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Evaluation of Regional Selective Assistance (RSA) and its successor, Selective Finance for Investment in England (SFIE)

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Evaluation of Regional Selective
Assistance (RSA) and its
successor, Selective Finance
for Investment in England (SFIE)

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Appendices – Available at www.berr.gov.uk/about/economics-statistics/economics-directorate/page14639.html

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Executive Summary

Introduction

An evaluation of the impact of financial support provided to business under the RSA Scheme (£462.5 million offered to 784 businesses) in the period 2000-2004, and it replacement SFIE Scheme since April 2004 (£100.1 million offered to 526 businesses), was undertaken using a range of evaluation methodologies. The specific research objectives set out by BERR were to:

- Test the validity of the key assumptions underlying the rationale for the old RSA Scheme and, more specifically, the new SFIE Scheme;

- Assess the outcomes of funded projects against objectives with the key measure being productivity, skilled jobs and spillovers; in the case of the RSA Scheme the principle objective in the period 2000-04 was to increase jobs.

The evaluation of the RSA and SFIE Schemes was built around a methodology which included a variety of components ranging from econometric modelling to face-to-face interviews with SFIE Scheme beneficiaries, as well as surveys of the RDA Case Officers and those businesses who were offered financial assistance under both the RSA and SFIE Schemes but who subsequently declined it. The scale of this empirical work can be summarised as follows:

- Beneficiary (RSA and SFIE) and Non-assisted Telephone Survey (n=319, 162 and 405 respectively)

- Face-to-face interviews with SFIE Beneficiaries (n=10)

- Telephone survey of non-take-up cases (n=15)

- RDA Scheme Case Officer Survey (n=25)

Analytical Approach

The core of the evaluation methodology is the application of econometric modelling techniques which seek to ascertain the net effects of RSA assistance after controlling for the effects of 'selection bias' by incorporating a non-assisted group of firms and plants to embed a counterfactual in the analysis. It is this econometric approach which allows us to generate estimates of the contribution of the RSA Scheme to growth (especially job creation) in the assisted firms and plants.

Given the relatively recent introduction of the SFIE Scheme it is not possible to apply these econometric techniques to the evaluation of this scheme. Nevertheless, in order to be able to make some sort of assessment of the net effect of the new SFIE Scheme on beneficiary firms and plants we are obliged to obtain self-reported data from assisted firms on the scale of additionality associated with the assistance that they received. While this was primarily designed for the evaluation of the SFIE Scheme we do also collect it from RSA

beneficiaries for general comparative purposes. This is the only mechanism available to us which allows us to make comparative assessments between the two schemes.

Who got assistance from the RSA and SFIE Schemes?

RSA SCHEME

Our findings lead us to conclude that RSA assistance has been targeted on larger firms which might be expected to have many of the characteristics highlighted below. Further, it would appear that RSA assistance has been targeted at firms that are more likely to benefit from that assistance. This means that the issue of selection is of crucial importance to the evaluation and as a result reinforces the choice of methodology for this study. In summary:

- RSA beneficiaries grew faster than non-beneficiaries both before and after receiving assistance.

- Over the period 2004 and 2006 growth in GVA of the RSA beneficiaries is more rapid than that of non-beneficiaries. However, with respect to GVA per head growth the difference in mean growth rate is not statistically significant due to the larger size of RSA beneficiaries in terms of employment.

- RSA beneficiaries tended to be younger (average 24.4 years) than non-RSA beneficiaries (34.4 years).

- RSA beneficiaries also tended to be larger than non-beneficiaries both in terms of employment in the assisted site but also in terms of employment in the whole company.

- RSA beneficiaries are more export oriented and less focused on local markets than the general population of firms and operate in more price elastic markets. They are also less likely to be selling to the public sector and individual consumers than firms in the general population.

- Finally, RSA beneficiaries are more likely to be undertaking R&D and product and process innovation than non-beneficiaries.

HAS THE SFIE SCHEME CHANGED THE PROFILE OF ASSISTED FIRMS?

Comparing RSA and SFIE beneficiaries in the survey is complicated by the fact that the replacement scheme was designed to include assistance to firms which would normally have been supported under the Enterprise Grant Scheme. For that reason the comparison of the two Schemes is limited. However, we do endeavour to control for this by presenting data on those SFIE assisted business who had received £100,000 or more in grant support (n=47). The results of this comparison reveal that SFIE beneficiaries are more likely to:

- be smaller firms (i.e., less than 50 employees)

- have younger owner-managers (i.e., less than 45 years)

- have a business plan although this is clearly connected to the application process and the use of consultants (see Chapter 6)

- be less likely to report 'maintaining sales for current products and services' as a business objective

- be less export oriented and more locally focused in terms of sales

- be operating in markets which were less price sensitive

- have local suppliers and had higher levels of local purchasing

Impact of RSA and SFIE Scheme Assistance

EFFECTS ON BUSINESS BEHAVIOUR (RSA AND SFIE SCHEMES)

Generally, the majority of respondents (more than two-thirds in most areas of impact) from the two samples of SFIE and RSA beneficiaries reported benefits for their businesses. The most common effects were on productivity and sales growth with developments in management practice and innovation management some of the least often cited impacts. Two statistically significant differences were evident between the effects cited by RSA and SFIE respondents relating to improved staff knowledge or skills and improved technical understanding and capability. In both cases a positive effect was more often cited from SFIE beneficiaries than from RSA beneficiaries.

The conclusion from the 10 SFIE case studies is that the large scale investment that these grants support is something that makes an appreciable difference to the individual businesses concerned. In many cases, whilst the grant did not on its own tempt the firms into making these decisions it acted to increase the size of the investment and to emphasize the growth element of the business decision.

SELF-REPORTED ADDITIONALITY (RSA AND SFIE SCHEMES)

Levels of deadweight from both RSA and SFIE appear low with the majority of firms citing some form of partial additionality in terms of either achieving business outcomes more quickly or to a greater extent. Complete additionality occurred in around 21 per cent of cases. Interestingly, there was no statistical difference between the pattern of responses between the RSA and SFIE beneficiaries. The important point to emerge from the survey of SFIE beneficiaries is that a large proportion of the benefits associated with the assisted investment project have yet to accrue which underlines yet again the difficulty in undertaking evaluations too soon after the introduction of a Scheme. Essentially the results for the SFIE Scheme should be interpreted as illustrative at this stage of its life-cycle.

The most important point to emerge from a comparison with previous RSA evaluations is that the extent of wholly non-additionality (i.e., complete deadweight) associated with RSA financial assistance has fallen dramatically in the current evaluation period (2000-04). One obvious inference to make from these figures would be that the selection process for assisted cases has become much more refined in the last 10 years which has led to lower levels of wholly non-additional cases being supported. This further underlines the importance of adopting appropriate econometric techniques that are able to control for this 'selection bias'.

SFIE SCHEME IMPACT – INITIAL ASSESSMENT

(a) Employment

Using the information on new and safeguarded jobs from all the in-scope SFIE beneficiaries it is possible to gross up this result to produce an overall employment effect for the programme in mid-2006. With respect to safeguarded jobs the assisted businesses had received financial assistance to protect 10,130 jobs and we can now estimate that 8,884 of these jobs had actually been secured at the time of the survey. Of the 9,660 'promised' new jobs we can estimate that 4,289 jobs have been created at the time of the survey.

How many of these 'actual' number of assisted jobs can be considered as 'additional'? We can use the self-reported estimates of additionality from the survey respondents to arrive at an estimate of the number of net additional jobs associated with the SFIE Scheme in the period 2004-06. In summary, we can conclude that 1,875 safeguarded jobs were secured and that 905 net new jobs were created as a result of the financial assistance received.

(b) Operational Issues

One of the most important issues that emerged from the interviews with the owner-managers and/or financial director of the business was that the process of applying for SFIE assistance was complicated and has resulted in many of the interviewed firms employing consultants to submit the application at an average cost of around £20,000.

The RDA case officers' survey also highlighted the increased complexity of the SFIE Scheme for applicants and the difficulty of assessing both need and viability, critical components of the overall decision to grant support under the scheme.

MODELLING THE IMPACT (RSA SCHEME ONLY)

The findings of the econometric investigation, which control for 'selection bias', are broadly supportive of a positive RSA intervention (2000-04) in terms of employment growth in the 2004-06 period. There are clearly two separate groups

of firms within these data. While there is little evidence that the recipients of RSA are those that will generate the highest employment growth, it does stimulate employment in domestic firms, and is largely associated with firms with an international and national, rather than local focus. R&D, however, seems largely unrelated to RSA. RSA paid to MNEs, however, seems largely associated with encouraging firms to stay in the Assisted Areas, rather than grow, and grant size is more important than the simple existence of the RSA Scheme in generating employment.

It could be argued that the employment model may under-estimate the effects of RSA financial support due to the benefits not being fully realised and a small proportion of the safeguarded jobs not being fully captured in the employment growth model. Sensitivity analysis would suggest, however, that these are not significant issues affecting the validity of the conclusions.

Overall Assessment

The evaluation of the RSA Scheme (2000-04) and its successor SFIE Scheme (2004-06) has produced a range of quantitative and qualitative evidence that allows us to conclude that:

RSA SCHEME (2000-04)

- The findings of the econometric investigation are broadly supportive of a positive RSA intervention (2000-04) on employment growth in the 2004-06 period. This was particularly the case for UK-owned single plant businesses.

- By evaluating the effects of RSA financial assistance in this way has resulted in a set of results which, when examined in detail and with different econometric approaches, all point in the same direction. Indeed, no previous evaluation of the RSA Scheme has opened this 'black box' of control variables which we know have an influence on firm/plant performance. Put simply, the RSA Scheme is positively and significantly associated with the creation of employment in the recipient plants *after controlling* for a large number of these control variables as well as controlling for selection bias and endogeneity.

SFIE SCHEME (2004-06)

- Evidence would suggest that the beneficiaries under this Scheme are achieving real business benefits in terms of productivity and that this was also associated with increasing skills and technical capability.

- There is a high level of full additionality associated with the Scheme (21.1%) and this has led us to make an interim assessment of net additional job creation of 4,289 jobs with a further 87.7 per cent of safeguarded jobs realised – that is, 8,884.

● There are some concerns about the application and appraisal process which have been expressed by owner-managers/senior management of assisted businesses as well as RDA Case Officers.

Our overall conclusion is that both the RSA and SFIE Schemes are delivering benefits to the UK economy through net additional employment, higher value-added and a set of wider benefits that demonstrate linkage into other regional priorities such as regeneration, skill enhancement, supplier networks and broader environmental agenda. We are much more certain of our conclusion with respect to the RSA Scheme which has been evaluated using innovative econometric techniques and where the majority of the effects of the financial assistance have had time to materialise to be captured in our post-assistance impact period of 2004-06. Nevertheless, our analysis of the beneficiaries of financial support under the new SFIE Scheme has provided a positive assessment across a range of business effects.

Chapter 1: Evaluation Overview

1.1 Aims and Objectives

The overall aim of this evaluation is to assess the impact of the RSA and SFIE Schemes[1] in light of their objectives. In particular, a critical aspect of the evaluation is to assess whether changing the scheme in 2004, from RSA to SFIE, has increased the impact of the scheme. The specific research objectives set out by BERR were to:

- Test the validity of the key assumptions underlying the rationale for the old RSA Scheme and, more specifically, the new SFIE Scheme;

- Assess the outcomes of funded projects against objectives with the key measure being productivity, skilled jobs and spillovers; in the case of the RSA Scheme the principle objective in the period 2000-04 was to increase jobs.

Although the intention was to undertake a parallel evaluation of both the RSA and SFIE Schemes it must be acknowledged that it was not possible to apply identical evaluation methodologies due to the relatively short period of time since the start of the SFIE Scheme (i.e., April 2004). In particular, fully comparative estimates of the effects of intervention derived from the econometric analysis cannot be generated for both Schemes. However, some attempt is made to inform policy discussions with an analysis and commentary on the comparative nature of RSA and SFIE beneficiaries and their perceived effects of the financial support provided.

It is important to state at the outset that the approach to the evaluation of the RSA Scheme is different from those previously undertaken (see, for example, King, 1990; PACEC, 1993) which have relied upon a subjective assessment of additionality (by both the respondent and interviewer). Whilst we do include these questions in the survey of RSA beneficiaries we only do so to provide a comparison with the current SFIE Scheme. To be clear, the emphasis in this evaluation is on the econometric analysis of the net effect of the RSA Scheme which seeks to control for selection and assistance effects by incorporating a non-user sample to act as the counterfactual.

An evaluation of RSA Scotland, RSA Wales and of a broadly similar scheme in Northern Ireland (Selective Financial Assistance – SFA) was also undertaken by the research team using an identical methodology. Although separate projects they will provide a UK database of assisted and non-assisted firms for further comparative analysis.

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1   A detailed discussion of the nature and scope of both these schemes as well as their history is presented in Chapter 2.

1.2   Components of the Evaluation

The research specification for the evaluation of both the RSA and SFIE Schemes included the following components:

- **Statistical analysis of the administrative database on RSA and SFIE Scheme Beneficiaries and awards**. In particular, the basic characteristics of plants/ firms who have received grants over this period are examined and include the following:

  - Type and value of award (investment aid/employment creation);

  - Geographic location;

  - Size band of firm/plant;

  - Ownership of firm/plant;

  - Sectoral composition of firms/plants (production/services);

  - Take-up or claim rate for grants (completion).

- **Effectiveness of the RSA and SFIE Schemes**. The evaluation will consider the effectiveness of the support provided by both Schemes and in particular consider:

  - Value of grants and gross jobs secured;

  - Comparative analysis with previous evaluations of 'state aid to business' schemes as well as other area-based initiatives related to an economic development agenda (e.g., regeneration schemes).

- **Additionality**. The evaluation will look at whether the firm/plant would have undertaken the resulting project without intervention. This will include an attempt to capture whether the project was brought forward, or made larger, or significantly improved as a result of the intervention. The extent to which the intervention secured a project which could have been lost to alternative regional or country locations is assessed.

- **Contribution of the Schemes to regional development in the Assisted Areas (Wider Benefits)**. In particular, we seek to investigate the added value of the Schemes in terms of:

  - assisting employment and productivity in the Assisted Areas. In particular, we assess the extent to which the scheme has supported net employment and value added growth.

  - an assessment of the continued importance of an instrument of regional aid/development given the increasing importance and targeting of aid towards innovation and improvements in regional productivity.

  - the wider 'spillover benefits' from assisted firms?

● **Operational Issues.** An assessment (quantitative and qualitative) of the views of firms/plants in receipt of Scheme assistance to ascertain the value of the assistance they received and how they felt the Scheme operated. This is particularly important for the operation of the current SFIE Scheme.

1.3   Evaluation Methodology

In order to address each of these components of the evaluation the research team adopted a broad methodology which encompassed a variety of methodological approaches ranging from econometric modelling to face-to-face interviews with SFIE Scheme beneficiaries, as well as surveys of the RDA Case Officers and those businesses who were offered financial assistance under both the RSA and SFIE Schemes but who subsequently declined it.

However, the core of the evaluation methodology is the application of econometric modelling techniques which seek to ascertain the net effects of RSA[2] assistance after controlling for the effects of 'selection bias' by incorporating a non-assisted group of firms and plants to embed a counterfactual in the analysis. The econometric analysis is based on a bespoke survey of around 700 RSA assisted and non-assisted businesses in England. It is this econometric approach which allows us to generate estimates of the contribution of the RSA Scheme to growth (especially job creation) in the assisted firms and plants.

These econometric evaluation techniques are applied to the evaluation of the RSA Scheme for the first time and represent considerable methodological improvement upon previous evaluations of the RSA Scheme which have relied upon a self-assessment method of ascertaining project additionality. In other words we argue that the estimates presented here are conceptually and methodologically more robust than in previous evaluations of the RSA Scheme with the obvious implication that it will be problematic in determining whether the Scheme was operating more or less efficiently in the period 2000-04 than in the 1980s and 1990s.

Nevertheless, in order to be able to make some sort of assessment of the net effect of the new SFIE Scheme on beneficiary firms and plants we are obliged to follow previous evaluation methods and obtain data from assisted firms on the scale of additionality associated with the assistance that they received. While this was primarily designed for the evaluation of the SFIE Scheme we do also collect it from RSA beneficiaries for general comparative purposes. This is the only mechanism available to us which allows us to make comparative assessments between the two schemes. It is not our preferred method but it is the only one possible at the time of this evaluation.

In summary, there are four key data inputs which feed into the evaluation methodology. They are used to provide both a quantitative and qualitative

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2   Given the relatively recent introduction of the SFIE Scheme it is not possible to apply these econometric techniques to the evaluation of this scheme.

'response' to the questions raised by the various components of the evaluation:

- Beneficiary (RSA and SFIE) and Non-assisted Telephone Survey (n=319, 162 and 405 respectively)

- Face-to-face interviews with SFIE Beneficiaries (n=10)

- Telephone survey of non-take-up cases (n=15)

- RDA Scheme Case Officer Survey (n=25)

We discuss each data source in turn to demonstrate what they will provide in terms of evaluation evidence.

1.3.1 BENEFICIARY AND NON-USER TELEPHONE SURVEY

Evaluation of the impact of government assistance to business must be couched in the wider conceptual framework of the determinants of growth and performance. Accordingly, we proposed that the survey of assisted and non-assisted firms would seek to collect data on firm level factors likely to influence performance and growth. We would argue that without the additional in-company information it is not possible to accurately isolate the effects of 'selection' and 'assistance' on those assisted businesses that had grown faster than non-assisted businesses.

Recent evaluation work on the RSA Scheme has not adopted such an approach and as a result, despite the obvious strengths of large sample sizes and comprehensive administrative data on performance, may be unable to fully isolate the effects of assistance (see, for example, Harris and Robinson (2005) and the current work being undertaken for BERR using longitudinal micro data to evaluate BERR Business Support Programmes (Criscuolo *et al.*, (2006)). Nevertheless, taken together, these evaluations should provide a strong complementary evidence base on the effects of RSA and SFIE financial assistance on the performance of firms and plants in the Assisted Areas of the UK.

The telephone survey is the main source of evidence for the evaluation of Scheme impact on assisted firms and plants. The survey was designed with two broad objectives in mind. First, to provide a set of control variables which would allow us to model the performance of assisted firms and plants more effectively. That is, to be more consistent with economic theory. As noted above, this is an important development in the evaluation and moves beyond the reliance upon econometric modelling of administrative data which typically only contain data on size, sector, ownership and location. Both approaches should, of course, be seen as complementary. Second, the telephone survey will provide a set of variables on Scheme impact (self-assessed) which can be analysed in a variety of ways to provide a range of evidence on impact.

Data was collected via a survey of RSA/SFIE assisted-firms and non-assisted controls on firm characteristics (e.g., size, age, location and sector), market position (e.g., number of customers, suppliers, competitors, orientation and sales concentration), strategic development (e.g., priorities, strength of management team), owner-manager characteristics (e.g., education, attitudes to external equity) and external support. Econometric treatment models which control for these factors will be more able to isolate the effects of support provided through the RSA projects (See Chapter 5).

Profile and Performance

The initial step in the analysis of the telephone survey was to provide an in-depth statistical analysis of the differences between assisted and non-assisted groups of firms/plants. We are able to do this for both RSA and SFIE Schemes although the sample of the non-assisted group was compiled in line with the RSA profile in order to assist with the econometric modelling approach which was the core of this evaluation methodology. With the inclusion of the wider range of control variables this approach can go beyond the usual reliance on size, sector, age and ownership variables as covariates. We can, therefore, formally test whether the 'assisted' group of firms/plants is statistically different from the non-assisted group. This is obviously crucial for the econometric modelling work.

Building on this we can use the performance data to provide headline analysis of the differences (if any) between the assisted and non-assisted firms/plants over the relevant timescales (we have performance data from 2000 to 2006 to provide a pre- and post-assistance period). Analysis of value-added is also presented based on a 'proxy' question which obtained information on the proportion of turnover made up of 'purchased inputs'. We generate estimates of value-added per employee based on these responses.

Scheme Impact

The direct questions on Scheme **impact** provides evidence on the following aspects for both RSA and SFIE beneficiaries:

- Route to Scheme assistance – e.g., how firms found out about the Scheme.

- Levels of previous assistance under the Scheme

- Motivations for seeking assistance from the Scheme

- Anticipated and achieved outcomes in terms of created and safeguarded jobs and sales/exports (SFIE clients only)

- Impact of assistance on various aspects of the business – e.g., innovation, product quality and productivity, technical capacity, managerial skills, internal efficiency

- Additionality – including timing, scale and location dimension

- Timescale for benefits of Scheme assistance – all realised at time of survey or not?

- Alternative sources of finance explored and appraisal protocols used (i.e., incorporating Scheme assistance – proxy for additionality)

- Scheme assistance in context – other financial sources used for the assisted project and their 'relationships' – e.g., levered assistance as a result of Scheme assistance

- Other public sector assistance

- Displacement – this can be difficult to capture but we include various dimensions which enable us to consider the displacement effects associated with Scheme assistance. For example, – information on the proportions of sales in local markets and the nature of competition will provide evidence on the potential displacement effects of assisted firms/plants. We use the percentage of survey firm's sales which are sold within the 'region' together with the percentage of sales by firms which compete mainly with other firms within the 'region' to arrive at some assessment of the degree of displacement within the 'region'.

- Multipliers – questions on linkages and supply chains allow us to develop an analysis of the potential multiplier effects associated with assistance.[3] This, for example, will help identify if assisted firms/plants are more or less likely to be connected into local supply chains and the extent to which purchases are made locally.

All of the above are cross-tabulated with the wide range of firm/plant characteristics obtained form the pool of control variables. In summary, a variety of 'hard' and 'soft' measures of Scheme impact, including additionality and potential displacement effects, are presented.

Econometric Modelling (RSA Scheme only)

The econometric models are used to 'explain' the variation in performance (employment, turnover and turnover per employee) between the respondents and, while controlling for selection bias, estimate whether the assistance parameter is significant. As noted above this is the core of the evaluation methodology for the RSA Scheme. This assistance parameter can be estimated in a number of ways reflecting not only a dichotomous assisted/non-assisted status but also reflect the scale of assistance. Additionality (or the counterfactual if you prefer) is imbedded within this step of the analysis. However, there are no estimates of the displacement or multiplier effects available from the models.

The whole point here is whether the assistance has made the treated firms/plants perform better. This is the whole burden of the impact modelling – to estimate the

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3   Another view expressed in the past by some Government departments might be to suggest that there is a multiplier effect associated with all public sector expenditure and, therefore, this can be applied to any Scheme under evaluation without the necessity to derive a 'banded' point estimate.

real effect of the assistance. In terms of the equations we develop (productivity, turnover and employment growth) the 'additional' impact of assistance is measured. Estimates of displacement are not derived from the econometric modelling work (see above) but within the equations we included variables on the cross-elasticity of products and services and make the assumption that if they are not significant then displacement effects may not important. Similarly, estimates of a multiplier effect associated with the impact of assistance are not derived from the models.

1.3.2 SFIE CASE STUDIES

In order to develop further the issues raised in the analysis of the telephone survey the evaluation methodology included a 'case study' element. Overall, 10 such 'case studies' of SFIE beneficiaries were undertaken across England. They were identified from those respondents to the telephone survey who agreed to be contacted for a follow-up in-depth discussion of the effect of the Scheme on their business. A range of firms/plants were identified on the basis of their responses to the Scheme impact questions (e.g., high and low levels of self-assessment additionality; high and low impact on a range of business outcomes) and the detail behind their original answers was pursued.

Such follow-up discussions with the senior management of the assisted firm sought to assess the extent to which wider benefits (e.g., spillovers, skills enhancement of the workforce/management) are associated with the Scheme and their likely extent and impact. Issues of additionality were re-visited but further evidence was gathered on the nature and possible scale of displacement and multiplier effects associated with Scheme assistance.

The case studies were also used to explore the operational issues associated with the Schemes with particular interest focused on the changes in the operation of the Scheme from RSA to SFIE in England. Further, an assessment of the relevance of the current Scheme to the firm/plant was investigated.

In summary, these resultant 'narratives' with the owner-managers or senior executives of SFIE assisted firms and plants on the impact of assistance augment our understanding of Scheme impact identified from the descriptive and statistical analysis of the telephone survey.

1.3.3 TELEPHONE SURVEY OF NON-TAKE-UP CASES

The survey contacted those firms/plants who applied for, and were offered, financial assistance under both the RSA/SFIE Scheme and who subsequently declined this offer of assistance. We were interested in exploring the background to that decision in order to draw out any lessons for the operation of the current SFIE Scheme.

The following areas were explored with these non-take-up cases:

- reasons that led to an application to the RSA/SFIE Scheme for financial assistance in the first place

- proportion of total project costs sought from the RSA/SFIE Scheme

- other sources of finance used to fund the project

- circumstances that eventually led the firm/plant to decline the offer of financial assistance under the RSA/SFIE Scheme

- what happened to the project (proceeded/abandoned):

    - If abandoned – reasons for abandoning the project and who took this decision (e.g., management at this site/parent company in UK/overseas)

    - If proceeded – did it proceed as initially envisaged – and if Yes, how was the project then funded in the absence of financial assistance under the RSA/SFIE Scheme. If No – how was the project changed and what were the reasons for changing the nature of the project – an who took this decision (management at this site/parent company in UK/overseas)

1.3.4 RDA CASE OFFICER SURVEY

This was designed to elicit evidence on Scheme operation from the perspective of the individual RDA Case Officers who performed an appraisal or monitoring role on the SFIE Scheme. This was undertaken for the RDA Case Officers in England (n=25). The issues investigated were as follows:

- Profile of the Case Officer

- Changes to the Scheme/Organisational Context

- Scheme Guidelines – relevance and ease of operation

- Scheme Monitoring and Impact

1.4 Structure of the Report

The structure of the report is as follows:

- A review of some of the key arguments and evidence relating to the rationale for regional policy interventions through state aid to businesses. The rationale for both the RSA and SFIE Schemes is set out. A discussion of the impact of other area-based initiatives in the Assisted Areas is presented (Chapter 2).

- A description of the population of RSA and SFIE assisted businesses in the 2000-04 and 2004-05 periods (i.e., the 'in-scope' records), the survey methodology and response rates are presented. In addition, a discussion of the timing of the assistance over the two 'in-scope' periods is presented (Chapter 3).

- The comparative profile of RSA and SFIE assisted businesses, together with the non-assisted control group of businesses, is presented and analysed (Chapter 4).

- The detailed approach and results of the econometric modelling of the effects of RSA assistance are presented (Chapter 5).

- Self-assessment measures of the benefits and additionality (including behavioural) of RSA and SFIE assistance are presented. The issues arising from the follow-up case studies of SFIE Scheme beneficiaries are discussed (Chapter 6).

- The results of the RDA Case Officer Survey on emerging operational issues for the SFIE Scheme are presented and discussed (Chapter 7).

- A summary of the key conclusions (Chapter 8).

Chapter 2: Public Policy and Regional Development: RSA and SFIE Schemes in Context

2.1 Introduction: a Rationale for Intervention

The persistence of disparities in regional development across the European Union (EU) clearly presents a considerable challenge to public policy in the post-enlargement period (European Commission, 2004). In that context, the importance of developing even more effective regional policy interventions cannot be understated. However, as Martin and Tyler (2006) argue it is just as important to develop an understanding of what the impact of previous regional, or 'area-based' policies have been. At an EU level the operation of the Structural and Cohesion Funds represents the most explicit policy tools that seek to enhance the social and economic development of 'lagging' regions.

As part of the evaluation of the RSA and SFIE Schemes we were asked to review the international literature on regional policy and state aids to assess the continuing rationale for the programme aims and objectives of existing area-based BERR products. The Chapter starts with a brief summary of the background to the RSA and SFIE Schemes and then moves on to outline the general arguments underpinning the rationale for a state aid designed to provide discretionary financial assistance to the private sector in the less developed regions of a national economy. The Chapter goes on to outline issues concerning the measurement of the effectiveness of regional policy interventions and develops a discussion around the firm-level effects and externalities associated with assisting private sector investment in UK or Foreign-owned businesses.

2.1.1 RSA AND SFIE SCHEMES: BACKGROUND

The RSA Scheme has been a prominent feature of regional policy in Great Britain (GB) for more than 30 years (1972-2004) and has been used as a key 'product' in attempting to address the labour market inequalities which have been a persistent feature of the UK regions[4]. In 2000, in response to the 1998 DTI White Paper on Competitiveness it was aimed at more high quality projects with skilled jobs. RSA support came in the form of a discretionary grant award to private sector firms or plants for primarily capital investment projects in the Assisted Areas that will lead to job creation. Safeguarding 'at risk' jobs was also an important objective of the Scheme. Consequently, it has been the subject of

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4 Wren (2005) provides a useful summary of the expenditure on regional industrial assistance, including the discretionary component represented by RSA, over the period 1960-2003.

many evaluations and discussions concerning its effectiveness both in terms of the number of jobs actually created and at what cost (see, for example, King, 1990; PACEC, 1993; Swales, 1997; Wren, 2005; Harris and Robinson, 2005).

The RSA Scheme was replaced by the SFIE Scheme in April 2004 with a focus on increasing productivity and the proportion of skilled jobs in the Assisted Areas of England. The Scheme explicitly incorporated a gross value added (GVA) test and a skills test. This new scheme was designed to be more in line with BERR's overall objectives on regional policy which sought to develop the competitive strengths of the region through more sustainable forms of industrial development. The introduction of the GVA and skills test as part of the new SFIE Scheme signalled a commitment to move towards higher quality projects and a recognition that the operation of the RSA Scheme in the 2000-04 period lacked the tools to ensure that this anticipated outcome could be measured.

In essence, the transformations of the old RSA Scheme and the objectives of the new SFIE Scheme reflect the overall shift in regional policy from a policy intervention designed to redistribute jobs to the Assisted Areas to one aimed at raising productivity through the creation of highly skilled jobs in these areas. The business case for the new SFIE Scheme is predicated on these principles and job creation remains a crucial aspect as the regional imbalances in skills are an important dynamic in the enduring nature of regional disparities in England. The programme expenditure for the new SFIE Scheme is approximately £110 million a year. Applications for grant assistance up to £2 million are handled by the RDAs.

2.1.2 RSA AND SFIE IN CONTEXT: EU REGIONAL POLICY AND STATE AIDS

The objectives of EU Regional Policy[5] are challenging: to reduce inequalities between regions, to increase efficiency at the national and European level and to decrease inequalities between the Member States of the EU. The main instruments available to the European Commission for direct regional aid have been the Structural Funds (strengthened in 1988) and the Cohesion Funds (since 1993). Inevitably, these objectives lead to a trade-off at the spatial level as the ongoing tension between equity and efficiency becomes paramount in the execution of individual policy programmes and initiatives. This tension can be written perhaps more succinctly as a choice between supporting economic regeneration or boosting growth (see for example, Haughton and Counsell, 2004: 192-4). Using the East of England region as an example they suggest that the strategic importance of the Cambridge sub-region meant that it took centre stage in the overall regional planning strategy. This type of 'agglomeration' effect, manifested in what might be termed positive localized spillovers, can produce efficiency effects through the self-sustaining nature of these 'agglomerations'.

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5   The intention here is not to provide an overview of the 'politics' of EU Regional Policy since its formal inception in 1989 and the associated debates on the Budg*et al*location. A useful summary is provided by Bachtler and Wishlade (2005).

However, the long-term unwelcome or incompatible aspects of this 'agglomeration' process to a desire to reduce regional inequalities emerges when investment gravitates to where transaction costs are seen to be lower – whether through infrastructure improvements (financed through public expenditure) or through the availability of skilled labour which reduces, for example, the costs of recruitment and retention. The role of regional policy is to balance the needs of lagging regions with the demands of fast-growing regions. If these equity considerations are accepted then the issue becomes one of ensuring the efficiency of these public policy interventions.

Western governments have spent significant sums of public money in attracting inward investment, and indeed it may even be argued that attracting (and retaining) inward investment has been the main focus of industrial and regional policy in the UK. The merits of various approaches to regional policy are discussed in some detail in Armstrong and Taylor (1993). Leaving aside the issue of whether governments should intervene to address regional disparity, the theoretical literature on regional policy makes one essential distinction. This focuses on the debate concerning whether regional policy should be designed to address the symptoms of regional disparity such as unemployment and low levels of investment, or whether it should seek to address the underlying causes, such as low productivity and low levels of innovation. Largely, UK regional policy has been concerned to identify regions with high levels of unemployment that could benefit from new fixed capital formation.[6]

A review of the regional economic development literature in recent decades points to one overriding conclusion. Despite periods of convergence the overall trend is towards the persistent nature of regional inequalities throughout the EU, including the UK. Traditionally, many economists have regarded this to be the result of three types of market failure as related to the level of the individual firm (which is our interest in this evaluation).

Market failure can be specified in many different forms but in the context of this evaluation, the most important elements are **incomplete markets**, **externalities** and **information failure** (Stiglitz, 2000). These principles are contained within the recently revised business case for the SFIE Scheme.

- **Incomplete markets**: incomplete markets are interpreted as the existence of a gap in the availability of private sector external finance (e.g., formal or informal equity capital) to firms for start-up and expansion activity in particular regions. The reason for this can be related to the unwillingness of the private sector to become involved in projects which they deem to be 'high risk'. The new SFIE Scheme has an important, but not a single role, to play here alongside other recent initiatives in the English regions such as the Regional Venture Capital Funds (RVCFs).

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6   This recognises that there are certain areas of inner cities for example that may have above average unemployment, but that seeking to attract large scale investment is not feasible due to congestion or other constraints. This is an essential reason why regional policy is based on relatively large areas rather than very small jurisdictions.

- **Externalities:** externalities are viewed as the positive indirect effects that result from firms being located together. These positive externalities may include collaboration and networking opportunities (technological externalities – e.g., spillovers, linkages), information transfer, the freeing up of internal human and financial capital (which can then be utilised in other innovative actions within the firm), the leverage of additional private sector financial support, or the range of perceived or actual benefits associated with large urban labour markets (e.g., skill sets).

- **Information Asymmetries:** information or co-ordination failures (asymmetries) arise when firms are unaware of sources and mechanisms to access the necessary amounts of external finance required for new plants and/or the in situ expansion of existing operations.

The enduring scale of regional, and indeed sub-regional, inequalities across the EU and within the UK provides *prime facie* evidence that some combination of these market failures can be said to exist. The evolving map of the Assisted Areas in England was designed to reflect these 'enduring' regional and sub-region inequalities. The task in this evaluation is to provide evidence of the precise ways in which schemes such as RSA, and currently SFIE, can serve to overcome these operating difficulties for individual firms/plants.

While it may be useful to derive an average effect of intervention upon assisted businesses the challenge is to understand the ways in which the intervention can achieve a set of positive outcomes. For that reason, we adopt a methodology for this evaluation which has both econometric and case-study elements, with the latter designed to collect information directly from the owner-manager or Managing Director about how, and to what extent, the financial assistance has helped change behaviour within the firm/plant and in so doing achieve specific measurable outcomes.

2.2   Firm-Level and Regional Effects – Developing Externalities

The aim of this section is to bring together the most recent research evidence to inform the debate on the expected effects of public subsidy on the private sector in the Assisted Areas in the UK. We concentrate here on two dimensions which have attracted considerable research and policy attention in recent decades. Both are seen as important drivers of regional productivity and competitiveness and can be broadly summarised as:

- **Innovation** – at the firm level and also at the regional level – for example, within 'regional innovation systems'.

- **Inward Investment (FDI)** and the anticipated direct effects on jobs, skills as well as the wider benefits through spillovers, competition and supply chains.

To what extent has the RSA Scheme, and its successor the SFIE Scheme, been successful in enhancing regional competitiveness through these processes? These firm-level effects are examined further in the comparison between assisted and non-assisted firms and plants (Chapter 4), the econometric work seeking to explain firm/plant performance (Chapter 5) and the self-reported benefits of RSA and SFIE financial assistance (Chapter 6).

2.2.1 INNOVATION

Regional innovation policy has been a major component of EU Regional Policy in recent years. In brief, the emphasis has been upon building the innovation capability of individual firms as well as developing networks and clusters around the links between knowledge generating (universities) and knowledge applying (firms) organisations (Roper, 2004). Policies designed to raise the level of innovation at the firm level has wider benefits. Roper (2004) points to the positive spillovers associated not necessarily with the innovating firm itself, but rather with those 'trading' with it in a supply chain context. Spillovers to these other companies stimulated by public policy to raise the level of innovation activity represents clear evidence of the market failure rational for intervention as they are associated with substantial wider benefits.

Nevertheless, it is worth flagging that the extent to which positive 'spillover' effects from regional innovation policies are realised depends on the nature of the research (Roper, 2004). The effects (or footprints) from 'basic' research are considerably different from those obtained from 'applied' research, which in turn are very different from those available from 'near market' research activity. Further, the absorptive capacity of the local or regional economy will also dictate the extent to which positive spillovers will be realised. There must be some connectivity with the local economic base. Finally, and related to this point, lagging regional with very few high-tech firms have the most difficulty in capturing the benefits of 'basic research'. Overall, therefore, the impact of regional industrial policy interventions designed to stimulate spillovers is conditional and heavily dependent upon the precise characteristics of the lagging region.

2.2.2 INWARD INVESTMENT (FDI)

FDI has been the subject to a large body of research over the years in terms of its role in the regional economic development process. Some of the accepted wisdom has been summarised by Roberts (2002) with respect to the UK and is presented in Table 2.1.

Table 2.1: Impact of FDI in the UK

Issue/Outcome?	UK
New jobs, industrial diversification	**Yes** – e.g. 1984-1991, 200,000 new jobs identified by IBB, around £25bn of investment.
Overall competition effects, resource allocation	**Yes** – Driffield (2001a); Geroski (1995).
Overall productivity spillovers	**Yes** – Barrell and Pain, 1997;1999; Hubert and Pain, 1999. Cumulative effects of foreign manufacturing investment in terms of UK location competitiveness.
Specific value chain effects	**Yes** – Dunning, 1993, Munday 1995, Driffield *et al.,* 2002. Externalities in domestic firms that purchase from the foreign sector.
Profits and performance	**Yes** – Superior performance of the foreign manufacturing sector (Davies and Lyons, 1992). Superior productivity not always reflected in profit performance (Munday and Peel, 1997).
Earnings and labour markets	**Yes** – Higher earnings, also pay spillovers identified.
Trade unions and industrial relations	Varies, but Japanese investors connected to wider development of single union deals, and moves towards strike-free arrangements in enterprises.
HRM and Operational Techniques	Japanisation of British Industry but evidence of take-up of novel personnel and operational methods by competitors (Oliver and Wilkinson, 1992).

Source: Roberts (2002)

What follows is a more intensive look at the range of potential effects of FDI with reference to a number of more recent studies.

NEW JOBS AND INDUSTRIAL DIVERSIFICATION

The UK government has welcomed incoming FDI for bringing "new jobs, new management techniques, innovation, dynamism and competition to the economy" and has backed this up with substantial subsidies.[7] This view is supported by academics such as Eltis (1996) who see foreign transnationals in particular as raising quality and productivity levels.[8] At the regional level the emphasis for many years for the less favoured regions of Britain has been on alleviating structural unemployment via inward investment inflows (Dunning and Yannopoulos, 1976) using regional support for assisted areas (Gripaios *et al*, 1997). With the decentralisation of industrial policy to RDAs, there has been intensified competition between agencies to attract FDI through subsidy packages.[9]

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7   Evidence on this support is limited. Brech and Sharp (1984) estimated that in 1981-1982 the overall level of assistance offered by the British government to incoming transnationals was £1.5 billion. Excluding tax relief their estimate was £370 million. Girma *et al.,* (2001) note that in attracting Samsung and Siemens to the North East, the British government provided $30 000 and $50 000 per worker respectively, while Cowling *et al* (1999) cite a figure of £42,000 subsidy per job created in attracting FDI to Wales in the late 1990s.
8   See Girma *et al* (2001). Driffield (2001) explores the subtleties involved in evaluating the effects of FDI in bringing superior technology, such as the motivation behind the investment.
9   Witness for example the bidding war in 1997 between two British regions, Wales and the North, to win a plant of the Taiwanese-based computer firm Acer.

For the British regions at least the emphasis has been on using inward investment to:

● reduce structural unemployment;

● reduce inequalities, both intra-regionally and inter-regionally via raised productivity through technology transfer and spillover effects.

It is clear, therefore, that several regions of the UK, in particular those perhaps hardest hit by the structural changes in UK manufacturing, have significantly increased their reliance on foreign investment in terms of employment and output. While this in general is seen as a sign of success, both by and for the respective development agencies, the issue of the long term benefits of such a policy, and its contribution to the reduction in structural unemployment is still open to question.

In pursuing a range of economic objectives including reduced unemployment and social inclusion, RDAs still see FDI as particularly important as part of this regionally-based industrial policy. However, Driffield (2004) suggests that inward investment actually reduces the demand for unskilled labour. In so far as a key objective of regionally-based industrial policies in attracting inward investment is to reduce structural unemployment, it is doubtful as to whether this is achieved by a heavy reliance on inward investment when the effect is to reduce demand for unskilled workers (the latter are often those most likely to experience long-term unemployment and be the target of policy intervention in the first place). This suggests that there is perhaps an incompatibility between the attraction of inward investment to reduce unemployment on the one hand and the goal of social inclusion on the other, suggesting in turn the need for greater attention in regionally-based industrial strategies to assist workers who lose out from such inward investment inflows.[10]

INWARD INVESTMENT AND SKILL UPGRADING

There are a number of studies that identify substantial differences in factor demand between foreign and domestic firms. The inference here is that MNEs demonstrate higher levels of labour productivity, and in turn greater demand for high quality labour, linking this to technological differences between inward investors and other firms. Driffield (1996) finds that foreign firms will pay wages above the industry average of around 7 per cent, partly due to productivity differences. Conyon *et al.* (1999) find a wage differential of 3.4 per cent wholly attributable to productivity, and Girma and Wakelin (2001) find wage and productivity differentials of 5 per cent.

Bailey and Driffield (2006), however, question the ability of inward investment to generate a greater demand for skilled workers at the expense of unskilled workers. While this can be seen in a positive light, in that it leads to a potentially

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10   Trade, on the other hand, can have a beneficial effect on labour, with again the benefits being greater for skilled workers.

improved skill base, it also potentially increases inequality. Driffield *et al* (2006), however, also demonstrate that there are regional differences in these effects, and that inward investment in assisted areas appears to reduce wage inequality.

Wren and Taylor (1999) demonstrate that investment incentives have had the effect of changing the regional distribution of economic activity across the UK in general. As such, investment incentives have had the effect of encouraging firms to locate away from regions that demonstrate a more obvious location advantage. Consequently, spillovers from inward investment are perhaps lower than may be expected.

FDI AND COMPETITION EFFECTS

Caves (1996) suggested that FDI would have the effect of increasing competition in host country markets. The essential rationale for this, following Teece (1986), is that FDI flows are determined by the desire to internalise across national boundaries (vertical FDI), or to exploit assets through foreign production (horizontal FDI). Teece (1986) then makes the point that, as is well known, vertical integration is seen as a response to market failure, and as such therefore, vertical FDI may facilitate foreign entry, and reduce the monopoly problem.

While empirical papers linking FDI to host country concentration are limited in number, several authors have tested more indirectly whether inward FDI can affect domestic firms market shares or profitability. Aitken and Harrison (1999) for example, argue that one of the impacts of inward FDI is that the output of domestic firms is reduced as a result of the increased competition from the foreign entrant. If domestic industries were characterised by high levels of competition and low concentration then this result would be a matter of concern as one may expect concentration rates to rise following large scale foreign entry. However, there is also evidence that FDI is attracted into sectors where host country profitability is high (Geroski, 1995), and that FDI generates a decline in domestic firms' profitability, Driffield and Munday (1998). Such ideas are tested directly by Driffield (2001a; 2001b), and in general he finds that while there is some evidence that FDI is associated with more concentrated industries (in terms of explaining FDI flows), FDI acts to reduce concentration and increase competition.

PRODUCTIVITY SPILLOVERS FROM FDI

There is a growing literature which suggests that over time, domestic firms are able to appropriate productivity spillovers from foreign MNEs[11]. This can occur directly, through the licensing of a particular technology, through supplier networks or subcontracting arrangements, or indirectly as knowledge becomes public, and spillovers are assimilated by the domestic sector.

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11   See for example , Blomström (1989), Driffield (2001), Rodriguez-Clare (1996), and Aitken and Harrison (1999).

Evidence is emerging that such spillovers are generating increases in technological capability of domestic firms (Markusen, 1995). Barrell and Pain (1997) find that in the UK manufacturing sector that a 1 per cent rise in the FDI stock is estimated to raise technical progress by 0.26 per cent. Barrell and Pain (1997), however, are unable to distinguish between the aggregate improvement in technical progress, and the impact solely on the domestic sector. Both the productivity and spillover effects are likely to have an impact upon relative employment. Indeed, Hubert and Pain (1999) suggest that inward investment is virtually solely labour augmenting, and as such, inward investment acts to reduce the demand for unskilled workers, while Aitken *et al* (1996) suggest that such productivity gains may be translated into increased wages within the domestic sector.

Markusen and Venables (1999) outline the two main impacts on local firms of inward investment, as do Aitken and Harrison (1999). In addition to the standard productivity gains argument, Aitken and Harrison (1999) explain a further impact of a large MNE entering an industry. The foreign firm captures some of the domestic firms' market shares forcing them to operate at a smaller scale, reducing output and (possibly) increasing unit cost. This is expected to be significant in imperfectly competitive markets, and is similar to the result reported by Driffield and Munday (1998)[12].

There is now a substantial body of evidence that positive productivity spillovers do indeed occur[13]. A large review of this literature can be found in both Görg and Greenaway (2004) and Görg and Strobl (2001). In general this literature finds that spillovers do occur, but that they are neither guaranteed nor automatic, and is also potentially problematic to isolate. First, there is the possibility of a market stealing effect, in which more productive MNEs take market share from less efficient domestic producers, forcing them up the average cost curve and so lowering their productivity (Aitken and Harrison, 1999).

Secondly, there is the possibility that outward FDI may be undertaken not to exploit the technology of an MNE in a new location, but to source the technology of a host country and use it to advantage either in the foreign affiliate or in the MNE's home economy. Under such circumstances, any productivity spillovers may be very limited, or may run in the reverse way from the conventional model i.e. from domestic to foreign enterprises. This phenomenon has become known in the literature as technology sourcing. Technology sourcing behaviour may be particularly important in the flows of FDI between technologically advanced countries; indeed Van Pottelsberghe de la Potterie and Lichtenberg (2001) suggest that much of the outward FDI among the major industrialised countries is of this sort.[14]

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12 This phenomenon would still be expected in contestable markets. Theory suggests that firms in contestable markets operate at, or very close to their minimum efficient scale. As such, entry by a (superior) MNE would result in a loss of market share for the domestic firm, thus forcing it back up its long run AC curve, increasing average costs.

13 See Blomström and Kokko (1998) for a review of the evidence. However, Görg and Strobl (2001) demonstrate that this may be sensitive to the measure of foreign involvement.

14 However, Love (2003) finds little evidence of technology sourcing among inward or outward US FDI over the period 1981-95.

The most recent work on this issue (De Propis and Driffield, 2006) examine the role of FDI in developing spillover effects with the creation of local clusters and conclude that perhaps previous thinking was overstating the case. Rather than generating clusters FDI would appear to be locating in certain regions to benefit from pre-existing clusters of established firms (which develops and supports their earlier work on Italy).

FDI AND SUPPLY CHAIN LINKAGES

The literature cited in the previous section reveals a potential for domestic suppliers to the foreign-owned sector to benefit in terms of both productivity and performance. Such a potential, however, needs to be assessed in the context of the modern manufacturing environment. For example, a large number of foreign firms in the UK (particularly those in electronics, engineering, and automotive) form part of an increasingly global system of production, which in the 1980s and 1990s saw a growing emphasis on flexible production systems (see for example, Delbridge *et al.*, 1998).

Connected to this new emphasis has been a restructuring of buyer-supplier partnerships (Helper 1991a, 1991b; Imrie and Morris, 1992) and a greater focus on long term contracts with a reduced number of suppliers, with an accompanying movement away from short term arms-length contractual relationships. This provides increased scope for significant production externalities, particularly where a foreign party possesses a set of ownership advantages embodied in specific assets, technology and knowledge (Dunning, 1993). In this manufacturing environment in particular, foreign manufacturers can act in ways that improve the technical capability of their domestic suppliers, for example, in terms of design, procurement, market information and tooling, and in promoting quality and efficiency improvements (Munday *et al.*, 1995). In this way significant production externalities may be generated by the foreign sector through the value chain. As a result there could be productivity gains in domestic industries linked to sectors with significant foreign investment.

The existence of production externalities from the foreign owned sector may not always be reflected in value added growth in the domestic supplier sector. The observed productivity externality from the foreign sector back through the supply chain could be mediated by a series of factors. These might include the nature of the foreign subsidiary, and the freedom of local management teams to direct purchasing decisions against the need to realise global level economies in complex component purchasing decisions. Other mediating factors include the degree of vertical integration, technology levels, and finally the mix of components and materials bought locally i.e. low or high value-added components.

Domestic firms (primarily SMEs) may have particular difficulties in contracting to large multinationals. Factors influencing the magnitude of this problem include the 'relationship-specificity' of the investment required, and the strength

of contracting parties in appropriating any quasi-rents available in the presence of small numbers. Thus, upon re-negotiation of contracts, the domestic firms face an adverse selection problem. Graham *et al*. (1999) concluded that where significant buyer power is present, gains due to productivity growth in the upstream sector, are largely appropriated by the downstream sector. Azzam (1998) found a similar result with input prices inversely related to concentration in downstream sectors.

More specifically for multinational firms may be concerns of loss of resource control where knowledge and expertise is transferred to the supplier. This possibility is enhanced in the presence of information technology links between firms which have been shown to increase the potential for opportunistic behaviour (Clemons *et al.*, 1993). For these reasons an element of explicit or implicitly agreed 'exclusivity' is common in such buyer-supplier partnerships, whereby the purchasing firm can achieve a degree of co-ordination similar to that achieved with in-house production, without experiencing the full costs associated with transactions risk. Then exclusivity can remove the agency problems that could discourage technology transfer. However, this also leads to the supplier firms facing adverse selection problems when contracts are re-negotiated (for general discussion see Comanor and Rey, 2000).

A range of studies have suggested that buyer-supplier partnerships involving foreign firms are a mechanism for productivity spillovers, technology diffusion (Morris *et al.*, 1993; Görg and Ruane, 1998), and more fundamental value chain restructuring (O'hUallachain and Wasserman, 1999). In a wider review, Crone and Roper (2001) examined the specific literature on knowledge transfers from multinationals, and concluded that the supply chain is the main route through which knowledge is transferred from multinational plants to indigenous firms, and that such transfers lead to important improvements in supplier performance. The more system-wide efficiency effects of growth in FDI were also demonstrated by Gillespie *et al.*, (2000) for Scotland.

Despite its importance, examining the significance of production externalities generated by FDI in the supply chain has hitherto been problematic, largely due to data constraints. Nevertheless, there is some case evidence of the importance of such effects (see Oliver and Wilkinson 1992; Morris *et al.*, 1993). Moreover, there is an apparent consensus that low levels of input-output linkages between the foreign and domestic sectors are an impediment to cluster development, a theme which is increasing in importance in several UK RDA strategy documents. Indeed there is more general evidence purporting to demonstrate that those foreign investors with the lowest rates of local linkages contribute least to regional growth prospects and competitiveness (Crone and Roper 2001; see also Brand *et al*. 2000). There is then an underlying assumption that higher levels of transaction linkages between foreign and domestic firms are beneficial to the domestic sector, with an implicit recognition that the intensity of input-output linkages encourage knowledge and technology spillovers to indigenous sectors.

2.3   Area-Based Policy Initiatives in the UK

How does any assessment of the cost-effectiveness of regional *industrial* policy compare with other area-based policies in the UK? This is an important question in the context of developing the most effective *and* efficient set of policy instruments with which to maximise the benefit to the less-developed cities and regions of the UK. Area-Based Initiatives (ABIs) have been a central feature of policy interventions designed to regenerate the more deprived local and regional economies of the UK through community engagement and partnership (Lawless, 2006). Two recent reviews by Lawless (2006) and Rhodes *et al.*, (2005) provide a useful overview of what the objectives of ABIs have been in general and what they have actually achieved using, respectively, the examples of the New Deal for Communities and the Single Regeneration Budget (SRB).

As part of this evaluation of the RSA and SFIE Schemes in England we were asked to assemble the existing evidence on the cost-effectiveness of other area-based programmes in England. An immediate issue to recognise is that many national programmes targeted at either businesses (e.g., SMEs – Business Link), groups (e.g., unemployed/inactive – New Deal) or universities (KTP, University Challenge or LINK) do have a spatial component to them but many of the evaluations do not apportion the overall net benefit to particular geographical areas. That is not meant as a criticism of the evaluations of these programmes but an important recognition that the task is probably impossible. This does, however, create a double challenge for the comparative assessment of the cost-effectiveness of Schemes such as RSA and SFIE because, as they are tightly focused on the Assisted Areas, they tend to get compared to other area-based programmes as well as other BERR Business Support Products.

An overview of the major area-based programmes and their impacts (where available) are summarised in Appendix 3 (Tables A1-A8). This was compiled specifically for this evaluation. What we summarise below in Table 2.2 and Table 2.3 is a comparative review of the impact of area-based business support initiatives in deprived urban areas and is taken from the recent report on the 'State of the English Cities" published in March 2006 by the ODPM. Making the case for the importance of cities to regional growth the document brought together the available evaluation evidence. This has been supplemented with recent evidence on their evaluation work on New Deal for Communities Programme and the Single Regeneration Budget (Lawless, 2006; Rhodes *et al.*, 2005).

Table 2.2: Impact of Business Support Initiatives in Deprived Urban Areas

Programme/Scheme	Impact
Regional Selective Assistance (1991-95) – based on AEP (2000) and Wren (2005)	• Created or safeguarded 84,000 jobs (40% of gross figure) – AEP, 2000. • 14% reduction in Assisted Areas unemployment at cost per net discounted job of £17,500. • Further calculations by Wren on 'permanent net job equivalents' reduce the employment effect to 21,000 and 39,000 for England and GB respectively at an increased cost per job of between £17,500 and £53,750.
Urban Development Corporations (focus on property)	• Enabling expansion of existing business into more modern premises – Tyne & Wear and Sheffield • Low-levels of displacement of economic activity (Bristol, Manchester and Leeds) • Low-levels of local recruitment by resident firms – issues of mis-match
Enterprise Zones	• Low-levels of displacement • Highest additionality with manufacturing firms – lowest with retail and distribution • 58,000 additional jobs • Cost-per-job at 1994/95 prices was £1,700 per year (£17,000 on the standard assumption of a 10 year job life
City Challenge	• 8,700 new business created • 87,000 business receiving advice • 170,000 gross jobs (created and safeguarded) • estimate of 20,000 net jobs • cost-per-job £37,000 • cost effective in supplying business advice but expensive regarding new business formation (due to displacement and sustainability issues)
Single Regeneration Budget	• Rounds 1 to 5 of the SRB over the period 1995 to 2000 created or safeguarded 512,355 jobs (ODPM). • 67,926 new businesses have started up under SRB funded schemes • only 15% of schemes primarily concerned with business development/inward investment
Business Development in the Coalfields	• Overall, limited success in attracting inward investment • Cost-per-net-job of providing business support relatively high – £28,000 and additionality relatively low (38%)

Source: Based on Chapter 10, "State of the English Cities" (ODPM, 2006) with additional inserts from original programme evaluation documents.

Table 2.3: ABIs: Headline Evaluation Evidence on Value for Money

Policy Measure (1981-2000)	Estimated Public Sector Spend on Policy (£bn)	Estimated Spend by other Private and Public Sector (£bn)	Net Jobs in Local Area (net additional jobs)
London Docklands Development Corporation	2.90	9.69	44,000
Other Urban Development Corporations	1.70	9.26	81,387
Enterprise Zones	1.00	2.00	58,000
City Challenge	1.14	6.25	32,000
English Partnerships	1.00	2.30	90,000
SRB Challenge Fund	2.20	8.81	44,728
Total	**9.94**	**38.31**	**350,115**

Source: Dabinett *et al.*, (2001)

From Table 2.3 we can see a summary of the evaluation evidence across ABIs in the 20 years to 2000 (Dabinett *et al.*, 2001). Overall, it is possible to associate the creation of 350,115 net additional jobs in the targeted areas. Although the comparative assessment of alternative policy instruments is an important question to address it can also be seen as an artificial one. It must be noted that this comparative assessment between the effects of the RSA/SFIE Schemes and other areas-based programmes is problematic and may remain so due to the difficulties in making worthwhile comparisons between 'evaluations' employing very different methodologies. Lawless (2006) and Armstrong and Wells (2006) argue that the challenge for evaluation is a very real one and demands greater emphasis on less positivistic approaches.

For example, Rhodes *et al.*, (2005: 1945) acknowledge the conceptual and measurement issues associated with evaluating ABIs and through their case study work on seven SRB areas in England prefer to talk about *'small, but valuable improvements in the well-being of their residents across a range of social, economic and physical indicators that might have been expected a priori to have been affected...'*. To derive comparative value for money assessments of ABIs, such as that undertaken by Dabinett *et al.*, (2001) raises obvious methodological concerns about what do statistics on, for example, 'net additional jobs' actually mean and overlook the less tangible programme outcomes. The problem is that to embark upon such comparisons necessitates indicators which 'translate' across programmes even if they are methodologically suspect. In that context, to reduce an assessment of the relative contribution of the SFIE Scheme to the social and economic development of the Assisted Areas to 'point estimates' of the numbers of net jobs and their associated costs is potentially misleading.

More importantly, however, we would argue that the problem relates to the nature of the intervention to be evaluated as many of the ABIs are property focused and tied in to a regeneration agenda. The operation of a mainstream business support product, such as the current SFIE Scheme, cannot sit in isolation from these other area-based programmes and initiatives. Therefore,

there is a real danger that policy-makers are drawn towards the continuation of those schemes that produce the largest 'effects' (jobs, skills, export sales etc..) in the shortest time period without an acceptance that the work of say the Urban Development Corporation in creating the infrastructure has been instrumental in facilitating the benefits under a business support product.

The emerging biotechnology cluster in Teesside is an example where the SFIE Scheme has been able to assist new and existing businesses on the back of a recently developed modern business infrastructure. Similarly, and again in the North East, the regeneration of the Derwent Valley is interconnected to the operation of the SFIE Scheme in providing capital investment to projects located in the area. So, a 'league table' of policy interventions aimed at showing which ones are the most successful (defined as large and wide-ranging effects combined with cost effectiveness) needs to be interpreted with care. Indeed, one could argue it is a less than helpful exercise and misunderstands how, at the local level, the process of economic development actually takes place.

The details of the impact reported in Table 2.2 and Table 2.3 concentrate on the quantitative impacts at this stage rather than the range of other more qualitative outcomes (wider benefits) of these policy interventions, which as we argued above are equally important outcomes to capture.

2.4 Summary

The rationale for developing and maintaining a business support product such as the SFIE Scheme rests on the notion that the needs of the Assisted Areas in England are best served by a 'state aid' that produces a wide range of effects at the firm level and, more importantly, at the broader regional and national level. The review of the literature on regional and industrial policy serves to highlight the potential role of innovation and FDI in producing important externalities which may produce sustainable economic impacts in the Assisted Areas. The empirical evidence would suggest that these effects are not inconsiderable.

The task in the remainder of this report is to harness the evidence across the various components of our evaluation study to provide a clear commentary on whether the RSA Scheme, and its successor the SFIE Scheme, were able to produce effects at the firm level (e.g., increased R&D, greater levels of innovation, increased productivity, employment growth, spillover effects on domestic industry through linkages and/or supply chain effects of inward investment projects). Chapter 4 provides an overview of the profile of both RSA and SFIE beneficiaries in our survey and will pick up on a number of these issues in a descriptive manner. Chapter 5 presents the results of our econometric modelling which seeks to identify if there is 'an assistance effect' in the growth model and in so doing test for the contribution of a range of firm/plant characteristics in the overall explanation of that growth over the period 2004 and 2006.

Finally, it is our view that the SFIE Scheme, even within a policy framework underpinned by competing departmental priorities and budget constraints, should not be seen as competing with other policy instruments in the Assisted Areas. We base this conclusion on the fact that it is the most significant public sector budget available for investment in the private sector and has the potential to work in partnership with other ABIs (i.e., regeneration programmes) to redress the social and economic fortunes of the most deprived areas in England. To engage in comparative cost effectiveness exercise across this range of policy instruments, even if it could be achieved with methodological rigour, would be potentially damaging.

Chapter 3: RSA and SFIE Beneficiary Surveys: Background and Sampling Issues

3.1 Profile of RSA and SFIE Offers of Assistance

The sampling frame was drawn from the population of RSA and SFIE beneficiaries in the period since April 2000. The SFIE Scheme, which replaced the old RSA Scheme, was introduced in April 2004. We set out below the nature of the population of the two beneficiary groups.

3.1.1 RSA SCHEME (2000-2004)

In the four years to March 2004 there were 784[15] 'in-scope' RSA beneficiary firms/plants in England which were included in the survey. Just under two-thirds (61.7%) located in the Assisted Areas of the North East, North West and Yorkshire and Humberside. The average mean employment size of a RSA beneficiary in this period was 202 employees (median 96 employees) and in total there were 155,510 employees in these 784 businesses. Just over a quarter (26%) of beneficiaries employed less than 50 employees. With respect to ownership, just over a fifth (22.2%) of RSA beneficiaries were foreign-owned businesses: 7.9 per cent of all beneficiaries were US-owned, 2.8 per cent Japanese-owned. Three-quarters (74.4%) of the assisted business were in the manufacturing sector with a further 10.7 per cent in Financial and Business Services.

Overall, these businesses received offers totalling £462.5 million in the period with an average mean level of financial assistance of £590,635 (median £200,000). On average foreign-owned firms/plants received offers totalling £1.17 million (median £400,000), although this is distorted by 18 cases offered in excess of £2 million each. By contrast, UK-owned businesses received on average an offer of £428,475 (median £180,000), although this too is influenced by 10 cases each offered in excess of £2million. Just over one in ten of all offers of financial assistance in the period were over £1 million.

Overall, the £462.5m offered to businesses was related to the estimated 'creation' of 83,613 total jobs in the assisted businesses in the period 2000-04,

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15   This number was reached after a substantial cleaning process of the original dataset of 1,137 cases received from BERR and the RDAs with, for example, the removal of those applications rejected, offered but not accepted, application withdrawn, duplicates, firms in receivership and businesses that had ceased trading. It is, therefore, a slight under-estimate (i.e., not counting offers that were declined) of the total number of businesses receiving financial assistance under the RSA Scheme in the period. See Appendix 1 for a full account of the attrition process.

of which 43,716 were new jobs and 39,897 were safeguarded jobs (Table 3.1). UK businesses were responsible for almost two-thirds (62.0%) of these total jobs. Further, UK-owned businesses were slightly more likely to be supported to create new jobs rather than safeguard existing jobs: it is estimated that they would be creating 29,067 new jobs (mean 53.9 jobs) and safeguarding 22,760 jobs (mean 72.9 jobs). By contrast, foreign-owned firms/plants were slightly more likely to have received financial assistance to safeguard jobs rather than creating new jobs. Just under two-fifths (38.0%) of the total estimate of created or safeguarded jobs under the RSA Scheme were in foreign-owned plants.

Table 3.1: Number of Estimated New and Safeguarded Jobs by Ownership in RSA-Assisted Businesses (2000-04)

	New Jobs	New Jobs	Safeguarded Jobs	Safeguarded Jobs
	Mean	**Total**	**Mean**	**Total**
UK-Owned	54.2	29,067	72.9	22,760
Foreign-Owned	112.7	14,649	150.3	17,137
Total	**65.3**	**43,716**	**93.7**	**39,897**

Source: BERR and RDA Client Administrative Data

From the RSA Scheme administrative data received from BERR and the RDAs we estimate that of this total offer amount £192.3 million (41.6%) has been paid to date (mean value of payment: £319,437; median value of payment £140,000). However, as Table 3.2 shows, there is a great deal of variation in the status of each project with two-fifths of supported businesses currently (i.e., as at January 2006) receiving payments against the original offer amount. Only a third of cases (34.4%) could be considered completed at the time of the evaluation (i.e., 'completed case, conditions period expired' or 'project in conditions period').

Table 3.2: RSA Cases by Project Status

Project Status	No. of Cases	%
Accepted by company	194	24.7
Completed case, conditions period expired	29	3.7
Payment being made	320	40.8
Project in conditions period	241	30.7
Total	**784**	**100.0**

Source: BERR and RDA Scheme Administrative Database

For these completed cases we estimate that 92 per cent of the financial assistance offered was paid by the end of the project. This varies slightly between 94.4 per cent for UK-owned firms/plants and 87.6 per cent for Foreign-owned plants (Table 3.3).

Table 3.3: RSA Cases by Project Status and Amount Offered and Paid by Ownership (completed cases only)

Ownership	Latest Amount Offered	Amount Paid (January 2006)	Paid/Offer (%)
Foreign	£33,937,600	£29,731,600	87.6
UK	£57,776,000	£54,520,776	94.4
Total	**£91,713,600**	**£84,252,376**	**91.9**

Source: BERR and RDA Scheme Administrative Database

3.1.2 SFIE SCHEME (2004-2005)

In the 18 months from April 2004 to December 2005 there were 526[16] 'in-scope' SFIE beneficiary firms/plants in England which were included in the survey. Just under two-thirds (66.8%) were located in the North East, North West and Yorkshire and Humberside regions. Just over two-thirds (69.6%) of beneficiaries employed less than 50 employees at the time of offer. The average mean employment size of a SFIE beneficiary in this period was 586 employees (median 19 employees) and in total there were 307,268 employees in these 526 businesses[17]. Approximately, one in ten (9.3%) of SFIE beneficiaries were foreign-owned businesses (a further 2.7% were unknown on the SFIE dataset) – 3.4 per cent of all SFIE beneficiaries were US-owned. Almost three-quarters (72.6%) of the assisted business were in the Manufacturing sector with a further 12.2 per cent in Financial and Business Services.

Overall, these businesses received offers totalling £100.1 million in the period with an average mean level of financial assistance of £190,265 (median £80,000). Just over one in ten of all offers of financial assistance in the period were over £1 million. From the data received from BERR and the RDAs we estimate that of this total offer amount only £17.9 million has been paid to date (mean value of payment: £34,101) or 18 per cent of the total.

This total offer of £100.1m was related to the estimated 'creation' of 19,790 total jobs in recipient businesses in the period 2004-05, of which 9,660 were new jobs and 10,130 were safeguarded jobs (Table 3.4). UK businesses were responsible for almost two-thirds (62.0%) of these total jobs, which was an identical proportion to that observed for the previous RSA Scheme (see Table 3.1). Further, UK-owned businesses were more likely to be supported to create new jobs rather than safeguard existing jobs: it is estimated that they would be creating 7,049 new jobs (mean 18.6 jobs) and safeguarding 5,177 jobs (mean 30.8 jobs). These average levels of jobs for UK-owned businesses were significantly

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16 Again, as with the RSA dataset, this number was reached after a substantial cleaning process of the original dataset of 951 businesses received from BERR and the RDAs with the removal, for example, of those cases were the application was rejected, offers made but not yet accepted and those being vetted by the project officer. It is, therefore, an under-estimate of the total number of businesses receiving financial assistance under the new SFIE Scheme in the period. See Appendix 1 for a full account of the attrition process.

17 However, it would appear that the beneficiary dataset may include some reporting of worldwide employment in this total and the mean is perhaps inflated as a result. Removing these outliers it is clear that the SFIE beneficiary is much smaller in employment size than the previous RSA beneficiary.

lower than for the RSA Scheme and reflects the smaller amounts of financial assistance offered.

By contrast, foreign-owned firms/plants supported under the new SFIE Scheme were more likely to have received financial assistance to safeguard jobs rather than creating new jobs – by a ratio of almost 2:1. The average number of safeguarded jobs in foreign-owned firms/plants was 183.4 jobs compared to 150.3 jobs in the previous RSA Scheme. By contrast, foreign-owned SFIE beneficiaries estimated that they would create 74.6 new jobs compared to 112.5 new jobs under the RSA Scheme.

Table 3.4: Number of Estimated New and Safeguarded Jobs by Ownership in SFIE Assisted Businesses (2004-05)

	New Jobs	New Jobs	Safeguarded Jobs	Safeguarded Jobs
	Mean	**Total**	**Mean**	**Total**
UK-Owned	18.6	7,049	30.8	5,177
Foreign-Owned	74.6	2,611	183.4	4,953
Total	**23.2**	**9,660**	**51.9**	**10,130**

Source: BERR and RDA Client Administrative Data

Before beginning to assess the degree of additionality associated with the financial assistance provided under the two Schemes, we are able to observe that, on average, a 'promised' job under the new SFIE Scheme costs £5,058 (£5,160 for foreign-owned businesses and £4,993 for UK-owned businesses) compared to £5,531 (£6,333 for foreign-owned businesses and £5,039 for UK-owned businesses) under the previous RSA Scheme[18].

3.2   Response Rates and Sample/Population Profiles

Given the relatively small universe of assisted businesses under the two schemes and the resources available the approach to sampling was simply to undertake a census of the population of assisted businesses under the two schemes in anticipation of response rates of around 50 per cent. Overall, out of the total population of 1,310 RSA and SFIE beneficiaries there were 886 respondents to the telephone survey and they were distributed across the two sample groups as follows:

● RSA Beneficiary – 319 (Response Rate 60%)

● SFIE Beneficiary – 162 (Response Rate 58%)

● Non-Beneficiary – 405 (Response Rate 20%)

Response rates can be calculated in a variety of ways. A common approach is simply to express the number of completed interviews as a percentage of

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18   No allowance is made here for the administrative costs in the RDAs or BERR associated with the operation (i.e., appraisal and monitoring) of these two Schemes.

the number of completed interviews plus refusals. This was not our preferred method as it tends to over-state the level of response in the survey. Rather, the response rates were calculated on the basis of the 'usable' sample loaded into the CATI system for the telephone survey. In effect, the 'in scope' sample drawn from the BERR and RDA databases was greatly reduced as a result of further identification of duplicates, no company name/contact name and the CATI system rejecting the telephone number. Appendix 1 sets out the calculations of the response rates for the beneficiary and non-user surveys.

3.2.1 RSA SCHEME

With such high response rates for the beneficiary groups the comparison between respondents and non-respondents reveals almost identical profiles in terms of size, sector, and ownership for the RSA Scheme (Tables 3.5 to 3.7).

Table 3.5: Comparison of RSA Respondents and Non-Respondents by Size[1]

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
(Blank)	3	1	13	2
None	3	3	24	3
1-9	1	1	9	1
10-19	3	3	23	3
20-49	19	19	148	19
50-99	26	24	195	25
100-249	26	26	206	26
250-499	11	15	103	13
500-999	6	6	47	6
1000+	2	2	16	2
Total	**100**	**100**	**784**	**100**

[1] This size profile for the RSA Scheme is slightly different to that reported for completed RSA projects in the period 1990-2003 – in that period 28 per cent employed 100 persons or more compared to 47 per cent in the 2000-2004 period (see Roome, 2005 "Linking BERR Business Support Schemes to the IDBR and SAMIS").

Table 3.6: Comparison of RSA Respondents and Non-Respondents by Sector

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
Construction	2	3	22	3
Production	74	74	583	74
Services	21	21	162	21
(Blank)	2	1	13	2
(Not used)	1	0	4	1
Total	**100**	**100**	**784**	**100**

Table 3.7: Comparison of RSA Respondents and Non-Respondents by Ownership

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
UK Owned	78	76	603	77
Foreign-Owned	21	23	174	22
(blank)	1	1	7	1
(Not used)	1	0	4	1
Total	**100**	**100**	**784**	**100**

The timing of assistance in the 2000-04 period will be an issue that needs to be addressed in the econometric analysis in Chapter 5 (see section 5.4) but it is important to present some descriptives on the nature of the potential problem at this stage. From Figure 3.1 it is clear that almost two-thirds (64.3%) of RSA beneficiaries who received assistance to safeguard jobs *only* had been offered this assistance in the period since January 2003. Importantly, around a fifth of RSA beneficiaries had only received assistance since January 2004 which means that there is, *a priori*, a greater likelihood of the econometric models under-estimating the effects of assistance in the 2004-06 period. This also explains why only two-fifths (41.6%) of the offered amount of assistance had been paid by January 2006.

Figure 3.1: RSA Beneficiaries: Safeguarded and/or Job Creations by Year of Assistance (% of Cases)

Figure 3.2 presents the data in terms of the proportion of jobs created or safeguarded. The data shows that four-fifths (79.6%) of all the safeguarded jobs were supported under the RSA Scheme in the period 2002-04. This has implications for the ability of the econometric model to fully capture the employment effects of assistance through the mechanism of safeguarded jobs. We return to this issue in some detail in section 5.4 of the report.

Figure 3.2: RSA Beneficiaries: Safeguarded and/or Job Creations by Year of Assistance (% of Jobs)
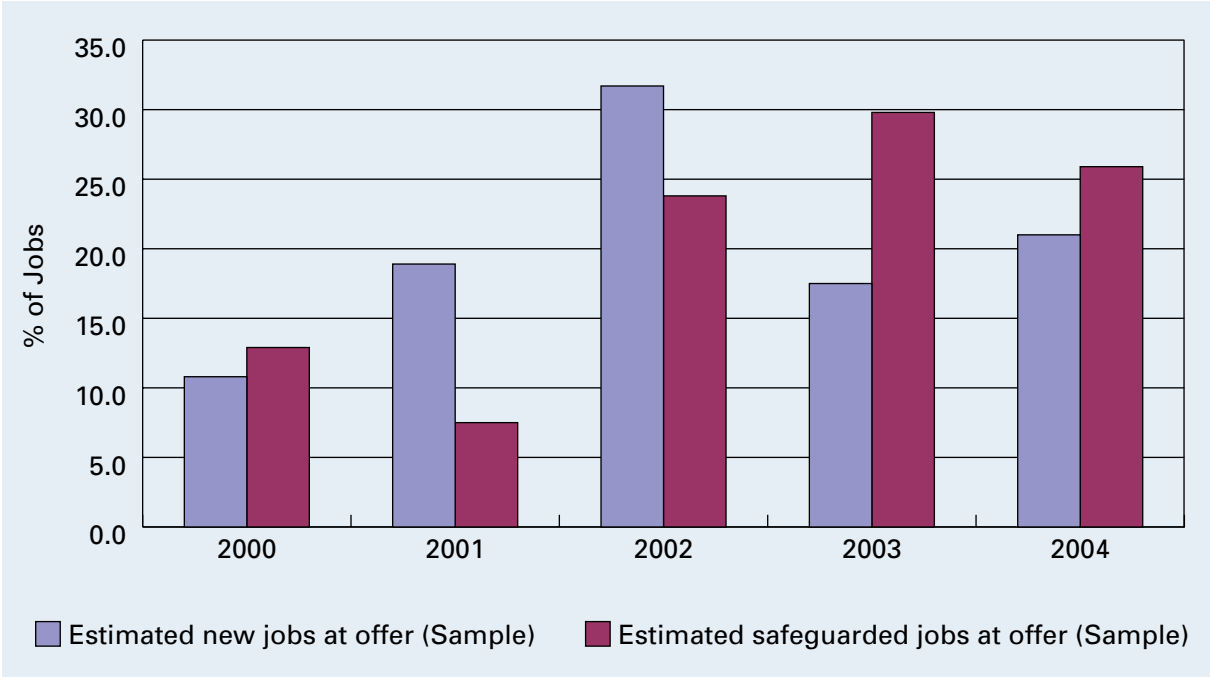
3.2.2 SFIE SCHEME

With respect to the SFIE Scheme Tables 3.8 to 3.10 illustrate that the profile of respondents and non-respondents is also well matched which increases the confidence we have in presenting unweighted results.

Table 3.8: Comparison of SFIE Respondents and Non-Respondents by Size

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
No. employees	3	4	20	4
1-4	6	6	30	6
5-9	10	10	55	10
10-19	13	15	75	14
20-49	20	18	96	18
50-99	12	8	47	9
100-199	6	7	33	6
200-249	1	1	5	1
250-499	2	2	11	2
500 or More	4	6	28	5
Unknown	23	24	126	24
Total	**100**	**100**	**526**	**100**

Table 3.9: Comparison of SFIE Respondents and Non-Respondents by Sector

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
Construction	1	4	18	3
Production	73	73	383	73
Services	25	23	125	24
Total	**100**	**100**	**526**	**100**

Table 3.10: Comparison of SFIE Respondents and Non-Respondents by Ownership

	Interviewed	Not interviewed	Total in scope	
	%	%	N	%
Don't know	2	3	14	3
UK-Owned	91	87	463	88
Foreign-Owned	6	11	49	9
Total	**100**	**100**	**526**	**100**

In only one respect do the two samples of RSA and SFIE respondents appear to differ. In terms of the latest offer (in the case of RSA) or forecast payments (in the case of SFIE) it would appear that, in the case of the SFIE Scheme, the survey was more likely to include beneficiaries of smaller amounts of financial assistance – defined here as less than £250,000 (Table 3.11). This is borne out by the fact that of the total £100.1 million offered to businesses under the SFIE Scheme, respondents to the evaluation survey only represented around a quarter of that total (i.e., £25.5 million: median size of financial assistance in the sample was £75,000). However, with respect to the RSA Scheme respondents to the survey represented just over a third (35.5%) of the total amount of £462.5 million offered under the scheme – that is, £164.3 million (median size of financial assistance in the sample was £200,000).

The reason for this is that the SFIE Scheme was designed to incorporate the former Enterprise Grant Scheme (EGS) which was closed at the time of the launch of the new scheme. We address this issue in the analysis by disaggregating the sample for both the RSA and SFIE Schemes into two groups on the basis of financial assistance offered: that is, above and below £100,000.

Table 3.11: Size of Financial Assistance by Respondents and Non-Respondents

Scheme and Size of Financial Assistance	Interviewed	Not interviewed
	%	%
SFIE: <=£250,000	92	88
RSA: <=£250,000	73	68

The distribution of the size of the financial assistance offered to respondents is displayed in Figure 3.3 and is in line with the aggregate data on the population of 'in-scope' businesses discussed above. There is a clear difference between the two schemes with almost three quarters (71%) of the assistance provided under the new SFIE scheme falling in the category of less than £100,000. This compares to only 14.4 per cent under the old RSA Scheme which was also much more likely to be offering assistance in excess of £1 million.

However, this difference can be explained by the fact that the new SFIE Scheme is designed to include beneficiaries who would have been assisted under the old Enterprise Grant Scheme (EGS) which provided grant assistance up to £100,000. For this reason direct comparisons between the old RSA and the current SFIE Scheme cannot be undertaken on a like-for-like basis. Within the sample of 162 SFIE beneficiaries there were 47 firms/plants (29%) who received offers of financial assistance of £100,000 or more. In subsequent chapters we address this issue by presenting the results for the SFIE Scheme split into two groups in order to identify a 'proxy' EGS group of beneficiaries: less than and greater than (or equal to) £100,000 of financial assistance. In addition, we access results from previous assessments of the impact of the old EGS in order to compare it with the smaller grant element of the new SFIE Scheme.

Figure 3.3: Size of Financial Assistance by Scheme (Sample)
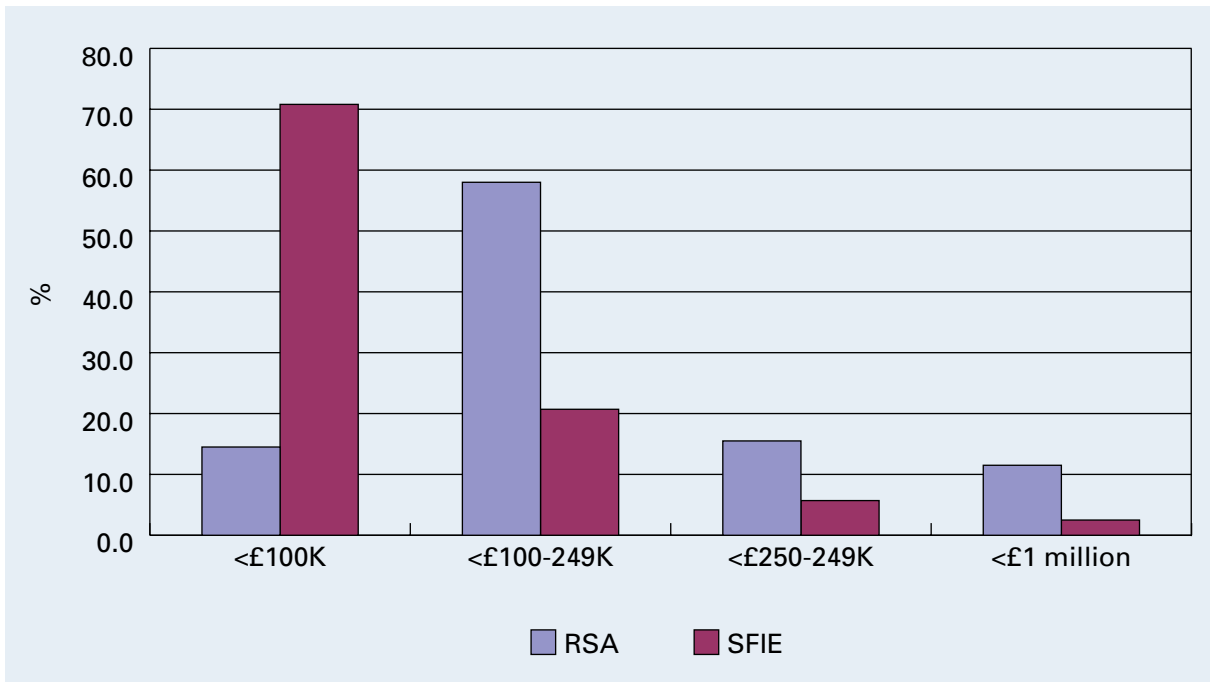
3.3   Regional Distribution of the Sample

The regional distribution of the achieved sample is set out in Table 3.12 and serves to confirm that just over two-thirds of assisted firms are located in the four Assisted Areas of the North East, North West and Yorkshire and Humberside: 69.6 per cent of RSA beneficiaries (i.e., 222 businesses) and 67.9 per cent of SFIE beneficiaries (i.e., 110 businesses).

One of the implications of this skewed distribution is that it will reduce the scope of the regional dimension to the econometric modelling in that a full set of 9 regional dummies for England will be problematic. However, it will be possible to undertake analysis using the three northern regions individually as well as other broad groupings such as the 'rest of England' or 'London and the South'.

Table 3.12: Regional Distribution of the Sample Groups

	RSA Beneficiary		SFIE Beneficiary		Non-Beneficiary		Total	
	N	%	N	%	N	%	N	%
London	13	4.1	8	4.9	17	4.2	38	4.3
East Midlands	21	6.6	8	4.9	30	7.4	59	6.7
East of England	15	4.7	5	3.1	23	5.7	43	4.9
North East	88	27.6	38	23.5	86	21.2	212	23.9
North West	75	23.5	36	22.2	95	23.5	206	23.3
South East	4	1.3	1	0.6	24	5.9	29	3.3
South West	16	5.0	8	4.9	22	5.4	46	5.2
West Midlands	28	8.8	22	13.6	46	11.4	96	10.8
Yorkshire & Humberside	59	18.5	36	22.2	62	15.3	157	17.7
Total	**319**	**100.0**	**162**	**100.0**	**405**	**100.0**	**886**	**100.0**

Chapter 4: Profiling RSA and SFIE Beneficiaries

4.1 Introduction

In this chapter as a prelude to the modelling of the effects of RSA assistance we consider the characteristics of RSA beneficiaries compared to the control group of non-assisted firms. Our objective here is to identify the key differences between each group which might influence their differential performance between the two groups. As we discussed in Chapter 3 the new SFIE Scheme is not directly comparable to the old RSA Scheme in that they include financial assistance to businesses that would normally have been supported under the old EGS Scheme. As a result we present a discussion of the profile of assisted businesses for the two Schemes separately compared to the non-user group[19]. However, a comparison of those SFIE cases that were offered assistance of £100,000 or more with RSA beneficiaries is presented at the end of the chapter.

The chapter is organised as follows:

- Section 4.2 focuses on the characteristics of RSA beneficiaries and the control group in terms of ownership, corporate structure and firm size and age all factors which have been shown to be important in other studies of business growth;

- Section 4.3 focuses on the characteristics of the partners and directors of assisted and non-assisted firms reflecting the quality of leadership in these enterprises and their openness to sharing equity as a means of promoting growth;

- Section 4.4 focuses on the strategic direction of assisted and non-assisted firms and the extent of business planning in the enterprise. Again both factors have been linked to business growth in previous studies;

- Section 4.5 focuses on the market situation and local market presence of assisted and non-assisted firms. In each case these factors will help to explain business performance. They are also important, however, in terms of shaping the multiplier or spillover effects from assisted firms;

- Section 4.6 focuses on both R&D and innovation which will again contribute to our understanding of firm performance and the outcomes of assistance;

- Section 4.7 presents a direct comparison between the characteristics of RSA and SFIE beneficiaries;

- Section 4.8 focuses on business growth – the key focus of the analysis of Chapter 5;

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19   It should also be remembered that the profile of the non-users was based on the RSA beneficiary profile (size, sector and region) as this was the control group to be used in the econometric analysis.

● Section 4.9 presents estimates of GVA measures derived from a series of questions on purchased inputs in the telephone survey.

4.2   Characteristics of RSA Beneficiaries

As part of the survey respondents were asked whether their business was UK-owned, foreign-owned or jointly owned and responses are given in Table 4.1. No statistically significant difference in the nationality of ownership was evident between RSA beneficiaries and the control group (χ^2 (2) =0.620, ρ =0.733). RSA assisted businesses were, however, more likely to be part of a larger multi-site group (53.6 per cent) than the control group of non-beneficiaries (44.9 per cent)[20]. The vintage of businesses in receipt of RSA (24.4 years) was also significantly less than that of the general population of firms (34.4. years)[21].

Table 4.1: Nationality of Ownership of RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
UK owned	73.4	75.8	74.7
Foreign owned	25.1	23.0	23.9
Jointly UK and foreign owned	1.6	1.2	1.4
Total	**100.0**	**100.0**	**100.0**

Notes: No significant difference was evident between the ownership profile of RSA beneficiaries and non-beneficiaries (χ^2 (2) =0.620, ρ =0.733).

Another factor which has proved important in previous studies of business growth has been the initial scale or size of the company with larger firms generally tending to grow more slowly. Here we consider two measures of size relating to the overall size of the business being assisted and then the site itself. Table 4.2 summarises firms responses in terms of the proportion of firms falling into various employment sizebands. Overall, there was no significant difference between the profile of company-wide employment in RSA beneficiaries and non-beneficiaries. RSA beneficiary sites do, however, tend to be larger than the group of non-beneficiaries as Table 4.3 suggests.

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20   χ^2 (1) =5.365, ρ =0.021.
21   T-statistics are as follows: t=-5.043, ρ <0.000. Non-parametric tests (Mann-Whitney U) also suggested that the distribution of ages of RSA beneficiaries and non-beneficiaries were significantly different (Z=-5.175, ρ <0.000).

Table 4.2: Business Size (all sites) of RSA Beneficiaries and Non-Beneficiaries

Number of employees	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Less than 100	9.9	13.2	11.8
100-249	20.4	18.6	19.4
250-499	13.4	13.7	13.6
500-999	14.8	10.8	12.4
1,000-1,999	9.9	7.4	8.4
2,000-4,999	8.5	11.3	10.1
5,000-9,999	8.5	5.4	6.6
10,000+	14.8	19.6	17.6
Total	**100.0**	**100.0**	**100.0**

Note: No significant differences exist between the distribution of company sizes for RSA beneficiaries and non-beneficiaries (χ^2 (7) =5.601, ρ = 0.587).

Table 4.3: Business Size of RSA Beneficiaries and Non-Beneficiaries (Assisted site only)

Number of employees	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
1-10	1.6	7.5	4.9
11-24	5.0	12.4	9.2
25-49	17.4	19.7	18.6
50-99	27.1	21.9	24.2
100-249	28.1	25.1	26.4
250+	20.8	13.4	16.7
Total	**100.0**	**100.0**	**100.0**

Note: Significant differences are evident between the distribution of employment in RSA assisted sites and non-assisted sites (χ^2 (5) = 32.051, ρ < 0.000).

Within the group of RSA beneficiaries, however, externally-owned firms or those which were partly externally owned were likely to have larger employment at the assisted site than was the case for UK-owned RSA beneficiaries. Most notably, 14.2 per cent of UK-owned, RSA beneficiaries had more than 250 employees compared to 38.3 per cent of externally-owned RSA beneficiaries.

Table 4.4: Business size of RSA beneficiaries – by ownership (Assisted site only)

	UK Owned	Foreign Owned	All RSA Beneficiaries
Number of employees	%	%	%
1-10	1.7	1.2	1.6
11-24	6.5	1.2	5.0
25-49	19.0	12.9	17.4
50-99	28.9	22.4	27.1
100-249	29.7	23.5	28.1
250+	14.2	38.8	20.8
Total	**100.0**	**100.0**	**100.0**

Note: Sites which were jointly UK and Foreign owned are allocated to the externally-owned group in this analysis. Significant differences are evident between the distribution of employment in UK-owned and externally-owned RSA assisted sites (χ^2 (5) = 27.78, $\rho < 0.000$).

4.3 Partners and Directors in UK Single Site Businesses

In this section we focus on a small number of indicators reflecting different dimensions of the leadership of RSA assisted businesses compared to the non-assisted controls. Our choice of indicators here reflects our previous experience of modelling small business performance as well as more general studies which have emphasised the importance of the characteristics, background and attitudes of the MD of a business in shaping its growth performance[22]. Note, however, that this type of indicator is less relevant in multi-national organisations. We, therefore, restrict our comparisons here to the group of UK-owned single-site businesses in the group of RSA beneficiaries and non-beneficiaries. To set this group in context, Table 4.5 compares employment in UK-owned, single site beneficiaries of RSA assistance and other RSA beneficiaries. UK-owned single-site RSA beneficiaries are markedly smaller than other RSA beneficiaries with only 6.3 per cent having employment greater than 250 compared to 32.6 per cent of other RSA beneficiaries.

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22   See, for example, Barkham *et al.,* (1996); Roper and Hart (2005); Mole *et al.,* (2007).

Table 4.5: Business Size of RSA Beneficiaries: UK-owned, single-site firms and other RSA Beneficiaries (Assisted site only)

	UK-owned Single-site	Other RSA	All RSA
Number of employees	%	%	%
1-10	2.8	0.6	1.6
11-24	9.2	1.7	5.0
25-49	23.2	12.6	17.4
50-99	30.3	24.6	27.1
100-249	28.2	28.0	28.1
250+	6.3	32.6	20.8
Total	**100.0**	**100.0**	**100.0**

Note: Significant differences are evident between the distribution of employment in UK-owned single-sites and other RSA assisted sites (χ^2 (5) = 43.10, ρ < 0.000).

First, in terms of the involvement of non-executive directors we see only a weak statistical difference between the proportions of RSA assisted firms with non-executive directors (27.7 per cent) and that for non-beneficiaries (24.2 per cent), and the proportion of firms in which the MD has an ownership stake in the business (Table 4.6). Significant differences are evident, however, between the involvement of the MD in other start-up businesses and their willingness to share equity. In both cases the MD's of RSA beneficiaries seem to have stronger entrepreneurial and growth orientations.

Table 4.6: Non-executives, Role of MD or Owner of RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Company has Non-exec directors	27.7	24.2	25.8
MD has ownership stake (>20 per cent)	73.9	73.0	73.4
MD is involved in other start-ups	45.2	30.4	37.2
MD would be willing to share equity to grow the business	54.7	39.4	46.7

Notes: Statistics are as follows: non-executive directors, t = 0.677, ρ = 0.499; ownership stake, t=0.170, ρ = 0.865; MD's involvement in other business start-ups, t=2.619, ρ = 0.009; and finally, willingness to share equity, t=2.415, ρ = 0.016.

Table 4.7: Highest Qualification Level of MD or Owner of RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
A degree, HND, masters degree or other higher degree	74.0	62.2	67.9
A-levels, AS-levels, Highers or OND	9.6	12.6	11.2
5 or more GCSEs grades A to C, 5 or more O-levels	5.8	12.6	9.3
NVQ level 2 or similar		3.6	1.9
CSEs or less than 5 GCSEs grades A to C or NVQ level 1	5.8	6.3	6.0
Other	4.8	2.7	3.7
Total	**100.0**	**100.0**	**100.0**

Note: Difference between distribution of highest qualifications of MDs of RSA beneficiaries and non-beneficiaries is not significant ($\chi^2(5) = 8.663$, $\rho < 0.123$).

In terms of other characteristics of company MDs which have been found to be important in previous studies of company growth, we find here no significant difference in the qualification profile of MDs between RSA beneficiaries and non-beneficiaries (Table 4.7) and or their age distribution (Table 4.8).

Table 4.8: Age band of MD or Owner of RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
Age band of MD	%	%	%
25-34	3.5	6.7	5.2
35-44	20.6	18.3	19.3
45-54	41.8	34.8	38.0
55-64	29.8	29.9	29.8
65 and over	4.3	10.4	7.5
Total	**100.0**	**100.0**	**100.0**

Note: Difference between age distribution of MDs of RSA beneficiaries and non- beneficiaries is not significant ($\chi^2(4) = 6.403$, $\rho < 0.171$).

4.4 Strategic Direction and Management of UK-owned Single Site Firms

We focus now on the strategic direction and management approach of RSA assisted firms compared to non-beneficiaries focussing again on the group of UK-owned single-site firms. It is worth noting initially, however, that among each group of firms 77-80 per cent of businesses had a formal business plan with no significant differences between groups[23].

Firms were then asked to identify their main business objective(s) (with multiple responses being allowed) with a focus on whether their aim was maintaining or increasing their market share with current products or the development of new products or services. The percentage of firms giving each response is given in Table 4.9. RSA beneficiaries were both more likely than non-beneficiaries to highlight increasing sales as a business objective rather than simply maintaining current levels of sales. Perhaps surprisingly, however, there was no statistical difference between the proportions of RSA beneficiaries and non-beneficiaries identifying the development of new products or services as a strategic priority (see notes to Table 4.9).

Table 4.9: Business Objectives of RSA Beneficiaries and non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
Business Objectives	%	%	%
Maintaining sales of your current products or services	20.7	26.9	24.2
Increasing sales of your current products or services	74.6	67.2	70.4
Developing new products or services	23.8	21.7	22.7

Notes: Statistics are as follows for firms emphasising maintaining sales as their main business objective: t=1.965, ρ=0.050; for firms emphasising increasing sales as their main business objective: t=2.204, ρ=0.028; for firms emphasising the development of new products or services as their main business objective: t=0.666, ρ=0.506

In terms of management style we asked firms to indicate which approaches most closely matched their management approach, again allowing multiple responses. Four alternatives were provided, intended to provide an indication of the extent to which managers were adopting a hierarchic or more consensual approach to managing and organising the business. In general terms we find most evidence of team-working in RSA beneficiaries rather than non- beneficiaries with RSA beneficiaries also placing significantly less emphasis on close supervision. No significant differences were evident between groups in terms of either working practices or initial recruitment (see notes to Table 4.10).

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23   Statistics are as follows comparing the proportion of firms having a business plan: t=0.754, ρ=0.451.

Table 4.10: Management Approach: RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Teamworking across staff and management	75.5	68.4	71.5
Close supervision	16.0	21.2	18.9
The establishment of standard working procedures	27.3	25.7	26.4
Careful initial staff selection, and investment in training and development	27.9	32.6	30.5

Notes Statistics are as follows for firms emphasising teamworking: t=2.141, =0.033; for firms emphasising close supervision: t=-1.814, =0.070; for firms emphasising the development of standardised working practices: t=0.481, =0.630; for firms emphasising initial selection and staff development: t=-1.368, =0.172.

4.5   Markets and Local Linkages

Comparing profiles of export intensity highlights significant differences between RSA beneficiaries and non-beneficiaries with RSA beneficiaries having a stronger export market orientation (Table 4.11). Nearly a fifth of RSA beneficiaries but only around a tenth of all non-beneficiaries were exporting more than 75 per cent of their sales. Conversely, RSA non-beneficiaries had a stronger local market orientation with around a third of these firms having more than 30 per cent of their sales in local markets compared to around 22 per cent of RSA beneficiaries (Table 4.12). The impression created here is that the group of RSA beneficiaries were, in general, more export and less locally focussed in terms of sales.

Table 4.11: Export Intensity of RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
Percentage Export Sales	%	%	%
Up to 5	24.2	33.8	29.0
Between 6 -10	13.9	14.9	14.4
Between 11 -15	5.7	3.6	4.6
Between 16 -25	9.8	8.7	9.3
Between 26 -50	13.4	18.5	15.9
Between 51 -75	14.4	10.3	12.3
More than 75	18.6	10.3	14.4
Total	100.0	100.0	**100.0**

Notes: Export orientation of RSA beneficiaries is stronger than that for non-beneficiaries ($\chi^2(6) = 11.781$, $\rho < 0.067$).

Table 4.12: Proportion of Sales which are local (within 20 miles) for RSA Beneficiaries and Non-Beneficiaries

Percentage	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Zero/nothing	0.0	1.4	0.8
Up to 10%	61.9	45.0	52.3
11-20%	11.3	11.8	11.6
21-30%	5.0	8.1	6.7
More than 30%	21.9	33.6	28.6
Total	**100.0**	**100.0**	**100.0**

Notes: Local market orientation of RSA beneficiaries is weaker than that for non-beneficiaries (χ^2 (4) = 12.922, $\rho < 0.012$).

Significant differences were also evident in terms of firms' assessments of the cross and own price sensitivity of the markets in which they were operating. Specifically, in the survey firms were asked by how much the demand for their own product would change if they and their main competitor were able to reduce their price by 10 per cent. In terms of the cross price sensitivity the greatest impact was anticipated by RSA beneficiaries with smaller effects anticipated by non-assisted firms. The implication being that RSA beneficiaries regarded their markets as significantly more price sensitive than those of non-beneficiaries. In terms of own-price sensitivity the results largely conform to the same pattern with RSA beneficiaries suggesting larger impacts on demand of a 10 per cent price cut than the general population of firms (see notes to Table 4.13).

Table 4.13: Response to own and competitor price changes for RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Cross Price Sensitivity (% change)			
The same	26.1	31.6	29.2
Up to 10 lower	31.3	37.8	34.9
10 – 20 lower	19.8	16.2	17.8
20 – 30 lower	10.4	6.8	8.4
Or, more than 30 lower	12.3	7.7	9.7
Total	100.0	100.0	100.0
Own Price Sensitivity (% change)			
The same	18.6	27.0	23.3
Up to 10 lower	34.9	33.9	34.4
10 – 20 lower	15.9	15.8	15.8
20 – 30 lower	15.1	8.8	11.6
Or, more than 30 lower	15.5	14.5	15.0
Total	**100.0**	**100.0**	**100.0**

Notes: Statistics are as follows for firms' cross price sensitivity comparing RSA beneficiaries and non-beneficiaries, $\chi^2(4)=10.057$, $\rho =0.039$ and for own-price sensitivity: $\chi^2(4)=9.491$, $\rho =0.050$.

As part of the survey we also asked firms around their purchasing patterns asking companies to identify the location of their suppliers. A relatively complex pattern emerges, with RSA beneficiaries less likely to have intra-group suppliers, but more likely to have non-local suppliers within the local region, extra-regional suppliers and international suppliers (Table 4.14). Local suppliers were also quantitatively less important for RSA beneficiaries than for other firms with only a quarter of RSA beneficiaries having more than 30 per cent of their inputs from local suppliers, something true of 38 per cent of non-beneficiaries (Table 4.15).

Table 4.14: Sources of Inputs for RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Other parts of your parent company	7.8	9.9	9.0
Local suppliers, within 20 miles of your site	54.5	53.3	53.9
Suppliers based elsewhere in the region	55.8	45.4	50.0
Suppliers based elsewhere in the UK, but outside of the region	81.5	72.1	76.2
Suppliers based overseas	65.5	49.9	56.8

Notes: Statistics are as follows for firms reporting purchases from other group firms: t=-0.964, ρ =0.0335; for firms reporting purchases from other local suppliers: t=0.324, ρ =0.746; for firms reporting purchases from other regional suppliers: t=2.781, ρ =0.006; for firms reporting purchases from other UK firms outside their home region: t=3.017, ρ =0.003; for firms reporting international purchases: t=4.290, ρ <0.000.

Table 4.15: Extent of Local Purchasing for RSA Beneficiaries and Non-Beneficiaries

Percentage	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Zero/nothing	0.0	0.6	0.3
Up to 10%	45.0	38.5	41.6
11 -20%	20.1	11.8	15.8
21 -30%	10.7	11.2	11.0
More than 30%	24.2	37.9	31.3
Total	100.0	100.0	**100.0**

Notes: Statistics are as follows for firms reporting international purchases: t=9.774,   <0.044.

4.6   R&D and Innovation

In terms of the proportion of RSA-assisted firms undertaking R&D we find a marginal difference between RSA beneficiaries and non-beneficiaries although there is no consistent evidence of RSA beneficiaries undertaking different types of R&D activity to non-recipient firms. Similarly, while RSA beneficiaries are as likely as non-beneficiaries to be making product changes they are more likely to be making process changes (Table 4.16).

Table 4.16: R&D and Innovation Activity RSA Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries	Non-Beneficiaries	All Firms
	%	%	%
Undertaking R&D	50.9	44.8	47.5
Basic product research	22.6	22.2	22.4
Applied product research	36.4	29.6	32.6
Basic process research	12.2	12.3	12.3
Applied process research	20.7	17.3	18.8
Product innovation	57.7	56.9	57.3
Process innovation	55.7	41.6	47.9

Notes: T statistics are as follows: undertaking R&D t=1.645, ρ = 0.100; basic product research, t= 0.111, ρ=0.911; applied product research, t = 1.909, ρ=0.057; basic process research; t=-0.049, ρ=0.961; applied product research; t=1.155, ρ=0.249; product innovation; t=0.224, ρ = 0.822; process innovation, t=3.762, ρ = 0.000.

4.7   Characteristics of RSA and SFIE Beneficiaries

We now present the characteristics of the SFIE beneficiaries in the sample and compare them directly to RSA beneficiaries. However, due to the issue of the new Scheme incorporating former EGS cases the tables include data on a sub-group of SFIE beneficiaries which could be said to correspond to the previous RSA Scheme – namely those in receipt of financial assistance of £100k or more.

Table 4.17 shows that a notably larger proportion of SFIE beneficiaries in England were UK owned (93 per cent) than was the case with RSA (73 per cent), with very similar proportions being jointly-owned (0.6-1.6 per cent). This difference was statistically significant at the 1 per cent level (χ^2 (2) =24.75, ρ <0.000). However, if one restricts the analysis to only those SFIE cases in receipt of financial assistance of £100k and over, to ensure a more accurate like-for-like comparison with the previous RSA Scheme, it is clear that this difference is no longer significant.

Table 4.17: Nationality of ownership of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
UK owned	73.4	92.6	78.7
Foreign owned	25.1	6.8	21.3
Jointly UK and foreign owned	1.6	0.6	0.0
Total	**100.0**	**100.0**	**100.0**
	N=319	N=162	N=47

Although it would appear that the move from RSA to SFIE has focussed assistance away from externally-owned firms and towards those owned from within the UK or jointly by UK and external partners, this can be simply attributed to the SFIE Scheme now incorporating previous EGS assisted cases. The vintage of businesses assisted by RSA (24.4 years) and SFIE (21.8 years) is broadly similar and again when we restrict the comparison to the larger SFIE cases (i.e., £100k and above) the average age for SFIE beneficiaries rises to 26.4 years.

Table 4.18 summarises responses in terms of the proportion of firms falling into various employment size bands with a clear focus among SFIE beneficiaries on smaller firms with less than 100 employees. This is consistent with the incorporation of former EGS cases noted earlier. Nevertheless, once the smaller SFIE grant cases are removed this difference is still in evidence, although the sample size here is very small.

Table 4.18: Business Size (all sites) of RSA and SFIE Beneficiaries

Number of employees	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Less than 100	9.9	50.0	26.1
100-249	20.4	16.7	21.7
250-499	13.4	4.8	4.3
500-999	14.8	7.1	8.7
1,000-1,999	9.9	2.4	4.3
2,000-4,999	8.5	9.5	17.4
5,000-9,999	8.5	2.4	4.3
10,000+	14.8	7.1	8.7
Total	**100.0**	**100.0**	**100.0**
	N=195	N=43	N=23

Similar differences are evident if we focus on the employment of the assisted site with a clear tendency for SFIE beneficiaries to be smaller than RSA beneficiaries (χ^2 (5) =121.14, ρ <0.000) (Table 4.19). However, this difference disappeared once the smaller SFIE cases were removed from the comparison.

Table 4.19: Business Size of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
Number of employees	%	%	%
1-10	1.6	16.0	2.1
11-24	5.0	27.2	4.3
25-49	17.4	25.9	23.4
50-99	27.1	17.3	29.8
100-249	28.1	8.6	25.5
250+	20.8	4.9	14.9
Total	**100.0**	**100.0**	**100.0**
	N=319	N=162	N=47

In terms of non-executive directors we see only a weak statistical difference between the proportion of RSA assisted firms with non-executive directors (27.7 per cent) and that for SFIE beneficiaries 18.4 per cent, Table 4.20)[24]. Again this difference is not in evidence once the smaller SFIE cases are removed from the analysis.

Table 4.20: Non-executives, Role of MD or Owner of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Company has Non-exec directors	27.7	18.4	28.6
MD has ownership stake (>20 per cent)	73.9	89.4	61.9
MD is involved in other start-ups	45.2	43.9	38.1
MD would be willing to share equity to grow the business	54.7	56.0	57.1

As one might expect the full sample of SFIE beneficiaries were more likely to be owner-managed enterprises than RSA beneficiaries (t=-3.216, ρ =0.001), but this is reversed once the smaller SFIE cases are removed. In terms of beneficiaries' MDs' involvement in other business start-ups we find no difference between RSA and SFIE beneficiaries (t=0.195, ρ =0.848). This is reflected in MD's attitude to sharing equity to facilitate business growth, with similar open attitudes among both RSA and SFIE beneficiaries (Table 4.20).

In terms of other characteristics of company MDs which have been found to be important in previous studies of company growth, we find here no significant difference in the qualification profile of MDs between assisted and non-assisted

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24   T-statistics for non-executive directors are as follows: RSA v SFIE t =0.677, rho=0.499.

groups, irrespective of size of grant received by the SFIE beneficiaries (Table 4.21)[25].

Table 4.21: Highest Qualification Level of MD or Owner of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
A degree, HND, masters degree or other higher degree	74.0	65.4	73.3
A-levels, AS-levels, Highers or OND	9.6	15.4	13.3
5 or more GCSEs grades A to C, 5 or more O-levels	5.8	7.7	13.3
NVQ level 2 or similar		1.3	
CSEs or less than 5 GCSEs grades A to C or NVQ level 1	5.8	7.7	
Other	4.8	2.6	
Total	**100.0**	**100.0**	**100.0**
	N=114	N=115	N=21

More interesting differences emerge in the age band of MDs, with SFIE beneficiaries being on average younger than RSA beneficiaries. On the basis of previous studies which have tended to suggest a negative correlation between MD or owner-manager age and business growth, we would expect this to contribute positively to more rapid growth in SFIE beneficiaries[26].

Table 4.22: Age band of MD or Owner of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
Age band of MD	%	%	%
25-34	3.5	5.5	11.1
35-44	20.6	35.8	38.9
45-54	41.8	23.9	22.2
55-64	29.8	24.8	22.2
65 and over	4.3	10.1	5.6
Total	**100.0**	**100.0**	**100.0**
	N=144	N=115	N=18

25 Statistics are as follows: comparing the qualification profile of RSA beneficiaries and SFIE beneficiaries, χ^2 (5) = 4.119, rho=0.532.
26 Statistics for the age distribution of MDs are as follows: comparing the profile of RSA beneficiaries and SFIE beneficiaries, χ^2 (5)=15.259, rho=0.004.

We focus now on the strategic direction and management approach of both groups of assisted firms, but it is worth noting initially that among each group of assisted firms 75-80 per cent of businesses had a formal business plan with no significant differences between groups[27]. Interestingly, for the larger SFIE grant beneficiaries the percentage rises to from 75 to 87.2 per cent which perhaps reflects the complexity of the application process under the new scheme. We return to this point later in the report (see Chapters 5 and 6).

Firms were then asked to identify their main business objective (with multiple responses being allowed) with a focus on whether their aim was maintaining or increasing their market share with current products or the development of new products or services. The percentage of assisted firms giving each response is given in Table 4.23. RSA and SFIE beneficiaries were both as likely to highlight increasing sales as a business objective rather than simply maintaining current levels of sales. Perhaps surprisingly there were no statistical differences between the proportions of firms in each group identifying the development of new products or services as a strategic priority (see notes to Table 4.23). Controlling again by the size of grant received by the SFIE assisted businesses illustrates that the larger SFIE grant beneficiaries were less likely to report maintaining sales as a main business objective.

Table 4.23: Business Objectives of RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
Business Objectives	%	%	%
Maintaining sales of your current products or services	20.7	15.4	12.8
Increasing sales of your current products or services	74.6	80.2	72.3
Developing new products or services	23.8	28.4	27.7

Notes:

- Statistics are as follows for firms emphasising maintaining sales as their main business objective: RSA beneficiaries and SFIE beneficiaries, t=1.443, ρ =0.150.

- Statistics are as follows for firms emphasising increasing sales as their main business objective: RSA beneficiaries and SFIE beneficiaries, t=-1.418, ρ =0.157.

- Statistics are as follows for firms emphasising the development of new products or services as their main business objective: RSA beneficiaries and SFIE beneficiaries, t=-1.067, ρ =0.287.

We find a significantly higher proportion of RSA beneficiaries emphasising team working than SFIE beneficiaries although this narrows when we focus only on the larger SFIE grant beneficiaries. No significant differences were evident between the two full samples of assisted groups in terms of either working practices or initial recruitment (see notes to Table 4.24), although larger SFIE beneficiaries reported higher proportions.

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27 Statistics are as follows: comparing the proportion of firms having a business plan: RSA beneficiaries and SFIE beneficiaries, t=0.602, rho=0.548.

Table 4.24: Management Approach RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Teamworking across staff and management	75.5	64.8	70.2
Close supervision	16.0	18.5	17.0
The establishment of standard working procedures	27.3	25.9	36.2
Careful initial staff selection, and investment in training and development	27.9	34.6	36.2

Notes:

• Statistics are as follows for firms emphasising teamworking: RSA beneficiaries and SFIE beneficiaries, t=2.402, ρ =0.017.
• Statistics are as follows for firms emphasising close supervision: RSA beneficiaries and SFIE beneficiaries, t=-0.686, ρ =0.493.
• Statistics are as follows for firms emphasising the development of standardised working practices: RSA beneficiaries and SFIE beneficiaries, t=0.316, ρ =0.752.
• Statistics are as follows for firms emphasising initial selection and staff development: RSA beneficiaries and SFIE beneficiaries, t=0.712, ρ =0.477.

Comparing profiles of export intensity between the two assisted groups highlights significant differences between RSA and SFIE beneficiaries (Table 4.25)[28]. Nearly a quarter of RSA beneficiaries and around a third of SFIE beneficiaries had little export sales (less than 5 per cent).

Table 4.25: Export Intensity of RSA and SFIE Beneficiaries

Percentage Export Sales	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Up to 5	24.2	35.5	31.8
Between 6 -10	13.9	17.1	9.1
Between 11 -15	5.7	6.6	9.1
Between 16 -25	9.8	10.5	9.1
Between 26 -50	13.4	15.8	18.2
Between 51 -75	14.4	9.2	18.2
More than 75	18.6	5.3	4.5
Total	**100.0**	**100.0**	**100.0**
	N=196	N=76	N=22

For more than a third of SFIE beneficiaries local sales accounted for 30 per cent or more of all sales compared to 21 per cent for the larger firms which received RSA assistance (Table 4.26)[29]. The impression created here is that the group of

28   Statistics are as follows for the pattern of firms export sales: RSA beneficiaries and SFIE beneficiaries, χ^2 (6) =10.908, rho=0.091.
29   Statistics are as follows for the pattern of firms local sales: RSA beneficiaries and SFIE beneficiaries, χ^2 (4) =11.695, rho=0.020.

SFIE assisted firms (less so for the larger grants) were in general less export and more locally focussed in terms of sales than RSA beneficiaries.

Table 4.26: Proportion of Sales Which are local (within 20 miles) for RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Zero/nothing	0.0	2.3	0.0
Up to 10	61.9	42.0	57.1
11-20	11.3	15.9	9.5
21-30	5.0	6.8	4.8
More than 30	21.9	33.0	28.6
Total	**100.0**	**100.0**	**100.0**
	N=185	N=94	N=23

Significant differences were also evident in terms of firms' assessments of the cross and own price elasticity of the markets in which they were operating. As we stated earlier in the survey firms were asked by how much the demand for their own product would change if they and their main competitor were able to reduce their price by 10 per cent. In terms of the cross price elasticity a greater impact was anticipated by RSA beneficiaries on their own sales from any price reduction on the part of their competitors compared to SFIE assisted firms. The implication being that RSA beneficiaries regarded their markets as significantly more price sensitive than those inhabited by SFIE beneficiaries.

In terms of own-price elasticity the results largely conform to the same pattern with RSA beneficiaries suggesting larger impacts on demand of a 10 per cent price cut than SFIE beneficiaries (see notes to Table 4.27). Alongside this difference in own and cross price elasticity there is also a significant difference in the proportion of firms in each assisted group (74% for SFIE beneficiaries and 82% for RSA beneficiaries) which regard themselves as facing intense or very intense competition in their main markets[30]. The proportion of larger SFIE cases was 81 per cent.

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30   Statistics are as follows where these relate to the proportion of firms reporting either intense or very intense competition: RSA beneficiaries and SFIE beneficiaries, t=2.187, rho=0.030.

Table 4.27: Response to own and competitor price changes for RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Cross Price Elasticity			
The same	26.1	38.9	37.8
Up to 10 lower	31.3	26.0	35.1
10 – 20 lower	19.8	19.8	13.5
20 – 30 lower	10.4	4.6	2.7
Or, more than 30 lower	12.3	10.7	10.8
Total	**100.0**	**100.0**	**100.0**
	N=318	N=160	N=37
Own Price Elasticity			
The same	18.6	33.6	31.4
Up to 10 lower	34.9	31.3	34.3
10 – 20 lower	15.9	12.2	11.4
20 – 30 lower	15.1	9.2	8.6
Or, more than 30 lower	15.5	13.7	14.3
Total	**100.0**	**100.0**	**100.0**
	N=319	N=162	N=35

Notes:

- Statistics are as follows for firms' cross-price elasticities: RSA beneficiaries and SFIE beneficiaries, χ^2 (4) = 9.380, ρ =0.052.
- Statistics are as follows for firms' own-price elasticities: RSA beneficiaries and SFIE beneficiaries, χ^2 (4) =11.913, ρ=0.018.

In terms of the type of customers (e.g. public bodies, other firms, consumers) we find little evidence that SFIE assisted firms, controlling for size of grant, are in any sense different from RSA assisted firms. In each case, however, it is important to realise that firms were allowed to identify more than one type of end-customer. Public sector sales were most common among the full sample of SFIE beneficiaries (35%) and only a fifth of RSA beneficiaries (Table 4.28). RSA-assisted firms were also significantly less likely to be dealing with private end-users than all SFIE beneficiaries but this difference does not hold for SFIE assisted firms who received more than £100,000.

Table 4.28: Types of Customers for RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Public Sector	22.3	34.6	25.5
Other Businesses	94.7	92.6	93.6
Private Consumers	14.4	28.4	17.0

Notes:

- Statistics are as follows for firms highlighting public sector customers: RSA beneficiaries and SFIE beneficiaries, t=-2.789, ρ =0.008.
- Statistics are as follows for firms highlighting sales to other businesses: RSA beneficiaries and SFIE beneficiaries, t=-0.860, ρ =0.391.
- Statistics are as follows for firms reporting sales to end users: RSA beneficiaries and SFIE beneficiaries, t=-3.439, ρ =0.00.

Purchasing patterns with local suppliers were broadly similar across the assisted groups. The larger, more export oriented RSA beneficiaries were also more likely to have national or international suppliers. 65.5 per cent of these firms indicated they had international suppliers compared to 43.2 per cent of SFIE beneficiaries, but 51.1 per cent of SFIE cases receiving financial assistance of £100,000 or more (Table 4.29).

Table 4.29: Sources of Inputs for RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Other parts of your parent company	7.8	3.7	2.1
Local suppliers, within 20 miles of your site	54.5	51.2	44.7
Suppliers based elsewhere in the region	55.8	39.5	38.3
Suppliers based elsewhere in the UK, but outside of the region	81.5	71.6	76.6
Suppliers based overseas	65.5	43.2	51.1

Notes:

- Statistics are as follows for firms reporting purchases from other group firms: RSA beneficiaries and SFIE beneficiaries, t=1.951, ρ =0.052.
- Statistics are as follows for firms reporting purchases from other local suppliers: RSA beneficiaries and SFIE beneficiaries, t=0.686, ρ =0.493.
- Statistics are as follows for firms reporting purchases from other regional suppliers: RSA beneficiaries and SFIE beneficiaries, t=3.427, ρ =0.001.
- Statistics are as follows for firms reporting purchases from other UK firms outside their home region: RSA beneficiaries and SFIE beneficiaries, t=2.375, ρ =0.018.
- Statistics are as follows for firms reporting international purchases: RSA beneficiaries and SFIE beneficiaries, t=4.719, ρ =0.000.

Local sourcing was also more intensive among SFIE beneficiaries than among RSA beneficiaries, irrespective of grant size, with around 50 per cent of SFIE

beneficiaries indicating that local purchases accounted for more than 30 per cent of total purchases compared to 24 per cent of RSA beneficiaries (Table 4.30).

Table 4.30: Extent of Local Purchasing for RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Zero/nothing	0.0	0.0	0.0
Up to 10	45.0	18.6	25.0
11 -20	20.1	20.3	6.6
21 -30	10.7	8.5	18.8
More than 30	24.2	52.5	50.0
Total	**100.0**	**100.0**	**100.0**
	N=188	N=59	N=19

Notes:

Statistics are as follows for firms reporting international purchases: RSA beneficiaries and SFIE beneficiaries, t=18.593, ρ =0.000.

In terms of the proportion of grant beneficiaries undertaking R&D (Table 4.31) we find no significant difference between RSA beneficiaries and those firms which received SFIE assistance (t=1.21, ρ =0.227), irrespective of grant size. Few significant differences were evident between the types of research and development activity being undertaken by the two assisted groups, although RSA beneficiaries were more likely than SFIE beneficiaries to be undertaking applied product research (t=2.963, ρ =0.003), but this difference disappears if we control for grant size.

Table 4.31: R&D and Innovation Activity RSA and SFIE Beneficiaries

	RSA Beneficiaries	SFIE Beneficiaries	SFIE Beneficiaries (>£100k)
	%	%	%
Undertaking R&D	49.9	44.4	46.8
Basic product research	23.5	25.3	31.9
Applied product research	34.5	27.8	34.0
Basic process research	11.6	10.5	14.9
Applied process research	18.7	18.5	19.1
Product innovation	59.0	59.3	63.8
Process innovation	57.0	56.3	55.3

In terms of product innovation there is a broad similarity between the proportions of firms undertaking innovative activity across the groups of assisted firms.

4.8 Business Growth: RSA and SFIE Beneficiaries and Non-Beneficiaries

Comparing growth between beneficiary groups is complicated both because of the different periods over which assistance was received and because newer start-up firms may have particularly fast percentage growth rates. We, therefore, focus our comparisons on firms in each of the respondent groups which existed in 2000.

Table 4.32 below summarises the key growth comparisons for RSA beneficiaries and the non-beneficiary group. In each period both employment and turnover growth of the RSA beneficiaries is more rapid than that of non-beneficiaries both in terms of mean and median growth rates. The suggestion is that prior to receiving grant support and afterwards RSA beneficiaries were outperforming non-beneficiaries. The difference in growth performance is statistically significant for each variable and period with the exception of employment growth in the 2000 to 2002 period. In addition to comparing mean growth rates we are able to use non-parametric tests to compare the distributions of growth rates of RSA beneficiaries and non-beneficiaries. Again we find consistently significant differences (see notes to Table 4.32).

Table 4.32: Growth Comparison – RSA Beneficiary and Non-Beneficiary

	RSA Beneficiary		Non Beneficiary	
	Mean % pa	Median % pa	Mean % pa	Median % pa
Employment Growth				
2000 to 2002	6.98	0.00	-2.20	0.00
2002 to 2004	16.20	4.17	0.57	0.00
2004 to 2006	9.42	5.84	0.48	0.00
Turnover Growth				
2000 to 2002	27.14	6.25	6.84	0.00
2002 to 2004	16.07	6.87	4.96	0.57
2004 to 2006	20.90	8.33	5.53	4.54

Notes:

- Growth comparisons between RSA beneficiaries and non-beneficiaries are as follows: employment growth 2000 to 2002, t=0.900, ρ =0.369; employment growth 2002 to 2004, t=3.063, ρ =0.003; employment growth 2004 to 2006, t=3.036, ρ =0.003; turnover growth 2000 to 2002, t=2.081, ρ =0.038; turnover growth 2002 to 2004, t=3.684, ρ <0.000; turnover growth 2004 to 2006, t=2.702, ρ =0.008.

- Non-parametric Mann-Whitney tests are as follows: employment growth 2000 to 2002, Z=-3.967, ρ <0.000; employment growth 2002 to 2004, t=-6.248, ρ <0.000; employment growth 2004 to 2006, t=-6.702, ρ <0.000; turnover growth 2000 to 2002, t=-4.394, ρ <0.000; turnover growth 2002 to 2004, t=-4.665, ρ <0.000; turnover growth 2004 to 2006, t=-3.456, ρ =0.001.

For SFIE beneficiaries, data collection focussed on performance before and after receipt of support with some evidence that firms in receipt of support increased their average turnover and employment growth rate (Table 4.33). However, given the recent award of financial assistance under the scheme for many of the respondents it is extremely difficult to draw many conclusions from these figures. We report later in Chapter 6 evidence from the survey on the timing of the benefits for SFIE beneficiaries and some self-assessment of performance outcomes for the business.

Table 4.33: Growth Performance of SFIE Beneficiaries

	SFIE Beneficiary	
	Mean *% pa*	*Median* *% pa*
Employment Growth		
2004 to 2006	15.9	10.0
2004 to 2005	11.6	8.7
2005 to 2006	16.4	8.7
Turnover Growth		
2004 to 2006	19.4	12.5
2004 to 2005	17.0	9.6
2005 to 2006	20.8	14.3

4.9   GVA Measures

As part of the evaluation methodology we have attempted to estimate the impact of assistance on the value added at firm/plant level by using a proxy based on the percentage of annual turnover taken up by purchased inputs. This proxy has been developed in recognition of the difficulty in obtaining GVA information directly from the respondent business through the telephone survey. We present below the outcome of the analysis of the proxy variable for 2004 and 2006 (Table 4.34).

A GVA figure for each firm/plant is constructed for 2004 and 2006 by deriving an actual figure for purchased inputs using the percentage provided by the respondent. Once obtained an overall GVA figure and GVA per head figure are calculated for the business. Overall, 546 of the 886 respondents (61.6%) were able to indicate what proportion of their annual turnover in 2006 was made up of purchased inputs: that is, 225 RSA beneficiaries (70.5%); 111 SFIE beneficiaries (68.5%) and 210 non-beneficiaries (51.9%). These proportions fell dramatically for 2004: 21.6 per cent, 19.1 per cent and 16.0 per cent respectively. Accordingly, we were reliant on a supplementary question which sought to ascertain whether the proportion had changed or remained the same. This had the effect of increasing the proportion of firms/plants for which we were able to calculate a figure for the percentage of purchased inputs to 68.7 per cent (n=219) for RSA beneficiaries,

56.2 per cent (n=91) for SFIE beneficiaries and 45.2 per cent (n=183) for non-beneficiaries.

The results for changes in overall GVA, and GVA per head, over the period 2004-2006 for RSA beneficiaries and non-beneficiaries are presented in Table 4.34. Again we concentrate on only those firms/plants that were in existence in 2000 in order to control for the effects of newer firms/plants growing faster.

Table 4.34: GVA Comparison – RSA and SFIE Beneficiaries and Non-Beneficiaries

	RSA Beneficiaries		Non Beneficiaries		SFIE Beneficiaries	
	Mean % pa	*Median % pa*	*Mean % pa*	*Median % pa*	*Mean % pa*	*Median % pa*
	% pa	% pa	% pa	% pa	% pa	% pa
GVA Growth						
2004 to 2006	18.8	7.6	2.1	4.2	11.6	9.0
	N=150		N=122		N=72	
GVA per Head Growth						
2004 to 2006	11.4	2.1	7.0	4.4	5.7	2.3
	N=148		N=117		N=68	
GVA per Head						
2004	£40,473	£45,000	£28,314	£39,625	£43,626	£38,833
	N=169		N=142		N=74	
2006	£71,951	£47,600	£70,316	£44,097	£60,565	£45,448
	N=178		N=158		N=84	

Notes:

- Growth comparisons between RSA beneficiaries and non-beneficiaries are as follows: GVA growth 2004 to 2006, t=2.378, ρ =0.018; GVA per head growth 2004 to 2006, t=0.649, ρ =0.517.
- Non-parametric Mann-Whitney U tests are as follows: GVA growth 2004 to 2006, Z=-3.222, ρ =0.001; GVA per head growth 2004 to 2006, Z=-2.408, ρ =0.016.

Over the period 2004 and 2006 growth in GVA of the RSA beneficiaries is more rapid than that of non-beneficiaries both in terms of mean and median growth rates. The difference in growth performance is statistically significant. However, with respect to GVA per head growth the difference in mean growth rate is not statistically significant. The implication here is that the employment size of RSA-assisted firms/plants is larger than that of non-beneficiaries (see Table 4.3). In addition to comparing mean growth rates we are able to use non-parametric tests to compare the distributions of growth rates of RSA beneficiaries and non-beneficiaries. Again we find consistently significant differences (see notes to Table 4.34).

A final point to note is that the number of respondents in the sample providing even this proxy information is much reduced and will constrain its usefulness

as a dependent variable in the econometric modelling of the effects of the RSA assistance. We observe that the median GVA per head figure in both 2004 and 2006 was slightly higher than for non- beneficiaries (Table 4.34).

We include the SFIE beneficiaries in the analysis for indicative comparative purposes[31]. We note that the GVA per head figures (median) were marginally lower than for RSA beneficiaries which may well reflect, once again, the inclusion of what would have been former EGS cases within this group of assisted firms and the fact that the comparison will be affected by timing issues. However, the percentage growth in GVA over the 2004-06 period is similar to RSA beneficiaries and higher than the non-assisted group. The median growth in GVA per head over the same period is almost identical to RSA beneficiaries.

4.10 Summary

The previous descriptive analysis has highlighted a number of significant differences between each group of firms (i.e., RSA and SFIE beneficiaries and non-assisted firms). This is important as it suggests the importance of a multivariate analysis of firm growth and the impact of RSA assistance. The key contrasts between the characteristics and performance of RSA beneficiaries and non-beneficiaries are:

- RSA beneficiaries grew faster than non-beneficiaries both before and after receiving assistance.

- Over the period 2004 and 2006 growth in GVA of the RSA beneficiaries is more rapid than that of non-beneficiaries. However, with respect to GVA per head growth the difference in mean growth rate is not statistically significant due to the larger size of RSA beneficiaries in terms of employment.

- RSA beneficiaries tended to be younger (average 24.4 years) than non-RSA beneficiaries (34.4 years).

- RSA beneficiaries also tended to be larger than non-beneficiaries both in terms of employment in the assisted site but also in terms of employment in the whole company.

- RSA beneficiaries are more export oriented and less focussed on local markets than the general population of firms and operate in more price elastic markets. They are also less likely to be selling to the public sector and individual consumers than firms in the general population.

- Finally, RSA beneficiaries are more likely to be undertaking R&D and product and process innovation than non-beneficiaries.

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31   The non-beneficiary control group was constructed against the profile of RSA assisted firms and not SFIE assisted firms for the reasons already discussed in the evaluation methodology.

- Comparing RSA and SFIE beneficiaries is complicated by the fact that the replacement Scheme includes former EGS assisted businesses. For that reason the comparison of the two Schemes is limited. However, we do endeavour to control for this by presenting data on those SFIE assisted business who had received £100,000 or more in grant support (n=47). The results of this comparison reveal that SFIE beneficiaries are more likely to:
  - be smaller firms (i.e., less than 50 employees)
  - have younger owner-managers (i.e., less than 45 years)
  - have a business plan although this is clearly connected to the application process and the use of consultants (see Chapter 6)
  - be less likely to report 'maintaining sales for current products and services' as a business objective
  - be less export oriented and more locally focused in terms of sales
  - be operating in markets which were less price sensitive
  - have local suppliers and had higher levels of local purchasing

Overall, this comparative analysis is consistent with a conclusion suggesting the targeting of RSA assistance on larger firms, which might be expected to have many of the characteristics highlighted above. Further, it would appear that RSA assistance has been targeted at firms what are more likely to benefit from that assistance. Interestingly, however, the general expectation would be that larger firms would grow more slowly than smaller companies. This makes the performance of RSA assisted firms of particular interest, a subject we now turn to in Chapter 5.

Chapter 5: Estimating the Business Level Effects of RSA Assistance

5.1   Introduction: the fundamental econometric problem

The essential econometric problem is to determine the effect that RSA financial assistance has on firm performance. In other words to determine whether RSA beneficiaries grow faster than non-beneficiaries as a result of the assistance received. As is discussed in detail below, and in the annex to this chapter, there are certain econometric considerations associated with this. First, there are sample selection issues to be addressed and also, whether, in the case of inward investors, the availability of RSA financial assistance is essentially determined at the same time as the investment decision (i.e., an issue of endogeneity).

In these data, there are three potential measures of performance, output, employment, and a proxy for productivity. Output is perhaps the most intuitively appealing, though also the most problematic, as output in this context is measures by sales, which of course are the outcome of two structural equations, both of which include the price of the final good, which is unobservable. As such, one can estimate a sales equation without the identification problem, but it is likely to perform poorly. Productivity can be measured in any number of ways, though this again relies on good data, and proxying this as output/ employment, without good information on the capital stock is again unreliable. This leaves employment, which in general is perhaps the least appealing measure, though for the purposes of RSA is particularly attractive, as one of the main aims of RSA was to boost employment.

Within an econometric framework, the standard approach is to regress employment on a measure of RSA incidence, and a set of control variables, to determine whether RSA does indeed boost employment. Notice that this assumes a direction of causality here that may or may not be testable within the data, that firms in receipt of RSA tend to grow faster, rather than, for example, firms with high growth potential are better at obtaining RSA. It is reasonable to assume that "good" firms – those with high levels of managerial competence, good products, good processes, highly innovative etc., will be those that will perform well and grow. Equally, it is reasonable to assume that such firms are also those that are attractive for policy makers, especially at a local level looking to boost output and employment. Therefore, if one were to run a simple regression of growth against RSA, and detect a positive result, this positive implied effect of RSA may be subject to an upward bias, as it may be that better performing firms are also better at attracting RSA. In other words, we may have a strong correlation, but not necessarily a reliable inference for policy makers. Equally, if RSA is to an

extent targeted, at ailing firms, then OLS will understate the importance of RSA to the beneficiary firm compared with the counterfactual.

With a survey of cross sectional data, ascribing this causality can be problematic, and while our survey was conducted at a point in time, we do have employment and output data for the period prior to, and after, RSA was awarded. We can, therefore, to some degree, address this causality problem. The analysis presented here offers two approaches to the problem. The first is an approach based on all of the firms in the sample, irrespective of whether or not they are RSA beneficiaries, while the second looks at the subset of firms that are beneficiaries.

5.2   Addressing the Problem of Selection or Endogeneity

The econometric issues surrounding this type of problem are discussed in more detail in the technical Annex A to this chapter, but we make the following summary points. There are numerous ways of addressing the issue of sample selection, all of which rely in some sense on being able to treat the policy instrument, not as an exogenous variable (something determined outside of the system) but as an endogenous variable, that is that the likelihood of a firm receiving RSA financial support is in part dependent on the quality of the firm.

Before discussing the alternative econometric approaches, it is important further to consider the nature of the sample of firms that one is dealing with in such studies. In theory, all firms within a geographic (and sometimes sectoral) domain dictated by the particular policy are potential beneficiaries for support. One then has information on all beneficiaries (and sometimes either unsuccessful applicants and even successful applicants who subsequently did not follow through), but no information on those firms that either considered applying and did not, or those firms that for whatever reason did not consider applying.

One possible solution therefore to this, is to use a "Heckman" model. These are common in industrial economics, for example in relating ownership change to firm performance – is it that firms who have been taken over perform better (or worse) or is it that good (or bad) firms are the targets for takeover. This approach firstly involves estimating a Probit model, which seeks to explain the probability of a firm being a recipient of the policy. The purpose of this is to test whether there are any common factors in RSA beneficiaries, and also to capture additional characteristic differences between beneficiaries and non-beneficiaries that could not be identified when the sample was constructed.[32] If, however, the Probit fails to identify any systematic patterns in the recipient firms, then subject to the other considerations above, one can again revert to OLS. The results presented here, however, are suggestive of selection issues, or at least

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32   One may ask why this is necessary, when one has the information on recipient firms, but of course only limited information is available. Firms have, for example different types of customers, different growth trajectories, and even different ownership patterns, information on which may only be available after the survey.

that one can explain a high proportion of the probability of a firm obtaining RSA assistance with just a few key variables.

5.3 Limitations and Alternatives

However, it is also fair to say that this approach has its limitations and it is important to consider alternatives. This also depends on what one assumes with respect to the process of the allocation of RSA financial assistance. Before coming to the estimation results, it is important, as we noted earlier, to consider the nature of the firms/plants receiving assistance. RSA beneficiaries broadly fall into two categories. Firstly, single plant domestically owned enterprises seeking relatively small amounts of funds, and secondly large (typically foreign) multinationals seeking large grants. The work by Harris and Robinson (2005) focus to a large degree on the latter, while it is clear that in terms of both size and scope the former group became more important in the later years of RSA. Rather than simply pooling all of these firms together, we therefore present three sets of estimates, one for the full sample, and one for each of these two subgroups of firms/plants.[33]

The sample selection model essentially assumes that there exists a given set of projects or potential projects, some of which are eligible for RSA. Investors then bid for RSA funding, and based on a set of criteria, funding is then awarded to those projects for which the scheme is most applicable. This seems most appropriate for those firms who are UK-owned single site firms. Here, RSA is less important in the location decision than it is for MNEs, though the evidence hitherto suggests that it is important for future development.

However, for MNEs (be they UK or foreign owned) the allocation decision is rather different. This is not a matter of selecting "potential winners" or dealing with applications to determine whether an existing investment project meets a set of criteria, so much as RSA being determined simultaneously with the investment and location decision of the firm. The case studies undertaken as part of this evaluation, albeit with SFIE beneficiaries[34], and a large literature on the location decisions of firms confirms this, see for example Driffield (2004), and as such the econometric problem of determining the effect of RSA on the employment growth of foreign subsidiaries is perhaps not so much sample selection as endogeneity.

It is relatively easy to test whether a variable may be treated as exogenous, though in general these tests are recognised as having only relatively weak power. If a variable cannot be treated as exogenous, a common way of dealing with such problems in econometrics is to find an "instrument" – that is, a variable which is correlated with the endogenous variable, but is determined outside of

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33   It is important to note that there around 60 RSA cases that are UK owned multi-site businesses in the English sample. These are too small to be treated as a separate group for the econometrics, and while they are "more like" the UK single site businesses they are only included in the full sample estimation.

34   However, they were all with firms in receipt of over £100,000 and matched many of the characteristics of former RSA Scheme beneficiaries. Indeed, some had previously received RSA assistance.

the model. A fundamental problem in policy evaluation is that there are seldom good "instruments" for policy initiatives – as they are in general designed in some sense to correct market failure, and the policy maker attempts to gather as much information as possible about the firm when implementing the policy. We test the assumption of exogeneity of RSA assistance in the employment growth equation. This is strongly rejected in the case of MNEs, and borderline for the full sample and for UK singles (the probabilities that RSA assistance is exogenous are 0.06 and 0.14 respectively). It is well known, however, that such tests are sensitive to the choice of instruments, and to the issue of identification which is further discussed in the annex to this chapter. The convention therefore with such results is to proceed with caution, on the understanding that OLS is likely to produce biased results.

Perhaps the most simple is the straightforward "two stage least squares" or "instrumental variables" approach outlined above – subject to being able to obtain a suitable instrument. Finally, one can adopt a more conventional sample selection model, which tests for sample selection bias, but then only estimates the growth effects on the selected firms. This is similar to Heckman's "other" famous model, the treatment model.

Once one has determined whether endogeneity or sample selection bias exists, the issue then becomes one of how to proceed, and how to distinguish between these approaches. Here, we rely on what is intuitively appealing and consistent with previous literature on small firms, FDI and financing, along with some basic econometric tests.

In order to generate the final models, we draw upon a range of variables (obtained through the bespoke survey for this evaluation) derived from theory that have been shown to relate to the performance of firms and plants (e.g., R&D, innovation activity, business strategy, management capacity) as well as the descriptives from the previous chapter in order to generate some priors. The latter include, for example, that nationality is important, along with past growth, and the regional embeddedness of firms may also in part determine the probability of a firm to apply for, and receive RSA assistance. These priors were then coupled with a general-to-specific approach, where successive models were run, excluding insignificant variables until a parsimonious form was obtained for each of the three samples of firms.

5.4 Timing of Effects: Some Issues

What we are modelling is the performance (particularly employment given the objectives of the scheme) of the RSA-assisted business after an input of a capital subsidy and embedded within this model is the counterfactual position represented by a group of non-assisted businesses. In the case of the safeguarded component of assistance, either on its own or with assistance to create jobs as well, we can make the assumption that the employment performance of the firm or plant in the period 2004-06 would have been different from unassisted

firms or plants as a consequence of receiving the financial subsidy. For example, and taking the positive outcome of RSA assistance, they may have declined less quickly than similar unassisted businesses. Further, the intervention to safeguard jobs may have served to keep the firm or plant in business and as a result enables it to be 'present' at the start of the 2004-06 period. As such, its performance in this period is included in the model which seeks to assess whether the RSA assistance parameter is significantly associated with net employment creation in the 2004-06 period.

There is another broad issue with regard to the timing of the financial assistance received, especially with respect to the safeguarded jobs. The conceptual problem here is that we are conducting a cross-sectional econometric analysis to isolate the effects of RSA assistance when in effect the assistance has come at varying 'distances' back from the start of the modelling period for employment change – that is, 2004. At the design stage of this evaluation these issues were considered and the decision was taken that within the constraints of an evaluation using cross-sectional survey data modelling the effects of RSA assistance received in the 2000-04 period for the 2004-06 period was the only feasible option available.

This decision does, however, create a number of specific issues. First, the nature of the RSA assistance package allows businesses to draw down the monies offered over a 3-year period which means that a business receiving an offer in the first quarter of 2004 (i.e., the last quarter of the operation of the RSA Scheme) will not perhaps have fully realised the benefits of assistance and therefore, the model of employment change in the 2004-06 period may under-estimate the effects of assistance. Second, assistance received to safeguard jobs at the start of the period for this evaluation (i.e., 2000 or 2001) will already have had its effect on the firm or plant and to model employment change in a period far removed from the point of assistance may be problematic and lead to an over-estimate of the effects of assistance. We argue, however, that the assistance may have kept the firm in existence for the following 6 years. This is, of course, conjecture as we simply do not know what the answer to this question is[35]. Third, there is an assumption that the actual realisation of the effects of RSA assistance that was received by businesses in 2002 or 2003 will be fully captured by the models presented below. This may not be the case and again may under-estimate the effects of RSA assistance. In order to address these issues we will re-specify the econometric estimates to introduce a sensitivity analysis for an impact period 2002-2006 against which we can assess the original results. This is presented in section 5.7 along with the assumptions used and a more detailed discussion of the specification of the equation.

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35 We present evidence in Chapter 6 which suggests that for a large number of 'safeguarded only' cases (i.e., 27 out of 43 or 62.8%) the provision of RSA financial assistance was fully additional (i.e., the definitely or probably achieved the same business outcomes categories) suggesting that without it the firm or plant would have been unable to have safeguarded a large proportion of the jobs indicated to BERR at the time of application and/or offer.

5.5   The Probit Estimates

The first stage in estimating the impact of RSA assistance on beneficiaries is therefore the development of a series of Probit models of the probability of receiving RSA support. There are two purposes for doing this. Firstly, as outlined above, to test for any selectivity bias in RSA assistance and its subsequent growth effects, and secondly identify any elements of the targeting of policy which are not 'controlled' for by the structuring of our sample survey of non-beneficiaries. Initial estimates are reported in Table 5.1. Three models are reported with slightly different specifications to give an indication of robustness, with Model 3 providing the preferred model specification (Table 5.3). In each initial specification we also included a full set of regional dummy variables. These proved largely insignificant, however. Some key variables such as firm size have been retained in each model as this is perceived to be important for policy analysis.

Table 5.1: The Full Sample Probit: Dependent variable is receipt of RSA (0/1)

Parameter[36]	Estimate	Dp/dx[37]	t-statistic	P-value
C	-1.26843	-0.39703	-3.71794**	[.000]
US owned	-.456234	-0.14280	-1.26563	[.206]
Japan owned	.912532	0.28563	1.92990*	[.054]
ROW owned	.909183	0.28458	1.38723	[.165]
employment 2004	-.680525E-05	-2.13008D-06	-.024754	[.980]
Log(emp. growth 02-04)	.550291	0.17224	2.99345**	[.003]
Business Plan	.148258	0.046406	.905939	[.365]
Firm age	-.506121E-02	-0.0015842	-2.01065**	[.044]
Ltd company	.436314	0.13657	1.00594	[.314]
Multi-plant	-.352060	-0.11020	-2.51352**	[.012]
Yorks & Humber	.265130	0.082987	1.39157	[.164]
North West	.308522	0.096569	1.84021*	[.066]
North East	.344296	0.10777	1.98985**	[.047]
UK customers	.374497	0.11722	1.73339*	[.083]
EU customers	.345491	0.10814	2.46310**	[.014]
Generated productivity growth	.220390	0.068983	1.70989*	[.087]
Public sector customers	-.764807	-0.23939	-5.29508**	[.000]
Sell to other businesses	.570256	0.17849	2.17172**	[.030]
Source inputs from abroad	.429751	0.13451	2.94547**	[.003]
Sector dummies	Yes			

Number of observations = 482; Number of positive observations. = 223
LR (zero slopes) = 131.051 [.000]
Mean of dep. var. = .462656
Log likelihood = -267.226
Fraction of Correct Predictions = 0.701245
Pseudo R-sq 0.27; LM heteroscedasticity test ~ $\chi 2$ (1) 1.0985 (0.295)

It is important to interpret these variables correctly, particularly in the context of the ownership variables. A very high proportion of Japanese firms in the sample are RSA beneficiaries, while the same cannot be said of US firms. As one would expect, RSA is strongly correlated with three regions (only the North West and North East dummies are statistically significant), and younger firms are more likely to be RSA beneficiaries. It is also noticeable that firms that may be seen as being more "dynamic" in that they sell to other businesses, and source inputs from abroad are more likely to be supported by RSA, while firms that sell to the public sector are less likely to be beneficiaries.

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36   Annex B to this chapter contains definitions of all the variables used in the modelling reported in this chapter.

37   We present evidence in Chapter 6 which suggests that for a large number of 'safeguarded only' cases (i.e., 27 out of 43 or 62.8%) the provision of RSA financial assistance was fully additional (i.e., the definitely or probably achieved the same business outcomes categories) suggesting that without it the firm or plant would have been unable to have safeguarded a large proportion of the jobs indicated to BERR at the time of application and/or offer.

Table 5.2: The UK Single Plant Sample: Dependent variable is receipt of RSA (0/1)

Parameter	Estimate	$\delta p/\delta x$	t-statistic	P-value
C	-1.32160	-0.40396	-3.69549**	[.000]
Employment 2004	.748737E-03	0.00022886	1.27156	[.204]
Log (emp growth 02-04)	.443930	0.13569	1.76001*	[.078]
Business Plan	.279578	0.085455	2.35129**	[.0.01]
Firm age	-.013916	-0.0042535	-3.52152**	[.000]
UK customers	.855601	0.26152	2.78111**	[.005]
EU customers	.350281	0.10707	1.72477*	[.085]
Source inputs from abroad	.700664	0.21416	3.55108**	[.000]

Number of observations = 250 Scaled R-squared = .290866
Number of positive obs. = 122 LR (zero slopes) = 76.1000 [.000]
Log likelihood = -135.165
Pseudo R-squared = .366994
Fraction of Correct Predictions = 0.716000
LM heteroscedasticity test ~ χ^2 (1) 1.7885 (0.181)

With relatively few variables, the model predicts well for UK single plant firms, and again suggests that nationally and internationally orientated firms are more likely to be beneficiaries of RSA support, as are younger firms. The key variable here is the Business Plan variable used to 'instrument' the likelihood of obtaining RSA. SMEs that have an existing business plan (usually associated with seeking finance from elsewhere) are more likely to obtain RSA than those without[38]. Overall, these results are encouraging for policy makers, in that young, dynamic firms with international links are more likely to be beneficiaries of RSA than those with merely a local focus. This is potentially good news for policy makers, in that it suggests that domestic beneficiaries are more dynamic than average with higher rates of growth. This is again important when seeking to relate RSA to subsequent growth.

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38   This is a common finding in studies of this type (e.g., Barkham *et al.,* (1996); Roper and Hart (2005); Mole *et al.,* (2007). SMEs have to produce a business plan when seeking private sector finance, and while this may be correlated with the ability of managers, the writing of these is often subcontracted, and the existence of a business plan is seldom found to be related to firm performance.

Table 5.3: The Multinational Sample: Dependent variable is receipt of RSA (0/1)

Parameter	Estimate	Dp/dx	t-statistic	P-value
C	-1.63954	-0.51355	-2.36415**	[.018]
Employment 2004	.180986	0.056689	1.54764*	[.122]
Firm age	-.831119E-02	-0.0026033	-1.83109*	[.067]
Exporter	.228100	0.071447	.647293	[.517]
R&D	.211847	0.066356	.714129	[.475]
US owned	.283567	0.088820	.806671	[.420]
Japan owned	1.46358	0.45843	2.05609**	[.040]
ROW owned	1.47076	0.46068	2.35420**	[.019]
UK MNE	.224804	0.070414	.689333	[.491]
Local sourcing	.582807	0.18255	2.38633**	[.017]

Number of observations = 142
Number of positive obs. = 64 LR (zero slopes) = 39.2621 [.000]
Mean of dep. var. = .450704
Log likelihood = -78.1046
Pseudo R-squared = .344055
Fraction of Correct Predictions = 0.690141
LM heteroscedasticity test ~ χ^2 (1) 2.399 (0.124)

Of the three Probits the set of results for the MNE sample is most suggestive of a sample selection problem. The problem is, however, that very few inward investment projects into the UK are not at some point in receipt of RSA support. As a result, while the matched non-beneficiary group includes a sample of MNEs, many of these are UK firms rather than foreign ones. This is therefore suggestive of an endogeneity problem rather than a sample selection problem. Virtually all inward investors from Japan and the rest of the world (typically SE Asia) have been in receipt of RSA at some point, and firms that engage in local sourcing are some 18 per cent more likely to be RSA beneficiaries. Firm size is positively related to RSA, but with a very low level of significance.

5.6   The Employment Growth Equation Results[39]

In this section we report the estimates of the effect of RSA assistance during the 2000 to 2004 period on subsequent employment growth (over the 2004 to 2006 period). In each case our performance models are estimated for log growth rates in employment to allow for the standard log-normal distribution of business growth rates. As suggested above, and given the considerations outlined in the annex to this chapter, the preferred approach is to assume sample selection for UK single site operations (i.e., there is a link between management ability and the ability to get RSA assistance), and endogeneity rather than sample selection for the MNEs. For comparison we present the results from both estimations for the full sample of firms. For comparison, the OLS estimates are presented in the annex to this chapter, though we advise caution when reading the OLS results, for the reasons outlined above and in the Annex to this chapter.

The results presented in Table 5.4 suggest that, overall, there is indeed a sample selection issue, but that it acts if anything to understate the growth effects of RSA. This means that RSA has a positive effect on employment for the overall sample of RSA-assisted firms, but that for at least some firms, this takes the form of protecting employment rather than stimulating new jobs. As such, the selection term in the Heckman models is negative. The specific reasons for these results become clear when one looks at the UK single plants and MNE sub-groups separately (Tables 5.5 and 5.6).

Nevertheless, these results are broadly good news in that RSA financial support is positively related to employment growth, and the estimates are broadly consistent across all of the estimators. It is also clear that many of the individual factors associated with RSA in Table 5.1, are negatively associated with growth. UK MNEs have grown faster than others, while Japanese and SE Asian firms have not. Firms that source through imports have grown slower, and not surprisingly firm size is inversely related to growth.

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39   This section only reports the results for employment – dependent variable defined as the difference in the log of employment in 2004 and 2006. Equations were run for both sales and 'productivity' growth but were not significant and are not reported here.

Table 5.4: The Full Sample (Number of observations: 477)

Variable	Heckman Stage 2		2SLS	
	Coefficient	t-stat	Coefficient	t-stat
C	.135	1.529	.158	1.430
RSA	**.654**	**4.745***	**.671**	**3.658****
LEMPG42	-.0600	-1.108	-.0537	-.806
EMP04	-.0003	-4.186	-.0000	-3.306**
UKMNE	.133	2.565*	.133	2.070**
JAPAN	-.0463	-.481	-.067	-.545
ROW	-.3230	-2.292**	-.321	-1.836*
EXPORTER	-.011	-.247	-.013	-.233
LON	-.150	-1.781*	-.182	-1.737*
SW	-.168	-2.294**	-.193	-2.130**
WM	-.040	-.637	-.057	-.729
YH	-.094	-1.661*	-.109	-1.520*
NW	-.061	-1.159	-.078	-1.161
NE	-.149	-2.739*	-.163	-2.358**
CUSUK	-.131	-2.403**	-.136	-1.973**
PUBSECT	.136	2.787*	.139	2.221**
BUSINESS	-.118	-1.880	-.106	-1.382
DIRECT	.043	1.044	.061	1.190
SOUPAR	.115	1.904	.136	1.782*
SOUUK	.044	1.157	.011	.219
SOUIMP	-.071	-1.771	-.067	-1.347
Selection term[40]	**-.305**	**-3.588***		

LM het. test = 5.499 [.019]; SSR = 45.850; RESET = 2.348 [.124]
Adjusted R-squared = .157 ; Log L = -118.234
Adjusted R-squared = .113; SSR = 70.4278

In the UK-owned single plant growth model RSA assistance is again strongly associated with firm growth, but again the negative selection term suggests that support is given to firms who perform worse than average (Table 5.5). As such, the OLS coefficient on RSA is biased downwards compared with the instrument variable (IV) or sample selection estimates (See Tables A5.1 in the Annex). For these firms, firm age is positively associated with growth, while firms whose main aim has been to maintain the status quo have done worse than those seeking new markets or products. Ownership appears insignificant, as does the location of customers, while firms that both sell and source abroad tend to do worse than average. These results contrast markedly with the results for the multinationals sample.

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40   In the case of the Heckman model the selection term is the inverse Mills ratio.

Table 5.5: UK Owned Single Plants Growth Models – Heckman Selection Model Stage 2. (Number of observations: 246)

Variable	Coefficient	t-stat
C	-.0065	-.068
RSA	**1.098**	**4.903****
EMP04	-.00057	-3.598**
R&D	-.092	-2.162**
FIRMAGE	.0037	2.744**
MAINT	-.1234	-2.560**
TEAM	.066	1.374
CLOSE	.080	1.491*
STAND	-.049	-.939
OWN20%	-.042	-1.006
CUSREG	-.038	-.877
CUSUK	-.288	-3.588**
CUSEU	-.137	-2.629**
SOULOC	.069	1.702*
SOUIMP	-.253	-3.704**
Selection term	**-.559**	**-4.144****
SSR = 19.2270 RESET = 1.17587 [.279] Adjusted R-squared = .192891 Log L = -35.5298		

The Probit results discussed above suggest that larger firms within this group are more likely to receive RSA, but that after receiving RSA the beneficiaries do not grow as fast as the non-beneficiaries. However, it is also clear that beneficiaries do better than they would have done without RSA. The reason for this is that RSA is offered in order to secure jobs, as well as to create new ones. In the case of domestic singles, the total "secured jobs" protected by RSA in England was 2,624 over the period, while the number of new jobs that firms claimed would be created was 7,212. This explains the negative sample selection term, as only RSA beneficiaries can have "secured jobs" in this way.

For the multinational group (Table 5.6) beneficiaries of RSA grow more slowly (the RSA dummy is not significant), and the OLS estimator (see Annex A5.3 to this Chapter) again understates this effect. Therefore, we note that the Heckman model gives the largest estimate of the RSA effect, and the Mills ratio suggests sample selection issues. These results, unlike those discussed above, are in line with the findings of Harris and Robinson (2005). This suggests that MNEs who receive RSA support may have done so as the result of some bargaining mechanism, where what matters is not the creation of further jobs after the RSA assistance, but the creation of jobs at the point of RSA intervention. It is,

therefore, perhaps not that surprising that the RSA coefficient is not significant in the estimated model.

Table 5.6: MNEs (Number of observations: 142)

Variable	2SLS	
	Coefficient	t-stat
C	.0196	.073
RSA	**.086**	**.128**
LEMPG42	-.1523	-1.165
EMP04	-.164	-2.771**
R&D	.161	1.811*
VINTAGE	.00024	.119
PROCIN	-.00055	-1.378
EXPORTER	.1576	.764
MAINT	.294	1.824
GROW	.355	3.327**
NEWPROD	.249	2.254*
EA	-.450	-1.540*
LON	-.205	-.614
SW	-.215	-1.216
EM	.274	1.178
NW	-.171	-1.229
US	.0574	.453
JAPAN	-.00165	-.0047
ROW	-.113	-.349
UKMNE	.073	.551
SOUPAR	.190	1.895*
SOULOC	.055	.457
SDUM4	.203	1.388
SDUM5	.072	.441
SDUM8	.202	1.402
SDUM9	.058	.244
SDUM11	.279	1.723*
SDUM14	.236	1.413
SDUM15	.213	.971
Adjusted R-squared = .327 SSR = 10.2674		

The Probit results discussed above suggest that larger firms within this group are more likely to receive RSA, but that after receiving RSA these firms do not grow as fast as the non-beneficiaries. However, it is also clear that assisted firms do better than they would have done without RSA. The reason for this is that RSA is offered in order to secure jobs, as well as to create new ones. In the case of MNEs, the total "secured jobs" protected by RSA in England was 7,154 over the period, while the number of new jobs that firms claimed would be created was 8,053. This extremely large number of secured jobs suggests that the impact of RSA on growth of employment in MNEs may be small, but its effects on relative decline may be large.

These results highlight the distinctions between the two types of firms, but even further suggest at least two groups within the MNE sample. For example, MNEs that have been seeking to grow, or introduce new products have been successful in this respect, though this appears unrelated to RSA assistance. This is all indicative of there being a group of inward investors for whom the RSA Scheme was an incentive to stay in the UK rather than to come to the UK. This result is robust to the inclusion of the country dummies.

5.6.1 RE-ESTIMATING THE GROWTH MODELS WITH VALUE OF GRANT

With the availability of information on the actual amount of money offered to the individual RSA-assisted firms it is possible to be more precise about the effects of that assistance on employment growth over and above the use of a dichotomous dummy variable (i.e., whether or not a firm had received assistance). The approach here is to develop the growth models presented above by including the value of the RSA support received, and therefore, obtain an elasticity of employment growth with respect to RSA support.

This is obviously different from the approach thus far which has been based on a full set of firms in the sample, and seeking to compare beneficiaries and non-beneficiaries. The preceding analysis highlighted the sample selection and endogeneity problems associated with the approach and this still applies when evaluating the effects of RSA on the set of assisted firms only.

Technically, this approach involves estimating a relatively standard selection model, *where the probit and the outcome equation are estimated simultaneously, but the second stage (the employment growth model) is only performed on the selected firms (i.e. RSA assisted firms)*. This tests, and subsequently allows for, sample selection bias but then only estimates the growth effects on the selected firms. This is similar to Heckman's "other" famous model, the treatment model. This model permits the inclusion of some variables that are only pertinent to beneficiaries, such as grant size. This approach is potentially important in allowing for sample selection bias, in that if one simply runs an OLS regression on this, the selectivity question is ignored, and the effect of RSA financial assistance on employment growth is likely to be overstated. The results for the three different groups of firms/plants are reported in Tables 5.7-5.9.

Table 5.7: The Full Sample selection model (Number of observations: 223)

Variable	Coefficient	t-stat
C	.593	1.232
GRANT SIZE	**.039**	**1.183**
LEMPG42	-.131	-1.411
EMP04	-.0003	-2.702**
UKMNE	.1935	2.612**
JAPAN	-.182	-.964
ROW	-.545	-2.197**
EXPORTER	.0055	.064
LON	-.366	-2.182**
SW	-.384	-2.283**
WM	-.090	-.999
YH	-.262	-2.266**
NW	-.124	-1.063
NE	-.327	-2.781**
CUSUK	-.243	-1.907*
PUBSECT	.128	1.504**
BUSINESS	.157	.973
DIRECT	.209	2.850**
SOUPAR	.362	2.270**
SOUUK	.034	.453
SOUIMP	-.174	-2.135**
Selection term[41]	**0.328**	
Log L = -319.069 Corr(Y,Yfit) = 0.54		

Overall, the selection model for the full sample is not particularly informative (Table 5.7). The size of the RSA offer is **not** significant in explaining subsequent employment growth. This, however, merely serves to demonstrate the heterogeneity of the sample, in that pooling UK single site firms with subsidiaries of MNEs is not informative when we are working with the actual amount of financial support offered to these businesses. Tables 5.8 and 5.9 are more informative.

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41   The reported value for the sample Selection model is not a sample selection term, but merely a term that must lie between 0 and 1 to confirm that a global maximum in Log L is found.

Table 5.8: Domestically Owned Single Plants Growth Models – selection model (Number of observations: 122)

Variable	Coefficient	t-stat
C	-.235	0.651
GRANT SIZE	**.094**	**2.35****
EMP04	-.001	-4.84**
RANDD	-.075	-1.94*
VINTAGE	.00181	1.31
MAINT	-.071	-.46
TEAM	.089	1.09
CLOSE	.196	2.34**
STAND	-.079	-1.72*
OWN20%	-.012	-.36
CUSREG	-.066	-1.24
CUSUK	-.282	-2.41**
CUSEU	-.169	-2.55**
SOULOC	.068	.89
SOUIMP	-.164	-2.32**
Selection term	**0.339**	

% positive obs. = 48.37
Corr (Y,Yfit) = 0.48
Log L -48.324

For UK singles, the model suggest that, in broad terms, a 10 per cent increase in grant size will increase subsequent employment in these firms by less than 1 per cent (Table 5.8). Similarly, for MNEs, the estimation incorporating the actual grant size suggests that a 9 per cent increase in grant size will increase subsequent employment by 1 per cent (Table 5.9). We can see, therefore, that the specification of the employment growth models with the inclusion of a variable capturing the amount of financial assistance offered has potential value in the development of a method to calculate cost-per-job estimates.

Overall, the specification of the models for UK singles and MNEs are consistent with the previous results but in the case of the latter the RSA 'instrument' is positive and significant which contrasts with the earlier result which used a simple dichotomous RSA dummy. The implication here is that there is some sensitivity to the size of the grant awarded which allows us to identify an assistance effect for these firms.

Table 5.9: MNEs Growth Models – selection model (Number of observations: 64)

Variable	Coefficient	t-stat
C	-1.75194	-2.53**
GRANT SIZE	**.089**	**2.00****
LEMPG42	-.385	-5.171**
EMP04	-.141	-1.171
R&D	.166	1.155
VINTAGE	-.006	-3.124**
PROCIN	.117	1.441*
EXPORTER	.783	4.290**
MAINT	.402	4.047**
GROW	.643	5.659**
NEWPROD	.210	1.740*
EA	-1.922	-5.07**
LON	-.136	-1.195
SW	-.626	-4.698**
EM	.294	1.204
NW	-.154	-1.957*
US	.238	1.875*
JAPAN	.088	.462
ROW	.250	1.234
UKMNE	.370	3.399**
SOUPAR	.315	4.270**
SOULOC	.101	1.218
Selection term	**.297**	
Log L = − 43.41212 Corr (Y,Yfit) = 0.33		

5.7   Capturing Safeguarded Jobs in the Model: Sensitivity Analysis

As we discussed in Section 5.4 above an important issue that emerged in the discussion of these results is the ability of the employment growth model to capture both elements of the RSA assistance package, that is, job creation and safeguarding jobs[42]. We have already seen in Chapter 3 that the financial assistance provided to firms and plants under the RSA Scheme was a mixture of job creations only (47.9% of cases for UK single plants and 39.5% for MNEs); safeguarded jobs only (9.0% of cases for UK single plants and 17.1% for MNEs)

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42   In total, there were 39,897 safeguarded jobs supported in the 'in scope' RSA-assisted firms in the 2000-04 period: 22,759 in UK single plants and 17,138 in MNEs (both UK and Foreign-owned).

and a mixture of both job creations and safeguarded jobs (43.1% of cases for UK single plants and 43.4% for MNEs).

It is our view, therefore, following the reasoning set out above that a substantial proportion of the employment effects of the financial assistance received by a firm or plant in the period 2000-04 will be captured in the model of employment change in the 2004-06 period, irrespective of the proportion of job creations and safeguarded jobs in the assistance package offered.

However, in the models presented above we may understate the importance of safeguarded jobs as we are only estimating a model of employment growth in the period 2004-06. If employment retention was not an issue for unassisted firms, then the models may not fully capture the importance of RSA assistance, as the relative importance of job retention (i.e., 39,897) may be understated. Nevertheless, a large proportion of these jobs are included in the sense that the performance of these plants in the 2004-06 period may be associated with the financial assistance received at some stage in the 2000-04 period. That is, as we state above, the assistance received may have enabled them to be 'still in existence' in the 2004-06 period, and as such 'counted'.

Does the nature of the over- and under-estimates average themselves out over the RSA beneficiaries in the sample? In short, we do not know the answer to that question for sure but what we can do is re-specify the employment growth model in order to introduce a sensitivity analysis into the results. Two approaches were considered for testing for this. The first was to effectively impose a two year time constraint for all of the employment effects to have occurred, and to estimate for several subsets of the data over a two year moving window. This was rejected for several reasons. Firstly, one is concerned that all of the employment gains from RSA may take longer than two years to materialise, and secondly that this would render it impossible to carry out a proper sample selection model based on previous performance. In addition, many of the sample sizes would become small, making if difficult to capture all of the inter-firm variation, and the other determinants of employment growth.

Therefore, we undertook an alternative sensitivity test, by carrying out the estimation discussed above for the sub-sample of RSA-assisted firms that obtained RSA assistance between 2002 and 2004, effectively seeking to ensure that we captured the "safeguarded jobs" effect within the employment growth period, which we re-specified to be 2002-06. While we have several reservations about this, such as sample size and the fact that the matching process with non-beneficiaries was not designed to allow for this (though it is not clear how one could practically do this, other than by doing a matching process for each year before constructing a stratified sample), this was done, and the results summarised below.

Rather than present all of the results again for the sub-sample, Table 5.10 provides the coefficient on the RSA term for the various estimation procedures

for the basic employment growth equation, across the full sample and the two sub-samples. It also provides the coefficient on the "grant size" variable for the final sample selection model. The full set of models is presented in the Annex C to this chapter (Tables C5.1-C5.3).

Table 5.10: Employment Growth Models (2002-06) – Sensitivity Analysis

	Full sample	UK singles	MNEs
Coefficients on RSA term:			
Heckman	0.379	0.477	0.084
	(3.37)	(2.51)	(2.12)
Instrumental variables	0.382	0.437	0.056
	(3.43)	(4.01)	(0.723)
FIML	0.371	0.451	0.071
	(2.74)	(3.48)	(1.75)
Coefficient on Grant size	0.025	0.079	0.071
(sample selection model)	(0.729)	(3.29)	(1.75)
Sample size	452	216	139
(RSA beneficiaries)	(141)	(80)	(45)

Note: (t values in parentheses).

It is noticeable when comparing the models that in each case the coefficients and implied elasticities are smaller for this sub-sample than for the overall sample. However, the fact that there is less time for the created jobs to occur and be captured by the model will reduce these numbers so we cannot be sure they represent good estimates of the RSA effect.

More importantly, these differences are not significant. From these results we conclude that the concern in using all the 'in scope' assisted firms/plants in the 2000-04 period in the econometric analysis would lead to a failure to capture the full "secured jobs" effect is unlikely. In other words, the tendency of the base line estimation to understate job retention is less important than the tendency of imposing a window of arbitrary (shorter) length to capture the full employment effects (i.e., job creations and safeguarded jobs) of RSA assistance.

5.8   Displacement Issues

The previous section has provided evidence that there is clear additionality associated with RSA financial support in the 2000-04 period. However, an important dimension of the overall assessment of the impact of the RSA Scheme concerns displacement. One element of the discussion concerning displacement relates to understanding the nature of the projects being assisted by the RSA Scheme. The extent to which displacement can be considered at the micro-level rather than a macro-level consideration is also a matter of some debate.

One might expect, *a priori*, that displacement will be higher in the case of indigenous UK firms. Smaller indigenous firms may be more likely to be associated with higher displacement levels (particularly regional displacement) given that they are more likely to sell a higher proportion of their output within the local, regional and/or national markets. On the other hand, one might expect that foreign-owned firms would use the Assisted Area where they are located as an export base. Foreign-owned firms would be expected to cause less local, regional and/or national displacement given their higher propensity to export[43].

Table 5.11 and Figure 5.1 illustrate that very few (around 10%) of cases relate to a move into the Assisted Area. The vast majority of assistance relate to financial assistance provided to firms who are already operating in the Assisted Areas. This data is taken from the administration data held by the RDAs and BERR on the 784 in-scope records used for the survey. With this profile of assisted projects one may further infer that displacement, in the form of inward-moving firms/plants competing for local and regional sales, is not an issue for a large proportion of RSA beneficiaries.

Table 5.11: RSA Cases by Project Type

Type of Assisted Project	Number of Cases	%
Buy-out or acquisition	25	3.2
Modernisation / Expansion at existing site	377	48.1
New branch plant	60	7.7
New project on existing site	83	10.6
Start up of RSA eligibility activity at new site	66	8.4
Transfer to new site in same TTWA	131	16.7
Transfer to new site not in same TTWA	33	4.2
Missing Description	9	1.1
Total	**784**	**100.0**

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43   Lenihan, H and Hart, M (2006) 'Evaluating the Additionality of Public Sector Assistance to Irish Firms: A Question of Ownership?' *Policy Studies*, Vol. 27, No. 2.

Figure 5.1: RSA Cases by Project Type by Ownership
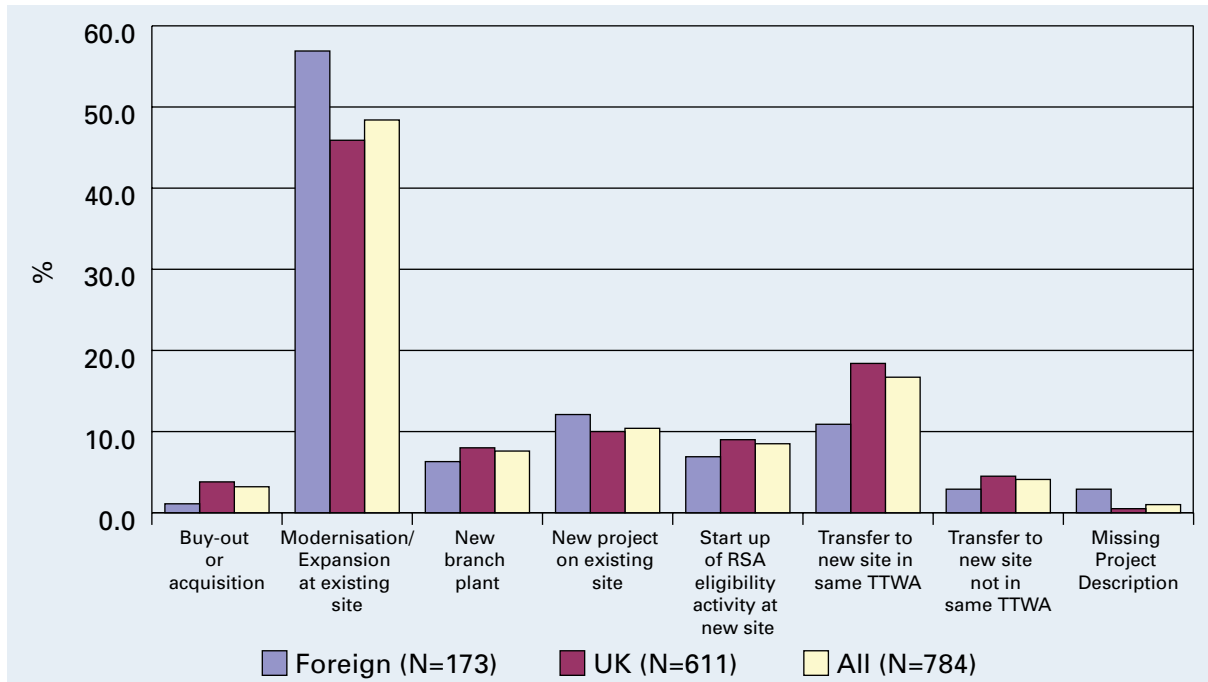
Table 5.12 presents data from the survey on the nature of the market orientation of RSA assisted firms and, in particular, the proportion of sales to customers in the region where they are located. A further question asks about the extent to which there may be regional competition for these sales.

Table 5.12: Components of an Estimate of Displacement for RSA Beneficiaries

	RSA Beneficiaries	UK Owned	MNEs	Non-Assisted (All)
Mean % of sales to the regional market (i.e., local plus rest of region)[1]	37.0	39.2	26.2	51.9
Proportion of firms indicating sales taken up by competitors **in the region** if they ceased trading[2]	23.0	28.3	10.6	41.0

Notes:

[1] SFIE figure is 53.4 per cent (there are too few MNE plants in the SFIE sample to provide a disaggregation by ownership).

[2] SFIE figure is 29.4 per cent.

Taking these two bits of information together (and we deliberately avoid formally combining them to produce a point estimate of displacement) would lead us to conclude that overall displacement will be relatively low for the RSA Scheme in the period 2000-04. Disaggregating this information by ownership implies that the degree of displacement associated with MNE plants is much lower than for UK-owned businesses.

5.9   Summary

The findings of the econometric investigation are broadly supportive of RSA
intervention. There are clearly two separate groups of firms within these data.
While there is little evidence that the beneficiaries of RSA financial assistance
are those that will generate the highest employment growth, it does stimulate
employment in domestic firms, and is largely associated with firms with an
international and national, rather than local focus. R&D however seems largely
unrelated to RSA assistance. RSA paid to MNEs, however, seems largely
associated with encouraging firms to stay rather than grow, and grant size is
more important than the existence of RSA in generating employment.

However, as we have argued throughout this chapter these results may under-
estimate the effects of RSA financial support due to the benefits not yet being
fully realised and a small proportion of the safeguarded jobs not fully captured
in the employment growth model. Sensitivity analysis would suggest that this is
not a significant issue in the analysis.

Annex A to Chapter 5

In order to evaluate the impacts of a policy initiative, one would ideally, survey the whole population of potential beneficiaries, and then determine the relationship between the policy instrument and firm performance.

For obvious reasons, this is not practical, and so one constructs a stratified sample of non-beneficiaries, to match as closely as possible the recipient group, in terms of firm size, type, location, industry sector, type of ownership etc, with a view to comparing this stratified sample of non-beneficiaries with the recipient firms. If receipt of a policy instrument is essentially a random event, and if everyone who is surveyed replies, the a straightforward ordinary least squares (OLS) regression will suffice, and providing no other econometric problems arise, will provide an unbiased estimate of the policy effects. In practice however, these conditions seldom arise. Also, while one can seek to obtain a stratified sample of non-beneficiaries that matches closely the recipient group, this can never be perfect as there are essentially an infinite number of firm level characteristics.

There are further considerations however. Firstly, the offer of RSA will be determined at the same point as the location decision (especially for foreign MNEs). As such, it is likely that sample selection is not the only problem, but also that the RSA variable is endogenous in employment growth. Testing for this is straightforward.

Testing for endogeneity

The standard approach to testing for endogeneity is the Hausman test (updated to the Durbin-Wu-Hausman test). This involves the following:

Consider a regression

$$y = \beta_0 + \beta_1 * \mathbf{z} + \beta_2 * x_3 + e_1 \qquad\qquad \text{(a1)}$$

where z is endogenous. Suppose that x_1 and x_2 are instrumental variables for z. One should decide whether it is necessary to use an instrumental variable, i.e., whether a set of estimates obtained by least squares is consistent or not.

An augmented regression test can easily be formed by including the residuals of each endogenous right-hand side variable, as a function of all exogenous variables, in a regression of the original model. We would first perform a regression

$$\mathbf{z} = \gamma_0 + \gamma_1 * x1 + \gamma_2 * x2 + \gamma_3 * x3 + u \qquad\qquad \text{(a2)}$$

to get residuals **z_res**, then perform an augmented regression:

$$y = \delta_0 + \delta_1 * z + \delta_2 * x3 + \delta_3 * \mathbf{z\_res} + \varepsilon \qquad\qquad \text{(a3)}$$

If δ_3 is significantly different from zero, then OLS is not consistent.

In this context, the potentially endogenous variable is whether they received RSA. This means that formally the equation (a3) must be estimated as a probit, for reasons discussed above. One can rely on the t test of the estimate of δ_3 in these circumstances, though the 'variable addition' likelihood ratio test is potentially more stringent.

THE IDENTIFICATION PROBLEM AND FINDING A SUITABLE INSTRUMENT

In all of the cases discussed above, the essential problem remains, firstly, that the two equations are separately identified, that is that there is at least one variable that impacts on stage 1 but not on stage 2, and vice versa. The existence of such variables is notoriously problematic in policy evaluation, as one is seeking a factor that impacts on whether the policy is "turned on", but not subsequently on firm performance. Equally, these factors will vary across the sub-samples, being different for foreign MNEs compared with small single plant domestic firms.

The selection of these variables is as follows:

DOMESTIC SINGLE SITES:

The existence of a published business plan: this is a factor often associated with the ability of small firms to raise finance, though is uncorrelated with growth. This is consistent with work done elsewhere on firm financing, including work being done concurrently with this for the Small Business Service on the Annual Small Business Service data.

Firm age: older firms appear less likely to obtain RSA, though this is again uncorrelated with growth in our sample. With models of any of this type, there is always the possibility of a variable being correlated with the dependent variable in both equations, and but appearing as significant in only the first for example. However, this appears unlikely in this case, and previous evidence linking firm age to performance is patchy, and usually sensitive to man y other factors.

FOREIGN MNES:

The region of the investment, particularly the north east of England, and the degree of local R&D both impact on the likelihood of RSA, but not on employment growth. Local sourcing was also considered, though the large literature on the importance of agglomeration in firm (and MNE performance in particular) would reject this. These have intuitive appeal, as firms generally make a case for RSA based on region issues, and phenomena such as local R&D, though for a multinational the success of global R&D is potentially more important for performance than the location of R&D locally.

However, what one say here is that the hypothesis of RSA being an exogenous event for MNEs in the UK can be rejected, and the significance of the sample selection terms in the UK singles models (along with the evidence from the case studies) suggests that the estimates presented here are more reliable than simple OLS.

ECONOMETRIC APPROACH – ALLOWING FOR SELECTIVITY IN RSA ASSISTANCE

Our focus here is the impact of RSA assistance provided during 2002 to 2004 on business growth between the 2004 and 2006 business years. If π is any potential indicator of business growth, a basic model that encapsulates these effects can be defined as follows:

$$\pi = \beta x \quad + \quad \delta z \quad + \varepsilon \qquad (1)$$

Where: x is a vector of firm characteristics, and z is a binary variable taking value 1 if a firm received RSA, and 0 otherwise. In this model, the size, sign and significance of the coefficient on the 'treatment' term (i.e. δ) will give an indication of the impact of RSA on business growth. Other studies have shown, however, that such treatment coefficients will give an unbiased indication of the real effect of assistance only if assistance is randomly distributed across the population of small firms. Where there is any element of systematic targeting or selection, the coefficient on the treatment term will reflect a combination of 'assistance' and 'selection' effects.

Rather than direct estimation of equation (1) a preferable approach is therefore to allow explicitly for this type of selection bias. Specifically, we assume that the likelihood or probability of receiving RSA (z*) is itself related to a set of business and owner-manager characteristics, v. This suggests a model of the form (Greene, 1995, p. 642):

$$\pi = \beta' x \quad + \quad \delta' z \quad + \varepsilon$$

$$z^* = \gamma' v + w \qquad (2)$$

What is observed, however, is not the probability of receiving RSA (z_i^*) but a categorical variable which indicates whether a firm received RSA or not during the 2002 to 2004 period. In this situation the standard estimation method for this type of model is the two-stage procedure outlined in Heckman (1979). This involves the estimation of a Probit model to estimate the probability of a firm receiving RSA and the incorporation of a selection parameter in the treatment model for business performance (see Greene, 1995, p. 639 for details). In these terms, a positive (negative) and significant coefficient on the Mills ratio is indicative of a positive (negative) sample selection problem, RSA being skewed towards high (low) performance firms.

An important issue in operationalising the Heckman type model is the avoidance of too much overlap between the selection and performance models. In the probit models we therefore focus on external characteristics of the firm which may have been visible ex ante, and which may have provided the basis for administrative criteria for the targeting of assistance. In the growth models, wherever possible, we include more organisational factors which may initially have been unobservable but which may nonetheless have contributed to performance.

Table A5.1: The Full Sample OLS estimates of employment growth. (Number of observations: 477)

Variable	Coefficient	t-stat
C	.121	1.542*
RSA	**.176**	**5.868****
LEMPG42	.040	1.015
EMP04	-.0002	-3.956*
UKMNE	.115	2.533*
JAPAN	.0477	.559
ROW	-.052	-.481
EXPORTER	.010	.245
LON	-.130	-1.735
SW	-.156	-2.340
WM	-.017	-.301
YH	-.0449	-.906
NW	.023	.518
NE	-.070	-1.508*
CUSUK	-.052	-1.159
PUBSECT	.030	.951
BUSINESS	-.053	-1.039
DIRECT	.054	1.464
SOUPAR	.035	.682
SOUUK	.034	1.009
SOUIMP	-.019	-.571

LM het. test = 3.121 [.077]
SSR = 51.743
RESET = 2.860 [.091]
Adjusted R-squared = .129
Log L = -129.627

Table A5.2: Domestically Owned Single Plants, OLS estimates of Employment Growth. (Number of observations: 246)

Variable	Coefficient	t-stat
C	.282	2.677**
RSA	**.212**	**3.976**
EMP04	-.00044	-2.412**
RANDD	-.0061	-.123
VINTAGE	-. 166	-1.684*
MAINT	-.152	-2.614**
TEAM	-.0460	-.819
CLOSE	.052	.798
STAND	-.089	-1.432
OWN20%	-.013	-.266
CUSREG	-.037	-.708
CUSUK	-.0090	-.123
CUSEU	-.052	-.953
SOULOC	.048	.990
SOUIMP	-.095	-1.719*
GRANT SIZE		
SEC JOBS		
NEW JOBS		
Selection		

SSR = 36.2751
RESET = 2.4188 [.120]
Adjusted R-squared = .189596
Log L = -111.293

Table A5.3: MNEs, OLS estimates of Employment Growth (Number of observations: 121)

Variable	Coefficient	t-stat
C	-.0062	-.027
RSA	**-.034**	**-4.621**
LEMPG42	-.168	-1.723*
EMP04	-.156	-4.388**
RANDD	.166	1.986**
VINTAGE	-.000033	-.026
PROCIN	-.00056	-1.455*
EXPORTER	.188	1.651*
MAINT	.315	2.828*
GROW	.352	3.384**
NEWPROD	.241	2.399**
EA	-.494	-3.047**
LON	-.259	-1.817*
SW	-.239	-2.140**
EM	.242	1.677*
NW	-.191	-2.193**
US	.072	.747
JAPAN	.055	.338
ROW	-.065	-.366
UKMNE	.090	.965
SOUPAR	.183	2.038**
SOULOC	.073	1.045
SDUM4	.201	1.400
SDUM5	.093	.873
SDUM8	.195	1.432
SDUM9	.019	.194
SDUM11	.288	1.910*
SDUM14	.236	1.430
SDUM15	.246	2.020**
SSR = 9.978 RESET = 1.655 [.202] Adjusted R-squared = .346 Log L = -20.718		

Annex B to Chapter 5: Variable definition used in Econometric Modelling

Parameter		category
BUSINESS	sells to other businesses	dummy
Business Plan	does the business have a formal business plan	dummy
CLOSE	does the business closely monitor employees	dummy
CUSEU	do you have customers elsewhere in the EU	dummy
CUSREG	do you have customers in your region	dummy
CUSUK	do you have customers elsewhere in the UK	dummy
DIRECT	do you sell direct to the public	dummy
EA	East of England regional dummy	dummy
EM	East Midlands regional dummy	dummy
EMP04	employment in 2004	log
Generated productivity growth	have you generated productivity growth over the past 2 years	dummy
GRANT SIZE	size of assistance	log
GROW	have you sought to generate growth	dummy
Japan owned	Japanese owned	dummy
LON	London regional dummy	dummy
Ltd company	is the business a limited company	dummy
MAINT	has the major objective to be to maintain output at existing levels	dummy
Multi-plant	is the business a multi-plant company	dummy
NE	North East England regional dummy	dummy
NEWPROD	has the business introduced new products over the period	dummy
NW	North West England regional dummy	dummy
OWN20%	does the MD/ CEO own at least 20% of equity	dummy
PROCIN	has the business engaged in process innovation	dummy
Public sector customers	does the business sell to the public sector	dummy
R&D	have you undertaken R&D over the period	dummy
RSA	**Dummy for RSA**	**dummy**
SOUPAR	do you source components from the parent	dummy
Source inputs from abroad	do you source inputs from abroad – not through a foreign parent	dummy
SOUUK	do you source from elsewhere in the UK	dummy
STAND	has the business standardised its operating process	dummy
SW	South West England regional dummy	dummy
TEAM	does the business have formal teamworking	dummy
UK customers	are customers elsewhere in the UK	dummy
UKMNE	is the firm a UK owned MNE	dummy
US	is the firm a US owned MNE	dummy
WM	West Midlands regional dummy	dummy
YH	Yorkshire and Humberside regional dummy	dummy

Annex C to Chapter 5: Sensitivity Analysis – Full Models for Table 5.10

Table C5.1: Full Sample

	Heckman		IV		FIML		sampsel	
C	0.22	1.77	0.21	1.60	0.31	2.42	2.53	3.33
RSA	**0.38**	**3.37**	**0.38**	**3.43**	**0.37**	**2.74**	**0.03***	**0.73**
LEMPG02	0.04	2.45	0.04	3.16	0.04	3.40	0.62	3.32
EMP04	0.00	4.34	0.00	-1.18	0.03	0.54	0.00	-2.40
UKMNE	0.07	1.37	0.03	0.15	0.38	0.57	0.12	0.91
JAPAN	0.01	0.06	-0.23	-0.58	0.24	0.28	0.17	0.71
ROW	-0.40	-2.18	-0.14	-2.16	-0.08	-1.81	-0.92	-2.55
EXPORTER	0.01	0.20	0.52	2.07	0.05	0.38	0.28	1.84
LON	-0.06	-0.53	-0.05	-0.13	-0.03	-0.21	-0.04	-0.13
SW	-0.11	-1.19	-0.20	-0.55	0.05	0.46	-0.64	-2.21
WMM	0.03	0.39	-0.19	-0.57	0.58	1.72	-0.68	-2.44
YH	0.01	0.12	-0.40	-1.25	0.40	1.44	-0.58	-2.48
NW	0.07	0.99	-0.18	-0.64	0.59	1.96	-0.36	-1.53
NE	-0.03	-0.37	-0.34	-1.15	0.34	1.38	-0.59	-2.83
CUSUK	-0.10	-1.77	-0.03	-0.13	-0.04	-0.48	-0.25	-1.14
CUSOTH	-0.06	-1.09	0.07	0.37	-0.45	-1.83	-0.06	-0.47
PUBSECT	0.05	1.08	0.36	2.13	1.10	2.42	0.07	0.48
BUSINESS	-0.15	-2.01	-0.62	-2.01	0.06	0.90	-0.15	-0.61
DIRECT	0.09	1.73	0.42	2.05	0.08	0.73	0.12	0.94
SOUPAR	0.11	1.55	0.09	0.33	0.10	1.52	-0.12	-0.65
SOUUK	0.07	1.48	-0.15	-0.84	0.41	1.85	0.14	0.81
SOUIMP	-0.02	-0.54	-0.22	-1.28	0.00	-0.40	-0.27	-2.32
Selection term	-0.17	-2.20					0.48	6.55

Mean of dep. var. = .068466 Sum of squared residuals = 41.6942 F (zero slopes) = 17.6949 [.000] R-squared = .630883 Adjusted R-squared = .595230 Log likelihood = -117.999	R-squared = .058850 Adjusted R-squared = .043652	Log likelihood = -207.590	Number of positive obs. = 121 Log likelihood = -164.815

* this is the coefficient on the continuous grant variable

Table C5.2: UK Singles

	Heckman		IV		FIML		sampsel	
C	0.33	1.83	0.37	2.14	0.36	2.16	0.39	2.87
RSA	**0.48**	**2.51**	**0.44**	**4.01**	**0.45**	**3.48**	**0.08***	**3.29**
EMP02	0.00	-2.41	0.00	-3.70	0.00	0.75	0.00	-4.83
RANDD	0.13	1.49	0.14	1.63	0.08	1.17	0.21	1.92
VINTAGE	0.00	-2.56	0.00	-2.20	-0.03	-1.46	0.00	-1.56
MAINT	-0.11	-1.10	-0.12	-1.19	-0.12	-1.42	-0.14	-0.82
TEAM	-0.10	-1.03	-0.13	-1.37	-0.07	-0.93	-0.47	-3.36
CLOSE	0.03	0.25	0.04	0.37	0.10	1.08	0.19	0.93
STAND	0.03	0.31	0.04	0.35	-0.05	-0.52	-0.02	-0.12
OWN20%	0.07	0.76	0.03	0.31	-0.06	-0.90	-0.19	-1.60
CUSREG	-0.07	-0.77	-0.10	-1.11	-0.03	-0.33	-0.03	-0.20
CUSUK	-0.11	-0.91	-0.09	-0.76	1.63	1.24	-0.43	-1.93
CUSEU	-0.02	-0.18	0.00	-0.04	1.05	0.93	0.01	0.07
SOULOC	0.16	1.89	0.17	2.04	0.09	1.37	0.09	0.82
SOUIMP	-0.02	-0.25	0.00	-0.05	1.17	1.22	-0.01	-0.12
Selection term	-0.10	-1.66					0.65	5.66
	F (zero slopes) = 2.85949 [.000] R-squared = .265540 Adjusted R-squared = .172677 Log likelihood = -142.890		R-squared = .291455 Adjusted R-squared = .206429 F (zero slopes) = 3.38923 [.000]		Log likelihood = -90.9354		Log likelihood = -43.5168	

*   this is the coefficient on the continuous grant variable

Table C5.3: MNEs

	Heckman		IV		FIML		sampsel	
C	0.28	0.66	0.27	0.07	0.19	0.46	0.12	0.11
RSA	**0.08**	**2.12**	**0.06**	**0.72**	**0.07**	**1.75**	**0.07***	**1.75**
LEMPG02	0.33	2.62	0.38	2.46	0.33	2.15	0.21	2.02
EMP02	-0.15	-2.35	-0.23	-1.35	-0.15	-2.13	0.17	1.47
RANDD	0.11	0.54	0.46	0.48	0.01	0.05	-0.98	-4.07
VINTAGE	-0.00	-1.11	-0.00	-0.36	-0.00	-0.69	-0.02	-4.46
PROCIN	0.19	1.66	0.28	0.57	0.19	1.17	-0.08	-0.57
EXPORTER	0.11	0.63	0.43	0.29	0.09	0.35	0.19	3.62
MAINT	0.33	1.66	0.29	0.93	0.32	1.36	0.11	3.53
GROW	0.43	2.58	0.17	0.33	0.43	2.05	0.13	3.75
NEWPROD	0.18	1.17	0.21	0.82	0.18	0.80	-0.33	-0.98
EA	-0.81	-3.32	-0.92	-0.64	-0.79	-4.24	-0.26	-5.50
LON	-0.36	-1.54	-0.92	-0.44	-0.36	-0.79		
SW	-0.31	-1.73	-0.52	-0.64	-0.30	-1.39	-0.08	-0.36
NW	-0.27	-1.79	-0.28	-1.03	-0.26	-1.06	0.15	0.74
US	0.00	0.01	0.36	0.39	-0.09	-0.45	-0.07	-0.28
JAPAN	0.38	0.66	0.99	0.35	0.04	0.04	-1.30	-3.33
ROW	-0.06	-0.11	-0.79	-0.25	-0.35	-0.96	-0.11	-0.41
UKMNE	0.13	0.61	0.45	0.42	0.03	0.14	0.27	1.26
SOUPAR	-0.07	-0.48	0.31	0.52	-0.07	-0.45	-0.25	-1.79
SOULOC	0.27	1.16	0.12	0.88	0.15	1.01	0.08	0.62
Selection term	0.33	0.57					0.51	6.87
	R-squared = .490536 Adjusted R-squared = .259686 Log likelihood = -39.8110 F (zero slopes) = 2.12491 [.006]		R-squared = .255048 Adjusted R-squared = .15844 F (zero slopes) = 1.09264 [.370]		Log likelihood = -88.0969		Log likelihood = -28.2958	

*   this is the coefficient on the continuous grant variable

Chapter 6: Motivations for Seeking Assistance, Effects and Additionality

6.1 Introduction

The aim of this chapter is to present the results from a series of self-assessment questions in the telephone survey which asked the respondent to indicate the effects of the assistance received under the RSA and SFIE Schemes on their business. The intention here was to use a series of standard questions which would facilitate comparison with previous evaluations and indeed other forms of business support. The emphasis in the discussion will be on the following components of that assessment:

- Motivations for seeking assistance

- Behavioural effects

- Additionality

- Timing of Effects

In addition, the narrative from the 10 face-to-face interviews with SFIE Scheme beneficiaries is presented to understand in more detail these issues. Finally, a summary of the key findings of the non-take-up survey is presented to provide some insights into the decision to abandon seemingly viable projects that had been offered assistance by either BERR or the RDAs.

6.2 Motivation for Seeking Assistance

Both groups of beneficiaries were asked what their motivation was in seeking assistance from the RSA and SFIE Scheme (Table 6.1). The table presents only the three most important responses for each beneficiary group. A desire to grow the business faster was the most common response from the two groups. However, SFIE Scheme beneficiaries were more likely than those assisted under the old RSA Scheme to indicate that this was their main motivation in seeking assistance. RSA Scheme beneficiaries were also more likely to report that they sought assistance because they were in difficulty. This was particularly the case for foreign-owned firms as almost one in five (18.8%; n=80) indicated that their main reason for seeking assistance under the RSA Scheme was because they were in difficulty. Businesses in receipt of larger amounts of financial assistance (>£1 million) were, as one might expect, more likely to be foreign-owned firms and/or plants (27.5% of foreign-owned firms received financial assistance in excess of £1 million compared to 6% of UK-owned firms). As a result, therefore,

these larger beneficiaries of financial assistance reported that their main motivation for seeking assistance was because they were in difficulty.

As we have noted earlier comparing the two sample groups of beneficiaries is problematic due to the fact that the old EGS Scheme is encompassed with the current SFIE Scheme. If we restrict the analysis of the SFIE respondents to only those that were offered financial assistance of £100,000 or more (n=47) then this will be more useful in identifying if there were different motivations for businesses in seeking assistance between the two Schemes. Table 6.1 shows that after controlling for size of grant the general point still holds in that SFIE beneficiaries were more likely than RSA beneficiaries in the sample to be approaching the Scheme in order to secure financial assistance to help them grow faster.

Table 6.1: Motivation for Seeking Assistance

	RSA (All)	RSA (>=£100k)	SFIE (All)	SFIE (>=£100k)	Entire Sample
	%		%		%
We were seeking to grow faster	68.3	68.9	80.9	78.7	72.6
We weren't growing at all	6.0	5.5	5.6	6.4	5.8
We were in difficulty	12.5	13.2	4.9	4.3	10.0
	N=319	N=273	N=162	N=47	N=481

Another dimension to this is the extent to which there are variations across the Assisted Areas (as measured by the intensity of assistance available: i.e., Tier 1 and Tier 2). This information is only available for the RSA beneficiary sample and, although not significant, RSA respondents in Tier 1 were slightly more likely to report that their motivation in seeking financial assistance was that they were in difficulty: 14.9 per cent compared to 11 per cent in Tier 2 Assisted Areas.

6.3   Effects of RSA and SFIE on Business Behaviour

As part of the survey firms were asked to identify ways in which the financial support received from RSA or SFIE had impacted on their business and the responses are tabulated below (Table 6.2)[44]. This question was the initial one which sought to capture if the respondent thought there was any benefit or effect in this area. Generally, the majority of respondents (more than two-thirds in most areas of impact) from the two samples reported benefits for their businesses. The most common effects were on productivity and sales growth with developments in management practice and innovation management some of the least often cited impacts. Two statistically significant differences were evident between the effects cited by RSA and SFIE respondents relating to improved staff knowledge or skills and improved technical understanding

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44   Comparisons with other BERR Business Support Programmes could be undertaken by using Wave 5 of the Cross-Product Survey.

and capability. In both cases a positive effect was more often cited from SFIE beneficiaries than from RSA beneficiaries.

Table 6.2: Effects of Assistance on Business Behaviour

|	RSA All	RSA Non-UK	RSA <£100k	SFIE All	SFIE <£100k	SFIE >=£100k
	%	%	%	%	%	%
Introduction of new or significantly improved products or processes	73.2	76.9	67.4	71.8	77.3	58.7
	N=310	N=77	N=46	N=156	N=110	N=46
Introduction of new or significantly improved management practices	46.9	32.5	43.2	49.4	53.2	42.6
	N=309	N=78	N=44	N=158	N=111	N=47
Improved staff knowledge or skills	65.0	66.2	65.2	73.6	75.9	68.1
	N=314	N=77	N=46	N=159	N=112	N=47
Improved management of innovation processes	50.8	47.4	54.5	52.9	55.0	47.8
	N=307	N=78	N=44	N=157	N=111	N=46
Improved technical understanding or capability	60.3	67.9	68.9	70.9	70.5	71.7
	N=310	N=77	N=45	N=158	N=112	N=46
Improved product quality	66.3	55.7	69.6	73.4	73.2	73.9
	N=312	N=79	N=46	N=158	N=112	N=46
Improved efficiency of machinery	75.2	75.9	71.1	79.2	78.2	81.8
	N=310	N=79	N=45	N=154	N=110	N=44
Improved efficiency of other inputs	49.5	48.0	48.9	47.1	50.5	39.1
	N=301	N=75	N=45	N=153	N=107	N=46
Reduced costs	62.5	70.5	52.3	58.1	61.5	50.0
	N=309	N=78	N=44	N=155	N=109	N=46
Improvements in sales	78.1	75.9	80.0	83.8	87.4	74.4
	N=311	N=79	N=45	N=154	N=111	N=43
Increased productivity (and by that I mean value added per employee)	81.6	84.6	79.5	84.4	85.3	82.2
	N=309	N=78	N=44	N=154	N=109	N=45

Table 6.2 also disaggregates the responses by ownership (Non-UK owned for the RSA Scheme) and by the size of financial assistance received. The only significant differences in terms of grant size (reported in the table as less than or greater than £100k) between the two schemes relates to the 'introduction of new or significantly improved products or processes' and 'reduced costs'. In other words, smaller amounts of financial assistance under the SFIE Scheme (broadly equated to levels of financial assistance available under the old EGS Scheme[45]) are more likely to produce these effects than similar amounts of financial support received under the old RSA Scheme. Perhaps what is more useful to understand than the effects of the actual amounts of money received is to investigate the effects of the particular project for which financial assistance was sought and received.

With respect to ownership, there were too few cases in the SFIE sample to make meaningful comparisons with the previous RSA Scheme. However, from the RSA sample some statistically significant differences emerge. Foreign-owned firms and/or plants are less likely to report the 'introduction of new or significantly improved management practices' and 'improved product quality' as a result of the financial assistance received, whereas they are more likely to report increased productivity.

Again we examine the extent to which the reported effects of assistance of business behaviour vary by the type of Assisted Area (Figure 6.1). The sample is restricted to RSA beneficiaries only and for only those that can be allocated to either Tier 1 or Tier 2 levels of assistance. Two statistical significant differences emerge with a greater number of RSA beneficiaries in Tier 1 areas reporting the improved efficiency of other inputs and increased productivity as a result of the financial assistance received. Probing further it is clear that this finding is independent of ownership with both UK-owned and foreign-owned firms just as likely to report these effects in the Tier 1 Assisted Areas.

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45   Although it is clear from the data that there a significant number of RSA beneficiaries who were in receipt of financial assistance of less then £100,000 in the period when the EGS was operating.

Figure 6.1: Effects of Assistance on Business Behaviour by Assisted Area Tier (RSA only: n=170)
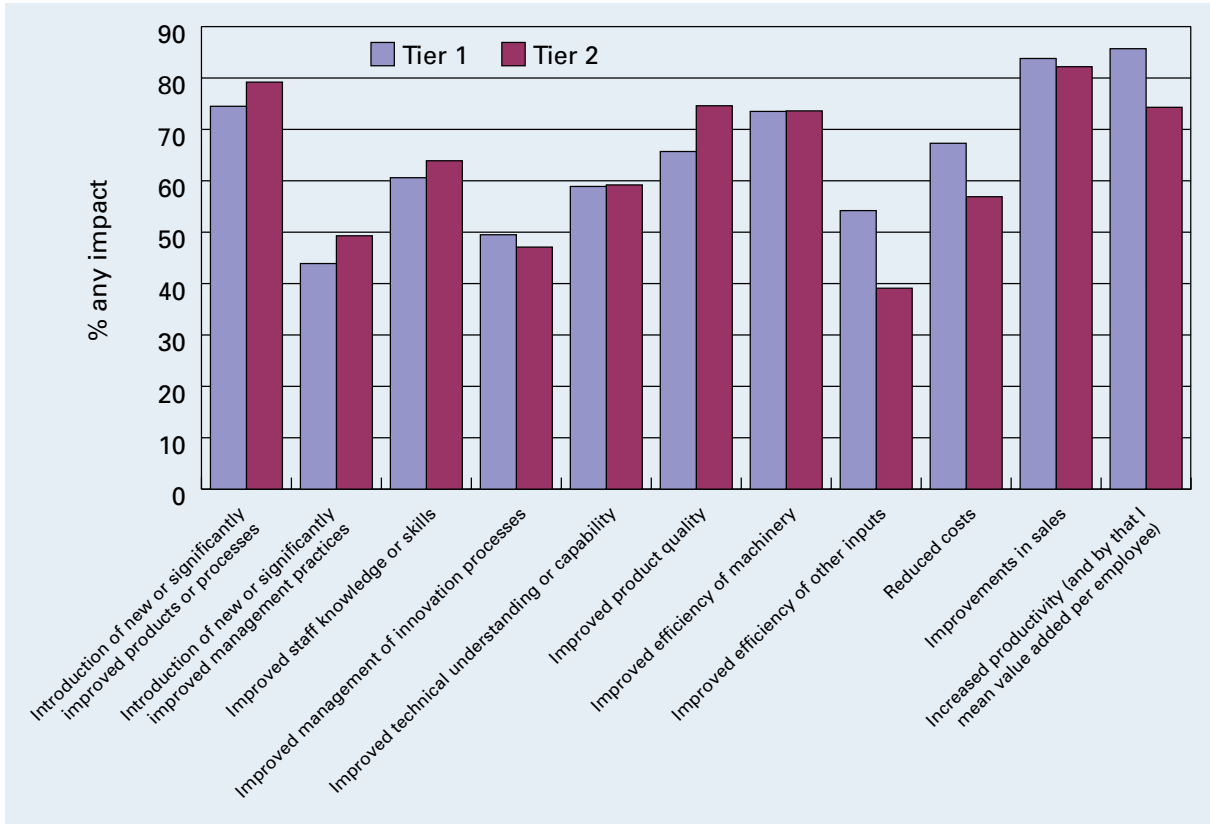
The follow-up question on each of the areas of business behaviour sought to ascertain the extent to which, if a respondent replied that they thought there was a benefit of the Scheme (RSA or SFIE), this benefit had actually happened or would definitely happen (on a scale of 1 not very likely to 5 to a critical extent). The results are presented for both sample groups in Figure 6.2. It is clear that when a respondent reported that they thought the assistance would have an impact on their business it was in effect seen as a critical or very important impact for on average half the firms/plants in the two samples. Of particular note was the high percentage of respondents reporting that the assistance produced a critical or very important impact in improved efficiency of machinery, innovation and increased productivity.

Figure 6.2: Extent to Which Business Behaviour Changed (critical or large extent only: scores 4 & 5)
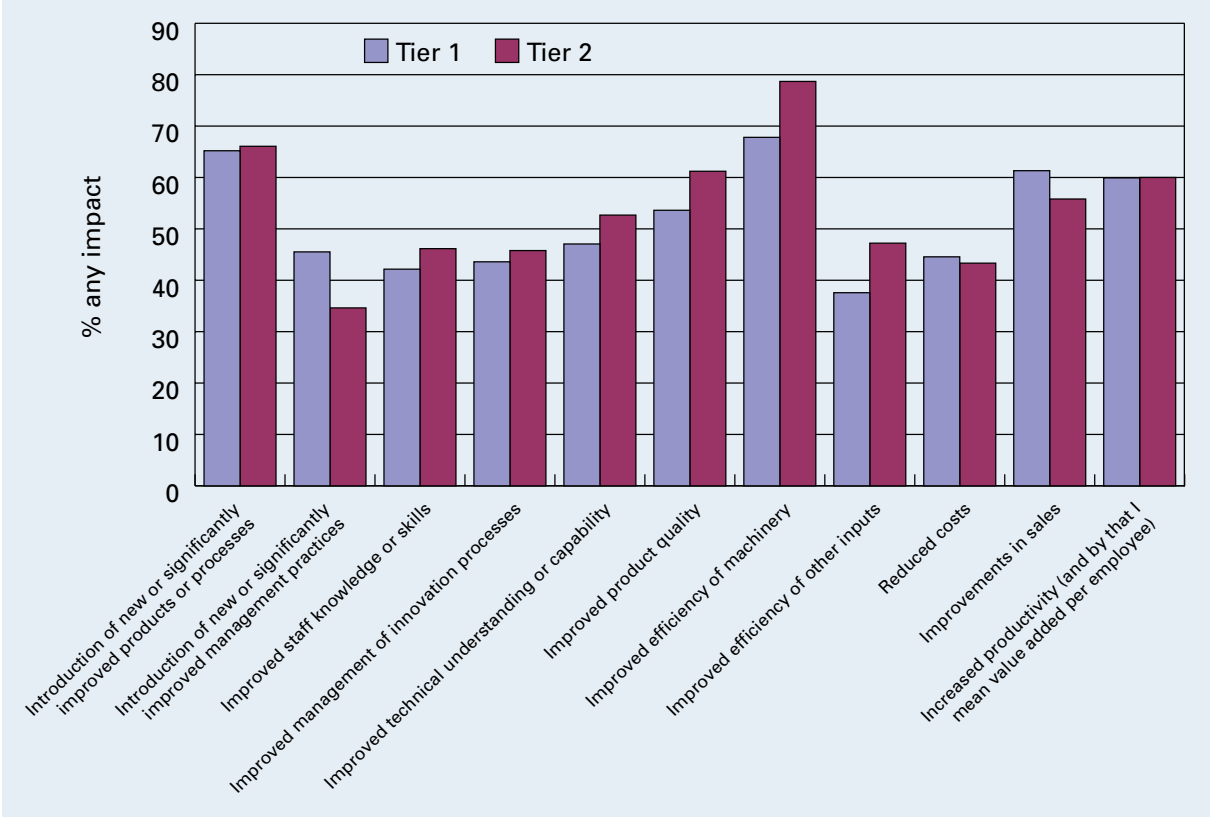
6.4 Additionality – Self-Assessment

Despite the obvious problems inherent in asking beneficiary firms/plants the rather hypothetical 'counter-factual' question what would have happened in the absence of assistance this approach has become a consistent feature of the evaluations of business support programmes. There are intrinsic difficulties associated with this technique when used in this regard which is commonly referred to as 'respondents effect', that is, the fact that respondents (firms) may purposely exaggerate (in either an upwards or downwards direction) the impact of financial assistance from an external influence, such as a development agency. More precisely, respondents may exaggerate the impact of assistance for fear that they may reduce their chances of receiving repeat assistance (if they were not deemed by the development agency as really meriting assistance the first time round). On the other hand, other beneficiaries may be likely to play down the impact of assistance attributing success to themselves and their own personal characteristics (such as own motivation; education; business idea etc).

Levels of deadweight from both RSA and SFIE appear low with the majority of firms citing some form of partial additionality in terms of either achieving business outcomes more quickly or to a greater extent (Table 6.3). Complete additionality occurred in around 21 per cent of cases. Interestingly, there was no statistical difference between the pattern of responses between the RSA and SFIE beneficiaries.

Table 6.3: Self-Assessment of Additionality

	RSA All	RSA Non-UK	SFIE All	SFIE <£100k	SFIE >£100k
	%	%	%	%	%
We would have achieved similar business outcomes anyway	3.4	5.0	4.9	3.5	8.5
We would have achieved similar business outcomes, but not as quickly	23.2	26.3	22.8	27.0	12.8
We would have achieved some but not all of the business outcomes	25.7	22.5	24.1	22.6	27.7
We probably would not have achieved similar business outcomes	25.1	25.0	24.7	21.7	31.9
We definitely would not have achieved similar business outcomes	21.3	17.5	21.0	21.7	19.1
(None of these)	1.3	3.8	2.5	3.5	0.0
Total	100.0	100.0	100.0	100.0	100.0
	N=319	N=80	N=162	N=115	N=47

Disaggregating the RSA beneficiaries by ownership reveals no statistically significant differences between UK-owned and foreign-owned beneficiaries of the scheme. Again there are too few foreign-owned cases in the SFIE sample, and indeed the overall population of SFIE assisted businesses, to make comparisons between the schemes feasible.

Follow-up questions were included in the survey whenever a respondent indicated that the financial assistance enabled the project to proceed more quickly or at the anticipated scale. Of those RSA beneficiaries who indicated that they would have achieved the same outcomes but not as quickly, two-fifths (39.2%) indicated that it would have taken them an additional 1-2 years and in a further third of cases (33.8%) the delay would have been more than 2 years. The pattern of responses for SFIE beneficiaries is broadly similar with the comparable proportions being 37.8 per cent and 24.3 per cent respectively.

With respect to the reduced scale of project in the absence of financial assistance almost three-fifths (58.6%) of RSA beneficiaries reported that they would have had to scale back the project by 50 per cent or more. The comparable proportion for SFIE beneficiaries was just under half (48.8%). Both these follow-up questions on partial additionality provide important supporting evidence for the very low levels of 'non-additionality' associated with both the RSA and SFIE Schemes. In other words, respondents were able to evidence their initial assessment of the degree of additionality.

However, as we have discussed earlier these comparisons between the RSA and SFIE Schemes are not completely accurate as the latter included businesses that would have normally been supported under the old EGS Scheme. Accordingly, we report the responses for SFIE beneficiaries disaggregated by the amount of

financial assistance received: less than £100,000 and £100,000 and over. The direct like-for-like comparison between the old RSA Scheme and SFIE cases receiving £100,000 or more reveals that although the degree of wholly non-additionality is slightly higher the overall levels of partial and full additionality are much higher. For example, 51 per cent of SFIE respondents report Scheme additionality (definitively and probably not achieved business outcomes categories of response) compared to 46.4 per cent of RSA beneficiaries.

At this point it is useful to introduce evidence from previous evaluations of the EGS Scheme in order to compare with the SFIE results for those firms/plants receiving less than £100,000 of assistance. The most recent evidence comes from Wave 2 of the Business Support Monitoring Survey carried out in the first quarter of 2004. Figure 6.3 presents the results for the more robust comparison of the EGS and SFIE Schemes. The most important point to note is that percentage of reported wholly non-additionality was over three times as high for businesses supported under the old EGS Scheme[46] compared to those receiving similar amounts of financial assistance under the new SFIE Scheme: 11 per cent compared to 3.5 per cent. At the other end of the spectrum the proportion of respondents reporting that the assistance was wholly additional (definitely or probably) was broadly similar (44 per cent of SFIE respondents compared to 42 per cent of EGS respondents).

**Figure 6.3: Comparison of Additionality between SFIE (<£100k) and EGS**

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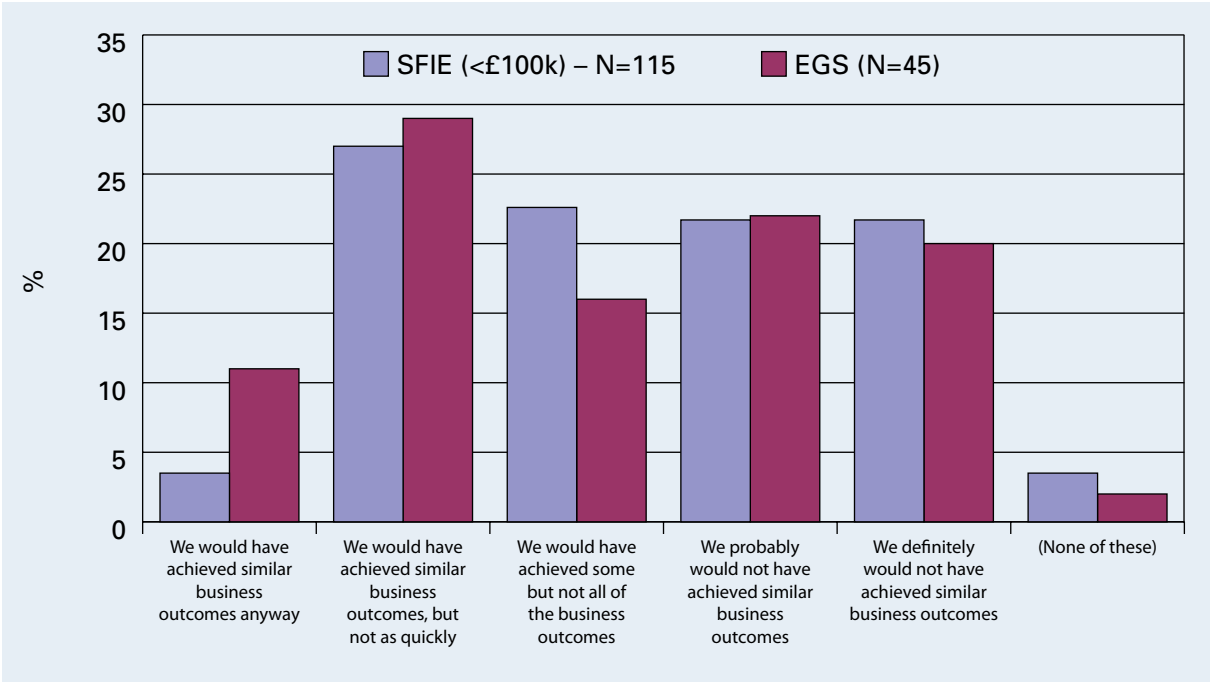
46   These 45 EGS cases include 34 completed cases and 11 in progress cases.

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The only other point of difference is that SFIE beneficiaries were much more likely to report that they would not have achieved all of the envisaged business outcomes (i.e. reduced scale) in the absence of support: 22.6 per cent compared to 16 per cent.

Another way of doing this is to combine the results for the EGS Scheme from Wave 2 of the Business Support Monitoring Survey carried out in the first quarter of 2004 with the results for the RSA Scheme obtained from this survey. The results are presented in Figure 6.3b and show that there is no difference between the degree of additionality reported under the new SFIE Scheme and the previous RSA Scheme once the EGS assisted firms (n=45) are included.

Figure 6.3a: Comparison of Additionality between SFIE and RSA+EGS
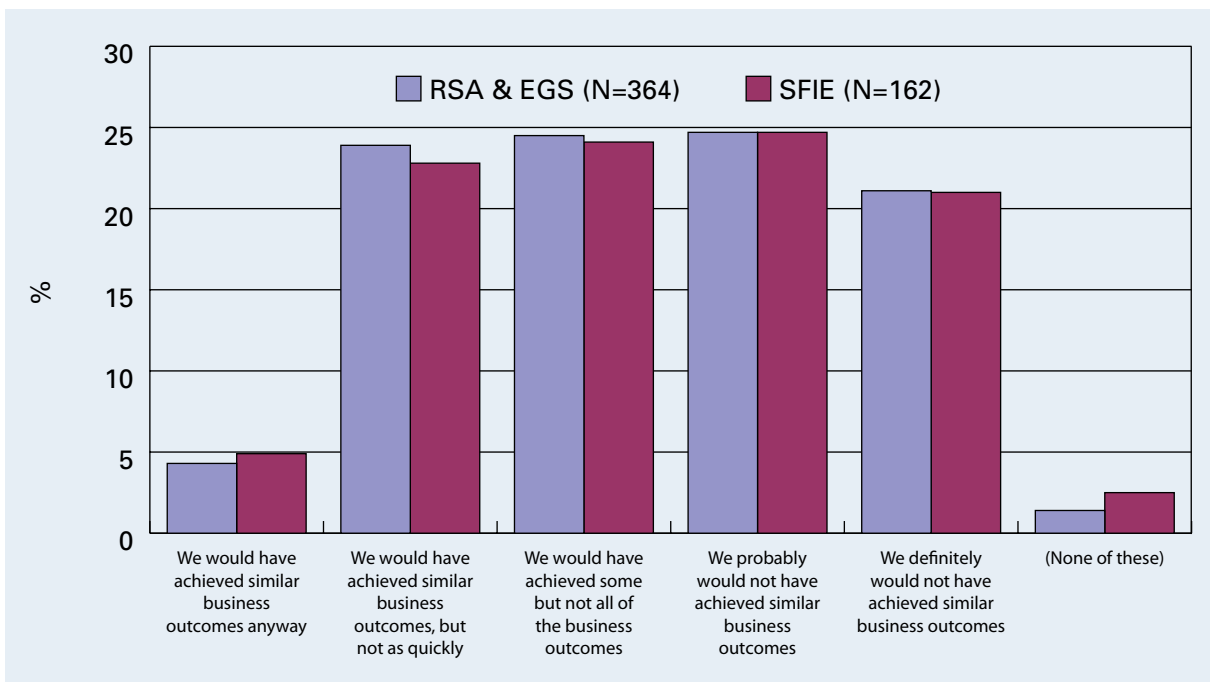
Does the degree of additionality vary across the type of Assisted Area? Figure 6.4 present the responses for the RSA Scheme and although the level of wholly non-additionality is almost identical (and less than 2%) for the two types of Assisted Area there are significant differences in the other categories of additionality. Levels of full additionality in Tier 1 are almost twice that reported by RSA beneficiaries in Tier 2: 29.7 per cent compared to 16.4 per cent. Further, respondents in Tier 2 assisted areas are more likely to report partial levels of additionality.

**Figure 6.4: Additionality by Assisted Area (RSA Beneficiaries only)**
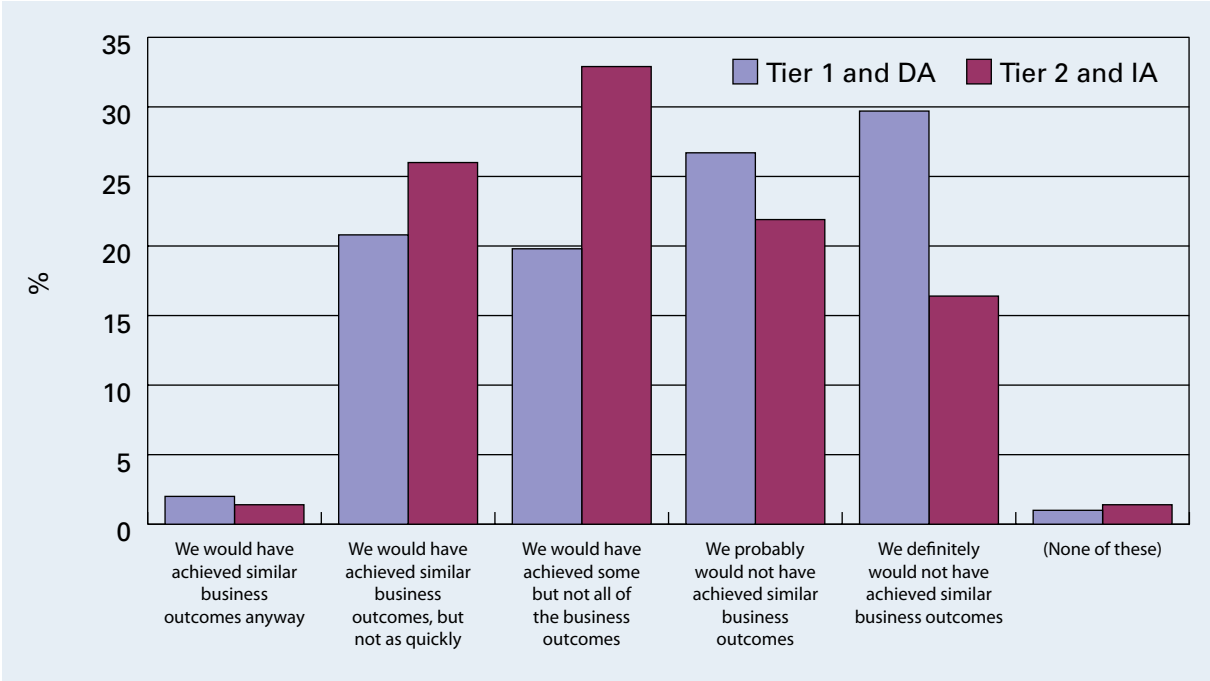
An important dimension of additionality in the context of the RSA and SFIE Schemes is the extent to which, without assistance, firms/plants would have located elsewhere, whether in other regions of the UK or in other countries. Overall, 117 (36.7%) of RSA beneficiaries and 42 (25.9%) of SFIE beneficiaries reported that prior to the approval of the financial assistance under the Schemes they were considering another location[47]. What is of interest is the extent to which these projects would have been 'lost' to the UK in the absence of assistance. For RSA beneficiaries, just under half indicated that they were considering a location outside the UK, while for SFIE beneficiaries it was exactly one-third.

The follow-up question to these respondents asked them if, without assistance, they would have gone ahead with the current project at the same location. Figure 6.5 shows that both the RSA and SFIE Schemes would appear to have been active in ensuring the assisted project went ahead at the current site. Overall, 45 per cent of SFIE beneficiaries and 57 per cent of RSA beneficiaries report that they would have abandoned the project altogether or located it outside the UK. Just under a fifth (19%) of SFIE beneficiaries and one-quarter of RSA beneficiaries report that they would have located outside the UK in the absence of financial assistance.

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47   A further 11 and 7 respectively were 'Don't knows'.

Figure 6.5: 'Locational' Additionality
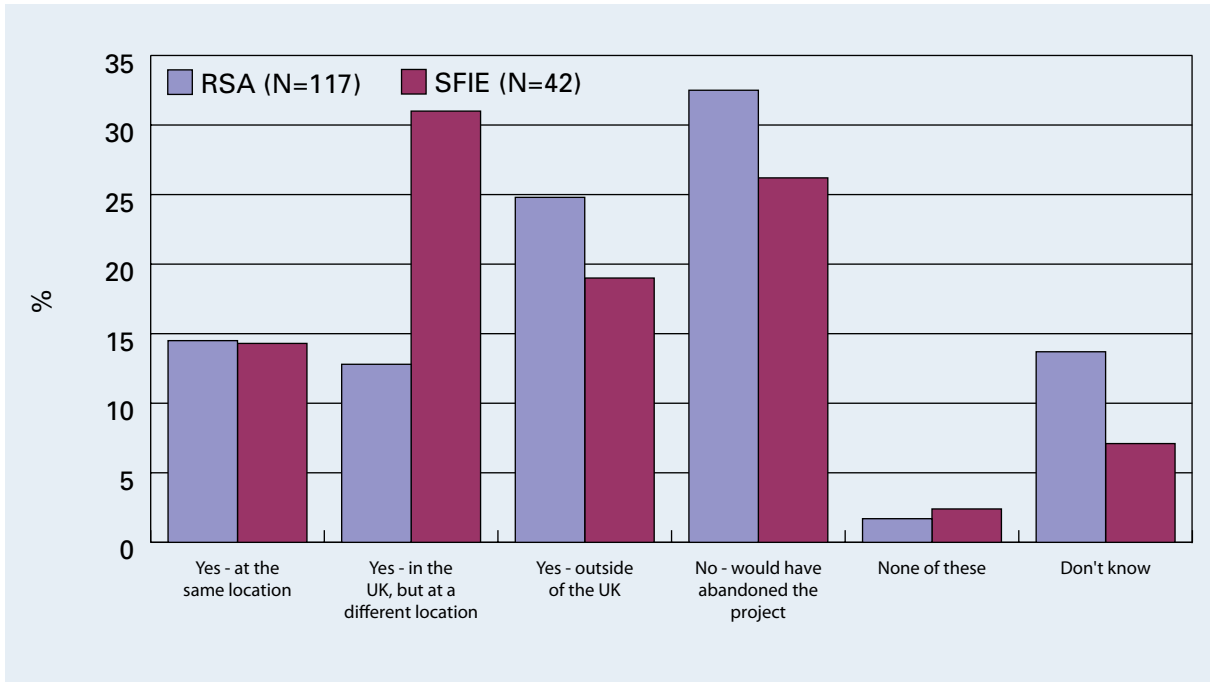
Respondents were also asked to indicate if there were any other viable alternative sources of finance available for the project if no assistance had been provided under the RSA or SFIE Scheme. A fifth of RSA beneficiaries (21.0%) and 17.9 per cent of SFIE beneficiaries report that other viable alternatives were available as the time they applied to the Schemes. Overall, two-thirds of these businesses (n=96) report partial additionality in the second and third categories of partial additionality (equally split between both) in Table 6.3 with only 4.2 per cent reporting 'zero' additionality. The inference here is that while alternative sources of finance were available for some business the effect of the assistance from the RSA or SFIE Scheme was to accelerate the project or to allow it to proceed at the scale envisaged by the business. Finally, comparing the two groups those businesses who report that no alternatives were available were more likely to report higher levels of additionality and this difference was statistically significant.

An interesting follow-up to the standard additionality question asked respondents to indicate if the financial support they received from either RSA or SFIE to divert resources, such as finance, labour or management time, into business activities other than the funded project. For both the RSA and SFIE Scheme only 9.4 per cent and 10.5 per cent of businesses respectively indicated that had been an outcome of receiving assistance. This serves as a way of illustrating the further effects of assistance under both schemes on other potential business outcomes and not those solely associated with the funded project.

Table 6.4 presents the results for the three previous evaluations of RSA together with the findings of the current evaluation[48]. The results are not directly comparable due to the differing ways in which the various degrees of partial additionality, including alternative locations, were addressed and also the way in which the assessment was undertaken. Previous BERR studies have based the assessment on both the interviewers' assessments and the response from the respondent, whereas in our evaluation the respondent's reply was recorded without further review.

The most important point to emerge from the comparison is that the extent of wholly non-additionality associated with RSA financial assistance has fallen dramatically in the current evaluation covering the 2000-2004 period. The previous estimate of around a fifth (based on an agreed interviewer/respondent assessment) in 1991-95 has fallen to only 2.8 per cent, although it is only approximately half that found in the 1985-88 evaluation. Full additionality has shown some fluctuation over the four evaluation periods but an average figure of around 23 per cent would appear to be useful generalisation. One obvious inference to make from these figures would be that the selection process for assisted cases has become much more refined in the last 10 years which has led to lower levels of wholly non-additional cases being supported.

Businesses supported under both the RSA (2000-04) and SFIE Schemes were significantly less likely than in previous periods to report that in the absence of assistance they would have gone ahead with the project outside the UK, or indeed in other regions of the UK.

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48 Appendix 2 contains a summary of recent evidence from the evaluation of industrial policy in Ireland which was taken from Lenihan, Hart and Roper (2005).

Table 6.4: Comparative Additionality Estimates for RSA Assistance

	1980-84[3]	1985-88[3]	1991-95[2]	2000-04[3]	2004-06 SFIE[8]
Wholly non-additional[5]	**16.1**	**8.5**	**19.3**	**2.8**	**6.4**
1. Gone ahead but at a later date/ more slowly[5]	17.4	26.9	24.0	20.1	8.5
2. Gone ahead but on a smaller scale[1]	15.4	11.3	12.9	23.2	25.5
3. Gone ahead but elsewhere in the UK[4]	6.0	1.4	8.2	0.3	0.0
4. Gone ahead but outside the UK[4]	15.4	12.7	18.1	0.3	2.1
Some combination of 1-4	5.4	3.8	4.1	6.9[7]	6.4[7]
Full Additionality (probably)[6]	n.a.	n.a.	n.a.	25.1	31.9
Full Additionality (definitely)[5]	**24.2**	**35.4**	**13.5**	**21.3**	**19.1**
	100.0	100.0	100.0	100.0	100.0
	N=149	N=212	N=165	N=319	N=47

Source: King (1990); PACEC (1993) and AEP (2000)

Notes:

[1] Defined as 'with fewer jobs' in the 1980-84; 1985-88 and 1991-95 evaluations, whereas the 2000-04 evaluation did not specify jobs in the question, although given the nature of the Scheme the inference is that a reduction in the scale of the project would lead to fewer jobs.

[2] Based on an agreed Interviewer/Respondents' assessment.

[3] Based on respondents' assessment.

[4] The additionality question did not include these location options but rather they were probed in a series of separate questions which have been cross-tabulated with the standard additionality question. In brief, they are a sub-set of respondents to the wholly non-additional category who had given serious consideration to alternative locations prior to accepting the offer of financial assistance under the RSA and SFIE Schemes.

[5] Figures in bold are directly comparable across the four evaluations.

[6] This option was not included in the additionality question in the three previous evaluations of RSA.

[7] In the 2000-04 evaluation this was captured by the combination of the response category 'none of these' and other combinations of the of the partial additionality questions, including alternative locations.

[8] For comparative purposes the results from the survey of SFIE beneficiaries are included (i.e. only those in receipt of financial assistance of £100,000 or more).

6.5 Timing of Effects

Around half of RSA beneficiaries reported already having derived all of the expected benefits from their financial support compared to around 22 per cent of SFIE beneficiaries. This inevitably reflects the time difference in the receipt of support[49]. A significant proportion of firms, however, anticipate future benefits from RSA support and particularly from SFIE stretching over the next five or more years. This has clear implications for the interpretation of the results of the modelling of the economic impact of the schemes – i.e., there will be a tendency

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[49]   The analysis of the question has not yet been undertaken which controls for the timing of assistance.

towards an underestimation of the overall effects of assistance on the business (see Chapter 5).

Table 6.5: Timing of the Effects of Assistance

	RSA All	RSA Non-UK	RSA <£100k	SFIE All	SFIE <£100k	SFIE >=£100k
	%	%	%	%	%	%
You have already realised all the benefits	53.3	42.5	73.9	21.6	24.3	14.9
You expect to realise all the benefits in the next year	15.4	17.5	4.3	29.0	26.1	36.2
You expect to realise them in the next 2 years	14.7	17.5	6.5	30.9	33.9	23.4
In the next 3 years	6.6	12.5	2.2	6.2	3.5	12.8
In the next 4 years	1.9	1.3	4.3	3.7	1.7	8.5
In the next 5 years	2.2	1.3	0.0	3.1	3.5	2.1
Or will it take more than 5 years to fully realise all the benefits	2.5	2.5	6.5	0.6	0.9	0.0
(No benefits experienced)	1.6	2.5	2.2	1.2	1.7	0.0
(Don't know)	1.9	2.5	0.0	3.7	4.3	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
	N=319	N=80	N=46	N=162	N=115	N=47

One might expect the profile of the timing of benefits to be different depending upon the amount of financial assistance received with smaller amounts of assistance having 'worked their way through the business'. This is in fact the case for the RSA Scheme where almost three-quarters (73.9%) of businesses in receipt of financial assistance of less than £100,000 reporting that all the benefits have been realised at the time of the survey. This not the case for the SFIE Scheme but given that most of the assistance received by these firms has been of recent vintage this is not surprising – we are not comparing like with like.

Foreign-owned firms and/or plants assisted under the RSA Scheme are less likely to report that they have realised all the benefits which given the fact that they are more likely to have received larger tranches of financial support is consistent with the findings on the amount of support.

Once again a further dimension of the analysis is to investigate the differences between the two categories of Assisted Areas – Tier 1 and Tier 2. RSA beneficiaries located in Tier 1 areas are more likely to report that the benefits of financial assistance have not been fully realised compared to Tier 2 areas[50]. This is further emphasised by the fact that just over one-fifth of Tier 1 RSA beneficiaries expect

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50   Again it is important to note that the current analysis is only based on 174 RSA beneficiaries for which we are able to allocate to these areas.

to realise all the benefits of assistance in the next two years compared to 8 per cent located in Tier 2 areas.

Figure 6.6: Timing of Benefits by Assisted Area
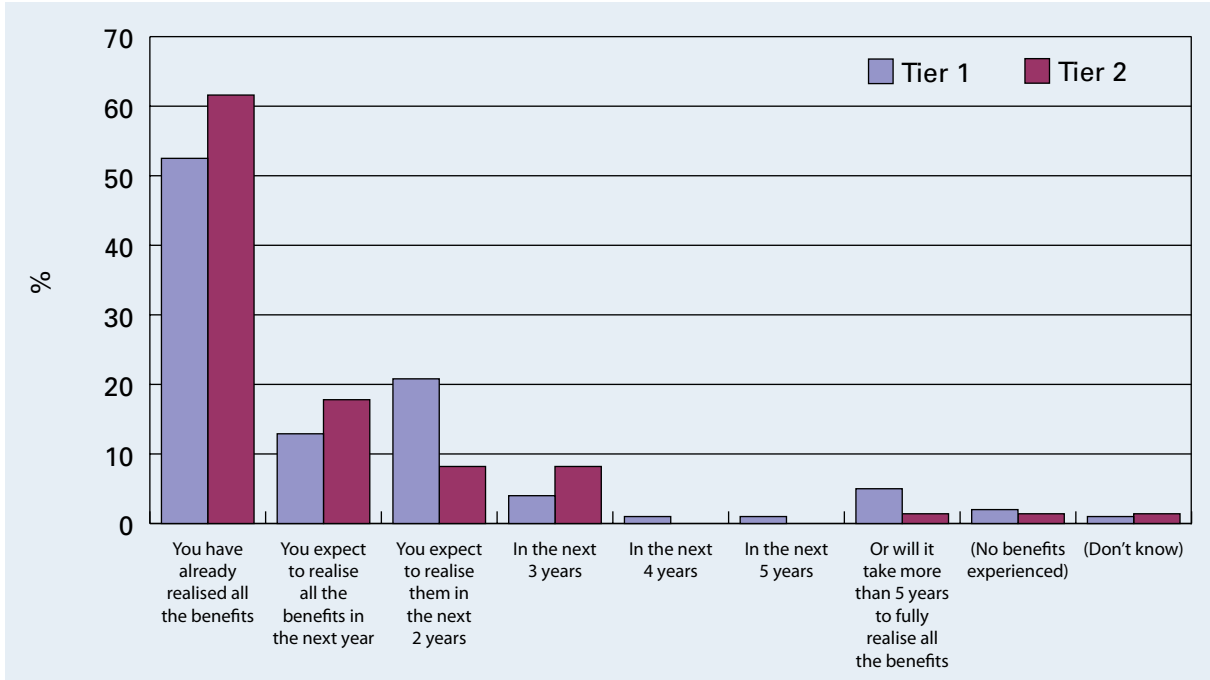
6.6 SFIE Beneficiaries: Jobs, Sales and Exports

In recognition of this issue about timing for the beneficiaries under the new SFIE Scheme and the inability to undertake econometric modelling of the effects of assistance additional questions were included in the survey to probe further on the effects of the scheme. These relate to job creations, jobs safeguarded as well as the effects on sales and export sales (Tables 6.5 and 6.6).

Businesses were asked to indicate how many jobs they had expected to create and/or safeguard a as a result of assistance under the SFIE Scheme and at the time for the survey had they actually done so. From Table 6.5 it is clear that just under half of the respondents (44.4%) indicated that all the expected jobs had been created while almost double that number report that all the jobs they had expected to safeguard with the assistance had in fact been secured. Approximately, a further quarter of respondents (28.9%) report that some of the expected job had been created which, as we have seen above, may be related to the anticipated future benefits still to be realised.

Table 6.6: Jobs Created and Safeguarded (SFIE Beneficiaries)

	Jobs Created	Jobs Safeguarded
	%	%
Yes – all of them	44.4	87.7
Yes – some of them	28.9	3.6
No	25.2	6.5
Don't Know	1.5	2.2
	N=135	N=138

Using the information on new and safeguarded jobs from all the in-scope SFIE beneficiaries it is possible to gross up this result to produce an overall employment effect for the programme in mid-2006. With respect to safeguarded jobs the assisted businesses had received financial assistance to protect 10,130 jobs and we can now estimate that 8,884 of these jobs had actually been secured at the time of the survey. Of the 9,660 'promised' new jobs we can estimate that 4,289 jobs have been created at the time of the survey[51].

How many of these 'actual' number of assisted jobs can be considered as 'additional'? We can use the self-reported estimates of additionality (see Table 6.3) from the survey respondents to arrive at an estimate of the number of net additional jobs associated with the SFIE Scheme in the period 2004-06. The results are presented in Table 6.6. In summary, we can conclude that 1,875 safeguarded jobs were secured and that 905 net new jobs were created as a result of the financial assistance received.

Table 6.7: SFIE: Net Additional Jobs

	New Jobs	Safeguarded Jobs
Estimated number of jobs at time of offer	9,660	10,130
Actual number of jobs created or safeguarded[1]	4,289	8,884
Degree of Additionality (full only – i.e., definitely would not have gone ahead)	21.1%	21.1%
Number of net additional jobs	905	1,875

Notes:

See Table 6.6

With respect to sales, Table 6.7 shows that for the sample of SFIE assisted businesses just under a third (30.2%) report that all the anticipated increases in turnover had been realised with a further third reporting that some of them had been. Of those firms who answered the question regarding the anticipated effects of financial assistance on export sales around a fifth (22.0%) report that they had fully achieved these sales, while a further third (34.1%) report that

51 We use the 'worst case' estimate here of 44.4% and 87.7% (see Table 6.5) as we have no way of calculating the proportion of actual jobs created by respondents who indicated that they had only created some of the promised jobs by the time of the survey.

they have done so only partially. Again, as with jobs, this is not surprising for a new Scheme with many of the assisted business in the survey only receiving assistance in the calendar year 2005, but not after September 2005.

Table 6.8: Sales and Export Sales (SFIE Beneficiaries)

	Sales	Export Sales
	%	%
Yes- fully	30.2	22.0
Yes- partially	33.1	34.1
No	29.5	39.0
Don't Know	7.2	4.9
	N=139	N=41

6.7   SFIE Case Studies

As part of the evaluation it was agreed that 10 follow-up interviews with SFIE beneficiaries would be undertaken after the telephone survey to probe further on a number of the issues raised by the respondent. The Topic Guide used in these face-to face interviews is included in Appendix 4.

The selection of the case studies was deigned to reflect a range of responses to a number of the questions in Section B of the telephone questionnaire – dealing with the impact of the financial assistance from the SFIE Scheme. In other words we were seeking to identify those firms, who had been offered in excess of £100,000, and who had indicated either 'low' or 'high' additionality together with a spectrum of other impacts on the business. These were all businesses who had given permission at the time of the telephone survey for the research team to contact them at a subsequent time. Overall, there were 30 'in-scope' businesses from which to seek a further face-to-face interview.

The 10 SFIE beneficiaries interviewed were located in a number of English regions: the North East (3 firms), the North West (2 firms), London (1 firm), Yorkshire and Humberside (1 firm), the West Midlands (2 firms) and the East of England (1 firm). They were, with one exception, UK-owned businesses and 8 of the businesses were operating in a range of manufacturing sub-sectors (e.g., food, chemicals, automotive products, printing, engineering, wood products). The remaining two businesses were in the service sector (engineering services and a racing facility). Seven of the businesses would be classified as small businesses (i.e., less than 100 employees).

In terms of the financial assistance received under the SFIE Scheme the three larger businesses had received in excess of £500,000, while the others had received between £120,000 and £250,000. Given the reliance upon the survey-generated GVA data in the VfM calculations it was decided to attempt to verify the information on purchased inputs reported in the telephone survey through

the case studies. In all cases the respondent was able to talk through the relevant figures to arrive at a broadly similar estimate of purchased inputs as recorded in the survey dataset.

THE APPLICATION PROCESS

One of the most important issues that emerged from the interviews with the owner-managers and/or financial director of the business was that the process of applying for SFIE assistance was complicated and has resulted in many of the interviewed firms employing consultants to submit the application at an average cost of around £20,000. In one case the respondent revealed that the consultant operated on a percentage of the total grant received – that is 10 per cent. In one case it was actually a cold call by a consultant which resulted in the business applying for assistance under the scheme to assist them to purchase land next to the existing factory premises. Without this support they would have gone ahead anyway with the purchase. Interestingly, the respondent had clearly indicated this in the telephone survey when answering the standard additionality question – they would have 'gone ahead anyway' – which provides some confidence in the estimates derived from this type of survey using the self-assessment method.

It should also be noted that many of these firms did have experience of the old RSA Scheme and were able to make very direct comparisons with the application process – that is, it has become much more complex. However, whilst there was a general view expressed about the complexity of the application process the majority of interviewees understood the need to collect the data requested – the problem was the opportunity cost involved and hence the use of outside consultants.

For one respondent the length of the application process was considered to be a very long one…

> *"There were only 2 of us working on it [the application process] and it took a lot of time…they needed a huge amount of information…it just seemed to go on for months''.*

It was not only the length of time and volume of paper work involved in the process that was considered a problem but also the people who the company had to interact with to complete the application process. In particular the external accountant the company was told to use by BERR to aid with the financial aspects of the application.

"…he was the financial person we were referred to…there was one accountant who yes-ed and no-ed things and he was only part-time…and we had to get advice from him. For example at one stage he was basically saying 'No, you don't meet the criteria'. So we said 'Well what do we need to do to make the criteria?' He said 'You change this and this and you're okay'. But without asking him…He didn't tell you…it was a question of you had to treat him the right way and ask him the right questions…".

There were further issues over the lack of clarity in the criteria with different people in the process asking and/ or emphasising different things leading to some confusion. For example, it was only at the end of the application process questions about workforce ethnicity were raised for one business when previously this had not been mentioned as an issue in terms of the criteria that had to be fulfilled.

"…we'd get to one stage and then meet somebody else and he would ask us totally different questions to the people we'd met before then, just before finalising it, the chap who offered it us in the end came down to se us and he was asking about claiming and the ethnicity of our workforce… nobody had ever asked us and we were practically at the final stage and you think 'Well, why did nobody mention this before? Why could it not be in the report that you asked me to fill in?".

SCHEME CONDITIONS

There was a great deal of negative commentary on the particular conditions associated with assistance provided under the SFIE Scheme as the following case illustrates:

"I think the main thing was that neither they nor we understood the retention. They call it a floatility (?) retention, but in fact effectively it's holding back money just in case you, you know, pack up and leave. Which I can understand that, but they didn't understand that actually if you completed a project earlier than the 3 year time frame that the 20% actually stayed there till the end of the third year which is crazy".

"But you need the grant and you put in the application for the grant and there's a ceiling on the grant, right, about a combination of jobs or capital and then they hold this 20%. So you're actually applying for an 80% grant and you get penalised effectively for doing the job early, so the whole structure of this 20% is bizarre".

One respondent, who received the assistance to help his company to move to new premises described how…

> *"…it was touch and go to get the approval before we actually moved in… it's a bit difficult because the criterion is you mustn't sign for any of your requirements [i.e., for the building]. We had to get special permission to sign the lease because everything hadn't been finished…It was a very long…process and generally when you're looking for property you look for a long time and if suddenly the right one comes up you can't hang a round…If we'd waited for the DTI we'd have lost the building…we got this special permission but even then…but we mustn't use all of it in any of those products before we got the approval. So you've got this building… yet in theory you're not allowed to sign an order form for any of this product which is going to be paid for or contributed towards by the grant until you've got the grant, which of course is not possible…once the final thing goes in…you have to wait 3 or 4 weeks…if we had relied on this money to go ahead with the project and here we are 15 months…since we actually got possession of the building…then we'd have been in serious problems".*

ADDITIONALITY OF ASSISTANCE

From the telephone survey we know that in all but one of the cases interviewed, in the absence of the grant the business would not have been able to be trading at the same level as they are currently. We used the face-to-face interviews to investigate these responses in more detail.

For the business reporting 'zero' additionality the following comment was made:

> *"Well yes, because – again confidentially – £120,000 less all expenses compared with an outlay of 3 million is very, very small. I mean we'd have done it anyway".*

For those cases reporting some additionality we report the following findings. In one case the grant added to the total investment and without the grant they would have reduced the investment and the impact of this was that the future stream of revenues would have been curtailed. In another case the owner would have decided to scale back but the grant had raised their growth objectives. In other cases the grant enabled the business to remain in operation, while for another without it the business would have been unable to start trading.

Another owner expressed it like this:

"I think that we would have ended up borrowing more money, but I'm not sure … In terms that we financed the assets with the local bank, I mean they obviously have their limits in terms of what they will lend against assets and I think we were close to the maximum anyway, so I don't think it would have been easy to find the extra £100,000 to £150,000 required to invest in the new technology".

In the case of one of the respondents the additionality from the RSA Scheme came in the form of the company concerned reaching a point of 'modernisation' earlier than it otherwise would have done. This 'modernisation' all stemmed from the grant enabling the company's move to new premises and then having enough funds for further equipment purchases that the new premises allowed them to exploit.

"It's taken us ahead in time. It's probably taken us two years ahead in the equipment and the efficiency that we've achieved…when you move when you're limited as to what you can afford to do you stagger things in and we did do so, but knowing that we had to spend this amount of money to get the grant it made us do things we wouldn't have done for a couple of years…we did advance technically further than we would have otherwise done I think – this quickly".

If the grant was provided in a different way how would the assisted businesses react? For a number of cases the grant supported the balance sheet to add to shareholders funds and to reduce the gearing which had constrained the banks from lending in the past. The fact that the grant adds to 'free cash flow' is highly significant in its role to unlock finance from traditional sources. Making the grant into an interest-free loan would reduce its value to the firm because it would add to both assets and liabilities.

"Well, it would be very difficult for a private company to accommodate that sort of thing. A loan is obviously not as good as a grant and we can get loans from anywhere. You can get loans so that's not much of a help".

In all the cases the use of venture capital was ruled out by the private owners. This is consistent with the traditional ranking of sources of finance that takes place in private companies. This suggests that the key to this ranking of finance is the degree to which it leaves the existing management in control.

IMPACT OF ASSISTANCE ON THE BUSINESS

It was quite clear that the capacity of all the cases was increased by the investment supported by the SFIE scheme. In addition, for the majority of the project investments there was some technical change associated with the purchase of the capital equipment. In two of the cases the new capital equipment was combined with a brand new facility which enabled the production process to be completely redesigned.

The new capital equipment in many of the cases will significantly add to the services that they could provide, especially for cases operating in sectors of manufacturing where the old ways were no longer tenable and would have led to an inevitable decline of the business over time. The new elements were, therefore, critical to their future. But there was a conditionality associated with this in a number of the businesses – in other words would the management be able to fully exploit the opportunities presented in part because of the sheer scale of internal change that had been instigated.

The conclusion is that the large scale investment that these grants support is something that makes an appreciable difference to the individual businesses concerned. In many cases, whilst the grant did not on its own tempt the firms into making these decisions it acted to increase the size of the investment and to emphasize the growth element of the business decision.

In the case of one respondent the SFIE money funded a move to newer, bigger premises, these allowed several things to happen within the company.

"…we were growing…and we'd just come to a stop because once you overload a warehouse you block things up…we were getting to that stage…you write these grand things down and you think 'By golly, I'm not going to get the money unless I spend it', so you just spend it, but… not wastefully…we did advance technically…Particularly going to the computer controlled stock control. And this can be developed into all sorts of things and later on we'll do order picking as well…It's only just come in, but we can see it doing it [improving efficiency] and accuracy particularly to see the accountability of stock around the building… We would have done the move anyway, but we would not have equipped ourselves as quickly to become…efficient…It's not just the equipment, but we also built a mezzanine floor to cater for a new show room…that is good for showing off to customers because the customers are impressed by the building.… These are things without the grant or without the potential of the money coming from the grant in the future we wouldn't have outlaid that amount of money at that stage…we've never had so many customers visiting us as there are now and I'm sure because it's a nicer place to visit".

The point being raised at the end of this quote supports a point that we have made on many occasions about the evaluation. It is the *totality* of the financial assistance that is important to the recipient and not the actual amount of money that they end up receiving. Receiving only 80 per cent of the latest amount offered would not have reduced the effects highlighted by this respondent.

WIDER BENEFITS

The case studies brought out some wider benefits from the SFIE scheme. Obviously the support is for firm's capital expenditure; which adds to the sum of investment. Many of the firms introduced embodied technical change in the capital expenditure and were in the process of realizing the productivity benefits. Most of the capital expenditure enabled the firms to increase capacity.

For two of the cases there were strong links to local universities (in the North East and the North West) as a result of the assisted project and KTP schemes were also being used to facilitate this link. The businesses were operating in the chemical and food sectors and were heavily reliant on R&D activity to ensure ongoing product development in very competitive markets.

Other ways the assisted business can help develop a professional business base in the assisted areas is revealed through the following comment from a recent start-up:

> *"…but we are very keen on the training and we're actively talking at the moment to get involved in a scheme whereby our managers are able to perform in groups with non-competing other managers and that is effectively my way of association and linkage and this, that and the other whereby they go and do a theme but it allows them to be able to transfer that knowledge and experience…."*

In a number of the cases the relationship between the business and local regeneration projects was strong and the individuals running the businesses had been active in playing a strategic role in the local area. Their businesses were highly 'tuned' to the needs of the local area in terms of providing both skilled jobs, and more generally, a quality profitable business at the core of the regeneration project.

The SFIE assisted firms were located in less advantaged areas. Consequently, the firms were recruiting and training people in areas of disadvantage: as one chief executive said:

"I mean the best illustration of that is our apprentice training scheme. We started the apprentices year one and we've now had 2 qualified. It's a 4 year apprenticeship. 2 have come all the way through the time and they're now a year into their professional career now. We've got 4 who finished at college this year, so they've done their 4 years and we've still got 8 still at college and we've recruited 4 more apprentices this year. So our commitment to training and developing apprentice engineers through to fully skilled engineers is really very evident. We have got certainly more than our fair share of fully skilled machinists. With the sort of level of complexity that we've got, really we don't want people just to operate and push runs. We need a skill. We would like ideally a skilled engineer on every machine. That would be our aim. We can't do that cost effectively. We can use some semi-skilled labour, but even that we're taking people from the [dying] trades in the city and re-training into engineering".

Another example was of re-location where the firms now recruited to an area with Objective 1 status from an area of relative prosperity in the region.

"Without the grant I think we would have moved nearer to the motorway… again you've got to get the employees out there…but here we don't have any problems recruiting here because we've got ……a large town with relatively high unemployment. If the SFIE hadn't been available we wouldn't have moved to …we would have gone nearer to junction XX".

The grant scheme therefore has helped firms to locate in areas that have a need for employment, and to train the local employees.

There were other benefits that were not captured by the econometrics. One example of the grant helped a company face future environmental issues. The CEO described the existing facility thus:

"It was put in in the nineties, it's still a good facility but with all the environmental issues surrounding it.. you need certification to be able to run the process. ….it's a heavily controlled process.. you get waste which is getting ever more expensive to remove, you know the polluter pays concept. Gas with the recent energy spikes is a growing cost and it's becoming a process that you can see over time will actually become very cost ineffective".

And the impact of investment in this firm would be to probably reduce the costs of their customers because there would be a process that would no longer be required:

"They will get a product that should reduce their costs. A lot of plants have a de-greasing facility before they start well you won't need to de-grease this".

There were wider benefits from the grants. First, there were examples of the grant influencing location decisions to the benefit of disadvantaged local areas. Moreover, the benefits were in both employment and workforce training because inevitably both were required. Second, there were examples where other benefits that were less easily quantified: environmental, and with potential cost savings for customers, again something that is not picked up in the econometric modelling.

The perceived wider benefits of the SFIE grant were listed by one respondent as a direct result of the move to a new single premises from three separate sites. This has meant that the company has moved into…

"…recycling. We recycle as much as we can which wasn't worth it when you were working from three places, but now we're in one unit we can do so…we've now got a compactor so with cartons and stuff like that we compact them and sell them for recycling rather than just putting them in a skip…".

Clearly the move to new premises has facilitated a more environmentally sensitive approach by the company concerned.

6.8 RSA/SFIE Non Take-up Survey

It was decided to approach those businesses on the database[52] that had 'declined the offer' in order to ascertain the reason for this and to develop another perspective on the issue of 'additionality'. Overall, 15 interviews were undertaken with businesses that had declined an offer of financial assistance under either the RSA or SFIE Scheme in England: 8 RSA cases and 7 SFIE cases.

The following areas were explored with these non-take-up cases (see Appendix 5):

● reasons that led to an application to the RSA/SFIE Scheme for financial assistance in the first place

● proportion of total project costs sought from the RSA/SFIE Scheme

● other sources of finance used to fund the project

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52   There were 106 RSA/SFIE cases in both England and Scotland but only 47 had useable contact details. Of these, interviews were undertaken with 22 businesses: 15 in England and 7 in Scotland.

- circumstances that eventually led the firm/plant to decline the offer of financial assistance under the RSA/SFIE Scheme

- what happened to the project (proceeded/abandoned):

  - If abandoned – reasons for abandoning the project and who took this decision (e.g., management at this site/parent company in UK/ overseas)

  - If proceeded – did it proceed as initially envisaged – and if Yes, how was the project then funded in the absence of financial assistance under the RSA/SFIE Scheme. If No – how was the project changed and what were the reasons for changing the nature of the project – an who took this decision (management at this site/parent company in UK/overseas)

The reasons for approaching the RSA/SFIE Schemes reflected a range of business development activities all designed to expand the business through new product/service ideas, relocation or through the physical expansion of the existing premises. For the RSA cases there had been previous involvement with the scheme and they were returning for further assistance.

When asked why they had turned down the offer of assistance the responses fell into two broad categories, with the majority of responses falling into the second category:

- **Scheme issues** – The length of time to reach a decision – offer came too late; too many tie-ins and conditions; grant to project costs ratio – "had to spend too much to get the level of grant we were looking for"; clause that states that you are not allowed to purchase anything until you have actually received the funding was an issue.

- **Business issues** – the project was abandoned as contracts fell through; lack of other funding; premises became available in current location therefore no need to move into a Tier 1 location, or too expensive in the assisted area; owners/shareholders decided not to proceed; change of ownership

Following on from this was the question of what happened the project once the offer had been declined. In all but one of the SFIE cases, and in 5 of the 8 RSA cases, the project was abandoned altogether. The main reason for this was that the required funding could not be found elsewhere. Of the 4 projects that proceeded 2 of them did so as initially envisaged with no 'scaling down' of the investment.

Both of these firms had complained at length about the conditions associated with the financial assistance. The funding for these projects was raised internally which might suggest very little additionality would have been associated with these two cases, although what was not probed was the degree to which these internal funds could have been utilised elsewhere in the business to achieve other outcomes which might have benefited the local/regional economy.

6.9 Summary

Generally, the majority of respondents in the sample of RSA and SFIE beneficiaries reported benefits for their businesses. The most common effects were on productivity and sales growth with development in management practices and innovation management some of the least often cited impacts. Two statistically significant differences were evident between the effects cited by RSA and SFIE respondents relating to improved staff knowledge or skills and improved technical understanding and capability. In both cases a positive effect was more often cited from SFIE beneficiaries than from RSA beneficiaries.

Overall, however, the percentage of respondents reporting these 'softer' effects are high and support the interpretation that the new SFIE Scheme has the potential to continue to enhance the competitiveness of the recipient firms in future years.

Levels of deadweight (i.e., wholly non-additional) for both RSA and SFIE-assisted business and/or plants appear low (3-5%) with the majority of firms citing some form of partial additionality in terms of either achieving business outcomes more quickly or to a greater extent. Complete additionality occurred in around 20 per cent of cases.

An overall employment effect for the programme in mid-2006 was estimated. With respect to safeguarded jobs the assisted businesses had received financial assistance to protect 10,130 jobs and we can now estimate that 8,884 of these jobs had actually been secured at the time of the survey. Of the 9,660 'promised' new jobs we can estimate that 4,289 jobs have been created at the time of the survey. We the self-reported estimates of additionality to arrive at an estimate of the number of net additional jobs associated with the SFIE Scheme in the period 2004-06: 1,875 safeguarded jobs were secured and that 905 net new jobs were created as a result of the financial assistance received.

The general conclusion to be drawn from the 10 case studies is that the SFIE Scheme has achieved outcomes that are clearly additional to the regional economy and that it can be positively connected to business performance in recent years. There were some direct criticisms of the operation of the SFIE Scheme and they mainly concerned the bureaucracy and the need to employ outside consultants on occasions to complete the application process. There is some evidence from the non take-up survey that the length of time to reach a decision led to the abandonment of the project. Nevertheless, the comments from the senior managers or owners of these businesses demonstrate that the SFIE Scheme has made important contributions to changing the capacity and competitiveness of manufacturing businesses as well as enabling mobile foreign-owned businesses to view the UK as a viable business location in an increasingly competitive global economy.

Chapter 7: RDA Case Officer Survey: Operational Issues

7.1 Introduction

The RDA Case Officers' survey was intended to discover how case officers dealt with applications for the SFIE. In particular we were interested in the ease of the process for making the decisions and the way in which the case officers were making those decisions. The relevant theory suggests that the implementers of policy tend to choose more routine and administratively comfortable cases[53]. The extent to which case officers believe applications to be straightforward would tend to mitigate any 'policy adjustment' at the case officer level. Allied to this is a debate over the appropriateness of rules versus discretion in the implementation of policy.

The survey had a total of 25 responses of which most were from individuals who were both appraising and monitoring applications. For fifteen of the case officers SFIE occupied all their working week, of the rest it occupied over 70 per cent for six, half the working week for 2 and for two others it occupied a lower proportion although for one this was only a recent reduction from much higher levels. Many of the case officers had previously held similar positions and their expertise was mainly developed through experience, supplemented with accountancy and business qualifications (32% had formal accountancy qualifications). Their number of appraisals varied from single figures (3 respondents) to over 200 with most having assessed between 10 and 99 applications. The case officers between them reported that they had assessed a total of 930 applications. There is a wealth of experience to draw upon for the operation of the SFIE Scheme in the RDAs.

The first question concerning the scheme concerned the way in which firms found out about the scheme. This confirmed the key role that intermediaries play in the scheme. Overwhelmingly case officers believed that the main route to the scheme is through business support organizations, such as Business Links or Chambers of Commerce. The only other group that came close was the presence of professional advisers. This is similar to the experience of other specialist financiers and indeed there was a scheme of 'investment readiness' to prepare firms for investment.

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53   Lipsky, M (1971) "Street level bureaucracy and the analysis of urban reform, Urban Affairs Quarterly 6, 391-409. For an example in UK business support see Mole K (2002) Street level technocracy in UK small business support, Environment and Planning C, 20, 179-194

Table 7.1: What is the MAIN route by which businesses find out about the SFIE Scheme?

Route	Number of Responses	%
Direct approach from RDA personnel	0	0
Leaflets from the RDA	1	4.2
Recommendation from other businesses in the region	0	0
Previous beneficiary of RSA Scheme	1	4.2
Referral from BERR	0	0
Referral from Business Support Organisations (e.g. Business Links, Chambers of Commerce	16	66.7
Information/Direction from Parent Company	0	0
Other (included professional advisers, local authorities, PDA press and publicity)	6	25

7.2   Comparing the RSA and SFIE Schemes

The second issue that we explored was whether case officers believed that the SFIE scheme was an improvement on the older RSA scheme. The vast majority of case officers understood the rationale for the scheme, with just 3 suggesting that they only partly understood the rationale.

The reasons given by the respondents for the introduction of the SFIE Scheme were to increase the emphasis on productivity and skills (11 out of 15) and to increase quality (2 out of 15) in an open ended question that was coded by the research team. Case officers mentioned the GVA tests which they believed had 'raised the bar' but made it more difficult and less transparent a process as far as the firms were concerned. A case officer put it like this:

"More rigorous appraisal process but this may be due to change in administration of the scheme rather than the scheme itself. Projects have been far more successful than those approved by the Government Office under RSA scheme. Volume of applications has probably reduced however due to the hurdles of GVA test etc. Also companies are put off applying as it is perceived as an arduous, difficult process" [54].

When asked about whether the SFIE Scheme has produced higher quality applications there was some disagreement (Table 7.2). Those who suggested that the scheme needed other changes included some discussion concerning the quality bar. Whilst one suggested skills were less of a problem.

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54   This point also emerged in the discussion with the owner-managers/Financial Directors of the 10 SFIE beneficiaries that were included as Case Studies (see Chapter 6).

"I think the scheme needs to be aware that some projects are of good quality but the skill levels are low. This shouldn't hinder the company's chances of gaining financial support".

Table 7.2: Higher Quality Project Applications under SFIE Scheme

Answer ONLY if you have direct case work experience of the RSA Scheme: Do you think that the changes made with the introduction of the SFIE Scheme have produced higher quality (e.g. labour skills and/or degree of R&D and innovation) project applications?		
	Number of Responses	**%**
Yes	8	38.1
No	7	33.1
N/a	6	28.6
Total respondents	21	

Others were more concerned to increase the 'quality bar'.

"A slight increase in quality but perhaps the quality bar should be higher still – which then gives a better return for the taxpayer's investment".

"Higher cost-per-job limits for higher quality jobs. Limit assistance for NVQ2 jobs".

One suggested that in their area the bar had been deliberately set higher. Although 17 out of 22 (77%) believed that the SFIE Scheme guidelines were straightforward to operate there were a number of issues that were commented upon including:

"Guidelines need to be regularly reviewed and kept up to date, in particular the annexes on EC market assessments and likely displacement in the manufacturing sectors".

"Although very long (and thus in theory comprehensive) the guidelines are open to interpretation and at times very hard to understand to the uninitiated, e.g. section on restrictions, Annex and Non Annex 1 foods".

We asked case officers to compare the RSA and SFIE schemes directly. It was clear that the case officers believed that the SFIE scheme had increased in complexity for applicants (Table 7.3). This was borne out from the SFIE case studies which revealed that many assisted businesses are using consultants to prepare the application for them as they found the process very time consuming.

Table 7.3: SFIE Scheme Guidelines

If you experienced the pre-2004 RSA Scheme, overall, how do the guidelines for the SFIE Scheme compare with the previous RSA Scheme (using the 5 point scale with 1 being very much worse and 5 being very much better)

	Very much worse (1)		About the same (3)		Very much better (5)	N/A	Response Average
Ease of operation as a Case Officer	0% (0)	6% (1)	53% (9)	12% (2)	0% (0)	29% (5)	3.08
Degree of complexity for applicant	6% (1)	25% (4)	38% (6)	0% (0)	0% (0)	31% (5)	2.45
Flexibility in offering appropriate assistance	0% (0)	6% (1)	53% (9)	12% (2)	0% (0)	29% (5)	3.08
Complexity of scheme criteria	0% (0)	19% (3)	50% (8)	0% (0)	0% (0)	31% (5)	2.73
						Total Respondents	17

7.3   SFIE Scheme Criteria

If it is difficult for the clients to be aware of the complex procedures we were also interested in those elements of the SFIE Scheme criteria that the case officers believed were more difficult or easy for them to assess (Table 7.4). Not surprisingly location was the easiest criteria to assess followed by eligibility and skills. The most difficult to assess was the need by the business for the financial assistance.

Table 7.4: Assessment of SFIE Scheme Criteria

To what extent do you find the criteria for the SFIE Scheme to be easy or hard to assess?

	Hard to assess (1)		(3)		Easy to assess (5)	N/A	Response Average
Location	0% (0)	0% (0)	5% (1)	9% (2)	73% (16)	14% (3)	4.79
Need	5% (1)	33% (7)	29% (6)	14% (3)	5% (1)	14% (3)	2.78
Eligible Investment	0% (0)	0% (0)	9% (2)	23% (5)	55% (12)	14% (3)	4.53
Skills	0% (0)	0% (0)	9% (2)	45% (10)	32% (7)	14% (3)	4.26
Viability	0% (0)	14% (3)	36% (8)	32% (7)	5% (1)	14% (3)	3.32
Quality of the Project	0% (0)	0% (0)	27% (6)	50% (11)	9% (2)	14% (3)	3.79
National and Regional Benefit	5% (1)	5% (1)	27% (6)	45% (10)	5% (1)	14% (3)	3.47
						Total Respondents	22

The flavour of the comments below shows that the vague and subjective nature of the concepts of need and viability are more difficult for the case officers to assess, and it does require some judgement. Officers commented:

"Need and Viability can be difficult to assess due to the experience of the applicant in seeking grant support. Validity of forecasts can be difficult to prove whereas the areas such as the skills test provide a simple pass or fail".

"Additionality is a subjective judgement"

"Need and viability are generally hard to assess as they depend on forecasts, peoples' attitudes to risk, peoples' attitude to borrowing, peoples' investment criteria, etc".

We followed this up by asking the extent to which each of the assessment criteria made a contribution to the decision that was reached about individual projects (Table 7.5). Despite the difficulty in assessing these criteria the assessment of project viability and the need for assistance were perceived by the case officers as two of the most important criteria for decisions about the individual projects. What is perhaps surprising from the responses is that project quality, skills and national and regional benefits are slightly less likely to be rated as critical element of the overall decision about individual projects.

Table 7.5: Relative Importance of the SFIE Scheme Criteria

To what extent does each of the assessment criteria for the SFIE Scheme contribute to our decision about individual projects?

	To a negligible extent (1)		(3)		To a great extent (5)	N/A	Response Average
Location	0% (0)	0% (0)	14% (3)	5% (1)	68% (15)	14% (3)	4.63
Need	0% (0)	0% (0)	14% (3)	23% (5)	50% (11)	14% (3)	4.42
Eligible Investment	0% (0)	0% (0)	9% (2)	27% (6)	50% (11)	14% (3)	4.47
Skills	0% (0)	0% (0)	18% (4)	45% (10)	23% (5)	14% (3)	4.05
Viability	0% (0)	0% (0)	5% (1)	36% (8)	45% (10)	14% (3)	4.47
Quality of the Project	0% (0)	0% (0)	24% (5)	29% (6)	33% (7)	14% (3)	4.11
National and Regional Benefit	0% (0)	0% (0)	27% (6)	45% (10)	14% (3)	14% (3)	3.84
					Total Respondents		22

There were other parties involved in the overall decision to provide financial assistance under the SFIE Scheme that were rated highly by case officers (Table 7.6): for example, members of the Regional Industrial Advisory Board or sub-regional partners including sector forums. One might suspect that these represented both the personal and professional network of the individual case officer.

Table 7.6: Role of Other Parties in the Decision-Making Process

Please indicate the value of the contribution of other parties in the decision-making about individual projects?

	Response Average
Regional Industrial Advisory Board	3.81
BERR SFIE Team	3.56
BERR Market Analysts	3.38
Industrial Development Advisory Board	2.50
IDU	2.46

The case officers suggested by a 2-1 majority that manufacturing firms were preferred under the scheme. This quote is typical:

"Manufacturing businesses, those industries reliant on capital investment. The scheme is not suited as well to technology businesses".

Another case officer was more expansive concerning the sectors they felt were excluded from the SFIE Scheme:

"SMEs, BMEs and some service sectors were excluded".

7.4 SFIE Scheme Impact

In the overall assessment of the SFIE scheme the respondents were asked about the overall contribution that the SFIE Scheme had made to the region. The average responses are shown in Table 7.7. Case officers saw the greatest contribution of the scheme in their region to jobs (creating and safeguarding jobs) and rather less on increasing innovation. This is consistent with their earlier responses on the relative importance of the SFIE Scheme criteria in their decision to award financial assistance. There is perhaps a slight concern that this emphasis on jobs might result from the relatively smaller role assigned to skills and project quality by the case officers in the final decision about an individual project (see Table 7.5).

Table 7.7: Regional Impact of the SFIE Scheme

Thinking about the SFIE scheme overall, can you indicate what you consider to be the most important effects of the Scheme to date in your region?	
	Response Average
Increasing or safeguarding jobs	4.45
Create or safeguard skilled jobs	4.10
Generate positive spillover effects on local economic development	4.00
Improve GVA by increasing productivity	3.68
Generate positive spillover effects on enterprise	3.35
Generate positive spillover effects on skills	3.32
Generate positive spillover effects on innovation	3.00

7.5 Summary

Overall, the survey suggests that case officers are reasonably happy about the SFIE Scheme. On the whole the guidelines were well received. Some believe that 'the bar' is slightly too low; others believe it is too high. In any event respondents suggest that the region has the discretion to increase the 'quality bar'. The way applicants find out about the Scheme is often through their contacts with other organizations involved in business support, which might suggest some joined-up element in the operation of industrial development policy.

The case officers' survey highlighted the increased complexity of the SFIE Scheme for applicants and the difficulty of assessing both need and viability, critical components of the overall decision to grant support under the scheme. The complexity for the clients relates back to the connection between other

organizations involved in business support. It is clear that some knowledge of the way the businesses are to be assessed is required for a successful application. This again highlights the role of intermediaries/consultants in the SFIE grant process. In the case of venture capital, intermediaries are often seen as important to provide 'investment ready' projects that increase the quality of the deal flow.

There are a number of case officers who see that judgement of need and viability of the business as more difficult. Typically case officers were using financial data to assess need and there maybe some differences in their comfort with these judgments; yet those with previous accountancy training also found these assessments more difficult.. Overall, however, one might argue that these are realistic statements: it is difficult to assess the need for grant assistance!

Guidelines always need to be interpreted and experience from other government services suggests that this interpretation can differ from jurisdiction to jurisdiction. In terms of local discretion there does seem to be some impact of a link between the Regional Economic Strategy and the SFIE Scheme. Some regions are using SFIE to target particular issues and clusters; others have decided to increase the quality bar to support high skilled workers. Again this may indicate some 'joined-up' implementation of regional and industrial policy interventions.

Chapter 8: Conclusions

8.1 Introduction

The RSA Scheme has been the subject of a number of evaluations since the early 1980s (see King, 1990, PACEC, 1993 and AEP, 2000) covering the periods 1980-84, 1985-88 and 1991-95. These studies have used different methodologies to isolate the effects of RSA financial assistance on the performance of recipient firms and plants. All have been reliant upon the analysis of BERR's client information together with a survey of recipient firms/plants. None have involved a survey of non-assisted firms.

OUR APPROACH

In order to address each of these components of the evaluation study the research team adopted a broad methodology which encompassed a variety of methodological approaches ranging from econometric modelling to face-to-face interviews with both RSA and SFIE Scheme beneficiaries, as well as surveys of the RDA Case Officers and those businesses who were offered financial assistance under both the RSA and SFIE Schemes but who subsequently declined it. However, the core of the evaluation methodology is the application of econometric modelling techniques which seek to ascertain the net effects of RSA assistance after controlling for the effects of 'selection bias' by incorporating a non-assisted group of firms and plants to embed a counterfactual in the analysis. The econometric analysis is based on a bespoke survey of around 700 assisted and non-assisted businesses. It is this econometric approach which allows us to generate estimates of the contribution of the RSA Scheme to value-added in the UK and arrive at some estimate of value for money.

These econometric evaluation techniques are applied to the evaluation of the RSA Scheme for the first time and represent considerable methodological improvement upon previous evaluations of the RSA Scheme which have relied upon a self-assessment method of ascertaining project additionality.

Nevertheless, in order to be able to make some sort of assessment of the net effect of the SFIE Scheme on beneficiary firms and plants we are obliged to follow previous evaluation methods and obtain data from assisted firms on the scale of additionality associated with the assistance that they received. While this was primarily designed for the interim evaluation of the SFIE Scheme we do also collect it from RSA beneficiaries for general comparative purposes. This is the only mechanism available to us which allows us to make comparative net benefit and value for money assessments between the two schemes. It is not our preferred method but it is the only one open to us at the time of this evaluation.

We set out below the key findings of our 'separate' evaluations of the two schemes and where possible discuss the direct comparisons in terms of characteristics of assisted businesses, scheme effects and operational issues.

8.2   Regional Selective Assistance (RSA)

The survey that was designed for this evaluation enabled us to compare the characteristics and performance of RSA beneficiaries and non-beneficiaries and the key points are:

- RSA beneficiaries grew faster than non-beneficiaries both before and after receiving assistance.

- Over the period 2004 and 2006 growth in GVA of the RSA beneficiaries is more rapid than that of non-beneficiaries. However, with respect to GVA per head growth the difference in mean growth rate is not statistically significant due to the larger size of RSA beneficiaries in terms of employment.

- RSA beneficiaries tended to be younger (average 24.4 years) than non-RSA beneficiaries (34.4 years).

- RSA beneficiaries also tended to be larger than non-beneficiaries both in terms of employment in the assisted site but also in terms of employment in the whole company.

- RSA beneficiaries are more export oriented and less focussed on local markets than the general population of firms and operate in more price elastic markets. They are also less likely to be selling to the public sector and individual consumers than firms in the general population.

- Finally, RSA beneficiaries are more likely to be undertaking R&D and product and process innovation than non-beneficiaries.

In general terms these observations are consistent with the targeting of RSA assistance on larger firms which might be expected to have many of the characteristics highlighted above. Further, it would appear that RSA assistance has been targeted at firms what are more likely to benefit from that assistance. This descriptive comparative evidence means that the issue of selection is of crucial importance to the evaluation and as a result reinforces the choice of methodology for this study.

ECONOMETRIC RESULTS (CHAPTER 5)

The findings of the econometric investigation are broadly supportive of a positive RSA intervention. There are clearly two separate groups of firms within these data. While there is little evidence that the recipients of RSA are those that will generate the highest employment growth, it does stimulate employment in domestic firms, and is largely associated with firms with an international and national, rather than local focus. R&D however seems largely unrelated to RSA. RSA paid to MNEs, however, seems largely associated with encouraging firms

to stay in the Assisted Areas, rather than grow, and grant size is more important than the existence of RSA in generating employment.

However, this may under-estimate the effects of RSA financial support due to the benefits not being fully realised and a small proportion of the safeguarded jobs not being fully captured in the employment growth model. Sensitivity analysis would suggest that this is not a significant issue in the analysis.

8.3   Selective Finance for Investment in England (SFIE)

The rationale for the introduction of the new SFIE Scheme in April 2004 to replace the old RSA Scheme is discussed in Chapter 2. Although it is impossible to conduct a like-for-like evaluation of the two schemes the evaluation methodology did contain various components which allow us to comment on the operation of the new SFIE Scheme compared to its predecessor.

CHARACTERISTICS OF SFIE AND RSA (CHAPTER 4)

Comparing RSA and SFIE beneficiaries in the survey is complicated by the fact that the replacement scheme was designed to include assistance to firms which would normally have been supported under the Enterprise Grant Scheme. For that reason the comparison of the two Schemes is limited. However, we do endeavour to control for this by presenting data on those SFIE assisted business who had received £100,000 or more in grant support (n=47). The results of this comparison reveal that SFIE beneficiaries are more likely to:

- be smaller firms (i.e., less than 50 employees)

- have younger owner-managers (i.e., less than 45 years)

- have a business plan although this is clearly connected to the application process and the use of consultants (see Chapter 6)

- be less likely to report 'maintaining sales for current products and services' as a business objective

- be less export oriented and more locally focused in terms of sales

- be operating in markets which were less price sensitive

- have local suppliers and had higher levels of local purchasing

EFFECTS ON BUSINESS BEHAVIOUR (CHAPTER 6)

Generally, the majority of respondents (more than two-thirds in most areas of impact) from the two samples of SFIE and RSA beneficiaries reported benefits for their businesses. The most common effects were on productivity and sales growth with developments in management practice and innovation management some of the least often cited impacts. Two statistically significant differences were evident between the effects cited by RSA and SFIE respondents relating

to improved staff knowledge or skills and improved technical understanding and capability. In both cases a positive effect was more often cited from SFIE beneficiaries than from RSA beneficiaries.

The conclusion from the 10 SFIE case studies is that the large scale investment that these grants support is something that makes an appreciable difference to the individual businesses concerned. In many cases, whilst the grant did not on its own tempt the firms into making these decisions, it acted to increase the size of the investment and to emphasize the growth element of the business decision.

SELF-REPORTED ADDITIONALITY (CHAPTER 6)

Levels of deadweight from both RSA and SFIE appear low with the majority of firms citing some form of partial additionality in terms of either achieving business outcomes more quickly or to a greater extent. Complete additionality occurred in around 21 per cent of cases. Interestingly, there was no statistical difference between the pattern of responses between the RSA and SFIE beneficiaries. The important point to emerge from the survey of SFIE beneficiaries is that a large proportion of the benefits associated with the assisted investment project have yet to accrue which underlines yet again the difficulty in undertaking evaluations too soon after the introduction of a Scheme. Essentially the results for the SFIE Scheme should be interpreted as illustrative at this stage of its life-cycle.

COMPARING SELF-REPORTED ADDITIONALITY ESTIMATES (CHAPTER 6)

The results on self-reported additionality for the three previous evaluations of RSA are not completely comparable due to the differing ways in which the various degrees of partial additionality, including alternative locations, were addressed and also the way in which the assessment was undertaken. Previous BERR studies have based the assessment on both the interviewers' assessments and the response from the respondent, whereas in our evaluation the respondent's reply was recorded without further review.

The most important point to emerge from the comparison is that the extent of wholly non-additionality associated with RSA financial assistance has fallen dramatically in the current evaluation covering the 2000-2004 period. The previous estimate of around a fifth (based on an agreed interviewer/respondent assessment) in 1991-95 has fallen to only 2.8 per cent, although it is only approximately half that found in the 1985-88 evaluation. Full additionality has shown some fluctuation over the four evaluation periods but an average figure of around 23 per cent would appear to be useful generalisation. One obvious inference to make from these figures would be that the selection process for assisted cases has become much more refined in the last 10 years which has led to lower levels of wholly non-additional cases being supported.

Businesses supported under both the RSA (2000-04) and SFIE Schemes were significantly less likely than in previous periods to report that in the absence of assistance they would have gone ahead with the project outside the UK, or indeed in other regions of the UK.

SFIE SCHEME IMPACT – INITIAL ASSESSMENT (CHAPTERS 6 AND 7)

Employment

Using the information on new and safeguarded jobs from all the in-scope SFIE beneficiaries it is possible to gross up this result to produce an overall employment effect for the programme in mid-2006. With respect to safeguarded jobs the assisted businesses had received financial assistance to protect 10,130 jobs and we can now estimate that 8,884 of these jobs had actually been secured at the time of the survey. Of the 9,660 'promised' new jobs we can estimate that 4,289 jobs have been created at the time of the survey.

How many of these 'actual' number of assisted jobs can be considered as 'additional'? We can use the self-reported estimates of additionality from the survey respondents to arrive at an estimate of the number of net additional jobs associated with the SFIE Scheme in the period 2004-06. In summary, we can conclude that 1,875 safeguarded jobs were secured and that 905 net new jobs were created as a result of the financial assistance received.

Operational Issues

One of the most important issues that emerged from the interviews with the owner-managers and/or financial director of the business was that the process of applying for SFIE assistance was complicated and has resulted in many of the interviewed firms employing consultants to submit the application at an average cost of around £20,000.

The RDA case officers' survey highlighted the increased complexity of the SFIE Scheme for applicants and the difficulty of assessing both need and viability, critical components of the overall decision to grant support under the scheme. The complexity for the clients relates back to the connection between other organizations involved in business support. It is clear that some knowledge of the way the businesses are to be assessed is required for a successful application. This again highlights the role of intermediaries/consultants in the SFIE grant process. In the case of venture capital, intermediaries are often seen as important to provide 'investment ready' projects that increase the quality of the deal flow.

A small number of businesses who had received an offer of assistance under both RSA and SFIE, but who had subsequently declined the offer were contacted. When asked why they had turned down the offer of assistance the responses fell into two broad categories – Scheme Issues and Business Issues, with the majority of responses falling into the second category. The sorts of

reasons advanced by business citing the second category were as follows: the project was abandoned as contracts fell through; lack of other funding; premises became available in current location therefore no need to move into a Tier 1 location, or too expensive in the assisted area; owners/shareholders decided not to proceed; change of ownership

8.4   Summary

The evaluation of the RSA Scheme (2000-04) and its successor SFIE Scheme (2004-06) has produced a range of quantitative and qualitative evidence that allows us to conclude that:

RSA SCHEME (2000-04)

● The findings of the econometric investigation are broadly supportive of a positive RSA intervention (2000-04) on employment growth in the 2004-06 period. This was particularly the case for UK-owned single plant businesses.

● However, as we have argued in Chapter 5 this may under-estimate the effects of RSA financial support due to the benefits not being fully realised and a small proportion of the safeguarded jobs not being fully captured in the employment growth model.

SFIE SCHEME (2004-06)

● Evidence would suggest that the beneficiaries under this Scheme are achieving real business benefits in terms of productivity and that this was also associated with increasing skills and technical capability.

● There is a high level of full additionality associated with the Scheme (21.1%) and this has led us to make an interim assessment of net additional job creation of 4,289 jobs with a further 87.7 per cent of safeguarded jobs realised – that is, 8,884.

● There are some concerns about the application and appraisal process which have been expressed by owner-managers/senior management of assisted businesses as well as RDA Case Officers.

By evaluating the effects of RSA financial assistance using this approach has resulted in a set of results which, when examined in detail and with different econometric approaches, all point in the same direction. Indeed, no previous evaluation of the RSA Scheme has opened this 'black box' of control variables which we know have an influence on firm/plant performance. Put simply, the RSA Scheme is positively and significantly associated with the creation of employment in the recipient plants *after controlling* for a large number of these control variables as well as controlling for selection bias and endogeneity.

There is a clear opportunity with this econometric approach, and particularly with the use of the actual amount of grant awarded in the estimations, to develop cost-per-job estimates and an overall value for money assessment for the RSA Scheme in the period 2000-04. Coefficients for the RSA dummy and the value of the grant variable in these estimations could be used to this end. This would have the advantage of moving away from the reliance upon a self-assessment additionality question to arrive at the number of net additional jobs and then cost-per-job estimates. However, although this was discussed at length with the project Steering Group there was no consensus on the most appropriate method to be used. As a result it was decided to re-visit this at a future date.

Our overall conclusion is that both the RSA and SFIE Schemes are delivering benefits to the UK economy through net additional employment, higher value-added and a set of wider benefits that demonstrate linkage into other regional priorities such as regeneration, skill enhancement, supplier networks and broader environmental agenda. We are much more certain of our conclusion with respect to the RSA Scheme which has been evaluated using innovative econometric techniques and were the majority of the effects of the financial assistance have had time to materialise to be captured in our post-assistance impact period of 2004-06. Nevertheless, our analysis of the beneficiaries of financial support under the new SFIE Scheme has provided a positive assessment across a range of business effects.

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