FISCAL STUDIES, vol. 26, no. 2, pp. 245–275 (2005) 0143-5671

Regional Grants: Are They Worth It?*

COLIN WREN†

†*University of Newcastle upon Tyne*
(c.m.wren@ncl.ac.uk)

Abstract

Regional grants have recently come under scrutiny and are controversial. Some estimates put the employment effect of these grants at no more than 6,000 jobs in the first half of the 1990s, against expenditure of £500 million. Other aspects of the grants are questioned, such as their ability to attract foreign direct investment and their effect on productivity. This paper reviews these issues, focusing on the recent evidence for the Regional Selective Assistance scheme. It describes the nature and difficulties involved in policy evaluation, and finds that differences over the employment effect of the grants result from possible biases induced by the evaluation methodology and from differences in the job measure used. Overall, the paper argues that the regional grants are cost-effective in employment terms, but that expenditure is small relative to the scale of the problem, so that an expansion of the grants may be desirable.

I. Introduction

There has been much interest in regional economic issues in recent years. This is not just because the disparities in UK regional economic

*This paper has benefited from presentations made to: an Alliance for Regional Aid conference, Royal Institute for British Architects, London, April 2002; a Department of Trade and Industry / Regional Studies Association seminar on regional investment, DTI, London, September 2003; and an ESRC Urban and Regional Economics Seminar Group meeting on regional policy at the London School of Economics, October 2003. The author acknowledges the comments of two anonymous referees, and is grateful to a past Managing Editor, Alissa Goodman, whose comments have greatly improved the paper. Thanks also go to Georgina Green and Owen Parker of the Department of Trade and Industry for clarification on points of detail, but responsibility for the paper rests solely with the author.

JEL classification numbers: O2, H2, R0.

performance have persisted (Adams, Robinson and Vigor, 2003), but because the performance of regions is seen as essential to achieving high and stable levels of national growth and employment (HM Treasury, 2001).[1] Like its immediate predecessor, the Labour government has sought to promote indigenous development, rather than to redistribute existing economic activity between regions, but novel to its approach are institutional reforms that have sought to build up capacity at the regional level to formulate and implement policy.[2] Alongside these developments, aspects of the old UK regional policy remain, principally in the form of the discretionary grants to private industry. In one form or another, these regional grants have existed since the earliest interventions of the Depression, and they have been available continuously since the early 1960s (Wren, 1996a). However, they are primarily about job creation (see Armstrong (2001)), and they sit uneasily with the new direction of regional policy. As such, it is no surprise that the regional grants have recently come under much scrutiny and that this has resulted in controversy about their value.

The controversy over the grants arises from the Regional Selective Assistance (RSA) scheme, which has operated since the early 1970s. While in England RSA has recently been rebranded as Selective Finance for Investment, regional grants are in fact little changed since the late 1980s, and the controversy has three elements.[3] First and foremost, recent reports have questioned the usefulness of RSA as a job-creation measure. The National Audit Office (2003) finds that over the period 1991–95, RSA created 21,000 jobs at an average cost of £21,000, while a background report puts it at only 6,000 jobs (NERA, 2003). This is a poor return on grant expenditure of about £500 million over the period.[4] Second, since the mid-1980s, half the regional grants by value have gone to support foreign direct investment (FDI). These grants seek to locate FDI in designated Assisted Areas (see below), but the empirical evidence for this is not encouraging. Research reported below finds that the grants are ineffective

[1]Interest in regional issues can be gauged by the number of recent reports. In addition to the above, they include a critique of regional policy (Regional Studies Association, 2001), a government position paper on regional policy (HM Treasury, 2003a), a report on regional grants (National Audit Office, 2003), a review of regional statistics (HM Treasury, 2004), a report by the Committee of Public Accounts (House of Commons, 2004a) and ongoing reviews at the European Union level of the Structural Funds and of state aids (see Department of Trade and Industry (2004)).

[2]These are the Devolved Administrations in Scotland, Wales and Northern Ireland, and in England the Regional Development Agencies (RDAs) and London Development Agency.

[3]The Selective Finance for Investment (SFI) scheme brings together RSA and the Enterprise Grant (EG) scheme in England. EG was spun off from RSA in 2000, so that the SFI scheme is similar to the RSA scheme that operated prior to this time (see below). RSA continues to operate under this name in Scotland and Wales.

[4]In its lead story, the *Financial Times* newspaper interpreted it as placing 'a question mark over the value of regional intervention' (17 June 2003).

and that agglomeration economies are more important in determining location. Finally, HM Treasury (2001) finds that productivity differentials account for around 60 per cent of the disparities in regional per-capita GDP, and recent policy is focused on productivity as a source of competitiveness and economic growth (Department of Trade and Industry, 1998). However, on this score, the evidence is also weak. Not only do RSA-assisted plants appear to have lower productivity, but in some studies the assisted plants have shorter survival time durations.

The purpose of this paper is to review the recent evidence on the effects and cost-effectiveness of Regional Selective Assistance in order to draw conclusions for the future of regional policy. UK regional policy has many aspects, and industrial financial assistance is often taken as synonymous with this policy.[5] The paper argues that the regional grants have beneficial effects, and not only are they more cost-effective than suggested by recent studies, but they are at least as cost-effective as other measures, so that ways of expanding the grants should be considered. In the next section, expenditure on the grants is described and the early evidence on cost-effectiveness is reviewed. Changes to regional policy in response to this and the nature of the grants are then described. Section III reviews the methodology used to evaluate regional policy, and in Section IV the empirical evidence is examined for the effects of RSA on employment, FDI location and productivity. Section V considers the employment cost-effectiveness and scale of the grants. Conclusions are drawn in Section VI.

II. The quest for cost-effectiveness

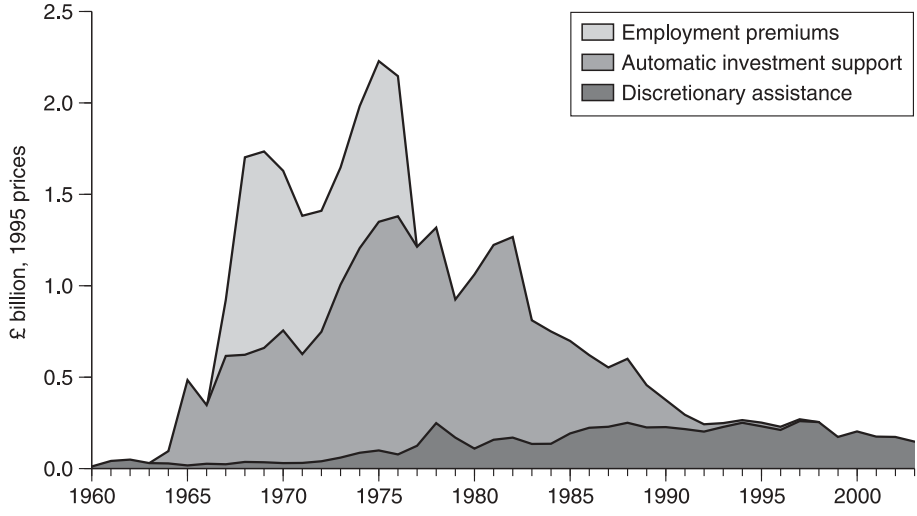
1. The pattern of expenditure

Expenditure on UK regional industrial assistance between 1960 and 2003 is shown in Figure 1, with a threefold breakdown of this assistance. It is taken from Wren (1996b), but extended forward in time, and details of the schemes making up each category can be found in Wren (1996a). It shows spending on all forms of regional industrial assistance to private industry, including grants, loans and investment tax allowances. The figures are expressed as 'grant equivalents', which is the grant amount that, if received at the same time as the subsidy, has equivalent value to the firm in net

[5]The government sees its regional policy as boosting productivity, growth and employment through measures designed to generate or improve innovation, enterprise, skills and infrastructure (HM Treasury, 2001). Much of this is aimed at industry, and hence the term regional industrial policy is sometimes used. The institutional reforms mean that much of this policy is now delivered at the regional level. Other regional aid in Great Britain includes regeneration and property-related schemes (see Department of Trade and Industry (2004, annex 5)). In Northern Ireland, the grants are known as Selective Financial Assistance (see Harris and Trainor (2005)).

FIGURE 1

Expenditure on regional industrial assistance



Notes: Figures are for actual grant payments at constant prices for Great Britain. Data are for financial years, so that 1960 refers to the financial year 1960–61 and so on.
Sources: Wren (1996a); Annual Reports on the 1982 Industrial Development Act.

present-value terms. Where a similar national measure exists, the differential subsidy in favour of the Assisted Areas is calculated. Discretionary assistance determines the assistance rate as part of the aid-giving process, which is zero where the assistance is refused, whereas automatic support offers the assistance on terms determined automatically according to the published eligibility criteria. Discretionary assistance includes the Regional Selective Assistance scheme. Unlike other categories, which subsidise capital investment, the employment premiums directly subsidise labour.

Figure 1 identifies £32 billion in regional policy assistance over 1960–2003, of which £18.8 billion (59 per cent) is in automatic investment support, £7.8 billion (24 per cent) is in employment premiums and £5.4 billion (17 per cent) is in discretionary assistance (1995 prices). At its peak, regional policy assistance expenditure reached £2,200 million in 1975–76 (1995 prices), but it is now running at less than £200 million per annum and it is set to fall further. In the early 1960s, regional assistance comprised discretionary assistance only, but spending built up from this time, first with the introduction of the automatic support and then with the employment premiums.

(a) Automatic investment support

The 1963 Budget introduced regionally differentiated tax allowances for the first time; these were replaced by Investment Grants in 1966.[6] In one form or another, the automatic investment support increased up to 1982, but Figure 1 shows that there were four dips in spending. First, the introduction of corporation tax in 1965 diminished the real value of the allowances, leading to the introduction of Investment Grants to restore the real value of the subsidy. Second, the Investment Grants were later viewed as expensive and in 1970 they were replaced by regionally differentiated first-year writing-down allowances, but this reform was reversed in 1972 by the introduction of the Regional Development Grant (RDG). Third, spending fell in 1977 when construction and mining activities were excluded from RDG to curb public expenditure. Finally, investment support fell dramatically with the recession in 1979, due to a depressed level of investment and take-up.

(b) Employment premiums

The origin for these was the Selective Employment Tax in 1966. This surcharged employers' National Insurance contributions to raise revenue for an expansion of public services, but it was refunded to those firms outside of the construction and service sectors to effect a structural change in the economy towards the industries with an export content. In addition, a Selective Employment Premium (SEP) was paid to firms in these sectors, but withdrawn for firms outside of the Assisted Areas in the 1967 devaluation. It coincided with the introduction of a Regional Employment Premium (REP), which was also payable at fixed amounts in respect of employees eligible for SEP. The combined subsidy was put at about 8 per cent of wages (McCrone, 1969), but in real terms, expenditure on the premiums decreased in every year after their introduction, so that the rates were doubled in 1974 to restore their real value. The premiums were cut in the first sterling crisis of 1976, and withdrawn altogether in the public expenditure cuts of December 1976.

(c) Discretionary assistance

Regional policy expenditure peaked in the mid-1970s, but the turning point was the early 1980s, since when discretionary assistance has taken an increased share of expenditure. Revisions at this time included a phased reduction in the geographical coverage of the Assisted Areas, a reduction in the RDG rate and a four-month deferral on RDG payments, with RDG

[6]Prior to the 1960s, discretionary loans and grants amounted to no more than £5 million in total.

effectively scrapped in 1984.[7] Regional Selective Assistance was introduced in 1972, at the same time as RDG, and made on a discretionary basis to projects that either created or retained jobs backed by capital investment. In 2000, smaller projects were made ineligible for RSA, and funded under a new Enterprise Grant (EG) scheme, which was available to small and medium-sized enterprises (SMEs). Since then, RSA and EG have been recombined in a new Selective Finance for Investment scheme. Throughout the 1990s, expenditure on RSA was running at about £200 million per annum in Great Britain, but as we can see, since the turn of the century, spending on the regional grants has fallen substantially.

2. Early evidence on employment cost-effectiveness

The objectives of UK regional policy have been couched in many ways over the years, but ultimately it has been judged in terms of its ability to create jobs. This is the thrust of all government evaluations, and a factor underlying the above revisions. The employment cost-effectiveness was an important concern in early regional policy efforts, so that the 1960 Local Employment Act required the Board of Trade to pay attention to 'the relationship between the expenditure involved and the employment likely to be provided', and Treasury approval was required for cases where the 'grant per job' exceeded £1,000 (around £10,000 at today's prices). However, the job link was dropped when the Investment Grants were introduced in 1966, and it was only reintroduced when the RDG scheme was scrapped in the mid-1980s, so that throughout most of its operation, there was no direct job-creation link, even though it was the criterion on which the policy was judged. A 1983 White Paper put the 'cost' of a regional policy 'job' at £35,000 (Department of Trade and Industry, 1983), which at today's prices can be roughly doubled. It was undoubtedly a major factor for the changes to regional policy in the early 1980s, and it gave the policy a poor reputation. However, there are reasons why this evidence is misleading and why it has only limited relevance to the current regional policy.

First of all, Table 1 reproduces estimates for the employment effect of UK regional policy over 1966–76. They are calculated by Moore, Rhodes and Tyler (1986), by applying a shift-share analysis to regional employment data of the 1950s to determine the counterfactual position. They are the basis for the estimate given in the earlier 1983 White Paper. Table 1 shows that regional policy created 210,000 jobs over 1966–76 at a 'cost per job' of £47,750. However, it also shows that much of the support was taken up by

[7]It was followed by a revised RDG scheme that related the grant amount to the number of jobs in projects backed by capital investment. It was superseded by Regional Enterprise Grants from 1988 to 1997 that restricted the assistance to small and innovative projects.

TABLE 1

The 'cost' per regional policy 'job'

Manufacturing industry	*Gross assistance expenditure*	*Net jobs created*	*'Cost per job'*
Capital-intensive	£4,717m	6,000	£786,000
Labour-intensive	£5,311m	204,000	£26,000
All industries	£10,028m	210,000	£47,750

Notes: Regional assistance expenditure over 1966–76 at 1982 prices. Net jobs created are the direct and indirect jobs created over 1966–76 and existing at 1976. Capital-intensive industries are coal, petroleum, chemicals, mechanical engineering, metal manufacture, shipbuilding and marine engineering. Labour-intensive industries are all other manufacturing industries.
Sources: Moore, Rhodes and Tyler, 1986; Wren, 2003a.

firms in capital-intensive industries that created few jobs.[8] The 'cost per job' in these firms was put at £786,000, so that the pattern of take-up was a major factor in the poor employment effect of the grants. Outside of the capital-intensive industries, Table 1 suggests that the policy was still relatively expensive, at a 'cost' of £26,000 per 'job', but this is because the shift-share methodology provides an unfavourable measure of the jobs. It is based on all those jobs created over 1966–76, but still existing at 1976, so that it ignores the jobs that were created by policy but lost by 1976. Firm-based estimates that measure the job effect over shorter periods give much lower estimates. In Wren (1994), for example, the 'three-year cost per job' for regional incentives is £10,000 for large firms and about half this for smaller firms (1985 prices).

The kind of evidence produced by the 1983 White Paper led to the shift away from automatic assistance to a more discretionary policy. Discretionary assistance has a number of advantages, each to do with asymmetric information (see Wren (2003b)). The first is that it gives the government the chance to scrutinise projects, and to vary the terms of the assistance in the light of the information gained about the job-creation prospects of a project, so that it helps mitigate an adverse selection. Second, discretionary assistance allows the government to scrutinise a firm's commitment to carry out a project as agreed, and not subsequently to vary the terms of the contract, which is a moral hazard problem. Finally, it gives the government an advantage where bargaining over the grant rate is likely (for example, where the projects are large in scale), as its threat point is to refuse a grant, which increases its bargaining hand. However, discretionary assistance involves scrutinising projects in order to elicit information about

[8]At the time, a number of House of Commons reports pointed to excessive 'grants per job', which at current prices could be as high as £900,000, but otherwise little was known about the operation of regional policy (see Wren (1996a)).

the nature of projects, which imposes administration and compliance costs on the government and firms. Further, it may lead to errors, of which there are two main types:

- Type I: The government offers too low a grant or refuses a grant to a project that requires assistance to proceed.
- Type II: The government offers too high a grant to a project that would proceed with a lower grant or no grant at all.

The errors may either waste public resources (a Type II error) or reduce the number of projects implemented (a Type I error), and by implication they lead to a reduction in welfare. In the case of a Type II error, (at least some of) the assistance has no effect on firm behaviour, but the resources involved lead to efficiency losses elsewhere in the economy – for example, from the excess burden of higher taxation. A Type I error arises because there are welfare-improving projects that fail to be implemented because the assistance is insufficient. This presupposes a market failure – although other rationales exist for public support, such as distributional reasons (HM Treasury, 2003b) – and this is discussed below.[9] Either type of error leads to a socially inefficient outcome compared with that which is achievable in the first-best position.

Overall, the move to a discretionary grant system offers the prospect of a more cost-effective job-creation scheme. However, the possibility of errors and the cost of scrutiny raise the prospect of a less cost-effective scheme, so that this is largely an empirical matter. In the remainder of this paper, the empirical evidence and implications of the discretionary grants are considered. The focus is on the Regional Selective Assistance scheme, for which there is now a wealth of evidence. However, before this, the nature of and subsequent changes to this scheme are considered, indicating the changing nature of UK regional policy.

3. The nature of discretionary assistance

Regional Selective Assistance was introduced under the 1972 Industry Act, and it has taken an increased share of the regional policy budget since the early 1980s. Its advantage over automatic support is that it can be tied directly to job creation and refused to projects that do not fulfil *ex-ante* grant-per-job conditions (see Swales (1997a)). To satisfy European Union (EU) regulations on state aids, the projects must be supported by investment

[9]While this implies economic efficiency (i.e. a position on the possibility frontier), it does not necessarily imply social efficiency (i.e. location at the welfare optimum). As part of its review of business support, the government requires a market-failure rationale for each of its support schemes, although the Committee of Public Accounts (House of Commons, 2004a) found that this was still to be defined in the case of the regional grants.

in fixed capital (Commission of the European Communities, 1998). In addition to the conditions on job creation and investment, RSA is associated with a number of other criteria that define the scheme eligibility. These criteria have changed over time, and as well as seeking further improvements in cost-effectiveness, they have many other motivations. These include a reduction in expenditure by restricting take-up, greater efficiency in administration and the promotion of national as well as regional objectives.

Initially, the guidelines for RSA placed qualifying projects into two categories: new projects and expansions that created additional employment (Category A); and projects that did not provide extra jobs but maintained or safeguarded existing employment (Category B). Assistance was related to the number of jobs, and it was given as a cheap loan, interest-relief grant or removal grant under Category A, but as a loan at commercial rates under Category B. In either case, the applicant had to demonstrate the viability of the firm and that the greater part of the project cost would be met from sources outside of the public sector. In the case of Category B projects, the assistance was only offered where it could not be reasonably obtained from other sources. The bulk of assistance went to manufacturing firms under Category A, even though service firms that were not primarily serving a local market were eligible and until 1984 could obtain extra assistance under related schemes.

A review of industrial aid in July 1979 introduced two important new criteria. The first was a 'Proof of Need' condition, which required that RSA should lead to a significant change in the nature or scale of a project, a significant advance in timing or a desirable change in location. A similar condition had previously existed only for Category B projects. It reintroduced a condition under the 1945 Distribution of Industry Act that assistance could be provided only if the funds could not be obtained on requisite terms from elsewhere.[10] It was dropped by the 1960 Local Employment Act, but it later applied to virtually every area of industrial support. Second, a 'Regional and National Benefit' condition was introduced. This required that the project should strengthen the regional and national economy, providing more 'productive and secure jobs', such as through improved operating efficiency. As part of this, job displacement was taken into account at a national level in determining the assistance.

To reduce administration costs, loans were given only in exceptional circumstances and after 1980 assistance was in the form of a project grant related to the fixed and working capital of a project as well as the number of jobs. A major change was made to RSA in 1984, when it was no longer

[10]The 1945 Distribution of Industry Act set the framework for regional policy in the immediate post-war period, although it was little used in practice.

payable to relocation projects where there was no net increase in jobs to the UK as a whole. Since the Second World War, the policy had been about encouraging plants to relocate to the regions, and not just those from overseas. Finally, to address moral hazard, a 'clawback' clause was introduced into the assistance under which the grant was repayable over a five-year period if the job target and other conditions were not met.[11]

RSA remained broadly unchanged until the year 2000. At this time, it was restricted to those projects where the capital expenditure exceeded £500,000, while for other projects an Enterprise Grant scheme was introduced. This offered a discretionary grant for projects with up to £500,000 in capital investment, but was available in England and to SMEs only.[12] The EG operated in the Assisted Areas (Tier 1 and Tier 2 areas), but also outside these areas, in Tier 3 areas designated to include localities with particular social problems.[13] It offered a capital grant up to a rate of 15 per cent and a maximum award of £75,000 (i.e. for investments up to £500,000), but at a reduced rate of 7.5 per cent for medium-sized firms in Tier 3 areas. RSA was available in the Assisted Areas at rates up to 35 per cent in Tier 1 areas and 20 per cent in Tier 2 areas, but the minimum RSA grant amount was £75,000. Unlike RSA, EG did not make it essential for a project to create jobs, and it differed in several other respects. However, before the changes could take root, RSA and EG were replaced in 2004 by the Selective Finance for Investment (SFI) scheme, as part of an exercise to simplify and reduce the number of schemes on offer. SFI operates in England on a similar basis to the pre-existing schemes. In Assisted Areas and Tier 3 areas, the minimum award is £10,000, but job creation or safeguarding is no longer required for grants of less than £100,000. In the Tier 3 areas, its availability is similar to that of EG, except that the maximum award has been increased to £100,000.

[11]Jones and Wren (2004) examine the achievement of job targets in RSA-assisted projects.

[12]SMEs are firms with up to 250 employees. The changes meant projects up to £500,000 implemented by other firms in the Assisted Areas were no longer eligible for assistance. Similar schemes to EG existed elsewhere in Great Britain, including the Invest for Growth scheme in Scotland and the Assembly Investment Grant scheme in Wales.

[13]The designation of Assisted Areas is subject to European Community Guidelines and approval by the Commission (see Armstrong (2001)). Tier 1 areas have per-capita GDP below 75 per cent of the EU average, and are designated under Article 87 (3) (a) of the EC Treaty for Objective 1 support from the EU Structural Funds. Tier 2 areas are defined by the UK government under Article 87 (3) (c) and capture 'acute labour market need'. In England, the government designates Tier 3 areas for small business support. These have 'identified special need', including areas of high unemployment, low employment, coalfield closure and rural areas. The aid map setting out the areas under Article 87 (3) (a) and (c) expires at the end of 2006, and the Commission is consulting with Member States on revised Regional Aid Guidelines (see Commission of the European Communities (1998) and Department of Trade and Industry (2004)).

TABLE 2

Eligibility criteria for discretionary assistance

Jobs. Projects that create overcapacity, simply displace jobs elsewhere in the UK, or aim to relocate jobs from one part of the country to another, are not eligible.
Viability. Businesses and projects should be viable, and the project will normally be expected to be profitable within three years.
Other Funding. The greater part of the project cost should be funded from private sector sources.
Proof of Need. Applicants must demonstrate that a grant is necessary to enable the project to proceed.
National and Regional Benefit. All projects should contribute positive benefits to both the national and regional economies.
Prior Commitment. Project appraisal must have been completed and a formal offer of assistance issued, before the applicant enters into a commitment to proceed with the project.
Eligible Investment. The project must involve capital expenditure on fixed assets, such as property, plant or machinery, but the assistance may be assessed against new jobs created where the expenditure is insufficient. Expenditure can relate to expansion, modernising or the establishment of a new company.
Quality. Assistance is focused more on high-quality innovative, knowledge-based projects providing skilled jobs. Four key factors are used to determine the quality of projects: wage levels, sustainable employment, R&D and training.

Notes: The table refers to the Regional Selective Assistance scheme in 2000, but most of the same criteria apply to the Selective Finance for Investment scheme introduced in 2004. The table does not include other conditions, such as on clawback or *ex-ante* grant-per-job limit, which do not define eligibility.
Source: House of Commons, 2004b.

The current set of eligibility criteria for the discretionary grants is shown in Table 2. The first five criteria are essentially the same as those established in the 1980s, while the other three were introduced in 2000, although possibly changed in 2004.[14] In the case of the 'Quality' condition, the 1998 White Paper on competitiveness (Department of Trade and Industry, 1998) sought to refocus RSA on 'high-quality knowledge-based' projects to improve regional competitiveness. It was at the height of the 'New Economy', and doubts exist about whether there were sufficient of these projects in the regions (Regional Studies Association, 2001). The

[14]Changes made in 2000 to the first five conditions of Table 2 were that the project and firm must both be viable, a payback period of three years was required and a 'National and Regional Benefit' was sought, whereas previously it was a 'Regional and National Benefit'. The 'Prior Commitment' condition beefs up the Proof of Need.

'quality projects' are defined according to wages relative to the sector and region, the sustainability of employment and the levels of R&D and training (Department of Trade and Industry, 2001). It has been reinforced by the 2004 changes, which seek more actively to secure productivity growth, as measured by gross value added per full-time-equivalent employee, and it is described as the key change.

In England, RSA was administered by the Government Regional Offices, but in 2002 cases below £2 million were transferred to the Regional Development Agencies (RDAs). Similarly, the administration of the EG scheme was transferred to the Small Business Service in each region, co-located with the RDAs. The new SFI scheme will also be delivered by the RDAs, except for the few very large cases that will continue to be dealt with by the Department of Trade and Industry in London. These changes are coincident with a reduction in expenditure. Spending on EG in its last year was only £17 million, while in its first year after introduction the number of applications for RSA in England fell by three-quarters. Thus, while £103 million was spent on RSA and EG in England in 2002–03 compared with £112 million on RSA in 2000–01, the value of offers has fallen from £205 million for RSA in 2000–01 to £123 million for the combined schemes in 2002–03.[15] In 2003–04, combined spending was £81 million. This trend seems likely to continue, as the new SFI scheme will focus on 'quality projects' and the government plans to support only a 'small proportion of projects which do not meet the new criteria' (House of Commons, 2004b).

III. The evaluation methodology

Regional policy evaluation is contentious (see McVittie and Swales (2003)), so before proceeding to consider the evaluation results, it is worth briefly exploring this. In general, three issues underlie policy evaluation: the first is to decide what policy effects to include; the second is the measurement of these effects; and the final issue is the choice of the appraisal technique. While the issues are interdependent, they are now considered separately in order to highlight the nature of and difficulties involved in regional policy evaluation. As we shall see, the evaluation methodology changed in the mid-1980s (see Taylor (2002)), related to the second of these issues, which is the measurement of the policy effect.

[15]After the introduction of EG, applications for RSA in England fell from 1,075 in 1999–2000 to 269 in 2000–01, and in Scotland from 348 to just 76. Wales lagged these developments.

1. Policy effect

While there is inevitable vagueness about the stated aim of UK regional policy, which frustrates evaluation (McVittie and Swales, 2003), regional policy is primarily about job creation. RSA aims to encourage 'sound projects, which will improve employment opportunities in the Assisted Areas' (House of Commons, 2004b), while for grants of more than £100,000 the new SFI scheme requires that jobs are either created or safeguarded. The evaluations focus on the employment effect, so that the issue is to decide what jobs to include (for example, indirect jobs) and the level of disaggregation by job type or employee (Swales, 1997a; Marquand, 1980).[16] Evaluations of RSA measure the total number of jobs, giving these all the same weight. There is no attempt to value the jobs, whether at market or shadow prices, and no attempt to apply distributional weights to different types of job, except that the jobs outside the Assisted Areas are given a zero weight. This is questioned (for example, by Swales (1997b)), although it can be defended, as distributional weights are controversial, while according to the 'decision-making approach' the social weights can be imputed directly from the stated aim of policy (Sugden and Williams, 1978). Since the aim of RSA was job creation in the Assisted Areas, it is reasonable that the evaluations should focus on this.

2. Measurement

Once it has been decided what policy effects to include, the issue is how to measure them. Since the actual number of jobs is easily measurable, this reduces to determining the counterfactual or 'without-policy' position. Early evaluations used macro-evaluation techniques (see Bartels, Nicol and Van Duijn (1982)), but difficulties with these techniques and the smaller scale and geographical coverage of regional policy mean that more recent evaluations are based on what Gillespie et al. (2001) describe as the 'industrial survey' technique. This is a micro-based approach that relies on managers' own subjective assessments of the counterfactual position. It is much used by government in evaluating a range of policies, and it has the advantage of providing information on the processes underlying the operation of regional policy. However, it is subject to a large number of potential biases, which limits its appeal.[17] These include sampling bias (it is

[16]For example, by full- and part-time jobs, skilled and unskilled jobs, male and female employees, disadvantaged residents, ethnic minorities and so on.

[17]Other approaches are possible, so that Gillespie et al. (2001) use a computable general equilibrium model to examine the economy-wide impacts of RSA in Scotland. This is useful for taking into account the system-wide effects of assistance on output and input markets, including migration, but the results depend on how the labour market is specified. An alternative approach is a firm-based econometric

non-experimental), hypothetical bias (it is concerned with a counterfactual), starting-point bias (framing effects in questionnaire design may condition the response), information bias (events are rationalised *ex post*) and strategic bias (respondents respond to ensure scheme continuity).

3. Appraisal technique

Finally, it is necessary to decide on the appropriate technique in order to determine whether the policy is worthwhile or not. Again, there are different views on this, but if the policy has a single overriding objective and the resources are constrained, then cost-effectiveness analysis (CEA) is the appropriate technique (Jones-Lee, 1994). CEA provides a comparative measure of scheme performance, as it tells the policymaker where to allocate funds between competing policies. Ideally, it should be carried out at the margin, but in practice it is calculated as the ratio of the total policy effect to its resource cost, so that in employment policy it leads naturally to the 'cost per job'. CEA is the method used in regional policy evaluation, whether conducted at the macro or micro level, although other methods are proposed. Swales (1997b) argues for a cost–benefit analysis (CBA) on the grounds that it offers better guidance and the jobs are heterogeneous.[18] However, if job type is not an issue, then CEA gives a framework for making resource-allocation decisions, provided the costs and the jobs are correctly measured. NERA (2003) argues for an appraisal based on contingent valuation, but this technique is usually applied when valuing non-market effects, whereas in the case of regional policy the jobs can be valued using the appropriate wage rate.

The recent empirical evidence on the effects of Regional Selective Assistance is now considered. The purpose of doing this is to address the controversies outlined in the Introduction, in relation to its effect on employment, FDI location and productivity. Of course, RSA is about job creation, and this is the focus in Section V, where the cost-effectiveness and scale of policy are considered. The employment results are taken from the government evaluations, which use the industrial survey technique, based on structured interviews with senior personnel of randomly drawn samples of assisted firms. As such, they are subject to the criticisms outlined above. However, over the last 20 years, they are the only systematic attempt to

approach, such as in Wren (1994), where a control group of non-assisted plants is used to determine the counterfactual, but this can only really get at the direct effect.

[18]CBA is usually applied to appraise large infrastructure projects, rather than to evaluate programmes involving a large number of projects. CEA offers guidance in a comparative sense, as it suggests a reallocation of resources where cost-effectiveness differs between employment policies or with other policies appropriately valued.

measure the employment effect of RSA both for England and for Great Britain as a whole.

IV. The effects of the regional grants

Regional Selective Assistance is one of the UK's longest-running industrial support schemes, and it is perhaps the most heavily evaluated scheme, with the government carrying out evaluations for the periods 1980–84 (King, 1990), 1985–88 (PACEC, 1993) and 1991–95 (AEP, 2000). The evaluations focus on measuring the direct employment effect, which is adjusted for displacement, linkage and multiplier effects. To find the counterfactual position, the evaluations concentrate on the project 'additionality', which is the extent to which RSA alters the firm's investment decision, whether in timing, scale or location. It is a test of the *ex-ante* scrutiny of projects and it reveals information about the Type II errors outlined in Section II.2. In particular, AEP (2000, paragraph 5.5) finds that '53% of projects would have been able to go ahead at the same scale with a lower grant amount', so that a Type II error occurs in half the projects. As non-assisted firms are not surveyed, the extent of the Type I errors is not known. It reflects the narrow concern of the government evaluations with the proper use of public funds in existing schemes, so that the optimal policy scale is not an issue.

The results on 'additionality' from the three evaluations are summarised in Table 3, for which there are a total of 526 observations. A similar pattern of results is obtained across the three evaluations. Of the Type II errors, 18.5 per cent of projects would have gone ahead in exactly the same form without the assistance, but in the remainder of cases RSA has some effect,

TABLE 3

Regional grants and project 'additionality'

Per cent

Response:	*All periods*	*1991–95*	*1985–88*	*1980–84*
Gone ahead unchanged	18.5	19.3	15.1	22.1
Gone ahead, but:				
Later in time	23.8	24.0	29.2	16.8
On a smaller scale	13.6	12.9	13.2	14.8
Elsewhere outside UK	13.0	18.1	9.0	13.4
Elsewhere inside UK	5.0	8.2	1.9	6.0
Some combination	5.3	4.1	6.1	5.4
Abandoned altogether	20.8	13.5	25.5	21.5
Number of sample firms	526	165	212	149

Notes: The table reports the percentage of firms in each category responding to a question on what would have occurred to the project in the absence of RSA, given the alternatives shown. These are the interviewers' assessments based on the responses given by senior personnel at the recipient firms.
Sources: AEP (2000); author's calculations.

or 'additionality'.[19] Table 3 shows that 21 per cent of projects would have been abandoned altogether, and that the other 60 per cent were altered in some way, whether in timing, scale or location. Of those changed in timing, the grant may have brought a project forward only by a year or two, while there is no information on the amount by which projects were changed in scale. In the case of projects changed in location, these are likely to be foreign investors, as RSA was not available to relocations within the UK (see below).

1. The employment effect

In the case of the most recent RSA evaluation, AEP (2000) finds that it created 84,000 jobs over the four-and-a-half-year period 1991–95. However, drawing on the results of this study, the National Audit Office (2003) finds that it created 21,000 jobs, and a background report prepared by NERA (2003) argues that it is less than 6,000 jobs. On these different views, regional policy is either a strong, moderate or weak job-creation measure, so that the issue needs to be explored. The estimates of AEP (2000) are reproduced in Table 4 for Great Britain and England. The table also gives 'cost per job' estimates, which are discussed in Section V.

TABLE 4

Regional policy employment effect, 1991–95

	Employment effect		'Cost per job'	
	Great Britain	*England*	*AEP*	*NERA*
Gross jobs created	210,000	111,000	£3,250	£10,000
Less non-additional jobs (× 0.45) =	94,000	50,000	–	–
Less displaced jobs (× 0.76) =	71,500	38,000	–	–
Plus linkage and multiplier effects (× 1.18) =	84,000	45,000	–	–
Net jobs created	84,000	45,000	£8,150	£25,000
Present-value net job years (PJY)	652,000	351,000	£1,050	£3,250
Permanent net job equivalents (PJE)	39,000	21,000	£17,500	£53,750

Notes: The first column is the estimated employment effect of RSA over 1991–95 from the AEP study, while that for England is an apportionment pro rata to the expenditure on grants, based on the National Audit Office report, which expresses the jobs at 2002 values. The 'costs per job' are for net RSA expenditure at 1995 prices. They are based on the AEP (2000) and NERA (2003) studies, where the latter makes adjustments for strategic bias (× 0.74) and flexible labour markets (× 0.44).
Sources: AEP, 2000; National Audit Office, 2003.

[19] 'Additionality' is not the same as an absence of a Type II error, as the latter makes no recognition of whether the assistance changes the nature of a project, whether in timing, scale or location, but merely whether or not the assistance amount was too much in the project that is actually implemented.

The 3,845 RSA-assisted projects implemented in Great Britain between January 1991 and June 1995 are associated with 210,000 gross jobs (see Table 4). This is arrived at by scaling up the survey results from a stratified sample of 165 RSA recipients. Adjustments are then made to this figure for 'additionality', for the displacement of jobs elsewhere in the Assisted Areas and for multiplier and linkage effects in supplier firms. Combined, they give a figure for net jobs created of 84,000 (see Table 4). A further adjustment is made because the jobs occur in different time periods and have different lifetimes, so that the jobs are expressed in present-value terms using the Treasury discount rate. Table 3 shows that about a quarter of projects are brought forward through time by RSA, but otherwise it is assumed that the jobs have a lifetime equal to that of the asset provided by the project, which on average is 10 years. Once discounted, the results are given as two alternative measures of the job effect: a present-value net job year (PJY), which is a *job year*, and a permanent net job equivalent (PJE), which is a *job lifetime*. A job that lasts for 10 years is equal to 7.4 PJYs, and a job that lasts for ever is equal to 16.7 PJYs or 1 PJE. Table 4 shows that the 84,000 net jobs created in Great Britain are equivalent to 652,000 PJYs or 39,000 (= 652,000 / 16.7) PJEs.

The controversy over the size of the regional policy employment effect arises for two reasons: first from differences over the appropriate measure of the jobs and second from disagreements over the value of the industrial survey approach. On the first of these, Table 4 shows that the reason that the National Audit Office produces such a small effect of 21,000 jobs is that not only does it report the jobs for England, but it also expresses these as permanent net job equivalents. Discounting of monetary sums that occur in different time periods is common, but the discounting of jobs is more contentious. According to Swales (1997a), the HM Treasury *Green Book* on Appraisal and Evaluation finds that there is no agreement on the issue, although the latest *Green Book* argues that all the benefits and costs should be discounted (HM Treasury, 2003b). Of greater practical significance is that virtually no other study of a job-creation scheme uses this measure of jobs, and this undermines the purpose of cost-effectiveness analysis, which is to provide a comparative measure of scheme performance. Since most other studies examine the 'cost per job *created*', and this is the way in which measures of the employment cost-effectiveness are commonly used and understood, it seems better to express the employment effect in terms of net jobs created.

The second area of controversy surrounds the use of the industrial survey approach. NERA (2003) takes the employment estimate of RSA for England from AEP (2000), but citing evidence in Gillespie et al. (2001) and Wren (1994), it reduces this for three reasons:

- 'additionality' is overestimated by the survey approach because of strategic bias;
- real wages will adjust upwards in response to regional grants, displacing jobs; and
- assisted jobs last less than 10 years on average.

NERA's conclusion is that 'a more accurate net number of jobs created in England might be no more than 5–6,000 permanent job equivalents' (NERA, 2003, page 36).[20] This expresses the jobs as PJEs, but if given in terms of net jobs created in Great Britain, then applying NERA's adjustments, it is 27,350 jobs.[21] This is about one-third of the 84,000 net jobs created found by AEP (2000), so how are the criticisms of NERA and the regional policy employment effect to be judged?

On the first point, NERA seems to make a valid observation. Generally, the biases of the survey approach that were identified above could work in either direction, but in the case of strategic bias the latest RSA evaluation finds that 'some companies have come to realise that RSA will be assessed largely on the grounds of additionality and that the best way they can help secure its continuation is to claim maximum additionality' (AEP, 2000, paragraph 7.2.2). From an analysis of RSA grant offers, NERA finds that only 12 per cent of recipients received further RSA, but representing 30 per cent of the total offers, so that repeat awards seem to be a problem. On the second point, Gillespie et al. (2001) note that the government evaluations suppose a Keynesian labour market with excess labour supply but nominal wage rigidity. They argue that it is inconsistent with both the Treasury view and recent empirical work, which makes the regional wage rate depend on the regional rather than the national unemployment rate. If the regional labour market is flexible, the policy-induced jobs will increase the regional wage and crowd out employment. Gillespie et al. find that this reduces the employment effect by about half, although the exact effect depends crucially on the parameterisation of the regional labour market. Finally, on the third point, the 'job life' refers to the length of time that a job is attributable to assistance, and not the period over which a job lasts, which is longer. While a 'job life' of 10 years seems excessive (Wren, 1994), it is relevant to the evaluations because the job effect is expressed as permanent net job equivalents. However, if the employment effect is expressed in terms of net jobs created, then the 'job life' is not such an issue.

[20]NERA (2003) takes the PJE estimate of RSA for England of 21,000 jobs, but expresses it at 1995 values rather than 2002 values, and starts with 17,000 PJEs. It makes an adjustment of 0.74 for strategic bias / 'additionality' and an adjustment of 0.44 for flexible labour markets, giving 17,000 jobs × 0.74 × 0.44 = 5,500 jobs. No adjustment is made for job life.

[21]That is, 84,000 jobs × 0.74 (for strategic bias / 'additionality') × 0.44 (for flexible labour markets) = 27,350 jobs.

Overall, the measurement of the regional policy effect is controversial. If expressed in terms of net jobs created for Great Britain, the government-sponsored evaluation reports a figure of 84,000 jobs over 1991–95, but if the criticisms of NERA are fully taken on board then it could be as little as 27,350 jobs. This suggests that the RSA employment effect per annum is in the range 6,100 to 18,700 jobs created. Where the true effect lies depends on the strength of the first two criticisms of NERA outlined above. While there is validity in the argument for strategic bias (the adjustment is a multiplicand of 0.74), the adjustment for flexible labour markets (of 0.44) is probably overdone. This is because displacement effects are taken into account when disbursing RSA, while much of the assistance has gone to support FDI, which tends to be in newer industries not previously present in the Assisted Areas. Any crowding-out of employment is therefore likely to be through a general wage effect, but compared with the scale of the regional unemployment problem, the number of jobs created by the policy is not substantial (see below). Thus, it is reasonable that the employment effect lies somewhere towards the middle of this range, say at around 12,000 net jobs created per year. This is considerably more than that which is presented by the NERA study, at about 1,000 jobs a year, but which expresses the jobs in terms of permanent net job equivalents.

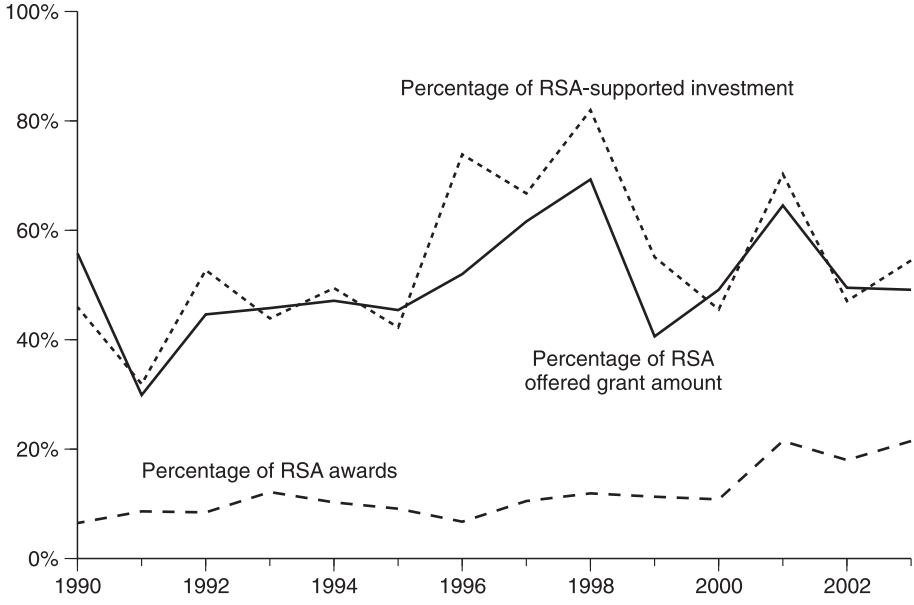
2. The effect on FDI location

The importance of foreign direct investment to the RSA scheme increased in the mid-1980s, and Figure 2 shows its share over 1990–2003. It reveals that FDI accounts for only about 10 per cent of RSA offers (20 per cent of offers since the revisions to RSA in 2000) but 50 per cent of the assistance. In some years, as much as 80 per cent of RSA-supported investment is in the form of FDI. Thus, while the regional grants are not available to relocations within the UK, they have been used extensively to support inward FDI. Recent studies focus on the spillover effects of FDI on indigenous plants, with Haskel, Pereira and Slaughter (2002), for example, finding a UK domestic productivity benefit from FDI that in present-value terms is valued at around £2,500 per FDI job. However, before this can be attributed to RSA, we need to know what the evidence is for the effect of the grants on industrial location.

Prior to the 1980s, a major aim of regional policy was to encourage firms to relocate within the UK to the Assisted Areas, and the evidence on this experience suggests that it was substantial. Ashcroft and Taylor (1979) find that policy caused 500 establishments to relocate over the 1960s, raising the employment of the Assisted Areas by 100,000 jobs. The period was associated with both investment incentives and location controls, but the

FIGURE 2

FDI and the take-up of regional grants



Note: The graph shows the percentage taken by foreign-owned plants of the total RSA-supported investment, the total RSA offered grant amount and the total number of RSA awards.
Source: Annual Reports on the 1982 Industrial Development Act.

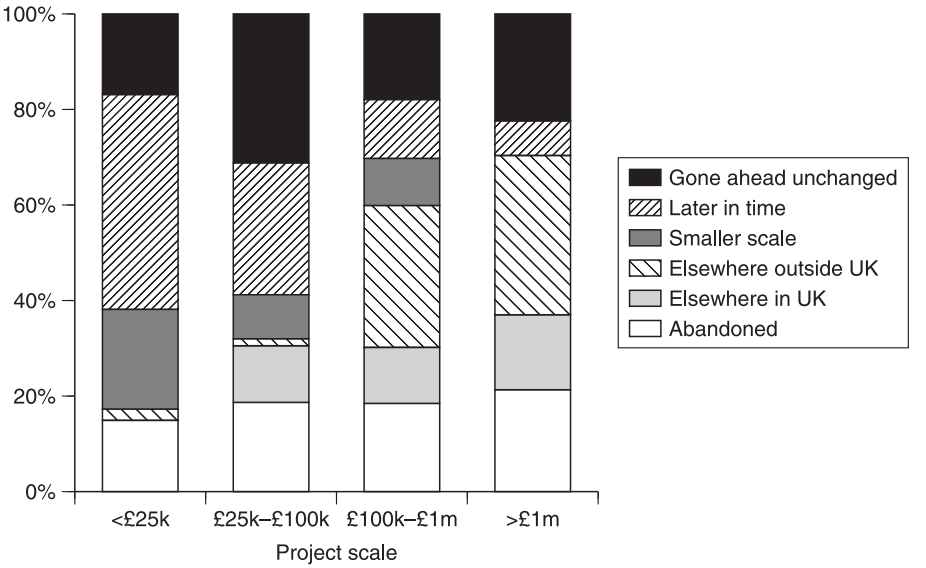
evidence is that these were about as equally effective as one another (see Taylor (2002)). The survey results reported in Table 3 suggest that RSA changed the project location in around a fifth of cases, with most firms reporting that the project would otherwise have located outside the UK. The government evaluations do not give a breakdown of this by the country of ownership, but a disaggregation of 'additionality' by project scale is shown in Figure 3, which reveals that the projects changed in location were almost exclusively the larger projects (half of the projects greater than £1 million reported that RSA changed their location). In fact, these larger RSA-assisted plants are substantially more likely to be foreign-owned, so that the survey evidence seems to be that the grants were effective in attracting FDI.[22]

Early econometric evidence on the effect of the regional grants on FDI location at the regional level is also encouraging (for example, Hill and Munday (1992)). However, a difficulty with these studies is that more FDI is associated with more grant, so that there is an endogeneity problem. Recent studies allow for this, but the evidence is that the grants are rather poor, with agglomeration effects dominating the firm's location choice. Devereux,

[22]Taylor and Wren (1997) report that 90 per cent of UK-owned firms offered RSA are SMEs.

FIGURE 3

'Additionality' by project scale



Notes: Adapted from survey results of 165 RSA recipients over 1991–95. The graph excludes the small number of cases where there is some combination of effects.
Source: AEP, 2000.

Griffith and Simpson (2003) examine the location of new plants in the counties of Great Britain over 1986–92, and make the RSA term exogenous by predicting the grant amount that a plant could get in each location. Their results show that, other things equal, the Assisted Areas are a less attractive location, but that a grant has a significant effect on location. However, this effect is extremely small, so that a 1 per cent increase in the grant increases the probability of location by only between 0.04 and 0.13 per cent, which when calculated at the mean implies that a £100,000 increase in RSA increases the probability of location in an area by only 0.0001! Devereux et al. find that FDI tends to locate near to other foreign-owned plants in the same industry.

The results of Devereux et al. concur with those of other econometric studies. For example, Crozet, Mayer and Mucchielli (2004) find little evidence of the effect of EU or national regional policies on the location choices of foreign multinationals in France. Similarly, Holmes (1998) finds no effect for pro-business policies at the US state level for plants locating close to the state borders. However, contrary to this, Taylor (1993) examines Japanese manufacturing investment in the UK over 1984–91, when the number of these establishments increased from 40 to 219. Even with agglomeration terms, he finds a significant effect on location of regional

policy (i.e. the designation of an area for regional policy), and a similar result is found by Head, Ries and Swenson (1995) in their study of Japanese investment across US states. It may be that the grants are important for early-stage investment, but that agglomeration factors are more important later on. The weak effect found for the grants in the econometric studies could arise because they are carried out for individual nations, examining plant location between regions of a country. The survey evidence on 'additionality' is that the grants determine location at the international level, and indeed RSA is not offered for relocations within the UK. As such, the econometric evidence does not necessarily contradict the survey evidence, which is that the grants are effective in changing plant location, but at the national rather than regional level.

3. The effect on productivity and competitiveness

Econometric techniques have recently been used to examine the effect of RSA on total factor productivity and competitiveness. This is of interest because the government reports that productivity accounts for 60 per cent of the disparities in regional GDP per capita (HM Treasury, 2001), while in 1998 the government undertook to refocus RSA on 'high-quality knowledge-based' projects to improve competitiveness (Department of Trade and Industry, 1998). Harris and Robinson (2003) examine total factor productivity at the plant level, including two dummy variables for RSA. The first takes a value of unity if the plant is at any time assisted by RSA over 1990–98, and the second has a value of unity for all the years after the receipt of RSA. When estimated for Assisted and Non-Assisted Areas, both terms are significant, but the first is negative and the second is positive, indicating that RSA-assisted plants have productivity that is 4.7 per cent lower than other plants, but that RSA improves this by 2.5 per cent. The result that RSA-assisted plants are poorer than other plants need not be alarming, as policy should operate at the margin where it potentially has the greatest effect, and this may be in lower-productivity plants. However, of greater concern is that when regressed for the Assisted Areas only, the second RSA dummy-variable term is generally insignificant, suggesting that it is picking up a regional effect, so that there is some ambiguity regarding the result.

Competitiveness is an ill-defined concept, but the evidence is that employees in RSA-assisted firms are less well paid than those nationally (AEP, 2000), although this might reflect regional wage differences. Three-quarters of firms report a competitive advantage as a result of RSA from lower costs or better-quality products, but the former could just be because RSA gives a profitability support. The effects are not quantified, and more convincing evidence is provided by another study by Harris and Robinson

(2004). This finds that despite their lower productivity, plants in receipt of RSA generally experience growth in market share and have a higher probability of survival, indicating an increase in competitiveness. Harris and Robinson point to a possible conflict between job creation and competitiveness, as closure (and entry) is found to be important in raising the productivity of the economy. However, in the case of large foreign-owned start-up plants, Jones and Wren (2003) find that plants receiving RSA have shorter survival durations.

Overall, these studies suggest that RSA has positive impacts in addition to employment creation, but that its ability to raise productivity could be hindered by its focus on job creation. This helps explain the recent changes to policy.

V. The efficacy of the grants

Overall, the above evidence is that RSA performed well. The survey results find that 'additionality' is achieved in 80 per cent of projects and there is an absence of a Type II error in half the projects. Further, the grants seem to have had a major impact on locating large FDI projects, albeit at the international level, while there is evidence that they have other beneficial effects, such as on competitiveness. The evidence above indicates that the shift to discretionary assistance and the revisions to RSA have met the concerns of policymakers regarding the employment cost-effectiveness of policy. However, recent reports have cast doubt on this, putting the 'cost' of an RSA 'job' as high as £50,000, while the Committee of Public Accounts finds that the net employment effect of policy is 'disappointingly small' (House of Commons, 2004a, page 13). Indeed, the revisions to regional policy may have been achieved at the cost of substantial Type I errors, which are ignored by the government evaluations but which could result in a suboptimal policy scale. These issues are now considered.

1. The cost-effectiveness of policy

The National Audit Office (2003) gives a headline figure for the employment cost-effectiveness of regional policy of £21,000 per job, while NERA (2003) puts it at around £50,000 per job. Both studies measure the cost in net present-value terms by deducting the future flow-backs to the Treasury from higher corporate tax revenues, so that the difference reflects the measurement of the employment effect. Table 4 presents 'cost per job' estimates for the different job measures. Since the employment effect for England is calculated pro rata to the distribution of grants in Great Britain as a whole, the estimates are identical between these areas. Table 4 presents the estimates from AEP (2000), and gives the estimates implied by the

NERA study, by making adjustments for strategic bias and flexible labour markets. The NAO and NERA 'costs per job' reported above both express the jobs as permanent net job equivalents, except that the National Audit Office reports the figure for £17,500 in Table 4 at 2002 prices and the NERA figure is at 1995 prices.[23] When the jobs are given as net jobs created, Table 4 shows the 'cost per job' is smaller and in the range £8,150 to £25,000 (1995 prices), corresponding to 18,700 and 6,100 net jobs created a year. It was argued above that the true employment effect is around 12,000 net jobs created a year (see Section IV.1), in which case the 'cost per job' is around £12,700 (1995 prices), so how is this to be judged?

There are several ways to make a comparison. One is with other job-creation schemes and another is with benefit payments paid to the unemployed, but in so doing the jobs must be appropriately measured. On the first of these, in a back-of-an-envelope calculation, Layard (2001) calculates the short-run average cost of a person in employment from the New Deal at £7,000 in gross spending terms.[24] This can be compared with the 'cost per net job created' of £12,700. However, the estimate for the New Deal makes a deduction from the costs for both benefit and tax savings, whereas the RSA figure makes a deduction for corporate tax savings only. If deductions are not made for these, the 'cost per job' for the New Deal is £14,000, and this is in the same ballpark as that for RSA. The second comparison can be made with the annual jobseeker's allowance paid to an unemployed person aged 25. This is around £3,000, but it is a recurrent payment, so comparison should be made with the 'cost per present-value net job year'. Table 4 shows that this is between £1,050 and £3,250, but when calculated at the midpoint number of jobs it is £1,600 (1995 prices).[25] Again, it makes no allowance for the front-end costs of the scheme, but overall it suggests that RSA is at least as cost-effective as measures designed either to reduce or to alleviate unemployment. In simple exchequer terms, it is also far more cost-effective than earlier regional policy efforts.

[23]Similar estimates were obtained in the other government-funded RSA evaluation studies, at £15,800 over 1980–84 and £18,000 over 1985–88 (1995 prices).

[24]This is the New Deal for Young People, which is designed to prevent young people from entering long-term unemployment. The gross exchequer cost of the scheme was £350 million by about the end of 2000. It is estimated that claimant unemployment was reduced by about 50,000 by this time and that regular employment increased by half this number. The average cost of a person in employment from the New Deal is put at about £7,000, and the average cost of a person off the unemployment register is about half this amount.

[25]The employment effect for Great Britain is 652,000 PJYs, which is 212,300 PJYs when the NERA adjustments are made. The midpoint is 430,000 PJYs, which implies a 'cost per job' of £1,600 (1995 prices).

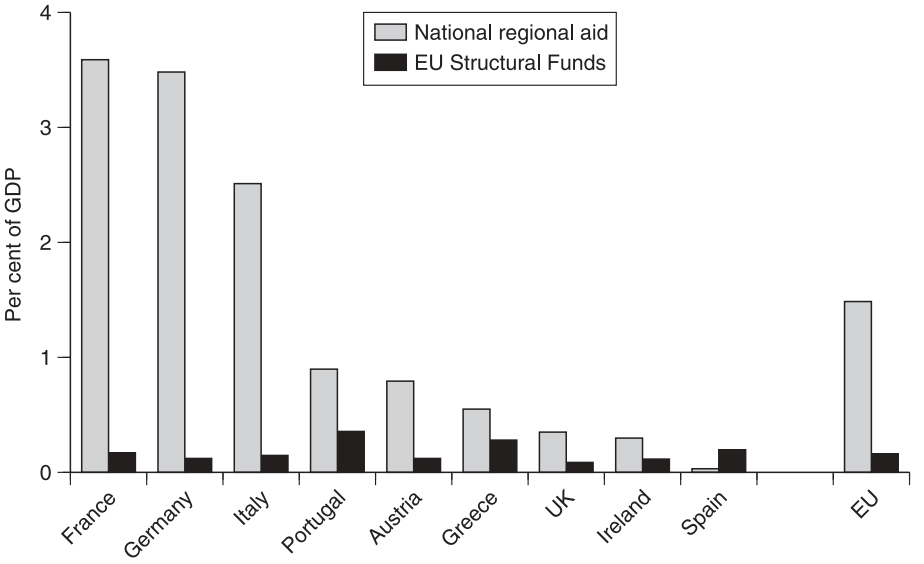
2. The optimal policy scale

According to the evaluations, the number of net jobs created by RSA over 1991–95 is between 6,100 and 18,700 per annum, and it is reckoned to be around 12,000 jobs a year. 'Acute labour market need' features in the designation of the Assisted Areas, so that one way to judge whether the policy scale is optimal or not is to compare the employment effect with the size of the unemployment problem. Another way is to examine the contribution of RSA to the reduction in unemployment over recent years. On the first of these, the combined claimant-count unemployment in Scotland, Wales and the three northern-most English regions is about half a million. Not all of these areas are designated for regional grants, and other areas are designated as Assisted Areas, while regional policy is not expected to eliminate regional unemployment completely. Nevertheless, the regional policy effect is small relative to the size of the unemployment problem, and it could only make a substantial reduction over the very long term. Moreover, it excludes those not claiming benefit or claiming other forms of support.

On the second measure, NERA (2003) reports that unemployment fell by 154,000 over 1996–2002 in the English travel-to-work areas with unemployment rates more than 2 percentage points above the national

FIGURE 4

Member State and EU regional assistance



Notes: Direct financial support to firms in Objective 1 / Tier 1 Assisted Areas as a percentage of GDP in these areas. Annual averages for 1996–98.
Source: DG Competition and DG Regional Policy, European Commission, Brussels.

average. If RSA continued to create jobs at the same rate as over 1991–95, then in England it created around 40,000 jobs over 1996–2002.[26] Not every job created will last throughout the period and not every job created will reduce unemployment.[27] Again, this comparison means that regional policy has made only a modest contribution to the regional unemployment problem. Finally, Figure 4 shows regional assistance expenditure over 1996–98 in the EU Objective 1 areas, corresponding to the Tier 1 Assisted Areas in Great Britain. It expresses assistance as an annual average relative to the GDP of each area, showing national regional aid separately from that provided under the EU Structural Funds. While other parts of the EU may not necessarily have optimal levels of grants, Figure 4 reveals that UK spending on the regional grants is less than a quarter of the EU average, and much lower than in similar countries such as France or Germany. There is a similar pattern for the EU Structural Funds.

3. Policy implications

Overall, RSA appears relatively cost-effective, but its size in relation to the scale of regional unemployment is modest, while expenditure on the grants is set to fall and may halve over the near future. This raises the possibility that the improvements to cost-effectiveness have been achieved at the cost of a smaller policy by excluding those projects where job creation is relatively expensive. This implies a trade-off between the 'cost per job' and the policy scale, although whether this has occurred cannot be ascertained from the government evaluations as they collect information only on the assisted projects. Thus, it is not known how far the shift to discretionary assistance in an effort to avoid Type II errors has caused more Type I errors, reducing the overall employment effect. Further, it is not known if the more stringent eligibility criteria on RSA have discouraged applicants. Nevertheless, the suspicion is that the greater cost-effectiveness has been achieved at the cost of a much smaller scale, so that before concluding, this paper considers possible ways of expanding the regional grant scheme. Taylor and Wren (1997) and Taylor (2002) consider ways to expand regional policy more broadly.

As a first point, the scope for government action in this area is restricted by European Commission guidelines on state aids. Article 87 of the European Treaty makes aid unlawful if it distorts or threatens to distort competition or impacts on trade between Member States, and Guidelines

[26]RSA created between 6,100 and 18,700 jobs a year in Great Britain as a whole, which is between 3,300 and 10,000 jobs per annum in England. The midpoint is around 6,650 jobs, and hence 40,000 jobs over a six-year period.

[27]Typically, it is assumed that 75 per cent of new employment comes from the unemployed and the remainder from increased labour market participation (Gillespie et al., 2001).

and Frameworks are published setting out the types and levels of support that the Commission is prepared to approve. In addition, reviews of state aids and EU regional policy (under which the Assisted Areas are defined) are ongoing for the period 2007–13 (see HM Treasury (2003a and 2004)), which may further impact on the availability of regional grants. However, even within the existing framework, the Commission exerts a considerable influence on the grants, limiting the scope for government action. This must be taken into account in any discussion of the possibility of expanding the regional grant scheme.

One problem with RSA is that it is demand-led, which means not only that the take-up reflects the existing pattern of job-creating investment, but also that it leads to the large number of repeat awards referred to above. The Commission disallows the promotion of state aids, so that to encourage a greater take-up of RSA, changes must be made to the scheme itself.[28] One way to do this is to reverse the eligibility criteria introduced more recently (Table 2), although this will merely restore the status quo before the most recent cuts take effect. Another way is to offer higher grant rates to encourage more marginal projects.[29] However, perhaps the most fruitful way to expand the grants is to reintroduce a diversionary component to regional policy either by encouraging firms to relocate to the Assisted Areas or by supporting projects that displace activity elsewhere.[30] It was noted in Section IV.2 that this was how the policy operated prior to the 1980s and with some success. The regional grants have not been available to projects that relocate jobs to the Assisted Areas since 1984, as these projects have no 'national benefit', even though it can be argued that this is what regional policy seeks to do in the case of FDI. Such a component would involve placing a higher value on jobs that are created in the Assisted Areas than elsewhere, but it need not run counter to the guidelines on state aids.[31] This is because, as found by Besley and Seabright (1999), the Commission approves 98 per cent of the applications for state aid, mainly for distributional or social reasons.

A diversionary or distributional component to regional policy is important, as without it, it is arguable whether what the government calls 'regional policy' is really regional policy at all. The regional problem is

[28]Despite this, one of the recommendations of the Public Accounts Committee is that the government should actively market the regional grants (House of Commons, 2004a).

[29]The average grant rate on capital is 15–20 per cent, but the limits set by the European Commission permit grant rates of up to 40 per cent in the Tier 1 areas (and 55 per cent for SMEs) and of between 10 and 30 per cent in Tier 2 areas (with a 10 per cent supplement for SMEs).

[30]When awarding grants, the government takes account of potential displacement effects, inside and outside the Assisted Area, and may reduce or refuse a grant accordingly.

[31]Allowing displacement to occur in Non-Assisted Areas may potentially run counter to EU state aid rules, as it could be viewed as a distortion to competition, but a trade-off of efficiency for equity seems inevitable.

defined as persistent disparities in regional inequalities (Taylor and Wren, 1997), so that regional policy should attempt to reduce these disparities. However, a Public Service Agreement target exists to[32]

> make sustainable improvements in the economic performance of all English regions and over the long term reduce the persistent gap in growth rates between the regions, defining measures to improve performance and reporting progress against these measures by 2006.
>
> HM Treasury, 2003a

This merely seeks to reduce the differences in rates of regional growth, and, as Adams, Robinson and Vigor (2003) note, the gap in regional inequalities could widen and satisfy this target. Without a strong redistributive component, it can be argued that the current regional policy is really a regional development policy. That is to say, it is a national policy, which is applied at the level of the region but to *all* regions. In conclusion, we can note that three further factors add weight to this argument:

- The government regional productivity paper makes no intention to favour the lagging regions (HM Treasury, 2001). Its objective is to improve the performance of every UK region in order to achieve high and stable levels of growth and employment.
- Regional Development Agencies exist in every English region, and these exploit the comparative advantage of their areas. Again, there is no presumption to favour lagging regions, and regional specialisation may favour the more prosperous areas.
- Under EU state aid rules, regional grants provide the only opportunity to offer financial assistance to large projects. In effect, these grants are used to compete internationally for mobile projects, so that they benefit the national economy.

VI. Conclusions

This paper has reviewed the evidence on the effects and cost-effectiveness of regional grants in order to address the recent controversies surrounding UK regional policy. It has focused on the evidence for the Regional Selective Assistance scheme, and argued that the recent criticisms of these grants are largely misplaced. It has found that the controversy over the employment effect of regional policy largely results from an unfavourable measure of the jobs, which is little used elsewhere. While there are disputes about the value of the industrial survey approach used to evaluate regional policy, surrounding possible biases induced by this approach and the nature

[32]It is the PSA Regional Economic Target for England, jointly agreed by the Department of Trade and Industry, the Office of the Deputy Prime Minister and HM Treasury.

of the regional labour market, it has been argued that the policy is relatively cost-effective in employment terms. Recently, regional policy has undergone one of its periodic revisions, but while the changes tend to reverse amendments made in 2000, it is likely that expenditure will continue to fall and perhaps substantially. In response to the question posed in the paper's title, therefore, it can be concluded that the regional grants do seem to be worth it on a number of criteria, but they are small in comparison with the scale of the regional problem.

References

Adams, J., Robinson, P. and Vigor, A. (2003), *A New Regional Policy for the UK*, London: Institute for Public Policy Research.

AEP (2000), *Evaluation of Regional Selective Assistance 1991–1995*, London: Arup Economics and Planning.

Armstrong, H. (2001), 'Regional Selective Assistance: is the spend enough and is it targeting the right places?', *Regional Studies*, vol. 35, pp. 247–57.

Ashcroft, B. and Taylor, J. (1979), 'The effect of regional policy on the movement of manufacturing industry in Great Britain', in D. Maclennan and J. Parr (eds), *Regional Policy: Past Experience and New Directions*, Oxford: Martin Robertson.

Bartels, A., Nicol, W. R. and Van Duijn, J. J. (1982), 'Estimating the impact of regional policy: a review of applied research methods', *Regional Science and Urban Economics*, vol. 12, pp. 3–41.

Besley, T. and Seabright, P. (1999), 'State aids: making EU policy properly reflect geography and subsidiarity', *Economic Policy*, vol. 14, pp. 15–53.

Commission of the European Communities (1998), 'Guidelines on national regional aid', *Official Journal of the European Communities*, C74, pp. 9–31.

Crozet, M., Mayer, T. and Mucchielli, J-L. (2004), 'How do firms agglomerate? A study of FDI in France', *Regional Science and Urban Economics*, vol. 34, pp. 27–54.

Department of Trade and Industry (1983), *Regional Industrial Development*, Cmnd 9111, London.

— (1998), *Our Competitive Future: Building the Knowledge Driven Future*, Cm. 4176, London.

— (2001), *The Government's Expenditure Plans 2001–02 to 2003–04*, Cm. 5112, London.

— (2004), *Regional Aid, 2007–2013: Consultation on European Commission Proposals on Regional State Aid*, London.

Devereux, M. P., Griffith, R. and Simpson, H. (2003), 'Agglomeration, regional grants and firm location', Institute for Fiscal Studies, Working Paper no. W04/06.

Gillespie, G., McGregor, P., Swales, J. K. and Yin, Y. P. (2001), 'The displacement and multiplier effects of Regional Selective Assistance: a computable general equilibrium analysis', *Regional Studies*, vol. 35, pp. 125–39.

Harris, R. I. D. and Robinson, C. (2003), 'Industrial policy in Great Britain and its effect on total factor productivity in manufacturing plants, 1990–98', *Scottish Journal of Political Economy*, vol. 51, pp. 528–43.

— and — (2004), 'The impact of Regional Selective Assistance on sources of productivity growth: plant-level evidence from UK manufacturing, 1990–1998', mimeo.

— and Trainor, M. (2005), 'Capital subsidies and their impact on total factor productivity: firm-level evidence from Northern Ireland', *Journal of Regional Science*, vol. 45, pp. 49–74.

Haskel, J., Pereira, S. and Slaughter, M. (2002), 'Does inward foreign direct investment boost the productivity of domestic firms?', Centre for Economic Policy Research, Discussion Paper no. 3384.

Head, K., Ries, J. and Swenson, D. (1995), 'Agglomeration benefits and location choice: evidence from Japanese manufacturing investments in the United States', *Journal of International Economics*, vol. 38, pp. 223–47.

Hill, S. and Munday, M. (1992), 'The UK regional distribution of foreign direct investment: analysis and determinants', *Regional Studies*, vol. 26, pp. 535–44.

HM Treasury (2001), *Productivity in the UK 3: The Regional Dimension*, London: HM Treasury and Department of Trade and Industry.

— (2003a), *A Modern Regional Policy for the United Kingdom*, London: HM Treasury, Department of Trade and Industry and Office of the Deputy Prime Minister.

— (2003b), *Appraisal and Evaluation in Central Government*, (the *Green Book*), London.

— (2004), *Review of Statistics for Economic Policymaking*, (the Allsopp Review), London, March.

Holmes, T. J. (1998), 'The effect of state policies on the location of manufacturing: evidence from state borders', *Journal of Political Economy*, vol. 106, pp. 667–705.

House of Commons (2004a), *Department of Trade and Industry: Regional Grants in England*, Committee of Public Accounts, Sixth Report, HC 207, Session 2003–04, London.

— (2004b), *Annual Report on the 1982 Industrial Development Act*, HC 852, Session 2002–03, London.

Jones, J. and Wren, C. (2003), 'Re-investment and the survival of foreign-owned plants', paper presented to the European Regional Science Association Conference, Finland, August.

— and — (2004), 'Do foreign inward investors achieve their job targets?', *Oxford Bulletin of Economics and Statistics*, vol. 66, pp. 483–513.

Jones-Lee, M. W. (1994), 'Safety and the saving of life: the economics of safety and physical risk', in R. Layard and S. Glaister (eds), *Cost–Benefit Analysis*, Cambridge: Cambridge University Press.

King, J. (1990), *Regional Selective Assistance, 1980–84: An Evaluation by DTI, IDS and WOID*, London: HMSO.

Layard, R. (2001), *Welfare-to-Work and the New Deal*, London: Centre for Economic Performance, London School of Economics and Political Science.

Marquand, J. (1980), *Measuring the Costs and Effects of Regional Incentives*, London: Department of Industry.

McCrone, G. (1969), *Regional Policy in Britain*, London: George Allen and Unwin.

McVittie, E. and Swales, J. K. (2003), 'Regional policy evaluation: ignorance, evidence and influence', University of Strathclyde, Department of Economics, Discussion Paper no. 03-06.

Moore, B., Rhodes, J. and Tyler, P. (1986), *The Effect of Government Regional Economic Policy*, London: HMSO.

National Audit Office (2003), *The Department of Trade and Industry: Regional Grants in England*, Report by the Comptroller and Auditor General, HC 702, Session 2002–03, London.

NERA (2003), *Review of Economic Rationale and Evaluation Methodology for DTI Regional Grants*, London: National Economic Research Associates.

PACEC (1993), *Regional Selective Assistance, 1985–88: An Evaluation by PA Cambridge Economic Consultants*, London: HMSO.

Regional Studies Association (2001), *Labour's New Regional Policy: An Assessment*, Seaford, England: Regional Studies Association.

Sugden, R. and Williams, A. (1978), *The Principles of Practical Cost–Benefit Analysis*, Oxford: Oxford University Press.
Swales, J. K. (1997a), 'The ex post evaluation of Regional Selective Assistance', *Regional Studies*, vol. 31, pp. 859–65.
— (1997b), 'A cost–benefit approach to the evaluation of Regional Selective Assistance', *Fiscal Studies*, vol. 18, pp. 73–85.
Taylor, J. (1993), 'An analysis of the factors determining the geographical distribution of Japanese manufacturing investment in the UK, 1948–91', *Urban Studies*, vol. 30, pp. 1209–24.
— (2002), 'The evaluation of UK regional policy: how much progress has been made?', in B. Johansson, C. Karlsson and R. Stough (eds), *Regional Policies and Comparative Advantage*, Cheltenham: Edward Elgar.
— and Wren, C. (1997), 'UK regional policy: an evaluation', *Regional Studies*, vol. 31, pp. 835–48.
Wren, C. (1994), 'The build-up and duration of subsidy-induced employment: evidence from UK regional policy', *Journal of Regional Science*, vol. 34, pp. 387–410.
— (1996a), *Industrial Subsidies: The UK Experience*, Basingstoke: Macmillan Press.
— (1996b), 'Grant equivalent expenditure on industrial subsidies in the post-war United Kingdom', *Oxford Bulletin of Economics and Statistics*, vol. 58, pp. 317–53.
— (2003a), 'Investment scale as a signal in industrial assistance schemes with employment objectives', *Economica*, vol. 70, pp. 331–52.
— (2003b), 'Informational rents and discretionary industrial assistance', paper presented to the Royal Economic Society Conference, University of Warwick, April.