that are strategically important to the region/have good long term growth potential and hence should offer high quality, long term employment opportunities;

- If possible, supplementing this type of sectoral analysis with other information on job quality including occupational classifications, the skills content of jobs, remuneration levels, feedback from surveys and other research, etc.

The NACE classification system has the merit of being a standardised framework and its use at an EU level for structural and other indicators relating to the European economy means that by adopting this classification system, it should be possible to relate data on Structural Fund employment effects to other analyses. 35 This includes indicators used to assess progress towards the objectives of the Lisbon Strategy’ and other policies such as the European Employment Strategy. However, the workability of this approach depends crucially on responsibility being taken at the project level to undertake the sectoral classification of employment effects since it would be unrealistic to attempt this on a large scale at a Programme level.

A sectoral classification of Structural Fund employment effects will not, on its own, provide a sufficient indication of job quality. As such, the NACE classification should be overlaid with a ranking of sectors that are strategically important in each region/have good long term growth potential.

35 The acronym ‘NACE’ derives from the title: Nomenclature générale des activités économiques dans les Communautés Européennes. The new classification was called "NACE Rev. 1" to distinguish it from NACE 1970, Statistical Office of the European Communities: General Industrial Classification of Economic Activities within the European Communities - NACE , Luxembourg 1970. In September 2005 the Eurostat Classification Section finalised the draft structure of NACE Rev. 2. This structure is the outcome of a long series of consultations that started in 2002, involving many stakeholders. In NACE Rev. 2, the number of sections is increasing from 17 to 21, and the number of divisions from 62 to 88. There is also a better classification of services sector activities and others that contribute to a ‘knowledge-based’ economy. For example, there is a new section on “Information and communication” which more clearly identifies the ICT activities in manufacturing and services.
The assumption is that if employment effects are concentrated in sectors with good long term growth prospects, there is a greater likelihood of the jobs concerned being of a high quality, i.e. requiring knowledge-intensive skills, relatively high rates of remuneration, good long term prospects, etc. This is clearly a generalisation since there can be high quality jobs in declining sectors and low quality jobs in growth sectors. However, for the purposes of a high level assessment, which is all that can be realistically attempted, this approach should provide a better understanding of the quality of Structural Fund employment effects than is possible at present. Also, compared with alternative methods, has the merit of being workable on a large scale.

If appropriate programme management systems are in place (see Step 1.2), the collation, analysis and aggregation of data on Structural Fund employment effects should be relatively straightforward. Aggregation will involve a ‘bottom-up’ process, starting with the aggregation of project data at the Measure level and then moving upwards through Priorities to provide a global estimate of employment effects at the Programme level. This exercise should be undertaken at the mid point in a Programme’s implementation (coinciding with the mid term evaluation/review) and towards the end (programme closure and ex post evaluation). At the same time, it is clearly important to compare the actual employment effects that can be attributed to Structural Fund programme with the original targets so that performance can be assessed.

It needs to be recognised that there will be some delayed Structural Fund employment effects which may not become fully apparent during the programming period itself. This may be because projects start relatively late and/or due to the nature of in the interventions themselves. In these circumstances there are two basic options: firstly, to forecast eventual employment effects by drawing on the project’s targets and any available evidence of progress so far; and, secondly, to ask Beneficiaries to continue to provide monitoring data beyond the point when Structural Fund support ends.

The later option is preferable but may be more difficult to achieve since Beneficiaries will have no obligation (unless written into grant agreements) to provide data on an on-going basis once their funding comes to an end. An alternative is for follow-up surveys to be undertaken that focus on projects where Structural Fund assistance has stopped. In the case of the ESF, the practice of tracking destinations (e.g. of young people who have completed training courses) is quite common.

As a check on the realism of gross employment estimates, one approach is to divide the total Structural Fund financial commitments for relevant Priorities by the number of jobs
Best Practice Framework

created, maintained and improved, the result then being compared with benchmark values.

**Checklist – Step 1: Estimating Gross Employment Effects**

- **Baselines and targets** – have baselines been established and targets/forecasts prepared at the beginning of the new Structural Fund programming period for the employment effects that should/are likely to arise from future interventions?

- **Monitoring and reporting framework** – is information on the gross job outcomes generated by projects being systematically monitored during the implementation period of a Programme? Is the accuracy of jobs forecasts being checked and targets/actual outputs if necessary updated?

- **Surveys and other research** – are surveys and research being undertaken to examine Structural Fund employment effects in more depth in addition to routine monitoring?

- **Programme level assessment of gross employment effects** – have estimates been made at the Priority and Programme level of the scale and quality of employment effects achieved at the mid point and towards the end of the Programme? Have these been compared with targets and any differences explained?
Step 2 – Estimating Net Effects and Regional Impacts

The second step, undertaken at a Programme level, involves adjusting gross employment estimates to take additionality, displacement and indirect effects into account, thereby making it possible to estimate net effects. The formula for estimating net effects is:

\[
\text{Net Jobs} = (\text{gross impact} - \text{deadweight}) + (1 - \text{displacement}) + (1 + \text{supplier multiplier}) + (1 + \text{income multiplier})
\]

As pointed out earlier, an assessment of Structural Fund employment effects undertaken on a purely gross basis can be misleading in terms of the scale of impacts. This step is likely to require the input of external experts and will usually only be undertaken towards the end of a programme or afterwards.

2.1: Additionality – an assessment should be undertaken of the extent to which employment effects can be attributed solely to Structural Fund intervention. The possibilities are:

- **Absolute additionality** – i.e. a situation in which none of the employment effects would have occurred without Structural Fund intervention;
- **Partial additionality** – namely, in the absence of Structural Fund intervention, projects would have proceeded but the employment effects would have been on a reduced scale or occurred at a later stage;
- **No additionality (‘Deadweight’)** – i.e. a situation where all the employment effects associated with Structural Fund interventions would have occurred anyway because projects could have proceeded with support from other sources.

An assessment of additionality involves establishing a causal relationship between Structural Fund interventions, projects and employment effects (‘attribution’). The key is to establish a link between projects, the outcomes they achieve and Structural Fund assistance. The key question to be asked is: what would have happened to the project if Structural Fund assistance had not been available? Because this is a hypothetical question, additionality is difficult to assess.

Additionality can be assessed by obtaining survey feedback from beneficiaries and asking them what would have happened in the absence of assistance. A survey-based approach of this sort is the most common but runs the risk of giving biased responses. For example, there is evidence from previous studies to suggest that the timing of survey work can influence the findings: thus if assisted businesses are asked to...
say how important Structural Fund aid was to their plans shortly after it was provided, there may be a tendency to over-state the importance because it will be fresh in the recipient’s mind; conversely, if a quite long period of time elapses, the opposite could be the case as factors come into play and in retrospect seem more significant. Likewise, if the beneficiary intends to make an application for further assistance, this could influence the response.

Another approach, generally considered to give the most accurate results, is to make comparisons between assisted and non-assisted groups (the so-called ‘quasi-experimental approach’) to establish the difference that a Structural Fund intervention may have made to beneficiaries. This approach has the merit of minimizing the risk of bias from beneficiary feedback but is a more complex and potentially costly methodological option. A further possibility is to examine what happened to rejected applications for Structural Fund aid: if the projects concerned nevertheless went ahead, then this could point to relatively low additionality (assuming the schemes that were rejected are similar to those that were accepted). An alternative to empirical methods for assessing additionality is to obtain parameters from other existing research.

Estimates of additionality can vary enormously depending on the type of Structural Fund intervention. For example, grant aid for entrepreneurs in the process of setting up a business will generally demonstrate high levels of additionality because alternative sources of assistance are often not available and financing is a key input to the formation of an undertaking; however, the same type of support provided to an existing SME may well be far less critical to its development because many other factors will affect performance. Similarly, the additionality demonstrated by interventions that create jobs will usually be higher than where jobs are maintained. Some broad parameters are provided at the end of this section.

Clearly, the aim should be to maximise Structural Fund additionality. The most obvious way of achieving this is to include a rigorous additionality test in project appraisal criteria so that only beneficiaries are targeted that genuinely need Structural Fund support, and who could not proceed with their projects without it, because no alternative sources of assistance exist.

2.2: Displacement – the extent to which positive employment outcomes that can be attributed to Structural Fund interventions are offset by negative side effects should also be assessed. There are several considerations in this respect:

- There could be displacement between ERDF target groups and non-assisted organisations/projects;
In the case of the ESF, there may be both displacement and substitution effects arising from interventions;

From a regional/spatial perspective, displacement between areas eligible for Structural Fund assistance and non-eligible areas is possible but less relevant in the new programming period since there will no longer be a ‘zoning’ approach.

2.2.1: ERDF Displacement Effects - in an ERDF context, an example of where displacement might occur is where SMEs are given assistance that results in improved performance at the expense of competitors. Another example would be investment in business premises that leads to occupancy rates elsewhere in the area falling. Project appraisal criteria can reduce the risk of displacement by ensuring that assistance is used to support businesses/projects that are under-represented in the region since these are likely to be non-displacing.

These types of displacement effects are difficult to measure. From a methodological perspective, the first option is to undertake research, for example to establish the extent to which ERDF-assisted SMEs are competing directly with other businesses in their areas. However, although research to investigate displacement effects could form part of a wider exercise (see Step 1.3), it is unlikely to be justified as a research aim in its own right; given this, the second option is to rely on standard parameters for displacement and substitution based on existing research and this approach is recommended.

2.2.1: ESF Displacement Effects - in the case of the ESF, the training of employees in one undertaking can ‘displace’ workers in another if the training improves the performance at the expense of a competitor. ESF interventions in favour of those out of work can have substitution effects if unemployed people gain work at the expense of those already in jobs or others who are unemployed but who do not receive assistance.

With the ESF, displacement can come about if training for employees and other support provided to businesses improves their performance at the expense of other non-assisted firms. Substitution effects apply to those who are out of work and who receive ESF training and/or other assistance that enables them to find a job, but this is done at the expense of somebody else who is unemployed but does not receive help. As with ERDF displacement effects, these are also difficult to measure and parameters from existing research may have to be used to arrive at an estimate. Displacement will typically be in the range of 10% to 30%.

Best Practice Framework
The last of the considerations highlighted above – displacement between assisted/non-assisted areas within a region – is less relevant because a zoning approach will no longer be a feature of the new 2007-13 Structural Fund programmes. This applies to regions that previously had areas that were eligible/non-eligible for Structural Fund assistance. But there is still the possibility of displacement at a higher level, i.e. between eligible/non-eligible regions but also between different regions that are eligible for Structural Fund assistance if, for example, differing levels of co-financing exist.

2.3: Indirect/multiplier Effects – to arrive at an estimate of net effects, it is also necessary to assess the extent to which the (additional, non-displacing) employment outcomes directly attributable to Structural Fund interventions have further indirect effects. These will arise from a combination of:

- **Income multipliers** – where job creation leads to additional incomes that are spent in local economies which leads to an increase in demand for goods and services, in turn creating further jobs;

- **Supplier effects** – i.e. where an assisted business or project increases leads to additional order for local goods and services, again resulting in second-round job and wealth creation effects.

- **Other indirect employment effects** – arising, for example, from developments that enhance the attractiveness of an area to business.

Indirect effects can be defined as ‘effects which spreads throughout the economy, society or environment, beyond the direct beneficiaries of the public intervention’. The way in which additional expenditure arising from Structural Fund-supported activities works its way through a local economy is complex and only a rough approximation is feasible in the context of a ‘bottom-up’ approach (the alternative is to use econometric modelling techniques).

2.2.1: Income Multipliers - in the case of income multipliers, a ‘bottom-up’ approach involves estimating the number of net additional non-displacing jobs, average remuneration and disposable incomes, and the amount of

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local expenditure needed to create new employment indirectly.

If the approach advocated earlier (Step 1.4) of assessing job quality through a sectoral analysis of Structural Fund employment effects is adopted, and this is combined with official data on wages and assumptions are made about disposable incomes, then a reasonable approximation of induced income effects is feasible. The wider an area is defined (provided it remains small relative to the total national economy), the higher will be this income multiplier. For most activities, local multiplier effects are probably fairly small: estimates are generally around 1.1. Regional multipliers may be larger and in the range 1.2 to 1.5.

2.2.2: Supplier Effects - in the case of supplier effects, estimates are even more methodologically complex and the necessary information less readily available. Here, a ‘bottom-up’ approach involves obtaining an indication of the value orders for goods and services placed by Structural Funds-assisted businesses or projects with local suppliers, the extent to which this procurement is additional, and then the indirect employment effects likely to be generated by increased turnover in supplier businesses. The local content of purchases may be higher than the proportion of purchases from local suppliers but is nonetheless rarely much more than 5 to 10%. Estimates of supply multipliers, in terms of the effects on employment in local labour markets have ranged from around 1.05 to 1.11.

A number of factors will influence the scale of supplier-related effects: the industrial structure in a region may, for example, mean that relatively specialised services and goods can only be procured from external sources; or the small size of the region may increase the likelihood of inter-regional ‘leakages’. These considerations apply to especially supplier-related effects where procurement focuses on goods (services, for example labour for a construction project, are more likely to be recruited locally). With income-related effects there can also be leakage if, for example, direct job creation benefits people who commute in from outside the area and spend their disposable incomes elsewhere.

As with displacement, indirect effects are difficult to research and it is preferable therefore to rely on standard parameters based on existing research.

2.2.3: Other Indirect Effects - there may be other indirect employment effects. For example, the development of a prestigious business facility (premises, conference facilities, etc) will directly benefit users but could attract other businesses to the area; there may be spin-offs from Structural Funds-supported R&D projects that lead to new employment-creating jobs; or ESF-supported capacity
building in addition to benefiting those directly involved should have benefits for voluntary groups, local communities, etc, that could in turn generate indirect employment effects (e.g. helping to reintegrate women returners to the labour market).

There are a number of considerations that are likely to have a bearing on scale of the gross/net adjustments needed. Thus, the extent of additionality at a project level will be strongly influenced by the level of Structural Fund co-financing rates - where these were low, it is more difficult to argue that projects could not have gone ahead without assistance. Likewise, the nature of the final beneficiaries is relevant: where actions are designed primarily to safeguard jobs in undertakings in declining sectors, displacement could well be relatively high. Conversely, where the focus is on promoting SMEs in growth sectors, additionality is likely to be high, especially if start-ups rather than existing SMEs are targeted, and the risk of displacing jobs in non-assisted firms – at least from the same region - will tend to be very low.

The size of these net effects also depends significantly on the definition of the area covered. Although ‘zoning’ is no longer a feature of the Structural Funds in the new 2007-13 period, there is still a possibility of negative side effects arising from interventions with a particular geographical focus. It could be argued that if the targeted area accounts for more than 5-10% of the total population of a region, ‘crowding out’ effects should be considered. There may also be ‘leakages’ and ‘spill-over’ effects. In the case of indirect effects, for example, there is likely to be a relatively high degree of inward and outward commuting to work across the boundaries of areas covered/not covered by the Structural Funds.

Existing studies suggest that additionality, displacement and indirect effects tends to fall into certain ranges, depending on the type on intervention/employment effects. The following table summarises these parameters:

### Indicative Parameters for estimating Net Employment effects

<table>
<thead>
<tr>
<th>Job effects</th>
<th>Additionality</th>
<th>Displacement</th>
<th>Indirect Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs created</td>
<td>High (70-80%)</td>
<td>Low (10-15%)</td>
<td>High (1:1.5+)</td>
</tr>
<tr>
<td>Jobs maintained</td>
<td>Low (20-20%)</td>
<td>High (60-70%)</td>
<td>Low (1:1 or lower)</td>
</tr>
<tr>
<td>Employability</td>
<td>High (50-60%)</td>
<td>Medium (40-50%)</td>
<td>Medium (1:1.1 to 1.5)</td>
</tr>
</tbody>
</table>

Source: CSES analysis of Structural Fund evaluations.

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### Checklist – Step 2: Converting Gross Employment Estimates into Net Effects at the Programme Level

Gross job estimates should be adjusted for:
Best Practice Framework

- **Additionality** – has an assessment been undertaken of the extent to which employment effects can be attributed solely to Structural Fund interventions?
- **Displacement** – has an assessment been made of the extent to which positive employment outcomes that can be attributed to Structural Fund interventions are offset by negative side effects?
- **Indirect/multiplier Effects** – has an assessment been made of the extent to which the (additional, non-displacing) employment outcomes directly attributable to Structural Fund interventions have further indirect effects (supplier and income multipliers)?

### Step 3 – Overall Assessment and Contribution to Key EU Priorities

The final step, to be undertaken at a Programme level as part of ex post evaluations, should involve an assessment of wider questions relating to Structural Fund employment effects. These include:

- **Key evaluation issues that apply to Structural Fund employment effects;**
- **How employment effects contribute to wider labour market and regional development trends;**
- **The contribution of Structural Fund interventions to the employment and related aspects of key EU policies, particularly in relation to the Lisbon Strategy and enlargement.**

This step should be undertaken for all programmes even if Step 2 is not completed and the measurement of Structural Fund outcomes is based on gross outcomes (Step 1).

3.1: **Key evaluation issues** – during the programming period (e.g. at the interim stage) and in the ex post evaluation, a number of key evaluation issues should be examined as part of the overall assessment of Structural Funds employment effects. These key issues include relevance, efficiency, effectiveness, impacts and Community added value (defined on the next page).
Best Practice Framework

- **Relevance** – the extent to which Structural Fund interventions relating to jobs benefit/are likely to benefit groups and address their needs (‘utility’);
- **Effectiveness** – the extent to which the targets for jobs set at the outset of the programming period (or as subsequently amended) are achieved, and whether this has been done in the most effective way;
- **Efficiency** – the relationship between financial inputs and employment outputs, i.e. ‘cost per job’ and value for money;
- **Impacts and Community added value** – the scale and nature of (net) Structural Fund employment impacts and the extent to which these interventions demonstrate Community added value.
- **Sustainability** – the durability of employment effects, i.e. the extent to which they are likely to last beyond the period of Structural Fund intervention.
Best Practice Framework
3.1.1: Relevance - Steps 1.1 and 1.4 of the ‘Best Practice Framework’, in particular the comparison between regional needs and the Structural Funds employment effects actually achieved, provide a basis for assessing relevance.

This presupposes, however, that a Programme’s outcomes are analysed not only in terms of the number of jobs but also the nature of the final beneficiaries. As argued earlier, a sectoral definition of employment effects, in particular ‘jobs created’ (and occupational classification in the case of the ESF) is important in this respect. The key issue here is the extent to which Structural Fund interventions generate employment effects in sectors (and/or occupational groupings) that are important to a region’s development needs as identified in the baseline assessment and Programme’s targets.

But other factors should also be considered in assessing the relevance of Structural Fund employment targets/outcomes. These include Community aims relating to the promotion of gender equality; addressing the needs of disadvantaged groups (young people, those who are long-term unemployed, ethnic minorities, etc); and improving employment prospects in disadvantaged areas and communities (e.g. those in areas affected by urban decline, geographically isolated or peripheral areas).

There is also a question of the extent to which Structural Funds employment effects are relevant to the Lisbon Strategy’s aim of creating ‘more and better jobs’ (and in the case of the ESF, the specific objectives of the European Employment Strategy).

<table>
<thead>
<tr>
<th>Relevance – Some Key Questions</th>
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</thead>
<tbody>
<tr>
<td>• Are jobs being created (or maintained) by the ERDF in sectors that are identified in the baseline assessment as important to regional development?</td>
</tr>
<tr>
<td>• How relevant are ESF interventions to the needs of target groups (businesses, those who are out of work, etc)?</td>
</tr>
<tr>
<td>• To what extent are Structural Fund interventions relevant to the aims of the Lisbon Strategy and other key EU policies including the European Employment Strategy?</td>
</tr>
</tbody>
</table>

3.1.2: Effectiveness - Structural Funds employment effects can be relevant to the needs of regions and target groups but this does not necessarily mean that targets are achieved in terms of scale and timing. An assessment of effectiveness examines these questions and should preferably be done using data on net employment effects at the Priority and Programme levels. The assessment should, however, go beyond simply establishing whether or not a target has been accomplished (e.g. creating 20,000 net jobs) and examine whether this has been achieved in the most effective way.
For example, it may be that Structural Fund interventions to support business start-ups with the aim of creating jobs demonstrate high additionality but more could have been done to reduce displacement or that different types of intervention (e.g. focusing on a particular types of SMEs) could have led to higher quality jobs. From a slightly different perspective, the question is what types of Structural Fund interventions tend to be the most successful/least successful in achieving their employment aims (‘relative effectiveness’).

A further question is the extent to which some Structural Fund interventions which do not have jobs as an aim nevertheless lead to positive (or negative) employment effects. This may, for example, apply to some interventions that contribute to the Lisbon Strategy aim of creating ‘more and better jobs’ through promotion of competitiveness and innovation.

<table>
<thead>
<tr>
<th>Effectiveness – Some Key Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Have the Structural Fund targets with regard to employment effects been achieved?</td>
</tr>
<tr>
<td>• If employment targets have not been achieved, why was this (e.g. were the target too ambitious and/or the programme simply under-performed)?</td>
</tr>
<tr>
<td>• How do different types of Structural Fund interventions compare in terms of their effectiveness in generating positive employment effects?</td>
</tr>
</tbody>
</table>

3.1.3: Efficiency - linked to an assessment of effectiveness in achieving targets for physical outcomes is the question of efficiency, i.e. the extent to which the employment outcomes achieved are reasonable given the level of the financial resources made available by the Structural Funds.

Put another way, an evaluation is needed of whether the same financial inputs could have had led to even greater employment effects or, conversely, whether the same effects could have been achieved with reduced financial inputs (value-for-money). The starting point is to calculate the gross and net cost per job and to then to compare the results with internal programme benchmarks (e.g. other Priorities) or external benchmarks (EU, previous programmes in the region, etc). Comparisons of this sort will provide a basis for a judgement of efficiency to be made although it needs to be borne in mind that the circumstances in which the programme/comparator(s) operate are different.

The cost per job should be compared on both a gross and net basis. Some of the literature on programmes to help those who unemployed argues that apart from additionality and substitution effects, net effects should take into account savings to public authorities (arising from a combination of lower unemployment payments and highest income tax
Best Practice Framework

Assuming the jobless find work, the cost of providing However, given the complications in arriving at an accurate estimate of these net cost savings, it is unlikely that this calculation will be appropriate in the case of most ESF programmes.

A global (gross/net) cost per job estimate will, on the input side of the equation, combine Structural Funds aid with national public and private sector co-financing but it may be appropriate to produce separate analyses of the cost per job for these different funding sources (e.g. if comparisons are to be made with national benchmarks for the cost per job).

### Efficiency – Some Key Questions

- Is the number of jobs created or maintained reasonable given the level of ERDF financial inputs or could more have been achieved with the resources available?

- How does the cost effectiveness of different types of Structural Fund interventions compare and what factors explain any differences?

- For example, in the case of the ESF is there a difference (e.g. between areas/target groups) in the cost of the training required to help those who are unemployed obtain jobs? In the case of the ERDF is there a difference, for example, between different types of SMEs?

### Impacts – Some Key Questions

- To what extent have jobs been created in sectors that are important to regional competitiveness and growth?

- Have ERDF interventions to maintain jobs helped to stabilise the labour market?

- Has ESF training for employees helped to develop skills?

3.1.4: Impacts - an estimate of net Structural Funds employment effects should – by taking into account additionality, displacement and indirect effects – provide an indication of regional impacts. However, the specific impacts attributable to Structural Funds interventions should also be related to wider regional trends. Indicators that are especially relevant include trends in employment and unemployment, productivity, and the sectoral distribution of jobs – in particular the extent to which Structural Funds interventions have contributed to jobs and growth in knowledge-intensive activities.

As a starting point to an analysis, a comparison should be made for key indicators between the baseline situation in a region (see Step 1.1) and the situation at the end of the programming period. The question to be answered is: what contribution has Structural Funds employment effects made to any positive trends (or to slowing down/stopping any deterioration)?
A ‘bottom-up’ approach to addressing the sort of questions highlighted above can only provide a very rough indication of the impacts. For example, job creation should have an impact on unemployment rates but the relationship is not 1:1 because those filling the new job opportunities created by Structural Funds’ interventions may already be in work and simply transferring from other positions. It also needs to be borne in mind that many impacts on regional trends will be of a longer term nature and only occur after the programming period.

The timing of ex post evaluations (which usually take place shortly after Programmes finish) means, however, that only an estimate of these longer term impacts can be made.

3.1.5: Community Added Value - as part of an impact assessment, the Community added value of Structural Fund interventions that lead to employment effects should also be considered. The key question that should be addressed is: to what extent have Structural Funds-supported interventions helped to achieve outcomes that would have been difficult/impossible to achieve through purely national/regional schemes? Two aspects or levels need to be considered – the programme and region.

A counterfactual analysis is essential to an understanding of Community added value at both these levels.

Taking the first of these aspects – the programme level - Community added value will be linked to factors associated with the Structural Funds (e.g. a multi-annual approach to funding which is often seen as one of the merits of Structural Fund operations compared with national schemes). But there may also be factors that have a more specific bearing on employment. The availability of additional financial resources from the Structural Funds to invest in job-related measures will clearly be a significant factor and linked to this, leverage effects (e.g. Structural Fund grants may help lever funding from the private sector for schemes that would not be made available otherwise, i.e. for purely national initiatives).

However, Community added value may well lie in less tangible factors. For example, the strategic orientation of Structural Fund programmes, with the overlay of Lisbon Strategy’s priorities relating to the knowledge economy, may help to raise awareness of the need to promote employment growth in particular sectors in a region; or the Structural Fund programming process and framework could encourage
adoption of innovative approaches to job creation; and at a regional level, Community added value could lie in a more comprehensive and integrated approach to promotion of employment-related objectives that is possible under national programmes.

At a regional level, Community added value lies in the difference between the Structural Fund-assisted employment impacts actually achieved and the counterfactual. The baseline analysis (see Step 1.1) should have included a projection of trends (‘dynamic baselines’) in key indicators to the end of the programming period based on a hypothetical situation in which Structural Fund assistance was not made available. A comparison with actual trends will point to the added value of Structural Funds. It needs to be borne in mind, however, that many other factors – prevailing economic conditions, national programmes, other influences on employment – may influence trends as well as the Structural Funds.

At both the programme and regional level, counterfactual analysis is likely to be as much a question of opinion-based judgment as it is on ‘hard’ statistical data on trends. Ex post evaluations should therefore seek the opinion of informed observers as part of an assessment.

**Community Added Value – Some Key Questions**

- What would have happened with regard to regional trends in the absence of a Structural Fund programme, i.e. what difference did the interventions make?
- What is added value of Structural Fund programmes compared with purely national schemes (e.g. additional resources, multi-annual programmes, transfer of know-how between countries)?
- What types of Structural Fund interventions tend to demonstrate the highest/lowest added value?

### 3.1.6: Sustainability

The benefits of Structural Fund interventions will be limited if employment effects are not sustainable in the longer term.

Step 1.4 should provide a useful input to an assessment of sustainability: in the first place this will provide an estimate of permanent as opposed to temporary employment effects. Here a distinction needs to be made between temporary jobs created during the implementation phase of projects (e.g. construction jobs), on the one hand, and jobs that may be temporary in the sense that they do not involve continuous employment throughout any single year but which nevertheless provide periodic employment in the longer term throughout the operational phase of a project (e.g. seasonal jobs), on the other.
Secondly, if the earlier proposition is accepted, an assessment of sustainability should involve examining the extent to which employment effects are concentrated in growth sectors since this should shed light on the degree of permanence and the likelihood of these effects lasting beyond the programming period.

As noted earlier, many Structural Fund employment effects may not become fully apparent until some time after a project/programme comes to an end. This will be especially the case with projects that start towards the end of a programming period or with some types of intervention where the effects are delayed.

Sustainability – Some Key Questions

- How sustainable are Structural Fund employment effects – can these effects be tracked beyond the period of intervention?
- What sort of ESRF and ESF Structural Fund interventions tend to produce the most/least durable employment effects and why is this so?
- What can be done to maximise the sustainability of employment effects?

3.2: Contribution to other EU priorities – in addition to examining issues that relate specifically to regional development, there should be an assessment of how Structural Fund employment impacts contribute to other EU priorities.

Job-related aims are central to EU policies across a wide spectrum of Community competences and the being able to measure Structural Fund employment effects is important in demonstrating the contribution being made to these wider aims and priorities. Other relevant EU policies include those on enlargement, the European Employment Strategy, the Lisbon Strategy and capacity building tasks in relation to the Community ‘acquis’ generally. In addition, it will be important to examine the relationship with purely national programmes.

3.2.1: Enlargement - enlargement in 2004 continues to pose major challenges. As pointed out earlier, it has been estimated that four million jobs need to be created if the average level of employment in the ten new Member States is to be aligned with that of the rest of the EU. Appreciable employment gaps also persist according to location, age and gender.

EU10 countries combine many of the features of Objectives 1 and 2 in the ‘old’ Member States – under-development (especially outside the capital regions) and a legacy of restructuring and the dismantling of formerly state-owned industries which has led to relatively high long term unemployment in many areas.
Best Practice Framework

From the perspective of measuring Structural Fund employment effects, there is a need to be able to assess the contribution of cohesion aid on job creation in growth sectors but also in helping to reintegrate workers who have been adversely affected by the restructuring of older industries. Given the amounts of Structural Fund aid earmarked for EU10 countries, it is clearly important from an accountability perspective that employment effects are properly evaluated.

However, comparative inexperience with the implementation of Structural Funds programmes means that evaluation can have an important role in helping to identify what works best/not so well with regard to job creation. But a lack of administrative capacity may reduce the effectiveness of Structural Fund interventions to promote employment even if these are based on good practice. As such, there may be a need for capacity-building measures and technical assistance to help implement aspects of this ‘Best Practice Framework’.

3.2.2: European Employment Strategy - the European Employment Strategy (EES) provides the framework for actions at an EU and national level to promote three overarching objectives - full employment, quality and productivity at work, cohesion and an inclusive labour market.

Progress towards the objectives set out in the European Employment Strategy is measured using 40 indicators. Assuming Structural Fund employment effects can be aggregated at a NSRF level, it should be possible to provide a broad estimate of the contribution to a number of the key EES indicators including: raising employment rates and reducing unemployment (in both cases, gender and age analysis being important); growth in labour productivity; and employment in newly formed enterprises.

3.2.3: Lisbon Strategy - Structural Fund priorities in respect of the Lisbon Strategy’s ‘growth and jobs’ agenda include investing in areas with high growth potential where national funds are insufficient to realize development opportunities, and investing in the drivers of growth and employment - human and physical capital including physical and ICT infrastructure, research capacity and innovation, education and training and adaptability of workers.

The methodology set out in this ‘Best Practice Framework’ with regard to the quantification of Structural Fund employment effects should help with an assessment of the contribution to the Lisbon Strategy’s aim of ‘more jobs’.

Similarly, Step 1.4 of the Framework, with its emphasis on a sectoral analysis of employment effects should, if linked to a
Best Practice Framework

ranking of sectors according to knowledge-intensity, enable the contribution to the aim of ‘better jobs’ to be assessed. There are a number of more specific indicators that are relevant to measuring the contribution of Structural Fund employment effects to the Lisbon Strategy and these are set out in Appendix C.

3.3: Relationship with National Programmes – in addition to considering synergies with other EU programmes/policies, an overall assessment should examine the relationship between the Structural Funds and national/regional programmes.

Co-financing requirements mean that there is often a close relationship, at a project level, between the Structural Funds and purely nationally/regionally supported schemes. Earlier observations regarding Community added value are also pertinent in this respect.

However, in the past there has often been a less close relationship at a strategic level. The relationship has also varied across EU Member States and across the Structural Fund priority objectives (for example, whereas Objective 1 has usually been closely integrated with national initiatives, the more fragmented nature of Objective 2 programmes has often made this more difficult to achieve). There have also been complications at an operational level given differing programming cycles, monitoring and reporting requirements, and implementation structures.

In the new 2007-13 Structural Fund programming period, with the subsidiarity principle being applied in a more pronounced way and with an end to ‘zoning’, there is likely to be a closer integration of Structural Funds and national/regional schemes. An important aim of future overall assessments should be to establish the extent to which this comes about and the advantages (and any disadvantages). For example, it may be that a closer integration of Structural Funds and national/regional schemes leads to efficiency gains and, through this, to improved employment effects.

3.4: Intervention-specific Employment Effects – the nature of employment effects will vary according to the nature of Structural Fund interventions. As part of an overall assessment, an analysis should be undertaken of intervention-specific effects. Ideally, the overall assessment will draw on thematic and other research carried out during the course of the Programme (see Step 1.2). Below, some of the main types of intervention-specific effects are described.

In the following sections, it is assumed that an assessment of Structural Fund employment effects will take place, in the first instance, at a project level as part of routine monitoring activities with aggregation then at the Priority and
Programme level. It is also important in each thematic field to bear the project life-cycle in mind with a distinction being made between employment effects linked to the implementation and operational phases of projects.

The draft Regulation for the 2007-13 programming period defines a number of priority themes for the purposes of classifying Structural Fund expenditure. These are: research and technological development (R&TD), innovation and entrepreneurship; information society; transport; energy; environmental protection and risk prevention; increasing the adaptability of workers and firms, enterprises and entrepreneurs; improving access to employment and sustainability; improving the social inclusion of less favoured persons; and improving human capital. Below, we concentrate on the types of intervention that are most likely to have significant employment effects.

3.3.1: Physical infrastructure – in the short-term, the project implementation process will lead to ‘outputs’ in the form of direct, temporary, construction-related jobs. These can be converted into full-time equivalent jobs so that aggregation/comparisons with other types of (permanent) employment effects can be made. If the construction workforce comes from the same area as the project, there will also be indirect, income related multiplier effects whilst the procurement of goods and services for the construction process should generate supplier effects.

In the longer-term, the operation of new physical infrastructure facilities will generate both direct and indirect employment effects. Direct effects will usually be limited to jobs created to operate the facility (‘results’). Indirect effects will arise in undertakings than benefit from the facilities (‘impacts’). For example, a new business incubator may create 10 new jobs for management and support personnel (‘outputs’; once the incubator is operating and full occupancy is achieved, tenant businesses will benefit and could create significantly more jobs (‘results’) as well as wider indirect effects (‘impacts’). Likewise, in the case of transport infrastructure, a new bridge will require some labour to operate and maintain it but the main benefits in terms of employment are likely to come from increased business activity because of shorter travel times, improved access to markets, etc.

<table>
<thead>
<tr>
<th>Summary - Physical Infrastructure Employment Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Outputs – project implementation leads to temporary, construction related job creation. There may also be some outputs associated with the management of a new facility;</td>
</tr>
<tr>
<td>• Results - the operational phase of project leads to direct job creation in organisations that benefit from using the facility.</td>
</tr>
<tr>
<td>• Impacts – wider employment effects arising from operation of the facility, e.g. improved trade that benefits businesses and creates jobs in the area generally.</td>
</tr>
</tbody>
</table>
3.4.2: Business support - interventions (grants, risk capital, advisory support, etc) to promote entrepreneurship/start-ups should lead (apart from jobs created to operate the scheme – ‘outputs’) to new ‘jobs created’ as enterprises grow and take on workers (‘results’). Additionality should be high and usually displacement will be low (especially if start-ups are in growth sectors). Similar employment effects will arise from interventions aimed at existing SMEs but additionality is likely to be lower and displacement higher. Support to existing undertakings threatened by closure should lead to ‘jobs safeguarded’.

There are often complications in measuring ‘jobs saved’ and the danger of exaggerating effects by counting more than simply jobs directly at risk in a firm/sector. Existing enterprises could also benefit from business support aimed at improving competitiveness (e.g. skills development) and in this case the output will be ‘improved jobs’ and possibly new job creation if the enhanced performance of the firm leads to additional recruitment.

It needs to be borne in mind, however, that interventions to improve competitiveness and productivity can also lead to job losses in the undertakings concerned. At a Priority and Programme level this means that it is important to estimate the net position with regard to employment impacts, i.e. the sum of job gains and losses.

<table>
<thead>
<tr>
<th>Summary – Business Support Employment Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outputs</strong> – jobs created or maintained to operate business support measures.</td>
</tr>
<tr>
<td><strong>Results</strong> - business start-ups and SME expansions should lead to direct job creation; other interventions may have ‘jobs maintained’ as a result.</td>
</tr>
<tr>
<td><strong>Impacts</strong> – in addition to direct job creation there will be further indirect employment effects as a result of supplier and other indirect effects.</td>
</tr>
</tbody>
</table>

3.4.3: Training and skills development – interventions of this kind will not directly create jobs as ‘outputs’ but should help those out of work to fill vacancies and existing employees to retain their jobs and/or increase their skills as a ‘result’. In both cases, particularly the latter, improved employability and skills enhancement will be an important outcome. Interventions aimed at helping the unemployment into work could have a ‘churning’ effect with existing employees, or other jobless, being effectively displaced.

A redistribution of jobs through ‘churning’ should, however, reduce long term unemployment. In the case of interventions aimed at those already in jobs, apart from helping to secure jobs (e.g. through wage subsidies), a key aim is usually to improve skills. As noted above, this should lead to improved productivity and increase business competitiveness with direct employment effects in the form of ‘improved jobs’ and
further indirect effects arising from improved performance. In addition to direct employment effects of this sort, interventions may also have some indirect effects, e.g. creating new jobs for trainers, although the scale of such effects is likely to be limited.

3.4.4: Support for R&D, technology transfer, innovation, etc – such interventions could lead to direct job creation as an ‘output’ (e.g. by enabling a new R&D project to go ahead or an existing R&D facility to expand). In the case of Structural Funds measures aimed at promoting innovation and technology transfer, employment effects are likely to be indirect and will be associated with improved business performance as productivity is improved and/or innovation leads to new products and services which help to make firms more competitive and capable of growing faster, leading to job creation as a ‘result’.

The absorption of new technology (e.g. ICT) may not, however, have labour-intensive effects. Indeed, if ICT is used to improve productivity, this could lead to a reduction in employment on a scale that on a net basis outweighs any positive effects at a Priority and Programme level. If, on the other hand, ICT is used to help sell products and services, and to expand the market generally, then there could be similar effects to those described above for business support measures. Employment effects should therefore be assessed more in terms of job quality rather than just in a numerical way.

3.4.5: Community Economic Development and Social Economy – interventions aimed at community economic development and promotion of social economy typically include support for entrepreneurship and social enterprises, investment in physical infrastructure (e.g. community centres)
and services (e.g. councillors) providing advice and practical support to those wishing to (re) enter the labour market (e.g. young people, women returners, the unemployed), small-scale grants to support local projects, and support for community and voluntary groups.

Community economic development measures of this kind may have direct employment outputs, for example paying for the recruitment of volunteers to provide advisory services; creating employment in business start-ups; or helping people who are unemployed find work (‘results’). But otherwise, Structural Fund employment effects are likely to be mostly of an indirect nature.

<table>
<thead>
<tr>
<th>Summary – Community Economic Development and Social Enterprise Employment Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Outputs – there may be some jobs created directly to help implement a community scheme, e.g. to run a community resource centre.</td>
</tr>
<tr>
<td>• Results – CED measures should lead to new economic activities, e.g. setting up a social enterprise, that creates jobs or improves employability for disadvantaged groups.</td>
</tr>
<tr>
<td>• Impacts – in addition to direct job creation there will be further indirect employment effects as a result of other indirect effects.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Effects</th>
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</thead>
<tbody>
<tr>
<td>• Key evaluation issues – during the programming period and at the ex post evaluation stage, has there been an overall assessment of Structural Funds employment effects? Key issues include: relevance, efficiency, effectiveness, impacts and Community added value, and sustainability.</td>
</tr>
<tr>
<td>• Contribution to other EU priorities – in addition to examining issues that relate specifically to regional development, has there been an assessment of how Structural Fund employment impacts contribute to other EU priorities - EU enlargement, the European Employment Strategy, the Lisbon Strategy and capacity building tasks in relation to the Community ‘acquis’ generally?</td>
</tr>
<tr>
<td>• Relationship with national/regional schemes – as part of an overall assessment, have synergies with purely nationally/regionally-funded programmes been examined to ascertain the extent of complementarity at a strategic and operational level?</td>
</tr>
<tr>
<td>• Intervention-specific employment effects – has an analysis been undertaken, as part of the overall assessment, of intervention-specific employment effects? Ideally, this aspect of the overall assessment should draw on thematic and other research carried out during the course of the Programme.</td>
</tr>
</tbody>
</table>
3.7 Project Life Cycle and Measuring Employment Effects

Structural Fund employment effects will vary according to the stage in the project life cycle:

- Temporary jobs will be created during the inception and implementation phase (some of these may become permanent);
- Once the project becomes operational, this should lead directly to more permanent employment effects – jobs being created or saved, jobs improved, etc;
- Direct employment effects will have a number of indirect effects.

It is important that the methodological steps outlined in this ‘Best Practice Framework are closely linked to this project life cycle. Given that the life cycles of different projects making up a project lifecycle and measuring structural fund employment effects
that data on employment effects will inevitably be collected at different points in the development of different projects. A choice therefore exists – whether to base estimates on forecasts for all projects at the inception/implementation stage (and then checked at the ex post stage in a programme) or, alternatively, to monitor employment effects on a more continuous basis using real data.

Ideally, these two approaches should be combined with forecasts being made and periodically updated using real data on projects. This will involve:

- At the outset of a project, making a forecast for each scheme of the number of jobs that are likely to have been created, maintained or improved at different points in the project’s lifetime;

- Periodically checking progress against the forecasts and as the project becomes operational, if necessary revising the forecast for the number of jobs that are likely to be eventually created or saved.

This approach presupposes, however, that monitoring systems are flexible enough for adjustments to be made as new project data on forecast/actual jobs becomes available (see Step 1.2). In addition, there should be periodic checks to ensure that project data on actual jobs is accurate.

### 3.8 Next Steps and Critical Success Factors

Suggested next steps in implementing the ‘Best Practice Framework’ are as follows:

- The Framework should be disseminated by the Commission to national and regional authorities with a recommendation that it should be used for the preparation of the 2007-13 Structural Fund programmes and the subsequent monitoring and evaluation of employment effects;

- Where necessary, the Commission should encourage national and regional authorities to allocate technical assistance to support the Framework’s implementation, e.g., through awareness raising and training for programme managers to develop the capacity to operate monitoring systems that can efficiently handle employment effects data;
Best Practice Framework

- National and regional authorities should be encouraged to provide common guidance to Beneficiaries based on the Framework on key definitions, how to measure Structural Fund employment effects, the information that should be provided, procedures, timing, etc.

- The Commission and national and regional authorities should periodically review implementation of the ‘Best Practice Framework’ to ensure that if problems arise, they can be tackled in a timely manner.

In the medium-term, the Commission should facilitate on-going contact at an EU level between those responsible for implementing Structural Fund programmes at a regional and national level so that ideas, good practice and experience generally with regard to measuring Structural Fund employment effects in the new 2007-13 programming period can be shared.

It is clear from the case study research (see Appendix F) that differing methodologies and systems are being developed throughout the EU to measure employment effects. Whilst national and regional authorities have discretion to decide what is appropriate, the aim should nevertheless be to encourage harmonisation based on best practices.

In taking the ‘Best Practice Framework’ forward, there are a number of critical success factors.

Firstly, the bottom-up approach set out in the ‘Best Practice Framework’ can only be successfully implemented with the active support of Beneficiaries and a considerable effort should be invested at a regional level in ensuring this is obtained. Secondly, and linked to this, the advantages of implementing the Framework should to be highlighted as lying in providing valuable feedback on projects and programmes that can help to improve future performance. Thirdly, the Framework needs to be built into the new 2007-13 Structural Fund programmes from the outset so that a firm basis is laid for subsequent monitoring and evaluation activities.

Last but not least, in addition to a reviewing the Framework’s implementation from a technical perspective (see above), there should be periodic feedback on the results achieved, i.e. analysis of Structural Fund employment effects. This should ideally be provided at a regional, national and EU level and could perhaps be linked to the Lisbon Strategy process.
# Definitions and Indicators

## Primary Definitions – Direct Employment Effects

<table>
<thead>
<tr>
<th>Definition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs created</td>
<td>New jobs that are created only because of ERDF intervention. These may be temporary or permanent, full or part-time. The priority should be to count permanent full-time jobs that are created directly by Structural Fund interventions.</td>
</tr>
<tr>
<td>Jobs maintained</td>
<td>Existing jobs that are at risk and would be lost if ERDF or ESF intervention did not occur. Jobs maintained should only be measured if this is an important aim of a programme and only those jobs at risk in an undertaking, rather than all the jobs, can be counted.</td>
</tr>
<tr>
<td>Employees assisted</td>
<td>Existing jobs where ESF-supported training and other actions focusing on those in work leads to improved skills.</td>
</tr>
<tr>
<td>Unemployed assisted</td>
<td>Unemployed individuals benefiting from ESF-supported training that either improves employability and/or leads to beneficiaries actually obtaining jobs.</td>
</tr>
<tr>
<td>Jobs linked to project implementation/operations</td>
<td></td>
</tr>
<tr>
<td>Project implementation</td>
<td>Jobs created/maintained directed or indirectly during the development phase of a project, e.g. construction-related employment, jobs required to prepare a new training programme. These employment effects will be temporary.</td>
</tr>
<tr>
<td>Project operations</td>
<td>Jobs created/maintained directly or indirectly once a project becomes operational, e.g. jobs required to operate a new physical infrastructure facility or to run a training programme. These jobs should be permanent.</td>
</tr>
<tr>
<td>Direct and indirect employment effects</td>
<td></td>
</tr>
<tr>
<td>Direct employment effects</td>
<td>Where there is a clear and immediate relationship between Structural Fund interventions and the creation, maintenance or improvement of jobs, and such outcomes occur mainly in the organisation that benefits from assistance</td>
</tr>
<tr>
<td>Indirect employment effects</td>
<td>Where direct employment effects have further secondary effects as a result of income multipliers or supplier effects.</td>
</tr>
<tr>
<td>Duration of jobs/employment effects</td>
<td></td>
</tr>
<tr>
<td>Full/part time job</td>
<td>A job that provides employment for less than half the working week. Part-time job estimates should be translated into full-time equivalents (FTEs). A full time job is one that provides employment for more than half the working week.</td>
</tr>
</tbody>
</table>

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Appendix A
# Definitions and Indicators

<table>
<thead>
<tr>
<th>Temporary and permanent jobs</th>
<th>A new job that lasts more than a total of six person-months during the course of the programme (thereby being equal to one FTE job) but not beyond the period of assistance from the Structural Funds. A new job that last for at least two years beyond the Structural Fund programming period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job quality</td>
<td></td>
</tr>
<tr>
<td>ERDF</td>
<td>NACE Rev. 2 classification of permanent full-time jobs that are created directly by Structural Fund interventions (Lisbon Strategy: ranking of sectors according to number of jobs in sectors that are important in a region to development of a knowledge economy). Additional indicators - data on remuneration and qualifications.</td>
</tr>
<tr>
<td>ESF</td>
<td>Occupational classification of jobs improved/employability improved supported, if appropriate/possible, by data on remuneration and qualifications.</td>
</tr>
<tr>
<td>Employment impacts</td>
<td></td>
</tr>
</tbody>
</table>
| Gross/net employment effects | Employment effects before (gross) or after (net) making adjustments for additionality, displacement and indirect effects (income multipliers and supplier effects):  
\[ \text{Net Jobs} = (\text{gross impact} - \text{deadweight}) + (1 - \text{displacement}) + (1 + \text{supplier multiplier}) + (1 + \text{income multiplier}) \]  
Additionality:  
- **Absolute additionality** – i.e. a situation in which none of the employment effects would have occurred without Structural Fund intervention;  
- **Partial additionality** – namely, in the absence of Structural Fund intervention, projects would have proceeded but the employment effects would have been on a reduced scale or occurred at a later stage;  
- **No additionality (‘Deadweight’)** – i.e. a situation where all the employment effects associated with Structural Fund interventions would have occurred anyway because projects could have proceeded with support from other sources.  
Displacement and Indirect Effects:  
- **Income multipliers** – where job creation leads to additional incomes that are spent in local economies which leads to
an increase in demand for goods and services, in turn creating further jobs;

- **Supplier effects** – i.e. where an assisted business or project increases leads to additional order for local goods and services, again resulting in second-round job and wealth creation effects.

- **Other indirect employment effects** – arising, for example, from developments that enhance the attractiveness of an area to business.
## Worked Example – Net Effects

<table>
<thead>
<tr>
<th>Steps</th>
<th>Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outputs and results:</td>
<td></td>
</tr>
<tr>
<td>Financial inputs</td>
<td>Euro 10 million</td>
</tr>
<tr>
<td>Outputs</td>
<td>100 SMEs receive assistance</td>
</tr>
<tr>
<td>Results</td>
<td>500 gross jobs created of which 400 are permanent and 100 temporary = 450 gross FTE jobs created</td>
</tr>
<tr>
<td>Cost per gross job</td>
<td>Euro 20,000 per gross job (euro 10 million/500 gross jobs)</td>
</tr>
<tr>
<td>Impacts:</td>
<td></td>
</tr>
<tr>
<td>Additionality</td>
<td>50% of the SMEs would not have gone ahead with their projects without the Structural Fund assistance. Net additional jobs = 225 (450 x 50%)</td>
</tr>
<tr>
<td>Displacement</td>
<td>20% of the net additional jobs created by the SMEs displace jobs in non-assisted firms. Net additional non-displacing jobs created = 180 [(225) – (225 x 20%)]</td>
</tr>
<tr>
<td>Indirect effects</td>
<td>Income multiplier of 1.3 (at regional level) means that in addition to the 180 directly created additional non-displacing jobs, a further 54 jobs are created indirectly. Supplier effects of 1.1 lead to further indirect effects equivalent to 18 jobs.</td>
</tr>
<tr>
<td>Net jobs created</td>
<td>252 net jobs (225 net additional – 45 displacement + (54 + 18) indirect)</td>
</tr>
<tr>
<td>Net cost per job</td>
<td>Euro 39,680 (euro 10 million/252 net jobs)</td>
</tr>
</tbody>
</table>
Calculating the cost per job for a Structural Fund programme provides a broad measure of financial efficiency and a basis on which the results achieved by different interventions can be compared. There are several ways in which the cost per job can be calculated:

- On the basis of an estimate of gross or net employment effects;
- Taking into account all expenditure or just the Structural Fund element.

Estimates from recent Structural Fund evaluation studies are summarised below. It should be noted that these relate to just the Structural Fund cost per job (i.e. not the full cost taking into account national public and private sector co-financing). Unless indicated otherwise, the estimates relate to the gross Structural Fund cost per job.

Any benchmarks for the cost per job should be treated with considerable caution. In particular, no two interventions or the circumstances in which they take place are exactly the same.

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Cost per job estimates</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>All types of interventions (jobs created or maintained)</td>
<td>€23,700 per new job/€11,500 per job maintained (Ex Post Evaluation, Sweden 1995-99 Objective 6 Programmes); €13,700 gross new job/22,100 net (Ex Post Evaluation of 1994-99 Objective 2 Programmes); €7,000 per new job/€6,700 per job maintained (Mid Term Evaluation of 2000-06 East of England Objective 2)</td>
<td>€14,800 per gross job created/€8,900 job maintained</td>
</tr>
<tr>
<td>Physical infrastructure (temporary construction related jobs)</td>
<td>€25,000 per gross temporary job (Thematic Evaluation of Structural Fund Impacts on Transport Infrastructures, 2000) €123,000 gross temporary job created (DATAR, 2006)</td>
<td>€74,000 per temporary job created</td>
</tr>
<tr>
<td>SME support measures (jobs created or maintained)</td>
<td>€17,500 job created (Thematic Evaluation of Structural Funds on SMEs, 1999) €65,000 (DATAR, 2006); €2,000 per job created (Business Incubation - International)</td>
<td>€19,320 per gross job created</td>
</tr>
</tbody>
</table>

For example, more investment will be needed to create permanent jobs through business support measures in a region where SMEs have a high failure rate than in other regions where good survival rates exist. Secondly, values for the cost per job from different countries will be influenced by wage levels.
## Benchmarks for Cost Per Job

<table>
<thead>
<tr>
<th>Source/Reference</th>
<th>Cost per Job Created (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Studies, OECD, 1999</td>
<td>€4,500 per job created / €4,000 per job</td>
</tr>
<tr>
<td>Benchmarking of Business Incubators, 2002</td>
<td>€7,600 per job created</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>€36,000 per job</strong></td>
</tr>
</tbody>
</table>
1. Introduction

A central aim of the Lisbon Strategy is to create ‘more and better’ jobs. This is to be achieved by developing a competitive, knowledge-based European economy. The question is: how can the contribution of the Structural Funds to this aim be measured? There are several aspects to this question:

- The direct contribution of the Structural Funds to creating ‘more and better jobs’;
- The indirect contribution through Structural Fund investment in promoting knowledge-intensive economic activities that are likely to generate ‘more and better’ jobs;
- The specific contribution of the ERDF and ESF to this and other aspects of the Lisbon Strategy.

At a European level, progress towards the ‘more’ aspect of this aim is being measured primarily through employment rates with the ‘better’ aspect captured by education and skills attainment levels. However, there are no Lisbon Strategy-

related performance indicators that relate specifically to the contribution of the ERDF to the ‘more and better’ jobs objective. Thus, the Lisbon Strategy Action Plan, agreed at the spring 2005 Council, includes over 40 performance indicators for measuring progress towards key targets including many that can be influenced by the ESF. But this list does not include indicators relating directly to ERDF job creation interventions and effects.

A recent evaluation of the contribution of the Structural Funds to the Lisbon Strategy identified a number of expenditures for the 2000-06 period that are directly relevant to the creation of ‘more and better’ jobs. These expenditures include: employment rates at national level rates of unemployment and long-term unemployment; access to ALMP measures at 6 months for 25 years; the female participation/employment rate; and the unemployment rate for 15-24 years olds and for 55-64 year olds. Likewise for ‘Central policy area - 10: Increase investment in human capital through better education and skills’, progress is measured towards agreed EU benchmarks which, for example, include: 12.5% of the adult working age population participating in lifelong learning; 85% of 22 year-olds having completed upper secondary education; reduce by at least by 20% (compared to 2000) the % of low-achieving 15 year-olds in reading literacy; raise number of graduates in MSTE in the EU.


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37 Thus for example, for ‘Central Policy Area - 8: Attract more people into employment and modernise social protection systems’ performance...
to the Lisbon Strategy including the ‘more and better’ jobs target.\(^3\) This, for example, includes €60 billion to prevent and combat unemployment, develop human resources and foster social integration in the labour market. However, the study did not seek to examine the contribution of employment effects attributable to the ERDF or ESF to Lisbon Strategy aims. Overall it concluded that whilst there was a congruence between the Structural Funds and the Lisbon Strategy with over 50% of ERDF and ESF financial allocations being earmarked for activities that promote the Lisbon Strategy aims, there was difficulty in relating this to performance indicators that measure outcomes and impacts rather than just inputs.

At a EU policy/programme-specific level, several methods have been developed for measuring progress towards the Lisbon Strategy targets. In the field of education and skills, for example, a Commission Working Paper sets out 29 performance indicators than can be used.\(^4\) This seeks to measure progress towards objectives such as creating ‘Developing skills for a knowledge society’ using indicators such as ‘completion of upper secondary education’ (where the target for 2010 is 85% of 22 year olds) and the ‘percentage of low achieving 15 year olds in reading literacy’ (where the aim is to reduce the level by 20%). However, again, he indicators used in this and other EU policy/programme areas whilst relevant to ESF interventions are not capable of capturing employment effects attributable to the ERDF.

Overall, therefore, there is little or no existing guidance on how Structural Fund employment effects arising from ERDF interventions can be linked to the Lisbon Strategy aims.

### 2. Suggested Approach and Indicators

Aspects of the ‘Best Practice Framework’ can be used to help assess the contribution of Structural Funds employment effects to the Lisbon Strategy by:

- Counting the number of net ‘jobs created’ or ‘improved’ by the Structural Funds;
- Measuring their contribution to increasing employment rates and reducing unemployment rates;
- Analysing the characteristics of Structural Fund employment effects to estimate the proportion of net

\(^{3}\) ‘Thematic Evaluation of the Structural Funds’ Contributions to the Lisbon Strategy’, Danish Technology Institute, February 2005.

Employment Effects and the Lisbon Strategy

jobs created or improved in knowledge-intensive sectors.

The methodological approach for the first of these steps is set out in the ‘Best Practice Framework’. Taking the second point above, at a national level it should be possible to provide an estimate of the contribution of ERDF net job creation effects to changing employment and unemployment rates. Although there is not, as pointed out in the ‘Best Practice Framework’ a simple 1:1 relationship between job creation and employment and unemployment rates, a quantitative comparison between these factors will provide at least a broad indication of the scale of possible Structural Fund employment outcomes on labour market trends. Moreover, if this exercise is undertaken at a national level, some of the factors that make a precise calculation difficult (e.g. displacement/substitution) will be minimised.

The second step above should provide an indication of the contribution of Structural Fund employment effects to the Lisbon Strategy aim of creating ‘more jobs’. Given the emphasis the Lisbon Strategy places on cohesion, it would be appropriate to also provide an analysis of employment effects by age groupings (particularly young people), gender and geographical area to provide an indication of the extent to which disadvantaged groups are benefiting from interventions.

To measure the Structural Fund contribution to ‘better jobs’, the ‘Best Practice Framework’ methodology for analysing employment effects by sector should be adopted with the aim of arriving at an estimate of the proportion of new jobs created in industries that tend to be knowledge-intensive.

In September 2005, Eurostat finalised the draft structure of NACE Rev. 2. In the NACE Rev. 2 the number of sections is increased from 17 to 21 and the number of divisions from 62 to 88. The result is a better classification of service sector activities and other activities that contribute to a ‘knowledge-based’ economy. For example, there is a new section on ‘Information and communication’ which more clearly identifies ICT activities in manufacturing and services. The table below provides (a non-exhaustive) list of the classifications that are particularly relevant to the Lisbon Strategy insofar as they tend to be knowledge-intensive.

It needs to be emphasised that a purely sectoral analysis focusing on the type of NACE classifications listed above will not capture the full contribution of Structural Fund interventions with employment outcomes to the Lisbon Strategy. In the first place, knowledge-intensive activities are spread across the European economy as a whole and can be found in elements of most if not all industries. From a different perspective, the fact that jobs may be created in knowledge-intensive sectors does not of course mean that the job-holders concerned have knowledge-intensive
functions that can contribute to promoting competitiveness and growth.

*Examples of Knowledge-Intensive Sectors (NACE Rev. 2)*

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chemical products (20)</td>
<td>• ICT (58)</td>
</tr>
<tr>
<td>• Pharmaceuticals (21)</td>
<td>• Telecommunications (61)</td>
</tr>
<tr>
<td>• Electronics/electrical components (26, 27)</td>
<td>• Information and technology service activities (62)</td>
</tr>
<tr>
<td>• Medical and dental equipment (32)</td>
<td>• Information service activities (63)</td>
</tr>
<tr>
<td>• Air transport (51)</td>
<td>• Scientific R&amp;D (72)</td>
</tr>
</tbody>
</table>

*Summary*

• Number of net jobs created or improved by Structural Fund intervention;
• Contribution of jobs created to increasing employment rates and reducing unemployment rates;
• Proportion of jobs created or improved where disadvantaged groups are the beneficiaries;
• Proportion of net jobs created or improved in knowledge-intensive industrial sectors;
• Improved labour productivity resulting from jobs created and improved.
Review of Existing Experience

This appendix provides an assessment of existing experience with regard to measuring employment effects. Section 1 examines the approach adopted to measuring Structural Fund employment effects whilst later sections review wider experience.

1. Structural Fund Evaluations

We begin by reviewing Structural Fund studies from earlier periods – ex post evaluations for the 1989-93 and 1994-96 programmes together with interim evaluations for the 1997-99 period.

1.1 Earlier Evaluation Studies

One of the first Structural Fund evaluations to attempt a quantification of employment effects was the ex post evaluation of the 1989-93 Objective 2 programmes. At an EU level, the study estimated that between 1989-93 approaching 850,000 gross additional jobs were created as a result of Objective 2 intervention. After making adjustments for additionality, displacement and indirect effects this estimate was reduced to a figure of between 450,000-500,000 net jobs created, saved or redistributed. Separate estimates were calculated for each Objective 2 region and the global estimate was very much a bottom-up calculation. The estimates were based on an analysis of monitoring data from a number of the Objective 2 regions and surveys and other studies to help estimate additionality, displacement and indirect effects.

In 1999, a study was carried out for the Commission examining practices with regard to measuring Structural

41 'Ex Post Evaluation of the 1989-93 Objective 2 Programmes', Ernst & Young, August 1997.
Review of Existing Experience

Fund employment effects. The study, *Evaluating Structural Fund Employment Effects*, which focused on examining 60 Objective 1 and 2 ex post evaluations for the 1994-96 period and interim evaluations of the 1977-99 period, contained a number of relevant findings.

Firstly, the evaluation studies relied heavily on official monitoring data to estimate gross employment effects but in some cases used other methods too. Where monitoring data was not available, or was considered unreliable, a large number of other 'bottom up' methods were used to estimate (gross) Structural Fund employment effects. These included: basing employment estimates on programme targets; in some cases, using the job targets recorded on project appraisal forms; surveying a sample of projects/beneficiaries to identify job outputs and then scaling up the results to provide an estimate for programmes as a whole; and using benchmarks (typically, cost per job based) derived from other programmes and studies.

Purely empirical methods, in particular surveys, to help estimate gross employment outputs (or at least, to check estimates based on monitoring data) appear to have been used in approaching half the evaluations.

Secondly, there were shortcomings in most of the evaluations with regard to distinguishing between different types of employment effects. A high proportion – almost half - of the evaluation studies carried out in the 1994-99 period failed to distinguish between jobs created and jobs saved. Where no distinction was made, a variety of practices were adopted - some studies provided an estimate for 'jobs created' or 'new jobs' only; in other cases, separate estimates were not given for 'jobs created' and 'jobs saved' and instead the two categories were combined. Relatively few Structural Fund evaluations estimated both the temporary and permanent jobs attributable to programmes with most focusing solely on permanent jobs only. Likewise, very few evaluations provided any insight into the durability of what were classified as permanent employment effects but there

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43 ‘Evaluating Structural Fund Employment Effects’ Ernst & Young, August 1999.

44 For example, the evaluators in the Murcia region of Spain carried out a telephone survey of 1,000 beneficiaries to build up a more comprehensive picture of employment impacts.
were some notable exceptions including several examples of ‘bottom-up’ approaches being used.45

There were several good examples from the evaluations carried out in the 1994-99 period of ‘meso-level’ analyses to examine the nature of employment effects. Where this was done, the approach typically involved an analysis of the distribution of jobs between different industrial sectors, spatial analysis of job outputs, broken down by sub-regions within priority areas and in some cases breaking down the job outputs according to the size bands of assisted firms. The best examples of this were in Germany’s Objective 1 regions.46

Thirdly, most (two-thirds of the 60 evaluation studies from the 1994-99 period) failed to tackle the conversion of gross Structural Fund employment effects into net outputs. Where this was done, various methods were used - deriving the parameters from other evaluation studies; carrying out surveys to estimate additionality, displacement and indirect effects; statistical techniques, such as shift-share analyses of regional employment trends; and using econometric models to estimate net Structural Fund employment effects. The assessment suggested that the first and second of these methods is the most common. There were quite a large number of studies where the parameters for additionality, displacement and indirect effects were derived from survey work, focusing either on projects or on final beneficiaries.

Last but not least, there were relatively few examples of evaluations from the 1994-99 period using purely ‘bottom-up’ techniques to assess the impact of Structural Fund programmes on macro-economic trends.47

45 In the Brandenburg region of Germany, the evaluators surveyed a sample of businesses to investigate whether the jobs created by Structural Fund assistance still existed. The results suggested that that some new jobs - albeit only 1.5 to 2% of the total - that had been ‘claimed’ earlier no longer existed.

46 Thus, in Thuringen, for example, the evaluators proceed from micro-economic analysis, working up to the meso level by examining the impact of Structural Fund projects on employment in different industrial sectors, sub-regions, social groups and finally on the region’s economy as a whole.

47 An exception was the Objective 1 Brandenburg mid-term assessment (Germany), the evaluators estimated that based on first two years of programme and 5,000 net jobs were being created each year, the Structural Funds were contributing towards 25% of all new jobs in the region. The study also suggested that jobs in assisted firms were growing even faster (at 28%) than in the region as a whole. It was estimated that...
Review of Existing Experience

The 1997 assessment argued that a number of steps needed to be taken to improve methods of quantifying Structural Fund employment effects. This included: clarification of definitions; more emphasis on assessing job quality and on aggregating and analysing job outputs at the meso-level; guidelines that combine suggested approaches to assessing both ERDF and ESF employment effects; more emphasis on the on-going assessment of employment effects rather than being tackled at specific points in the programming cycle; making conversion tables available with the parameters needed to estimate net impacts; and making guidance available at a project as well as a programme level on how employment effects should be measured.

1.2 More Recent Evaluation Studies

In this sub-section, we review more recent evaluations, in particular the ex post evaluations of the 1994-99 Structural Fund programmes. More recent evaluations also include the interim evaluations of the 2000-06 Structural Fund programmes but these are not widely available.

A key feature of ex post evaluations is that, unlike interim assessments, this type of research seeks to identify longer-term impacts of Structural Fund interventions on regional development. The ex post evaluations of the 1994-99 Structural Fund programmes adopted differing approaches the quantification of impacts on employment.

In the ex post evaluation of the 1994-99 Objective 1 programmes, a combination of ‘top-down’ and ‘bottom up’ methods were used to quantify impacts. An econometric approach, based on the HERMIN model, was applied to all the main Objective 1 countries (Greece, Ireland, Portugal, Spain) as well as to the regions of East Germany and Northern Ireland. This produced estimates for impacts on key variables such as GDP, unemployment, employment, productivity and investment.

In the case of the ‘micro-regions’, i.e. smaller Objective 1 areas where a modelling approach was not feasible, the evaluators relied on other research, case study feedback and an analysis of monitoring data to provide a ‘bottom-up’ assessment of Objective 1 impacts. However:

‘In practice, strong difficulties have been incurred in making an assessment of the impact of Structural Fund interventions across the micro-regions. Available data tends to be patchy...
Review of Existing Experience

and of questionable quality. Definitional issues reduce the ability to undertake consistent comparable analysis. Together these difficulties have hampered meaningful bottom-up analysis.

Other complications included the fact that some Objective 1 programmes failed to capture end results in the employment field and others failing to distinguish between jobs created and safeguarded. Equally, the evaluators argued that the real impact of the interventions could only be meaningfully assessed by reference to the relative employment gain measured as a percentage of jobs already existing in a region and in the absence of such data the real impact was not possible to establish. According to the study, ‘it [was] also difficult to move from gross results to net impacts as there are only limited estimations made on the expected deadweight, displacement, substitution and multiplier effects’.

<table>
<thead>
<tr>
<th>Objective 1 – ‘Bottom up’ Estimates of Employment Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nord-pas-de-Calais and Corsica</strong> – net employment effects totalling some 12,500 were estimated for these regions. The parameters for converting gross jobs into net jobs were obtained from the Thematic Evaluation of Structural Fund Impacts on SMEs (deadweight – 23%; displacement – 18%; multipliers for indirect effects – 1.6).</td>
</tr>
<tr>
<td><strong>Flevoland</strong> - the total number of jobs recorded as created through the programme was 7,342 with an additional 6,600 potential new jobs created through the construction of business sites and business centres. Taking both of these together provides a gross effect of just under 14,000 jobs. The evaluators concluded that it was possible that some of these jobs could have been occupied by inward commuters, a factor potentially balanced by the likelihood that those trained through the ESF would have accessed jobs that would otherwise have been accessed by residents in neighbouring labour markets. Parameters developed for the Objective 2 areas of the Netherlands were used to convert these gross estimates into net employment effects (deadweight – 50%; displacement – 15%; multipliers for indirect effects – 1.2).</td>
</tr>
<tr>
<td><strong>Merseyside</strong> - in the UK a ‘bottom-up approach was used to estimate employment results for Merseyside. Here, some 29,082 jobs were recorded as having been created through Objective 1 interventions. Using estimates developed by EKOS for the UK (deadweight – 35%; displacement – 35%; multiplier for indirect effects – 1.25) the study estimated that there were 15,400 net jobs. Evidence from stakeholder interviews suggested that this may underestimate actual deadweight and displacement effects.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E</th>
<th>The problems of applying a ‘bottom-up’ approach to measuring Structural Fund employment effects is not unique to Objective 1 areas.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In the 1994-99 Objective 2 ex post evaluation, a purely ‘bottom-up’ approach was adopted to estimating employment effects using a combination of monitoring data and feedback from the regional case studies. The case studies were also used to obtain the parameters</strong></td>
<td></td>
</tr>
</tbody>
</table>
Review of Existing Experience

relating to additionality, displacement and indirect effects required to convert gross outputs into net effects. 48

The Objective 2 ex post evaluation estimated net employment impacts for a number of different categories – not only jobs created and saved (the focus of the Objective 1 ‘bottom-up’ assessment in the micro-regions) but also ‘jobs redistributed’ as a result of ESF training measures. It also provided an assessment of the propensity of different types of Structural Fund intervention to create jobs.

With the exception of regions where Objective 2 employment outputs were not monitored at all, there was a quite comprehensive picture with regard to ‘jobs created’. But, there was a less good quality data on ‘jobs saved’. 49

Moreover, where an attempt to quantify ‘jobs saved’ was made, definitions and methodologies varied considerably across different countries and regions. In general, therefore, whereas estimates of ‘jobs created’ could be treated with some confidence, this was less so with the category of ‘jobs saved’.

The 1994-99 Objective 2 ex post evaluation included an estimate for the ‘jobs redistributed’ by ESF training interventions. The methodology for this estimate is summarised on the next page:

<table>
<thead>
<tr>
<th>Objective 2 – ‘Bottom Up Estimate of ESF ’Jobs Redistributed’</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Jobs redistributed’ were estimated by calculating:</td>
</tr>
<tr>
<td>• The number of beneficiaries of ESF training and skills</td>
</tr>
<tr>
<td>development measures;</td>
</tr>
<tr>
<td>• The proportion of beneficiaries who were unemployed before</td>
</tr>
<tr>
<td>starting their training (estimated to be 50%);</td>
</tr>
<tr>
<td>• The proportion of individuals from this category who</td>
</tr>
<tr>
<td>subsequently went on to obtain jobs (assumed to be 60%);</td>
</tr>
</tbody>
</table>

Spain, and the majority of Italian Objective 2 regions. In these countries, a combined total was generally provided for ‘jobs created’ and ‘jobs saved’.

48 There was far better availability of data on Objective 2 employment effects for the 1994-99 period than for the previous programming period. This applied especially to the 1994-96 period when estimates were available from three-quarters (62/82) of the Objective 2 regions compared with less than half for the earlier 1989-93 period. These estimates came either from the regional authorities themselves or from the interim and ex-post evaluations. Gaps in the availability of data mainly related to France where estimates were only available for a minority of the 19 Objective 2 regions although there were also gaps in data availability in some other countries.

49 In particular, there were few or no estimates of ‘jobs saved’ for Objective 2 programmes in Austria, Belgium, The Netherlands,
Review of Existing Experience

• The extent to which these individuals gained employment at the expense of others in the labour market (displacement or redistribution – assumed to be 100%).

The quality of the available data did not allow calculations of this sort to be made without making a large number of assumptions. In the first place, the available ESF Objective 2 monitoring data did not, in general, provide details of the labour market status of individuals who benefited from training programmes. However, data from regions where this factor was monitored suggests that it was around 50%. Secondly, although research was undertaken in some regions to track the destination of beneficiaries, comprehensive statistics were not available, let alone the extent of additionality (based on other research, this factor was assumed to be around 60%). Based on these parameters, the Objective 2 ex post evaluation estimated that the ‘jobs redistributed’ by ESF interventions totaled around 1.1 million.

The ex post evaluation estimated that Objective 2 interventions during the 1994-99 period had led to some 1.2 million gross additional jobs being created which translated into 770,000 net jobs. The parameters needed for the conversion were derived from a series of case studies focusing on different types of Structural Fund intervention and regions.50

As in the Objective 1 ex post evaluation, an attempt was made to assess the impact of Structural Fund interventions on labour markets. The starting point of the impact assessment was to compare the ‘before-and-after’ situation in Objective 2 areas using a combination of published statistics on key indicators and locally-available data from the regions themselves.

This analysis of trends in Objective 2 regions was hampered by the fact that statistics for small eligible areas (often below NUTS III) were not available on a harmonised basis. The analysis therefore had to rely on estimates that were generally more valid for certain series, such as unemployment rates, than others such as employment. These data were also problematic, however, with published data for some countries unavailable for certain years. In the 1994-99 period, these complications were further aggravated by the fact that there were a larger number of smaller Objective 2 regions than before. Comparisons were then made between the trends in Objective 2 regions and the EU economy as a whole to assess the extent of convergence over the 1994-99 period.

In the ex post evaluation of the 1994-99 Objective 5b programmes, employment effects were identified as arising mainly from Structural Fund interventions to promote start-ups and existing smaller undertakings in rural areas as part of diversification strategies and, secondly, by ‘improving the balance between labour supply and demand’. Taking the first of these, the tourism industry was

50 Gross ‘jobs created’ adjusted for additionality (75%), displacement (10%) and indirect effects (20%). ‘Jobs saved’ were adjusted for additionality (50%), displacement (30%) and indirect effects (10%). ‘Jobs redistributed’ adjusted for additionality (60%).
highlighted in the study as the main beneficiary (Objective 5a interventions were aimed at promoting employment in the agro-industrial sector). Job creation data were provided for certain regions (for example, it was estimated from an analysis of monitoring data that around 7,800 jobs were created or saved in the Bavaria Objective 5b region) leading to the conclusion that:

‘En fin de compte, l’impact en terme d’emploi semble avoir été très largement positif au moins dans les zones pour lesquelles des données sont disponibles (Bayern, Niedersachsen, Wallonie, Toscana).

However, because of the lack of monitoring data from other regions, the ex post evaluation did not provide estimates at a global level and Objective 5b employment effects were evaluated in an essentially qualitative way.51

As with Objective 2, a purely ‘bottom-up’ approach was also adopted in the 1994-99 Objective 6 ex post evaluation although, as with the Objective 5b study, there was less emphasis on quantifying impacts.51

As in the case of Objective 2, comparisons were made between the performance during the 1995-99 period of assisted areas and the national economies.

However, in contrast to the Objective 2 research, the impact of Structural Fund interventions on these trends was assessed in a purely qualitative way. More generally, the Objective 6 evaluators argued that not only was an attempt to quantify impacts fraught with methodological complications but also – and more importantly – likely to miss the point with regard to the main benefits of Structural Fund programmes. ‘At least in societies like Finland and Sweden’, they suggested, ‘the best chance for success of the Structural Funds is to be found in qualitative regional development. The core of qualitative impacts is new working methods between authorities, enterprises, NGOs and universities.’

As can be seen positively, the 1994-99 evaluations achieved only a partial quantification of Structural Fund employment effects. Although the ex post evaluations suggested that the situation had improved since the earlier programming period, continuing deficiencies were evident with regard to the monitoring systems operated by regional and national authorities and this was of course an important explanation for shortcomings with regard to output estimates.

Review of Existing Experience

The nature of the programmes themselves, in particular the fragmented geographical coverage of Objective 2 and 6 and their focus on small areas, have also made overall impact assessments difficult. However, more emphasis could perhaps have been placed on empirical research methods to quantify Structural Fund outputs and results, and in the case of impacts to assess the effect of interventions on key target groups if not on programme areas as a whole. But, given the labour-intensive and hence costly nature of such research - and the trade-off between depth and scope - it is questionable whether the resources available for the ex post evaluations were sufficient for this type of activity to be undertaken, at least on an extensive basis.

1.2 Specific ESF Related Employment Issues

There are many studies and other documents that are relevant to specific ESF related issues concerning the measurement of employment effects.

For example, a recent OECD report contains a detailed review of factors involved in estimating the net employment effects arising from ALMPs. Deadweight is defined in this report as the hirings from the target group that would have occurred also in the absence of the programme. Substitution effect is defined as the extent to which jobs created for a certain category of workers simply replace jobs for other categories, because relative wage costs are changed. The report argues that available empirical evidence seems to indicate that deadweight and substitution effects may be substantial (70-90% of the gross number of jobs 'redistributed').

52 There are some interesting comparisons to be made in this respect between the ex post evaluation of the 1994-99 Objective 1,2,5b and 6 programmes on the one hand, and the ESF ex post evaluation on the other. In particular, the ESF interim report suggests that the evaluators have been able to rely heavily on surveys and research undertaken at a regional level. For example, a longitudinal study was carried out on 32 Objective 3 measures in Belgium; likewise, in Portugal, the effects of Objective 4 was measured through a survey of 280 SMEs that had participated in ESF schemes and a control group of 200 SMEs that had not taken part. There was very little evidence of survey work of this type being undertaken at a regional level as an input to the Objective 1, 2 and 6 evaluations.

Review of Existing Experience

Amongst the other factors examined is ‘fiscal displacement’ effects, ‘work-test effects’ (where those who receive unemployment benefits are not really searching for work) along with possible ‘crowding out’ effects (defined as being a situation when participation in a labour market programme is regarded as a substitute for regular work). The paper is also interesting in pointing to two, opposing ‘productivity effects’: the first – negative effect - is defined as happening because participation in ALMPs leads to the opportunity to acquire human capital through on-the-job training being lost with working habits deteriorating as a result. The second, more positive and usual, is where training leads to improved skills and this, in turn, contributes to enhanced productivity.

Another recent paper presents a methodology for measuring the net impact of vocational training courses on the employment outcomes of particular target groups.54 The paper approaches the measuring of the impact of training policies by focusing on the probability of finding work, net of the results that would have occurred without an intervention. The methodology is based on the comparison group approach, i.e. comparing the outcomes in the target group who received training and control group who did not. The research was carried out on a sample of participants, from the Piemonte and Emilia Romagna regions and it demonstrates how the data from various statistical sources can be integrated for the purposes of measuring the impact of ESF training programmes.

The data was derived from a panel of jobseeker data, interviewed twice at a 12-month interval, taken from the surveys on the labour force and from the placement data bank on those taking vocational training courses co-financed by the ESF, interviewed 12 months after the end of the training interventions. The surveys on labour force were stripped out of participants in EST vocational training interventions to form a control group. The placement bank data provided information on the target group, and it contained the data which was obtained through surveys carried out in 2001-2002 on about 50% of the participants in training programmes. The paper also outlines a modelling approach that needs to be adopted in the absence of experimental procedures which assign individuals at random to the samples of trained and non-trained. It is

Review of Existing Experience

argued that the model provides unbiased estimates even in the absence of an experimental control group. The approach adopted to evaluating effectiveness is also interesting. The indicator used (and of particular relevance to this study) was gross and net job-placement rates. The gross rate of job placement represents the percentage of those employed one year after the courses have finished. The net rate of job placement measures the contribution of the co-financed policies on the employability of direct recipients net of what would have happened (always in terms of employability) without them. A comparison of the gross rates of placement of recipients with the results achieved by a sample of individuals who have not participated in the intervention was seen as likely to give biased results. Instead, what was described as a ‘stochastic selection model with endogenous switching’ was been used based on Heckman’s seminal work (1976) as a way of providing unbiased estimates without an experimental control group. Surveys using a sample of 11,769 individuals who had benefited from vocational training interventions aimed at fostering job placement were used.

Another study, for the Commission55, worth highlighting assessed the impact of ESF interventions on employment by combining a range of techniques. The study was designed around a set of assumptions which were then validated based on a review of general literature on the effects of labour market policies, an overview of evaluation studies of the effects of the ESF and ERDF and a statistical analysis of existing statistical data.

The review of methodology employed by the evaluations was out of the scope of the study so it does not provide insights into the relative effectiveness of different bottom up approaches to estimating employment effects of SFs. An overall conclusion of the study was that it was difficult to estimate the number of the jobs created, but that it could be concluded that the interventions have a positive effect on employment growth. It also highlights that it is currently not known to what extent the training measures undertaken with ESF support contribute to the creation of a knowledge economy. The study also points out that some indicators

55 Employment effects of the structural funds: an assessment based on theoretical considerations and on empirical evidence’, Ramboll plc, 2002
Review of Existing Experience

apart from employment growth need to be monitored, such as the quality of employment.

1.3 Thematic Evaluations

As with the recent ex post evaluations, there is a very mixed picture with regard to the emphasis in thematic evaluations on measuring employment effects.

Amongst the studies that included an estimate of employment effects was the Thematic Evaluation of Structural Fund Impacts on SMEs. This research estimated that around two million net jobs were created or saved as a result of Structural Fund assistance to SMEs (about a quarter of all net Structural Fund jobs for the 1994-99 period). This estimate was arrived at by scaling up the jobs created or saved by the sample of assisted SMEs used for the survey work. Case study feedback was used to obtain the parameters for additionality, and possible displacement and indirect effects. The report examines the sensitivity of net job estimates by testing various scenarios relating to Structural Fund targeting, SME survival rates, and the parameters required to convert gross into net effects.56

Another thematic evaluation that adopted this approach was the Thematic Evaluation of Structural Fund Impacts on Transport Infrastructure. An attempt to quantify employment effects for the 1994-99 period was made based on a methodology that involved making assumptions for the cost per job (one person year of direct employment) for transport infrastructure projects. This enabled direct jobs creation – mainly construction-related – to be estimated. A parameter of 1:1.5 was then applied to estimate indirect job creation (there is no justification in the study for either the cost per job assumptions or for the parameters relating to indirect jobs).

Based on this approach, the study calculated the total number of project related job opportunities created by the 1994-1999 programme to be over 900,000 person years in direct employment, with a further 1,400,000 person years in indirect employment. This was a demand-side employment

Review of Existing Experience

impact estimate only and no attempt was made to quantify further jobs that would be produced in the long term by supply-side effects.57

No attempt was made in a number of recent thematic evaluations to measure Structural Fund employment effects, either because such outcomes were not considered to be central to the aims of the interventions and/or because of a lack of data. This was, for example, the case with the Thematic Evaluation of Structural Fund Impacts on RTDI (May 1999) and the Thematic Evaluation of Information Society which focused on an assessment of the types of measures contained in programmes for the 2000-06 period rather than evaluating implementation issues, outcomes or impacts.58

Likewise, with the Thematic Evaluation of Structural Funds’ Contribution to the Lisbon Strategy there was a qualitative assessment of synergies between the Competitiveness and Employment Objective of the 2007-13 Structural Funds and the Lisbon Strategy but no retrospective assessment of the contribution made by past interventions to the Lisbon Strategy’s aims.59 In these studies the emphasis tended to be on quantifying financial inputs and the types of interventions supported rather than outcomes, whether in terms of employment effects or other impacts. In a further case, Evaluation of Financial Engineering Measures in Structural Policies, the data required to enable employment effects was found to be lacking and a key recommendation was that this shortcoming should be rectified in the future.60

In several other thematic evaluations, Structural Fund employment effects were partially evaluated. This was so in the Evaluation of Territorial Employment Pacts (TEPs). According to the evaluators, the principal aim of the TEPs was not to directly create jobs:


‘Employment impacts would rather be achieved through the co-ordination of activities, stimulation of idea generation, dissemination of planning information etc. Most Pacts understood this well, and in the main emphasised their indirect achievements. Several Pacts also highlighted the difficulty of isolating their effects in generating employment from other relevant developments in the area, such as the state of the macro-economy. There is a degree of confusion as to the extent to which the Commission expected and required Pacts to deliver substantive direct employment outputs, such as job numbers’.

The study provided evidence from a number of regions where TEPs operated of the job creation outcomes (e.g. the St Herblain Pact in France where some 300 job opportunities were created) but did not attempt to estimate employment effects at a global level. Similarly, it was not felt appropriate to provide any quantitative estimate of indirect employment effects and instead a purely qualitative approach was adopted to this aspect of the evaluation.61

In the case of the **Thematic Evaluation of the Contribution of the Structural Funds to Sustainable Development**, it was only appropriate to examine employment effects with respect to social capital. Here it was noted that ‘A higher proportion of interventions aimed at facilitating access to jobs had positive effects on social capital, than interventions focused on training’. An econometric model, based on a ‘policy-on/policy-off’ methodology, was used to estimate these effects. Applying this approach led to the conclusion that:

‘At the EU level the EU SF contribute to an average annual increase in employment of 0.2%. The largest impacts are in Portugal, Ireland, Greece, Spain and Italy. In France, Germany, the UK and other higher income countries the effects are close to zero’.

Overall, however, it was argued that in the case of social capital, the contribution of the Structural Funds was less clear than with natural capital because of the poor level of understanding of the cause and effects between the stock of social capital, social policy outcomes, and economic development measures.62

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1.4 Other Literature

In this section, we provide a brief review of wider recent evaluation work and academic studies with a bearing on the measurement of employment effects.

There is not a large amount of non-Commission literature that specifically deals with the issue of measuring Structural Fund employment effects. We therefore focus mainly literature dealing more generally with the question of measuring employment effects, especially net impacts.

The review of wider literature indicates that a range of techniques are used to measure the net effects of interventions. Some of the studies primarily rely on already existing data to derive their estimates, the others use a combination of bottom up approaches such as surveys and econometric modeling. However, there is a gap in methodological research. None of the studies which we have reviewed deals specifically with defining a detailed range of possible employment outcomes of interventions into the labour markets or wider economy. Similarly, none of them extensively tackles the issue of relative merits of bottom up/top-down methods that can be used in measuring employment effects.

1.4.1 Recent Academic Research

In Ireland, a recent study\(^{63}\) carried out by a group of Irish and British researchers is interesting in adopting a bottom up approach case study approach to estimating the net additionality of industrial development assistance.

The research focused on deriving estimates of deadweight and displacement based on face-to-face interviews with the relevant personnel of 42 firms which received assistance from Enterprise Ireland (a public agency). The impact of financial assistance provided was measured in terms of the net change in employment between date of financial assistance approved and date of interview. In terms of the job categories, the data was gathered on the percentage of jobs maintained, along with those lost and gained, and the total number of jobs lost or gained over the study period is calculated. The results show that the net additionality can be estimated as around 50%.

\(^{63}\) ‘Evaluating the Net Additionality of Industrial Development Assistance in Ireland’, University of Limerick, Kingston University, Aston University, 2003.
Review of Existing Experience

The reason for using face to face interviews was the lack of ready available data and the paper contains a section with a detailed interview methodology that can be used to estimate deadweight and displacement effects on jobs. The authors also highlight that the interviews entail the risk of beneficiaries over-emphasising the positive effects of the intervention but they also outline the range of measures that need to be employed in order to minimize the response bias.

An example of an alternative approach – focusing on business support - is provided by one of the academic studies that we have reviewed measures the impact of Structural Funds interventions on employment through econometric modeling. 64 Although the purpose of this assignment is to help develop bottom-up methods, it is nevertheless interesting to review studies using alternative (top-down) techniques as a way of identifying factors that those applying empirical techniques should at least be aware of, even if measurement is impossible using such approaches.

The study was carried out in Italy and used an econometric method for analyzing the employment impact of the business incentive initiatives implemented in the EU areas with declining industrial production (Objective 2 regions). The proposed method was based on a comparison-group evaluation approach that uses panels of existing employment data available from national social security sources and/or census of enterprises aggregated by geographic areas.

The paper argued against applying standard macroeconomic multipliers to evaluate the effects as this does not measure the actual net pre-post intervention employment change. The author claims that by using ‘a comparison group evaluation design’ pre-post employment changes recorded in the target areas are compared to those of adjacent non-target areas. Impact employment estimates are then retrieved from empirical models that make use of a panel of employment data sorted by industry and aggregated by geographic units corresponding to the Objective 2 areas and adjacent regions.

The author also uses a number of econometric specifications that allow impact estimates to be retrieved net of the following unobservable factors exogenous to the program intervention. The overall results of the analysis

64 ‘Evaluating the Employment Impact of Business Incentive Programs in EU Disadvantaged Areas. A case from Northern Italy’, 2002 Daniele Bondonio, University of Eastern Piedmont
show that the incentive program implemented in the Piedmont region did not significantly affect the employment growth recorded in the Objective 2 areas.

Another study covered a broader theme of impact of Structural Funds on regional distribution through the modeling of existing data. The impact of the Structural Funds was investigated in terms of per capita incomes, productivity and employment rates. The research found that the investments in infrastructure mainly have an impact on raising labour productivity but no significant impact on the employment. The authors also examined the correlation between unemployment and productivity rates, one of their key findings being that the positive correlation between productivity levels and employment rates is growing.

Research on the labour market impact of training measures in Denmark undertaken by the University of Copenhagen included a review of previous evaluations. This study, which focused on measures to help the unemployed back into work and interventions aimed at developing the skills of employees, relied on a combination of survey feedback and longitudinal data sets based on monitoring beneficiary destinations in the case of schemes for the unemployed. Deadweight was quantified and estimated at 20-30%, which is in line with estimates produced by evaluations of similar schemes elsewhere.

Examples of other academic research carried out in Denmark that is relevant includes work by the University of Aarhus to estimate the net social benefits from ALMPs, in particular wage subsidies. Net social return were defined as the change in aggregate output attributable to the programmes by subtracting the programmes discounted costs from their discounted stream of benefits. The benefits side included estimates for the discounted earnings impact but also the value of output produced during participation in job training programmes. Here it was assumed that employers’ value of the output of participants in private job training equaled the difference between the wage and the subsidy. On the costs side, amongst other things, the study estimated the deadweight loss of taxation to needed to finance benefits (estimated at 20%), displacement effects on non-subsidized workers (66% based on 1999 research by


Dahlberg & Forslund). The end result of these and other calculations was a ‘surplus’/positive return of around euro 38,000 per participant. 67

This particular study includes a review of wider academic literature on evaluating the employment effects of ALMP. Thus, in Sweden, a study by Larsson (2003) evaluates the effects of two Swedish youth programmes on earnings, employment probabilities and the transition to regular education for a two-year period in the first half of the 1990s is reviewed (this found negative short-term effects (one year after programme start) on earnings and employment, but these negative effects tended to become insignificant after two years). There is reference, In Switzerland, to Gerfin & Lechner (2002) who evaluates the effects of the Swiss ALMPs over a 15 month period (finding that employment and training programmes had adverse effects on employment outcomes, while temporary wage subsidies have positive employment effects).

67 ‘Costs and Benefits of Danish Active Labour Market Programmes, Lars Skipper and others, University of Aarhus, 2004.

1.4.2 OECD

The OECD has recently published a book on evaluating programmes for local economic and employment development in response to what it sees as the existing deficit in volume and quality of evaluations on local economic development. 68 It highlights some of the shortcomings of a purely bottom up approach to estimating employment effects and is worth considering for this reason.

The publication addresses the aims of evaluating interventions focusing on local economic and employment development, complications associated with measuring the impacts and the methods for carrying out the evaluations. Overall, the authors argue that the evaluation of such initiatives should be undertaken through a combination of econometric models and survey/interview work of programme beneficiaries.

68 ‘Evaluating Local Economic and Employment Development. How to assess what works among programmes and policies’ OECD, 2004
Review of Existing Experience

The importance of comparison group approach is also emphasized throughout the OECD publication as a way of gauging the counterfactual position, i.e. what would have happened in the absence of interventions. A number of evaluation methods are reviewed in the book but with more attention being paid to econometric models rather than bottom up approaches. It is argued that bottom up approaches are a good complement to econometric modeling but that they need to be treated with caution as the respondents can give biased answers. It is further argued that bottom up approaches need to be combined with the econometric modeling, as they do not control for extraneous factors.

There are no detailed accounts of methods and tools that can be employed to assess employment effects of interventions specifically through bottom up approaches. Several authors who contributed to the publication also highlight that measuring displacement, deadweight and substitution is notoriously difficult. They also highlight the importance of measuring indirect effects through programmes’ income and employment multipliers as well as their fiscal consequences. We outline below some key relevant information from the book.

One of the contributing authors (Bartik) emphasizes that employment impacts of development policies should not be observed in isolation from local conditions. Instead, varied employment outcomes should be analysed within a context of the particular demographic, economic, labour market, fiscal and social policy conditions found in each programme area. Bartik argues that there is a need for a more rigorous assessment of local economic development policies and that they should focus on assessing outcomes that would follow in the absence of interventions.

Bartik also cautions against ascribing credit for all job creation to the intervention programmes as at least some of the business activity would have occurred without the programmes. He further argues that the local economic development policies should be evaluated through a combination of statistical analysis based on comparison group approach and bottom up assessments through surveys and focus groups targeted at beneficiaries of programmes. Under this approach, key method for evaluating employment effects would be thorough regional econometric models which include modules that consider the structure of local taxes and government budgets, and the local labor market.
Review of Existing Experience

However, Bartik argues that using these models needs to be treated with caution as impact estimates on local economies are likely to be inaccurate if they are based on the incorrect or incomplete data. Better data for both assisted and non-assisted areas is required. Even the existing data at NUTS3 level is not geographically small enough to allow precise comparison. Another author (Bondonio) highlights the need for better data not only on the regions/firms assisted through Structural Funds, but also on the non-assisted regions/firms to enable comparison between assisted and non-assisted areas. Ideally, an integrated statistical systems providing easily accessible data sorted by small geographic units (smaller than NUTS3 classification) would be developed. One of the central conclusion in the book overall is that the improved data collection in small geographical localities and throughout the programme lifecycle, including the initial position, is key to improved evaluations, including those focusing on employment effects. However, such an EU-wide exercise is likely to be costly and to take long to complete.

Smith analyses other methods that can be used instead of econometric modeling in evaluating local economic development policies. A reliable assessment by the participants in the programme through surveys is one of the suggested methods.

However, in order for participant self-evaluation to yield valid impact estimates, he argues that respondents have to correctly estimate the unobserved counterfactuals of what would have happened to them had they not participated, and then compare it to their experience as participants. The research, as well as indirect evidence, suggests that there are, however, difficulties in obtaining correct responses from the participants. These include inability to realistically estimate the impact of counterfactuals or to give unbiased answers to the interviewer.

When the recipient firms are surveyed, Bartik argues that the key questions that should be asked are how the assistance provided to the firm has changed their behaviour. In cases where firms are given receiving financial assistance, he cautions that they might exaggerate the benefits of the programme in hope of receiving more assistance. To prevent this, direct and clear questions about the impact of the assistance on firms behaviour should be asked.

Similarly to other authors Oldsman and Haldberg argue for comparison group approach and emphasise that survey-based approaches could generate biased answers. Therefore, such approaches need to be accompanied by statistical analysis that controls for extraneous factors. In
addition to surveys, evaluations should ideally include case studies based on rich narratives to explain causal mechanisms and identify elements of the program design that need to be modified.

The OECD publication also addresses the issue of the appropriateness of setting job creation targets in the context of business assistance programmes. For example, in a chapter devoted to the issue of evaluating business assistance programmes, Oldsman and Halberg argue that the key goal of business incubation should be enterprise creation, rather than employment creation, which typically follows enterprise creation over time rather than in short term. Longitudinal analyses are therefore important since focusing on employment measurement too early in the life of the programme may result in assistance programme classified as unsuccessful. The authors also stress the importance of incorporating future evaluation requirements into the programme design and collecting baseline data that can be used in subsequent evaluations.

The evaluation of training programmes is also discussed, particularly the experience with evaluations in the US. Training evaluations here are essentially undertaken as net impact evaluations which compare mean outcomes of a representative sample of programme participants to a similar sample of non-participants. Some ideas for assessing worker training programmes by providing customized training programmes for local businesses are also presented.

These programmes are not run specifically to improve the employability of workers as but as a means to promote the location and retention of businesses. Within this context three key evaluation strategies are suggested - constructing comparison groups based on firms not individuals; using econometric models to explicitly evaluate the key relationships between the intervention and the intended outcomes, and using a representative firm approach to estimate the relative effects of programmes on a firm’s financial status.69

69 The research in the US also provides some insights into the success of training programmes. In the case of an entrepreneurial training programmes, the research findings (Bartik) suggest that there is 21% differential in self-employment experience between the control group and the target group. These findings have been based on the data that was collected for target and control groups.
Review of Existing Experience

The difficulties in assessing the displacement effect are particularly highlighted in the OECD publication. It is argued that estimates of displacement have varied significantly under enterprise support schemes in various locations due to different local circumstances which affect the severity of displacement. A particular complication is that the measurement of displacement usually depends on surveys of the firms that may have caused displacement in other firms. The displaced enterprises are sometimes no longer in business and the views of the two groups of firms could differ systematically.

Furthermore, the state of local demand and supply is critical to the magnitude of displacement effects and while displacement is likely to be most acute at the local level, it need not be limited to the confines of a particular locality - firms elsewhere can also be displaced. Also relevant to measuring displacement is that there are considerable differences in the geography of markets served by firms in different sectors (service sector firms are more likely to have a local orientation, especially those that provide personal services). Displacement will also vary depending on whether the products of firms in the same sector are close substitutes or not.

In estimating both deadweight, displacement and substitution effects, an author (Potter) argues that evaluators often rely on self-assessment exercises about examining the degree to which other firms, individuals or areas are likely to have been adversely affected. He also highlights the importance of using control group or control area comparisons to complement this information.  

In 1996, the OECD published a paper on the evaluation of the effectiveness of ALMPs based on the review of previous evaluations, which also tackles the issue of

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70 The OECD is currently launching a project called Integrating Employment, Skills and Economic Development, with a final report expected in 2007. The project will be carried out within the context of the OECD’s programme on Local Economic and Employment Development Programme. The background document to the study describes the existing difficulties in co-ordinating the economic development and employment policies at local and regional level. While the project will not be directly assessing the measurement of the regional development policy on the employment it will identify the ways how to better coordinate economic development and labour market policies. The outputs of this study will be informative to the DG Regio’s work especially as one of the areas which will be investigated is local governance and evaluation and monitoring systems currently used to assess the impact of policies.
Review of Existing Experience

methodologies that can be deployed to evaluate the effects of ALMPs.71

The most common outcome on which evaluations of ALMPs focus is whether the individual gets a job and/or experiences earnings gains following a programme. But it is also important that evaluations consider carefully the different possible outcomes from an ALMP, e.g. employment, unemployment, participation in another labour market programme, or non-participation. An individual may experience stable or falling earnings following participation in a programme because of unemployment, enrolment in another programme, or in the case of training, enrolment in further education. It is argued that there is no clear-cut answer as to which evaluation method should be used. The choice will depend upon programme objectives, evaluation objectives, cost considerations, required timeliness of results and so on. The paper identifies several key methods for evaluating the impact of ALMPs:

- **Interviews** with employers or employees are the most widely used method to gauge deadweight loss, substitution and displacement (e.g. by asking the former their views on whether they would have hired an individual in the absence of a programme or the latter on whether they would have accepted work in the absence of a subsidy). It is however difficult to judge the robustness of these results since they will depend on how the sample of firms to be interviewed has been chosen, on who exactly responds to the questions etc.

- **Post programme data** is used by many studies to track the labour market status of participants in programmes at various points following the completion of the programme. The data on the job status of the participants in the programme can be compared with the data on the non-participants with similar characteristics. However, neither these outcomes are robust as they do not indicate whether the outcome would have been observed anyway. This necessitates use of either a quasi-experimental or experimental approach.

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71 ‘Enhancing the Effectiveness of Active Labour Market Policies: Evidence from Programme Evaluations in OECD Countries’, OECD, 1996
Review of Existing Experience

- In random assignment experiments, individuals who would like to participate in a programme are randomly allocated to either a treatment group — those who receive the service — or to a control group — those who do not. The difference in outcomes between the two groups is referred to as the impact of the programme.

- In a quasi-experiment, programmes are evaluated ex-post. Because a control group does not exist, one has to be created using various data sources. This “comparison group” is typically matched as closely as possible to the observed characteristics of those who underwent the treatment. The main problem with these sorts of evaluations is differences in unobserved characteristics, or so-called selection bias, which can affect the outcomes.

In order to improve the evaluation procedure, it is argued in the paper that evaluation procedures should be introduced into the formulation of ALMPs. This would ensure that the necessary data are collected for a proper evaluation and that programme administrators are aware of the evaluation. Including with every programme a proviso that it will be evaluated would contribute to improving methods on how they are done and if done systematically, will enable comparison across different programmes.

1.4.3 World Bank

The World Bank published in 1999 a review of around one hundred evaluations of ALMPs.72 The study highlights a number of complications encountered during the evaluations of ALMPs which include handling selection bias, assessing deadweight and displacement/substitution effects, availability of data and data problems in the specific surveys.

These include benchmarking pre-intervention profiles (employment history, human capital attributes, etc.) and the tracking of participants and non-participants for no more than one or at most two years while, in many cases, the full impact of policies is unlikely to play out in this short period of time (such as in the case of training and self-employment). The existing administrative data also tends to be poor, so that the nature or the intensity of the intervention received by the participant is often uncertain. The study further outlines different types of evaluation techniques for evaluating effectiveness of ALMPs which

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can be sub-divided into scientific and non-scientific. The scientific evaluations are of two types: experimental and quasi-experimental. A weakness shared by both the experimental as well as non-experimental evaluations is that they do not take into account displacement effects of the retraining program.

Non-scientific techniques do not use control groups in evaluating the impact of interventions, relying instead on statistics compiled by program administrators. These evaluations are of little use in determining whether program participants are doing better: without a control group, it is difficult to attribute success or failure of participants to the intervention, since these effects are contaminated by other factors, such as worker specific attributes. However, in some cases, these evaluations (e.g. interviews with employers and employees) can provide some information on deadweight loss, as well as substitution and displacement effects. Another paper by the World Bank from 2002 points out that in most countries the evaluations usually do not involve the use of control groups. These evaluations rely on statistics compiled by programme administrators or on self-assessment by programme beneficiaries. Such techniques give no explicit estimate of what would have happened in the absence of the program, and so they provide little indication of the effects of the programmes. Because of the adverse impact on the robustness of findings, the paper concludes that it is preferable to use techniques that involve control groups.

1.4.4 National Audit Office (UK)

The National Audit Office (NAO) in the UK has produced several evaluations focusing on grant schemes. An evaluation of regional grants, carried out in 2003, included a review of previous evaluations, concluding that the UK work was ‘substantially more thorough and soundly based than the evaluations of regional programmes carried out by other European countries. Few of these had addressed additionality or displacement at all’.

The UK Regional Grants’ evaluations concentrated on the estimation of the ‘Net Cost per Net Job’, so as to provide an indicator of the cost effectiveness of the programme. This estimate was based on the gross number of jobs

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Review of Existing Experience

created or safeguarded by the projects and the total grant funds used to achieve them, discounted for a number of factors – additionality (45 to 48%), displacement (24 to 33%) and indirect effects (1.18 to 1.29). The NAO review made a number of observations on the evaluations.

Firstly, on additionality, the NAO argued that the suggestion that only about 45 per cent of the jobs supported were additional was a low level compared to other Departmental grant programmes. It agreed with the finding that overall, projects creating jobs demonstrated higher additionality than those safeguarding existing jobs, and also that large projects showed slightly higher than average levels of additionality - particularly when creating jobs (for the largest projects additionality rose to 63 per cent). The NAO noted that additionality had been estimated from survey responses from assisted companies. It argued that although the evaluators had recognised the likely presence of strategic bias from respondents - that firms would see it as in their interest to confirm the claims they made for the need for grant when they submitted their application for assistance – and incorporated questions in the survey with the aim of crosschecking of firms' estimates of additionality, this was unlikely to lead to a sufficient adjustment for bias.

According to the NAO, a review of the academic literature on bias in survey responses, on the effect of assistance on employment over time, and previous evaluation reports, provided some support for a more skeptical view of additionality. The difficulty of using survey methods to gauge a value where a respondent has an incentive to answer strategically in their self-interest was well known, and studies had shown the difference between asserted values and actual values, where they can be checked, can be large. Surveys, according to the NAO, can counter inconsistencies in a firm's response but they cannot deal with aspects of bias resting on a firm's judgments on the basis of consistent facts. A survey approach is therefore unlikely to fully establish the scale of bias present.

Secondly, the evaluation of employment effects and costs excluded any changes in employment outside the Assisted Areas. Direct or indirect displacement (or creation) of employment outside the Assisted Areas was not included as either a cost or benefit. The NAO argued that if job creation and displacement outside the Assisted Area were considered this would have given a better sense of national benefit at the expense of a less close focus of the effects in Assisted Areas, which is the aim of the policy. Such an approach, it argued, would almost certainly cut the number of additional jobs and increase their unit cost.
Thirdly, all jobs were given equal value so long as they had the same expected life. No distinction was made between new or safeguarded jobs, or between various quality dimensions of the jobs created, for example, average levels of skills or value-added per worker. On this point, the NAO argued that the effect of attaching a weighting to the quality or nature of jobs created would not be clear although all other things being equal, higher skilled, higher paid jobs would be more likely to increase productivity and competitiveness.

Fourthly, the evaluation did not consider any other sources of public support and funding received by Regional Selective Assistance projects, for example local authority support, or help with infrastructure or training, because there were no readily accessible records. Also, the evaluations were not asked to address administrative costs incurred by either applicant or DTI.

Other criticisms included the fact that although the evaluations recognised that surveying successful applicants about the level of additionality could lead to a strategic bias, and adjusted additionality downwards to counter that bias, the NAO felt that greater adjustments would be needed to eliminate it. Last but not least the evaluations based the expected lifetime of additional jobs on the expected life of the associated capital investments. Here, the NAO argued that the actual time for which jobs remain additional can be considerably different from that assumed in the evaluations - which affect estimates of scheme impacts.

The NAO has also reviewed academic research on the duration of employment effects. Research carried out into the effects of a range of assistance in the North East indicated that the employment effects decreased over time, as the action of external factors caused firms to change their business independently of the effects of assistance. The research found that five years after assistance was given, employment effects fell to less than 5% (large firms) and 25% (small firms) of peak values. The NAO argued that such findings need to be interpreted with caution because of market circumstances. It also questioned the reliability of the assumption that additional job life can be associated with the life of assisted assets and raised concerns that the 10 year average job life resulting from that assumption is too long.74

74 ‘NAO review of The build-up and duration of subsidy-induced employment: evidence from UK regional policy’ (2003).
We have also reviewed the research carried out by the Institute for the Study of Labour (IZA). Several papers were published by IZA on techniques for evaluating ALMPs, but they focus on micro-econometric or statistical modeling.75

1.5 Conclusions – Current Practices

Over the years, there has been some improvement in the extent to which evaluation studies have quantified Structural Fund gross employment effects.76 This reflects a number of factors - the increasing emphasis placed by the Commission on the need to quantify employment effects, more sophisticated monitoring systems, improvements on evaluation guidance and techniques, etc.

There is, however, still a very mixed picture with regard to the analysis of different types of employment effects. Quantifying 'jobs created' has posed less complications (although not across the full range of Structural Fund measures) than other employment effects. However, far fewer evaluations have successfully provided reliable estimates of 'jobs saved' and still fewer have distinguished between temporary and permanent jobs. With regard to job quality, several evaluation studies reviewed in this section have provided interesting examples of ‘meso-level' analyses examining employment effects from a sectoral perspective and there are important lessons to be learnt in this respect given the need to be able to assess Structural Fund contributions to the Lisbon Strategy’s goal of promoting growth industries.

A similarly mixed picture exists with regard to the conversion of gross employment outcomes into net effects. Relatively few studies have done this and where it has been attempted, the methodologies and parameters used are often not transparent.

Relatively few studies have comprehensively addressed the key evaluation issues outlined in Section 2 from the perspective of employment effects. ‘Relevance’ tends to be assessed in terms of a programme’s priorities rather than its...
Review of Existing Experience

outputs, including job outputs. Few studies compare employment aims (assuming they are defined) at the outset of programmes with the outcomes actually achieved, i.e. ‘effectiveness’, still less the relative effectiveness types of interventions in generating positive employment effects. ‘Efficiency’ – cost per job – is, however, often evaluated but not in terms of value for money. Likewise, very few evaluations have applied the concept of ‘sustainability’ to an analysis of employment effects.

Overall, therefore, the review of recent experience in measuring Structural Fund employment effects suggests that there are major shortcomings. To some extent this can be attributed to an absence of methodological guidance; the explanation also lies, however, in a failure to apply the guidance that exists.
1. France

In France, DIACT has overall responsibility for evaluation and monitoring aspects relating to Structural Funds implementation at the national level. As part of this remit, it has responsibility for co-ordinating the aggregation of monitoring data on outputs and results achieved through Structural Funds interventions at a regional level through the PRESAGE monitoring system.

DATAR has issued methodological guidance to French regions involved in the implementation of Structural Funds programmes at a regional level for the 2000-06 period. This involved providing common definitions for terms such as ‘jobs created’, ‘jobs safeguarded’ etc. as well as guidance on how to estimate temporary employment affects directly attributable to Structural Fund interventions.

In December 2005, DIACT’s predecessor, DATAR, published a national synthesis report drawing on final evaluations undertaken at a regional level (known at Community level as the ‘mid-term review update’) in respect of Objective 1 and 2 Structural Funds programmes for 2000-06. The main aim was to assess the (preliminary) results and impacts achieved and to examine any key lessons to help improve the efficiency and effectiveness of the new generation of programmes in the 2007-13 period.

Amongst other aspects, the synthesis evaluation addresses the contribution of Structural Funds programmes to employment across French regions. It examines direct (and to a more limited extent indirect) job creation, temporary job creation as well as jobs safeguarded. There are some limitations in the analysis linked to the timing of the availability of data on employment impacts. While the majority (24) of French regions were able to provide data on employment, not all regions were able to do so.

The synthesis report begins with an examination of the extent to which issues employment aspects were addressed in programme documentation in Objective 1 and 2 regions in France in the 2000-06 period. A key finding is that insufficient detail is provided to discern whether particular strategies in respect of the employment dimension of Structural Fund programmes were adopted: ‘D’une manière générale, la place de l’emploi dans la stratégie du DOCP n’a pas fait l’objet d’analyse très détaillée ce qui ne permet pas d’identifier aisément des types de stratégie particulière propre à l’emploi (dans sa composante FEDER et FEOGA)’.

1.1 Current Approach

The methodological approach set out in the DIACT guidelines to measuring the employment effects of Structural Funds interventions is summarised below:
Case Studies

- Bottom-up quantification of direct new jobs created and jobs safeguarded – but only for completed ERDF projects;

- Collation of bottom-up monitoring data at the regional level which is then fed through to and aggregated in national monitoring systems (PRESAGE);

- Cross-checking of bottom-up monitoring data in respect of employment outcomes at regional level through survey work with beneficiaries;

- Top-down quantification of temporary direct employment impacts (guidance provided by DIACT to regions on cost/job parameters by type of intervention).

The final evaluation reports of Objective 1 and 2 regions in France focused on four main types of employment effects: new jobs created (direct); jobs safeguarded (direct); the duration of direct jobs created (i.e. temporary/permanent); and the qualitative impact on employment (at a horizontal level).

National guidance on data collation requires French regions responsible for implementing Objective 1 and 2 programmes to provide data in respect of direct jobs. However, a key problem that has undermined the reliability of data has been that some regions have entered data into monitoring systems that includes estimates of both direct and indirect employment effects.

As part of the methodological approach to verifying whether ‘bottom-up’ monitoring data collated through regional monitoring systems and provided by beneficiaries in respect of employment outcomes is accurate, survey-based research is carried out at a regional level with a representative sample of final beneficiaries. The function of the survey work has been to cross-check the reliability of data as well as to probe issues around employment impacts in greater depth.

National guidance states that a minimum of 30 surveys should be undertaken with beneficiaries at the regional level to obtain more detailed information about employment effects, for example in respect of the type of jobs being created (full-time, part-time) and job quality (assessed by examining the qualification level of new direct jobs created as a result of Structural Fund interventions).

1.2 Key Issues

The synthesis evaluation report highlights the adverse impact on data comparability that this has had. Specifically, il est probable que les résultats présentés correspondent
Case Studies

dans la plupart des cas à des emplois créés directs ou indirects sans que l’on puisse faire précisément la part des uns par rapport aux autres’.

This problem has been compounded by the absence of common interpretations amongst French regions of definitions of employment-related indicators. Another problem has been that monitoring data collated in some regions has not been systematically entered into the French national data system. Tous insistent sur les limites des données disponibles dans PRESAGE et la prudence d'interprétation qui en découle (définition non stabilisée de certains indicateurs, données non suivies dans PRESAGE, etc.).

Data comparability and reliability issues notwithstanding, consolidated data at the national level suggests that based on funds committed 21,658 permanent jobs have been created (as at Feb 2005) at an average cost per job of 125,000 euros. The average number of jobs created per project was 1.4 although there were wide variations between regions and between different types of interventions with a variance of between 1 and 10.

The report also found interesting methodological variations between French regions. In Brittany, for example, the regional authorities carried out an analysis of job creation broken down on a geographic basis. This approach was not mirrored by regional authorities elsewhere however firstly because the approach was regarded as overly complex and secondly because of doubts as to whether the resultant data’s reliability. That being said, regions were generally able to provide examples of data broken down by département as well as by region - a good example being the Pays de la Loire region.

Temporary jobs: In the 2000-06 period, a concerted effort was made by DIACT to ensure that for the first time, French regions were able to produce estimates in respect of the temporary employment effects linked to Structural Fund programmes.

The issuing of guidance was designed to overcome a weakness in previous programming periods whereby there was no uniform approach as to whether or not (and how) to calculate temporary jobs which meant that the totality of the employment impacts of Structural Funds interventions was under-estimated in the previous 1994-99 period.

Cost per job benchmarks

The ‘top-down’ methodological approach to estimating employment effects was developed by DIACT in conjunction with SEGESA. The model involves the use of a cost per job benchmark estimate of the level of
Case Studies

investment needed to create a temporary job categorised into four different types of ERDF intervention:

- Interventions that benefit small building firms / artisans – 65,000 euros/job
- Public infrastructure works: roads – 123,000 euros/job
- Public infrastructure works: water and environmental – 113,000 euros/job
- Interventions that involve work being contracted to consultants, engineers, trainers: 75,000 euros/job

While the cost per job parameters are applied on a uniform basis for all French regions, the proportion of resources allocated to each of the four categories of intervention identified above is quantified by regional authorities depending on how resources have been allocated to meet developmental priorities.

In order to produce top-down estimates of temporary jobs created, each region estimates the approximate division of Structural Funds resources between the four different categories of ERDF projects listed above and then on the basis of committed expenditure calculates the number of temporary jobs using the cost/job benchmarks highlighted above. The results are then consolidated at a national level. DIACT’s calculations suggest that as at 28/02/05 137,469 temporary jobs had been created across Objective 1 and 2 regions in France at an average cost per job of 79,000 euros.

The report points out that there are weaknesses with this approach notably the fact that the length of a temporary job may vary considerably from a few hours (e.g. trainers) to several years (e.g. construction workers involved in large-scale construction projects). To overcome this shortcoming, the French national authorities have suggested that the number of jobs should be divided by the duration of the programming period to give an annualised equivalent figure.

There were differences between regions with regard to the areas of intervention where temporary job creation was most prevalent. While the majority of temporary jobs were created in the category ‘SMEs in the building sector and artisans, intellectual services (such as consultancy, training etc.) accounted for a particularly high proportion of the number of temporary jobs created in the regions of Rhône-Alpes, Midi-Pyrénées, Guyane, Aquitaine and Nord-Pas-de-Calais. Conversely, in the Haute-Normandie et Ile-de-France regions, a higher than average proportion of temporary jobs were created through major public infrastructure projects such as road building.
The evaluation notes that overall, the number of temporary jobs created on an annualised full-time equivalent basis (calculated using the top-down methodology) corresponds relatively closely with the number of direct (permanent) jobs created through regional programmes (calculated on a ‘bottom-up’ basis using PRESAGE). Given this, there is evidently a need to ensure that the positive impact of temporary job creation is not under-estimated particularly once multiplier and supply chain effects in the wider economy are taken into account.

Jobs safeguarded: turning to jobs safeguarded, a definition for jobs safeguarded was provided by DIACT to French regions at the outset of the programme. ‘Emplois qui auraient été supprimés chez le maître d’ouvrage en l’absence de l’aide européenne à l’opération’. Most of the mid-term evaluation reports make explicit reference to the methodological and practical difficulties in calculating jobs safeguarded. Estimates were nevertheless provided by regional authorities in many cases. Across the 23 evaluation reports examined by DIACT, an estimated 58,000 jobs were safeguarded.

Employment as a horizontal theme

Turning to employment as a horizontal theme, an effort was made to assess the impact of different types of Structural Fund interventions on employment. Beneficiaries were asked to grade whether interventions had been extremely beneficial, positive, neutral or negative from an employment perspective.

The results of this exercise have not however shed that much insight into the qualitative impacts on employment of Structural Fund interventions. Almost 60% of respondents stated that impacts at the project level had been neutral – reflecting the fact that in most cases, measures supported were not explicitly designed to create employment or otherwise to have a beneficial impact on employment.

While 40.1% stated that the impact had been positive on employment, only 0.5% said the impact had been remarkable and 0.3% negative. There were however some regions, notably PACA, where the impact on employment was viewed by beneficiaries as having been significantly higher than average.

Cross-checking monitoring data on employment outcomes

In order to verify the accuracy of ‘bottom-up’ monitoring data in respect of employment outcomes, there is a requirement to carry out survey work with a representative sample of final beneficiaries. National guidance on evaluation and monitoring states that a minimum of 30 surveys should be undertaken with beneficiaries in each
region to obtain more detailed information about employment effects, for example the type of jobs created (full-time, part-time) and job quality (the qualification level of new direct jobs created as a result of Structural Fund interventions is requested from survey respondents). The aim of undertaking survey work was twofold: firstly, to cross-check the reliability of ‘bottom up’ monitoring data provided by final beneficiaries; and secondly, to enable employment outcomes to be probed in greater depth.

Quantifying employment effects in the 2007-13 period

In the 2007-13 period, a number of steps will be taken to overcome problems encountered in the 2000-06 period.

- **A national working group on monitoring and indicators** with strong representation from regional authorities to help define a suitable framework for monitoring and indicators in 2007-13 will be set up;

- There will be **minimum common requirements** in respect of monitoring data that must be collated on employment effects;

- There will be **standard definitions** for different types of employment effects e.g. direct new jobs, indirect new jobs etc;

- There will be a **standard set of performance indicators** for all regions;

- The **frequency of data collation** will be uniform across all regions;

- There will however be **flexibility**. For example, there will be scope for those regions wishing to collate additional data e.g. on jobs safeguarded or to quantify temporary jobs using a ‘bottom-up’ approach to do so;

- Once the monitoring framework has been finalised, there will be **online advice and guidance for regional authorities** on aspects relating to monitoring: common definitions, info on quantifying employment effects etc..

While minimum common requirements will be set by DIACT, the intention is not to nationalise monitoring but rather to simplify the system and ensure common understanding and interpretation across French regions to improve data comparability and reliability.
Case Studies

The regions will still have an important role in drawing up the national system of monitoring and indicators – through the national working group on indicators and monitoring which will have strong representation from the regions. The close involvement of the regions in devising the framework is regarded as critical in conferring legitimacy on the framework and methodologies for quantifying employment effects set out within it. The national working group has previously been used successfully – for example in respect of the mid-term evaluations in 2000-06. In the next period:

- Regions will have two alternative methodological approaches to measuring temporary jobs i) top-down methodological approach using national cost/job benchmarks or ii) quantifying temporary jobs at project level and collating this information through PRESAGE;
- Individual regions will again determine whether they wish to collate information on jobs safeguarded (this is becoming much less important however in context of a knowledge economy);
- Monitoring data in respect of job losses will also be kept given that certain types of intervention such as a grant to invest in new machinery may actually lead to la suppression d’emplois;
- Job quality will continue to be assessed by looking at the type of employment contract e.g. contrat à durée indéterminé versus contracts with fixed time duration;
- Employment will be kept as a horizontal theme so as to help assess the overall impact of projects supported on employment.

The framework proposed is similar to the approach under consideration in France for 2007-13. A small number of points were raised:

Firstly, the interpretation of ‘indirect jobs’ is different in a French context from that set out in CSES’ framework. In France, ‘indirect jobs’ are considered as those jobs that can be linked to specific projects that arise within a short time period. CSES’ interpretation of indirect effects implies the longer term employment impacts brought about by multiplier and supply chain effects. In the French context, these are known as effets induits and currently no attempt is made to quantify such impacts.

Secondly, in the new programming period, much less emphasis is likely to be placed by the French authorities on
‘employment creation’. While the employment creation potential of SFs shouldn’t be negated, priorities in the new period include fostering innovation, technology transfer and competitiveness.

Thirdly, there will be a stronger emphasis on the importance of selecting baseline indicators and on target setting. There is a recognition that context indicators provide a useful benchmark against which programme performance can be measured.

2. Italy

The projects financed through ERDF in Tuscany mainly fall under the categories of infrastructure and enterprise development projects. The employment effects of structural funds are measured through a combination of tools. There is a monitoring system in place, which captures the basic data for all projects and employment data for infrastructure priorities. The evaluations are however a key step in assessing employment effects and they are strongly focused on bottom up approach that combines survey and case-study work. Econometric modelling is used to some extent. The below sections summarise current approach in assessing the employment effects, key issues and feedback on the draft good practice framework.

2.1 Current approach

A monitoring system has been developed at the national level in Italy by the Ministry of Economy in order to capture the key indicators related to the various aspects of structural funds use and impacts such as financial, procedural and physical outputs (employment effects fall under this category).

The baselines and targets for employment are set both at the programme and project level. At the programme level, employment outcomes that were measured in the past structural funds programming periods in Tuscany are used as benchmarks. The monitoring system captures the data related to the jobs created and safeguarded, permanent and temporary, but only for infrastructure related projects. This data is entered onto the system after the projects are completed.

The monitoring system captures many other types of data for enterprise development project, but not the job related data. Most of the projects financed under the ERDF in Tuscany are related to various enterprise development schemes. The data for both infrastructure and enterprise development projects is entered onto the systems by the final beneficiaries. In the case of infrastructure projects final beneficiaries are usually local authorities. For enterprise
Case Studies

development projects they are usually intermediary organisation or Tuscan Region.

Overall, a monitoring system is considered as a useful instrument for surveillance of ERDF implementation, but it cannot be used to fully assess the effects of ERDF on employment. It essentially captures the outputs, but it cannot provide information on results and impacts. Therefore, evaluation preferably via bottom up approaches, is considered crucial to verify figures on outputs that have been submitted (infrastructure projects) or to obtain the figures in the first place (enterprise projects) and to assess the results and impacts. It is also felt that while the data gathered through the monitoring system is useful to provide good background to the projects, the assessment of the employment effects and ‘job counting’ is better done only at the evaluation stage. This is because of the issues with difficulties of understanding definitions and bias, as described below:

The final beneficiaries often do not understand the definition of various categories of jobs that are being monitored. For example, the categories of ‘new jobs created’, ‘jobs safeguarded’, ‘temporary Vs permanent’ are often misunderstood, so it is likely that, for example, ‘jobs safeguarded’ could be counted in the category of ‘new jobs created’. When the evaluation stage is reached, the evaluators need to go back to the project managers in order to disentangle the job categories. The evaluation experience demonstrates that face to face interaction is the most effective way of communication to explain the meaning of different concepts.

Data that is captured in the system for aspects of projects other than employment effects is useful as it gives a good overall insight into the projects financed. Therefore, although no specific data related to jobs is collected for enterprise development projects, other types of data provide useful background information for the evaluation stage.

Given that the data originates from the beneficiaries, there is a tendency to somewhat overstate the impact of ERDF intervention on job creation. Moreover, the Beneficiaries who were in charge of the infrastructure projects are likely to leave their posts by the end of the programming period, so it can be difficult to identify the individuals who can verify the figures at the stage of the ex-post evaluation.

2.2 Key Issues

While a bottom up approach is favoured for estimating employment effects and was used in the case of enterprise development interventions, an input/output econometric model developed at the regional level was used to verify the data on the employment effects of infrastructure
The econometric approach was adopted for the following reasons:

- Unreliability of figures available in the monitoring system because of misinterpretation of the terminology: e.g. measuring the new jobs created versus the safeguarded jobs can be problematic as the individual in charge of the implementation is often different from the planner (who is better aware of the impact of the projects);

- Cost involved in conducting a full scale survey: the variety of the infrastructure projects (new plants, enlargement, restoration, etc.) made it difficult to survey a representative sample of projects, while a survey of all projects that were financed (around 800) was judged as too expensive.

The weaknesses of the econometric model are that it does not differentiate between temporary/permanent jobs and direct/indirect jobs. It also calculates an estimate of the results for the region as a whole, rather than specific areas within the regions that were assisted.

For the purpose of updating the intermediate evaluation of enterprise development project, a bottom-up approach was adopted to investigate different economic effects on SMEs. Since the range of investments was not as broad as in the case of the infrastructure projects, the results were comparable and therefore the survey and case-study method was adopted. The case-study technique is considered particularly useful in assessing the additionality of the jobs created by ERDF.

The case-study approach is considered indispensable as the assisted enterprises usually do not differentiate between the ERDF investment and other sources of investment. Without a detailed assessment, the employment figures ascribed to ERDF could be distorted. Apart from interviewing the beneficiaries to obtain the initial job-related figures from them, the evaluators analysed companies’ financial reports in order to determine the amount of investment in the business that was provided by ERDF in comparison to other sources. This helped the evaluators assess whether the claims regarding the ERDF’s role in creating/safeguarding jobs were realistic. The results obtained through survey work and case-studies were then up-scaled in order to measure the employment effects of enterprise related projects at the programme level.

**Issues in the evaluation process**

Although the bottom up approach allows for more realistic assessments, it can be challenging to get hold of the individuals who can provide the required information.
So far, the evaluations in Tuscany have focused on estimating direct employment effects, but there are plans to also consider indirect effects in the future. Making employment related assessments at the interim evaluation stage is premature, as there is no empirical evidence on stability of the jobs that were created/safeguarded. Ideally the employment effects should only be analysed at the ex-post stage.

Estimating employment effects is a part of the evaluation in which other effects, such as equal opportunities, environmental, etc. are also assessed. Therefore, there are limitations to a detailed assessment of the employment effects. It would be desirable to have a separate evaluation that focuses exclusively on estimating the employment effects through bottom up methods. Ideally, the employment effects for assisted areas/enterprises should be compared with a non-assisted control group(s). This information, however, can be difficult to obtain unless some independent studies/statistics are gathered by public authorities in a separate exercise. It is unlikely that the evaluators could research control groups given the sensitivity of employment data which the non-assisted enterprises are not likely to divulge.

Job quality is not currently analysed, but given the aim of the Lisbon Agenda to create ‘better jobs’, this should be considered in the future.

Feedback on the draft good practice framework

Overall, the approach is feasible and similar activities from the Step 1 are being already carried out in Tuscany. Priorities are seen as: providing some benchmarks/multipliers to aid estimation of net employment effects would be useful; in Step 3, ‘the overall assessment’, aggregation of employment data at a programme level can be quite difficult, as the data for different types of interventions is not always comparable. For example, the data which is gathered on the enterprise related projects is a lot more detailed than the data for infrastructure projects. Therefore, the overall aggregation may be possible at a high level, using an overall indicator, such as ‘new jobs created’. It is also likely that ‘key evaluation issues’ could be addressed by evaluators on a gross basis, rather than net.

The definitions should be as simplified as possible. Preferably, the focus should be on ‘new jobs created’ category and not ‘safeguarded jobs’. The distinction between these two categories is particularly confusing to the beneficiaries. With respect to the temporary jobs, it would be useful to further elaborate on different sub-categories. In Tuscany, a distinction is made between re-current seasonal temporary jobs such as those in tourism and agriculture and one-off jobs such as those in the construction stage in infrastructure projects. It becomes more difficult to
differentiate temporary from permanent jobs in other sectors.

Overall, a bottom up approach focusing on face to face interaction would be most appropriate for assessing the employment effects of ERDF interventions. This would however entail more resources being devoted to the evaluation process.

In terms of existing guidelines on assessing employment effects of regional assistance interventions, there are some that were produced by national authorities and they were consulted, while the recent Commission guidelines are not focused on this issue; however the Managing Authority and evaluators are aware of the recent Guide to evaluating socio-economic development, as well as of the MEANS guide.

In addition to the job categories specified in the draft guidelines, it would also make sense to improve integration between employment and equal opportunities indicators by including gender breakdown within employment data.

3. Ireland

The employment effects of SFs are determined primarily through an ongoing monitoring process. There are no additional assessments at the evaluation stage, but the evaluators rely on the figures gathered during the monitoring process. The employment effects are monitored for each project and then aggregated at the measure level.

3.1 Current Approach

The baselines and targets for employment are set at the measure level and then for each project. Employment outcomes achieved under previous SFs interventions in BMW region are used as benchmarks when setting the targets. Apart from the past experience, the particular characteristics of the sectors targeted through the SF interventions are also being taken into account when setting the employment targets.

Once the projects are underway, project leaders enter the data related to the employment onto a database system. The data that is being collected relates to the gross jobs figures. The emphasis is on collecting the data on the category of new jobs created. These contain a further breakdown into full time Vs part time jobs, which are further segmented by gender. Project managers also collate the data on jobs safeguarded. This category is more difficult to measure and it is broadly defined to include the pre-existing jobs in companies that are being supported through SFs. The data on temporary jobs, including those
The aggregate employment created figures are therefore compiled, but they do not distinguish between the employment generated through the SFs and other measures financed by the Irish government. The aggregation of employment related figures is not undertaken at the regional, but national level. At this stage, the employment effects are also assessed on a net basis.

The evaluators rely on the already existing employment data, rather than collecting additional data/conducting qualitative analyses during the evaluations of SF programmes. At the national level, an annual survey of projects supported by development projects is undertaken and it includes the measurement of employment effects. This survey respondents include both the beneficiaries of the SF interventions as well as Irish government interventions. For the reasons described earlier, no distinction is made in survey results between the projects supported by SFs and Irish government.

Some disaggregation of figures has been done for the ESF related intervention in the mid-term evaluation in BMW region. The ESF co-funding was used in BMW region in the field of childcare to support staffing costs and quality improvement programme. The mid-term evaluation has found that the ESF contributed to direct employment creation for 2,213 childcare workers. The size of the contribution of the ESF to the indirect employment of parents who use the newly created childcare facilities was more challenging to estimate as the evaluators had to rely on the previously existing data. Some high level conclusions on the impact of the actions aimed at the
Case Studies

quality improvement of staff have also been made, but they are mainly assumptions derived from an analysis of number and type of actions that were undertaken.

3.2 Key Issues

Bias in reporting: Even if the evaluation was conducted using a bottom up approach, it is questionable how objective the results would be. For example, it could be challenging to arrive at realistic figures regarding deadweight/additionality, which could distort the calculation of net jobs. As the data would originate from the beneficiaries, there could be a tendency to somewhat overstate the impact of SF interventions on job creation. It is therefore likely that the beneficiaries who received the funding could report unrealistically low levels of deadweight jobs. To minimise bias, it would be useful to assess also the unsuccessful applicants for SFs support in order to investigate what effect not winning SFs co-financing had on their businesses/projects.

An update to the mid-term evaluation of the programmes supported through the SFs at the national level, suggests that the system of indicators needs to be strengthened, especially with regard to the impacts. Carrying out special surveys, with the use of control groups, is proposed as the key method. The mid-term national-level evaluation of programmes targeted at human resources development, including employability actions, focused on assessing the effects by analysing data on outputs. The ‘outputs’ were mainly defined as numbers of participants in the actions or number of contact hours with the participants.

With regard to the proposed ‘Best Practice Framework’, overall, the Step 1 in the approach is feasible and similar activities are already on-going. Estimating net employment effects (Step 2), again at the measure level, could be possible providing that there are some benchmarks/multipliers that can be used.

The Step 3, ‘the overall assessment’, would be useful to prompt the evaluators to consider wider context. For example, in terms of ‘relevance’, the evaluators need to consider the extent to which the type of investments made through SFs, and therefore the jobs that are created, correspond to the needs of the regional economies and their populations.

In terms of ‘effectiveness’ in the Step 3, it would be very useful if instead of only counting the jobs created through SFs, the evaluators considered the wider policy context required for the success of SF interventions. For example, the same ALMPs interventions may work in one region, but not another because of differences in other policies that need to be in place to support the implementation of ALMPs. Going beyond quantitative analysis would help
policymakers both at regional, national and EU levels understand the global determinants of successful interventions and therefore improve the design of future development programmes. This could be accomplished by accounting for successes or failures across different regions on a case study basis and by potentially conducting some cross-regional/country comparisons.

In order to assess the quality of jobs the evaluators could look at the salary level i.e. are the highly paid or low paid jobs being created. This data could be however more difficult to obtain from project holders, as it is quite sensitive. Similarly, the project holders could be asked to provide some indications on qualification level of the jobs created (e.g. unskilled, skilled, graduate level, post-graduate level, etc.) to help gauge the quality of jobs.

4. Lithuania

In the current 2004-06 period, the Lithuanian Ministry of Finance is the Managing Authority of the national Objective 1 Programme and therefore has primary responsibility for monitoring the results and impacts achieved through the implementation of the Single Programming Document (SPD).

Its responsibilities in respect of monitoring are specified in the Lithuanian Government Resolution on the Management and Implementation of Structural Funds (Government Resolution No 1166 of 11 September 2003 on the responsibilities of state institutions in respect of European Union Structural Funds Assistance) and in the Operating Manual for the Structural Funds Management Division within the Ministry of Finance. A specific unit within this Division - the Monitoring and Information Division - has responsibility for monitoring.

4.1 Current Approach

To meet EU regulatory requirements in respect of the collation, processing and storage of monitoring data, a monitoring system SFMIS was set up by the Ministry of Finance as part of the preparations for Structural Funds implementation in April 2005. SFMIS is composed of 3 modules the first dealing with the registration of applications, the second with the collation of financial data on payments and the third with the collation of monitoring data on ‘physical’ outcomes.

Once monitoring data has been collated by Implementing Agencies such as the ESF Agency, the Lithuanian Business Support Agency etc., it is then passed on to the various Intermediate Bodies (government Ministries). Having reviewed and quality-assured the data, Intermediate Bodies submit an annual monitoring report to the Monitoring and Information Division within the Ministry of Finance. Monitoring data is then amalgamated at the programme
Case Studies

level and incorporated into annual (and the final) programme level implementation reports which are submitted to the European Commission.

Data is currently collated through the national monitoring system in respect of gross jobs created (direct) and net employment effects (direct).

The methodological approach to measuring the employment effects of Structural Funds interventions is summarised in brief below: bottom-up quantification of direct new jobs created and of jobs safeguarded at the project level; and collation of monitoring data on employment outcomes from Implementing Agencies is aggregated at measure, priority and the programme level through the national monitoring system for the Objective 1 programme (SFMIS).

Methodological issues relating to the two employment indicators adopted in the SPD are now considered. Since the start of the 2004-06 programming period, monitoring data has been collated on direct gross job creation through the national monitoring system (SFMIS). However, initially, the consistency and reliability of data was compromised because of variations in interpretation amongst beneficiaries as to how employment outcomes at the project level should be measured. The Single Programming Document simply specified a requirement to collate data in respect of new working places. There was therefore an absence of a clear conceptual distinction between part-time and full-time jobs created and between temporary and permanent jobs in monitoring systems.

However, the Lithuanian Ministry of Finance has taken active steps to address this issue and to improve data quality. It recently issued methodological guidance on how to calculate direct employment effects to Implementing Agencies and Intermediate Bodies. The new methodological guidelines state that all permanent and temporary direct jobs must be counted if they occur during project implementation; and all part-time jobs must be converted into a full time equivalent (40 hours/week).

Additionally, the Ministry provided clear definitions as to how different types of employment effects should be measured. For example, a ‘permanent job’ is defined as a new workplace where the employment contract is of unlimited time duration. A temporary job is defined as a job that lasts for longer than a minimum threshold of 6 months on a full-time equivalent (FTE) basis (over the duration of the project). If a temporary job lasts less than six months, then it is not counted.

With regard to measuring permanent job creation, the Lithuanian authorities count all jobs that will be created either during or within two years of project implementation.
Case Studies

Additionally, those jobs created that can be attributed indirectly to the project in the view of the programme promoter in the local area are also counted. Information on indirect effects is not entered into formal monitoring systems but is nevertheless kept for evaluation purposes so that evaluators can make a retrospective judgement across projects by category of intervention with regard to indirect employment effects.

4.2 Key issues

In common with other new member states, implementing agencies in Lithuania have encountered difficulties in quantifying employment outcomes. This can be linked to the challenges in implementing Structural Funds for the first time and the consequent need to build capacity in respect of evaluation and monitoring.

To strengthen capacity amongst the public administration, the Lithuanian Ministry of Finance commissioned two separate guides on evaluation and monitoring in 2005. The objective was to provide public officials with a single point of reference for all issues relating to evaluation and monitoring. As part of the project, a series of training modules were organised which both public officials and consultants with an interest in Structural Funds evaluation work attended. The main objectives of the training sessions were to ensure that public officials involved in Structural Funds implementation were grounded in a good understanding of issues relating to evaluation, evaluation management and monitoring; and highlight any specific problems being encountered by Implementing Agencies and Intermediate Bodies in respect of evaluation and monitoring.

Feedback from the training suggested that some specific difficulties in quantifying employment outcomes in the 2004-06 period have been encountered. Problems were identified in the following areas:

- Methodological issues around calculating direct employment effects e.g. distinguishing between part-time and full-time employment creation etc.
- Converting direct into indirect employment effects
- Converting gross into net effects

With regard to the first point, in common with many other EU countries, only direct jobs are collated through monitoring systems. Indirect job estimates are not collated.
It is envisaged however that if an ex-post evaluation of the current 2004-06 programme is undertaken, then evaluators will produce estimates retrospectively for indirect job creation taking into account possible multiplier effects. Here, a key issue will be the challenge of devising appropriate multiplier benchmarks for making the conversion from direct into indirect employment effects.

Public officials participating in the training module on monitoring expressed a wish to better understand the methodological alternatives in converting direct into indirect employment effects. Furthermore, a need was identified for research to be undertaken to determine suitable benchmark ratios for the conversion of direct into indirect employment effects for different types of Structural Funds interventions.

Taking the second (related) point, a need was identified for additional guidance on how to make the conversion from gross into net employment effects. Specifically, there was a need to improve understanding of how to apply concepts such as financial additionality, displacement and deadweight when calculating net employment effects. The starting point in this regard will to establish suitable ratios for calculating deadweight, displacement etc. drawing on ‘bottom-up’ survey work with beneficiaries. Another obstacle in making the gross-net conversion will be the difficulty in estimating the impact of indirect effects on employment (see previous point).

There was also some confusion with regard to whether anticipated employment outcomes beyond the lifetime of a project – both jobs created and safeguarded could be counted or not. Here, the issue was that some projects involving productive investment by SMEs had anticipated that employment impacts would mainly materialise after the project had been implemented. While the national authorities have made clear that only employment impacts arising during project implementation should be quantified and collated through monitoring systems, this issue does raise wider questions with regard to the difficulties in capturing the totality of employment impacts generated through Structural Funds interventions. The recent issuing of guidance has sought to clarify this issue. It states that all jobs created during the project or within two years of its implementation should be counted.

5. Sweden

The employment effects of Structural Funds in Northern Norrland are assessed both through an on-going monitoring exercise and at the evaluation stage. The sections below outline the current approach to monitoring employment effects and feedback on the draft good practice framework.
5.2 Current approach

Prior to the commencement of the projects, the overall employment targets are agreed with the Commission. They are then discussed with the project leaders and set for each project. No benchmarks are being used at this stage. Project leaders benefiting from ERDF report on progress four times a year and this is recorded on a monitoring system. The project leaders report on new jobs created, temporary jobs and preserved jobs. Although the updates are quite frequent, there are some concerns about the validity of the figures submitted. It is likely that in some cases figures are overestimated. One of the reasons can be a bias on the part of project leaders who wish to present the results in as favourable light as possible or because of double counting (double counting occurs when the same job post is counted by different projects). In result, some of the figures have been scaled down following the talks with the Managing Authority.

Apart from reporting on the number of jobs, the gender breakdown is also monitored. The targets are set for new and preserved jobs for men and women and the progress is subsequently monitored. Project leaders also provide employment effect estimates for projects financed through ESF. In terms of skills development projects, the number of participants in the projects is one of the core indicators. However, there is no systematic monitoring of beneficiaries employment history once they finish the training programmes. The impact of ESF financed projects, such as those supported under the sub-measures aimed at skills development or increased employability and entrepreneurship, is measured across several indicators. The mid-term evaluation of the Objective 3 interventions analyses both some quantitative data and provides some qualitative assessments of the effectiveness of the actions that were undertaken. On the quantitative side, the evaluators present the data related to the numbers of projects that were financed, number of participating companies, number of networks that were initiated and number of individuals who took part in skills development/training measures. Gender breakdown of the participants has also been monitored and participation of women has been compared across different sub-measures. The evaluation also tackles some more qualitative aspects of the impact of the ESF interventions, by assessing whether they have resulted in increased business skills and an increased willingness to change. The evaluation findings with respect to these aspects were positive and the evaluators expect further positive effects on the effectiveness of companies, mobility of the employees and strengthening commitment of employees to the life-long learning.

The Managing Authority primarily relies on the evaluation stage to estimate the employment effects of ERDF and
ESF. So far, the evaluators have used a bottom up approach to validate the figures submitted by the project leaders, mainly by interviewing them. Given that they interviewed the same individuals who submitted the figures, this did not help overcome the already existing issue of potential bias. A potential alternative in the future could be to talk to a sample of final beneficiaries (e.g. in the case of enterprise assistance projects to the SMEs themselves) and analyse their internal information/accounts in order to gauge the employment effects stemming from ERDF assistance. These results could then be upscaled and used to adjust the figures at the programme level. The feasibility of this approach would depend on the availability of comparable projects within a measure.

The Objective 1 in Northern Norrland programme covers a very large number of areas, which leads to the investments of varying character. The update to the mid-term evaluation of Objective 1 (2005) recognises that the different types of measures require different level of investment to create or preserve jobs. Transport Infrastructure and Transport Solutions area require the highest level of investment in order to create or preserve a job, while the measure for General Development of Industry and Commerce requires the lowest amount of investment. The report also finds that the temporal dimension in counting the number of jobs will vary according to the nature of different measures. For example, the programme aimed at strengthening the Sami business life displayed limited results with regard to new employment. The employment effects of this programme will be visible in a longer-run than it is the case with other measures, because the programme is about developing various seasonal employment opportunities.

The mid-term evaluation report also outlines that the effects of the programme should not be assessed only on the achievement of quantitative goals. For example, measures taken within the development of rural areas have strengthened entrepreneurship and more professional commercialisation of the products. The report also highlights the importance of assessing wider economic variables, such as gross national product and employment trends, that may affect the performance of measures supported through structural funds. This is particularly relevant, given that the resources provided through Objective 1 programmes are relatively small to cushion against wider economic variables.

6. Spain

The case study work included Andalucia in Spain. The research was carried out through a face-to-face interview with the Junta de Andalucia supported by desk research to review the interim evaluation of the current Objective 1 Programme.
In the current 2004-06 period, the Junta de Andaluca is the Managing Authority of the Andalucia Objective 1 Integrated Operational Programme Programme and therefore has primary responsibility for monitoring the results. With unemployment at 19% in 2002, a key priority of the Objective 1 programme is to create new job opportunities and to help people, especially the young, to take advantage of these opportunities. Being able to measure progress in this respect is very important.

6.1 Current Approach

The Junta de Andaluca has relied mainly on the HERMIN SPAIN econometric model to estimate Objective 1 employment and other effects. The model is operated by the University of Malaga on behalf of the Junta. An annex to the interim report explains the way the model has been used.

Using the HERMIN model, in the interim evaluation of the 2000-06 Andaluca Objective 1 Programme it was estimated that some 24,000 new jobs had been created and a further 77,500 safeguarded during the first three years of the 2000-03 Programme. These results were compare in the report with data drawn from the Encuesta de Población Activa (Survey of Working Population) between 1999 and 2002. The analysis suggested that Structural Fund employment effects represented 8.82% of the total number of jobs created in the region and 3.3% of jobs maintained. The conclusion was that these were ‘very positive impacts’. However, it was emphasised that ‘these results should be regarded with a certain degree of caution as they referred to gross, not net, employment figures and, furthermore, it has been shown in certain cases that there is an over-estimate of employment, given that calculations were made for the three year period’.

Elsewhere in the interim report, it was estimated that the total impact of investment made in the Objective 1 Programme would generate or maintain 50,000 jobs during the 2000-2006 period. It was argued that this would bring about growth in the employment rate in Andalusia at an accumulative annual rate of 2.55% for that period, as opposed to a growth rate of 2.29% without aid (in the opinion of the evaluation team, this provided a good approximation of the net impacts on employment). The reason for the inconsistency in estimates of Objective 1 employment effects is not clear unless the estimate of 50,000 jobs for the 2000-06 period as a whole relates only to new jobs (which would be consistent with the earlier estimate of 24,000 for the first three years).

In the discussion with the Junta de Andaluca it also became apparent that the interpretation being used of concept of ‘jobs maintained’ relates to new employment created by the Objective 1 Programme that lasts beyond the programming
Case Studies

period (i.e. permanent ‘jobs created’). This may also help explain the discrepancy.

6.2 Key Issues

It was agreed that the way in which Structural Funds employment effects are currently measured in Andalucia needs to be improved through a greater emphasis on a bottom-up approach.

Bottom up methods are already being used quite extensively. The “Methodological Guide for Evaluation of Operational Programmes 2000-2006 which was used for the interim evaluation was broken into three levels: the ‘micro approach’ (‘direct managers’), the intermediate approach’ (‘managing-coordinators’), and the ‘macroeconomic approach’. In the case of the first category (micro level) survey work was carried out for the interim evaluation focusing on ‘direct managers’ in the case of the ERDF and final beneficiaries for the ESF. At the intermediate level, case studies were undertaken. However, the survey work and case studies did not focus specifically on obtaining data that would have been relevant to measuring Structural Fund employment effects.

The Junta emphasised that technical support would be needed to further develop the bottom-up approach. In particular, there was a need for guidance on the conversion of gross employment effects into net impacts, and a need for additional resources to carry out surveys. More generally, there is a need to develop a better understanding of the role of evaluation in relation to European programmes in the region.

7. United Kingdom

The case study research in the UK focused on Yorkshire & The Humber. Officials from the Government Office (GO) responsible for both the Objective 1 and 2 Programmes were interviewed. This was supported by desk research to review the interim evaluation. The Government Office also provided additional material such as copies of the ERDF project monitoring forms.

7.1 Current Approach

In the Y&H region, a combination of ‘bottom-up’ and econometric techniques have been used to estimate Structural Fund employment effects.

The mid term evaluation of the 2000-06 Objective 2 Programme in Y&H established that there was underperformance on 15 or the 31 key targets. For example, in the case of Priority 1 employment effects, it was estimated that 3,853 new jobs had been created against a target of
6,261 for the mid term, i.e. a 62% achievement rate. With the exception of Priority 4 (where the jobs target was more or less achieved) there was similar under-performance across other areas of the Objective 2 Programme.

As a result of this, and the view that in some cases underperformance was due to inaccurate measurement, the GO decided to issue new guidelines on quantification of Structural fund outputs, results and impacts. This rationalisation resulted in fewer, simpler and better defined indicators which were unambiguous and easier for projects to report against. The revised guidelines included a number of (re)definitions. For employment effects, the categories to be monitored are:

- **Gross new jobs created** - a job can be counted as a gross direct new job if it is expected to be permanent, that is it is expected to last beyond the lifetime of the project (i.e. it is sustainable).

- **Temporary jobs**, e.g. for construction, can contribute towards the target. Assuming that a FTE permanent job lasts for 10 years, one year’s temporary employment equates to one tenth of a new FTE job.

- **Net new jobs created** - is the new jobs resulting from Structural Fund interventions. This can be measured as gross direct new jobs, minus the effects of deadweight and displacement, plus multiplier effects. This must be expressed in full time equivalents.

No attempt was made to define ‘jobs maintained’ or to suggest that this category should be included in estimates of the Structural Fund employment effects for the region. Apart form methodological difficulties, it was explained in the interview that one reason for not measuring ‘jobs maintained’ was that EU State Aids rules made it difficult to provide support to firms in difficulty. It was also decided to only measure full-time jobs because of the complications of converting part-time jobs into FTEs. For example, a disproportionate amount of time was being taken up estimating the FTE for the self-employed who has benefited from Objective 2 assistance (many of the individuals concerned continued to work for employers). The only exception to this decision to focus on permanent full-time jobs was in the construction sector where projects were required to provide estimates of temporary and part-time employment.

Against this, the category ‘jobs accommodated’ was included (this was defined as ‘the number of people employed by businesses that move into newly built or refurbished accommodation (see “area of premises provided” above). These are likely to be jobs that already existed within those businesses. Any jobs newly created as a result of the move should be counted as ‘gross new jobs
created’. Benchmarks were also provided (e.g. 54 gross new jobs created per £1m total project cost).

In the case of the Objective 1 Programme, there was better performance against targets: it was estimated 14,512 gross jobs had been created – over one-third of the Programme target, and 13,248 gross jobs safeguarded - approaching half the target (this was converted into 7,330 net jobs which was 29% of the target. Consequently, the decision was made to revise targets downwards. Reductions in targets meant that gross new jobs created fell by 23% from 55,318 to 42,112. This translated into a 25% reduction in net jobs created (from 33,564 to 25,126). At the same time the jobs safeguarded target only fell by 6% and the net safeguarded target actually rose by 2% (because of deadweight and displacement differences in the formulae).

The conversion of gross into net employment targets involved assumptions that varied between the Priorities. For instance, it was assumed that in Priority 1, 100 gross jobs would create or safeguard an additional 30 jobs in different sectors of the economy. These would be reduced by average displacement of 15% and deadweight of 25%. In Priority 2, the deadweight assumption is the same, but every 100 jobs are only expected to support 20 indirect ones and average displacement is anticipated to be higher at 25%. Overall, the mix of businesses supported under the Programme meant that it was estimated that 68 net jobs had been created for every 100 gross jobs created and 67 net jobs for every 100 gross jobs safeguarded.

Using the Regional Economic Model (REM), an analysis was undertaken for the mid term evaluation of the incidence of Objective 1 employment by sector and area. It was estimated that Metals & Engineering (largely AMM related industries) and Other Manufacturing between them contributed 7,100 of the 10,750 gross jobs created. This was 66% of the gross total, but their combined share of net jobs created was only 57%. Analysis of the impact calculations at district level showed much less variation than by sector (Sheffield had 47% of gross jobs created).

In addition to the REM model, the Objective 1 secretariat has developed its own Excel-based system for monitoring project outcomes. Project sponsors are provided with the software on a CD. Data is collected on outputs from projects on a quarterly basis coinciding with the submission of financial claims. (a copy of one of the data input forms is provided on the next page). GOYH then checks the data (including spot checks) and on a six monthly basis carries out an analysis leading to publication of a newsletter containing two reports, one on progress towards targets for
each Priority and the other on cross-cutting themes. As part of this exercise, Beneficiaries are asked to provide a breakdown of jobs created/maintained by sector so that job quality can be assessed. Post codes are also provided for jobs so that an GIS analysis can be undertaken for employment effects. The results of this ‘bottom-up’ monitoring activity are used to help calibrate the REM. GOYH also undertake specific studies, e.g. follow-up surveys of SMEs to establish whether jobs created still exist and to estimate business survival rates.

Detailed beneficiary data from project sponsors is seen as helping with the assessment of impacts in four ways:

- Calculations of net jobs and GDP impacts from gross jobs and increased sales results
- Impacts on individual businesses and targeted sectors from the SBS database using the names of businesses assisted
- Follow-up surveys of ESF beneficiaries, usually sample surveys drawn from representative profiles
- Surveys of businesses, communities etc on specific issues (these may be done in collaboration with relevant sponsors).

In the UK, the macro-economic model used for the Merseyside Objective 1 Programme is the closest to the Y&H system. However, unlike the Y&H system, it is not tailored specifically to the region. A critical factor in the Y&H approach is the support of project sponsors since without the input of project level data it would not be possible to undertake the ‘bottom-up’ analysis. In the interview it was pointed out that for larger project sponsors with their own monitoring systems, there has to be flexibility in applying the GOYH requirements; in contrast, smaller project sponsors who do not have their own systems are more willing to accept the procedures. Looking ahead, a challenge for the GOYH is to develop the REM and monitoring system so that it can also cover the Objective 2 Programme.
Below we provide a list of references used in this report:

**European Commission**


European Commission, DG Regio website ‘Evaluating Socio Economic Development’ ([www.evalsed.info](http://www.evalsed.info)).

**Structural Fund Evaluation Studies**


**Academic references**

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