Contract No. 2008.CE.16.0.AT.020 concerning the ex post evaluation of cohesion policy programmes 2000-2006 co-financed by the European Regional Development Fund (Objectives 1 and 2)

Work Package 4
"Structural Change and Globalisation"

CASE STUDY

NORTH EAST ENGLAND (UK)

Prepared by: Catherine Hodgson (KITE) and David Charles (formerly the David Goldman Chair of Business Innovation, KITE and now Dean of Research and Development at Curtin University of Technology, Perth, Western Australia)

for: European Commission
Directorate General Regional Policy
Policy Development
Evaluation Unit

CSIL, *Centre for Industrial Studies*, Milan, Italy
Joanneum Research, Graz, Austria
Technopolis Group, Brussels, Belgium

In association with
Nordregio, *the Nordic Centre for Spatial Development*, Stockholm, Sweden
KITE, *Centre for Knowledge, Innovation, Technology and Enterprise*, Newcastle, UK

Acronyms

BERD	Business Expenditure on R&D
CELS	Centre of Excellence in Life Sciences
CENAMPS	Centre of Excellence for nanotechnology, micro and photonic systems
CPI	Centre for Process Industries
CSR	Comprehensive Spending Review
DETR	Department of Environment Transport and the Region
DG REGIO	Directorate General for Regional Policy
DTI	Department of Trade and Industry
EAGGF	European Agricultural Guidance and Guarantee Fund
EAP	Employment Action Plan
EC	European Commission
EPIC	European Process Industries Competitiveness Centre
ERDF	European Regional Development Fund
ESF	European Social Fund
EU	European Union
FDI	Foreign Direct Investment
FESRA	Framwork for Regional Employment and Skills Action
FIFG	Financial Instrument for Fisheries Guidance
GDP	Gross Domestic Product
GERD	Gross Domestic Expenditure on R&D
GONE	Government Office North East
GVA	Gross Value Added
ICT	Information and Communication Technology
IP	Intellectual Property
LFS	Labour Force Survey
MAS	Manufacturing Advisory Service
MTE	Mid Term Evaluation
NaREC	New and Renewable Energy Centre
NDP	National Development Programme
NEPAF	North East Proteome Analysis Facility
NGO	Non-governmental Organisation
NHS	National Health System
NTI	New Technologies of Information
ODPM	Office of the Deputy Prime Minister
OECD	Organisation for Economic Co-operation and Development

ONE	One North East (Regional Development Agency for North East England)
PPS	Purchasing Power Standard
R&D	Research and Development
RDA	Regional Development Agency
RES	Regional Economic Strategy
RIS	Regional Innovation System
RTDI	Research, Technological Development and Innovation
SME	Small and Medium Enterprise
SPD	Single Programming Document
TEA	Total Entrepreneurial Activity
TOR	Terms of Reference
VAT	Value Added Tax
WP	Work Package

Table of contents

List of tables

List of figures

Executive summary

Scope and research methods

This report has been prepared as a contribution to the DG REGIO commissioned Ex Post Evaluation of the cohesion policy programmes financed by the European Regional Development Fund during the period 2000-2006, Work Package 4: Structural Change and Globalisation.

This case study examines two measures funded under Priority 2 of the ERDF 2000-2006 Objective 2 Programme implemented in the North East region of England which we believe particularly relevant to the Work package theme of structural change and adaptation to globalisation: Measure 2.4 (Technology Transfer) focused on improving SME access to advanced technologies; and measure 2.5 (Clusters and Sectors) intended to support SMEs operating in an identified set of clusters which it was believed had the potential to secure future regional competitive advantage.

Semi-structured interviews were undertaken with individuals representing three broad groups of respondent:

- intermediary organisations financed under the selected measures;
- regional policymakers;
- regional Programme managing authorities.

Additionally secondary data sources were used including programming and evaluation reports, statistical and monitoring data and scholarly articles (see Annex 5.2).

Key research questions and hypotheses tested in the case study

Priority 2 of the 2000-2006 Programme related to SME growth and competitiveness. We examined Measures 2.4 and 2.5 firstly with regard to their effectiveness in supporting efforts to diversify the regional economy through support for targeted sectors, and secondly in relation to their contribution to the strengthening of the regional innovation system. These questions are examined in relation to two of the five hypotheses developed as part of a conceptual framework for the overall Work Package, relating firstly to the degree of industrial specialisation which has developed in the North East Englandover time, and secondly to the potential of its regional innovation system.

Regional context and key findings

The North East Englandis the smallest of the English regions with a population of 2.55 million which has been in decline in recent decades, principally due to high levels of outward migration. At the outset of the Programme, the Socio-Economic Analysis component of the SPD identified the region as performing poorly relative to the national average across a number of key economic and social indicators. Some 87% of the region’s population lives in the Objective 2 area with only part of the wealthier rural areas excluded. Within the Programme area wards are categorised as either core or transitional (eligible for full or partial Objective 2 assistance respectively).

The region has been in receipt of Objective 2 funding from 1989 onwards. Only with the creation of Regional Development Agencies in 1999 did the English regions gain a body with overall responsibility for planning economic development within the region itself. The 2000-2006 Programme was therefore the first to coincide with this new (unelected) tier of regional governance. The first Regional Economic Strategy (RES) for the North East England was produced in 1999 by One NorthEast (ONE) the Regional Development Agency (RDA) for the region. The Programme must be understood in the context of this wider regional strategy, which both informed the development of the Programme itself, but also looked to the Structural Funds as a funding stream which would contribute to the realisation of the aims and objectives set out in the RES.

The Programme SPD identified a desperate shortage of jobs as the overriding problem which the region faced. Significant restructuring had taken place in what had been key regional industrial sectors, predominantly due to factors occurring outside the region (and the region's control), with the resultant 'deep-seated structural problems' as much a consequence of external changes as internally rooted ones. The region's response to these changes and its capacity to adapt in the face of them were, however, identified as contributing to the persistence of these difficulties.

The Programme established four strategic Priorities which reflected the areas where the region was expected to have capabilities and be able to make progress.

Priority 1: Establishing an entrepreneurial culture

Priority 2: SME growth and competitiveness

Priority 3: Strategic employment opportunities

Priority 4: Target communities: building capacity and connecting with jobs.

Priority 2 focused on the need to develop the existing SME base of the region in the context of increasing external pressures. Two measures from this Priority were selected for further evaluation. Measure 2.4 (Technology transfer) was intended to improve SME access to advanced technologies, so increasing their competitiveness. Measure 2.5 was intended to support SMEs operating in an identified set of clusters and sectors where analysis suggested the region possessed distinct competencies and thus had the potential to develop and grow. The primary aim of both measures was job creation – in line with the intended overall Programme outcomes – but each also attempted to tackle particular problems arising from the region's changing economic structures in terms of the need to diversify activity away from declining industrial sectors, with Measure 2.4 additionally attempting to address perceived deficiencies in the regional innovation system.

In terms of outputs and results in relation to agreed targets, Measure 2.4 largely underachieved in both core and transitional areas. Government Office North England (GONE) believe that this partly reflects the higher than expected unit costs associated with providing the level of in-depth and specialist support associated with this measure. In contrast Measure 2.5 exceeded a majority of targets in both core and transitional areas. We believe that this may indicate that despite the desire to focus more on intensive support the nature of the focus on targets and outcomes for SMEs still tended to push intermediaries to focus on services across large numbers of beneficiaries.

In conclusion, we draw attention to four key findings:

1. The ERDF measures examined in this report have attempted to offset some of the worst effects that the region has suffered as a consequence of economic restructuring through a push towards the diversification of the North East England economy into areas of potential future growth. We find that

the Programme had some success in supporting this push, although this was to be found less in direct outputs of activities funded and more in the overall position to which the region has shifted, and in which ERDF has been a positively contributing factor.

2. In the North East England context, Structural Funds monies are primarily a funding stream for activity proposed in the Regional Economic Strategy. ERDF funding is largely used to finance existing regional priorities, it is not the driver for them.
3. The current economic downturn illustrates the difficulties of establishing a sustainable regional response in a global economy. Whilst some parts of the regional economy do appear better placed than they were a decade ago, this is not uniformly the case, with some sectors continuing to experience shocks from wider sectoral change,
4. As a whole, the Structural Funds programmes which have been run in the region since 1989 have been important for the wider effects they have brought which go beyond immediate financial support. This should be understood as part of a long-term process rather than solely as the outcome of a single Programme.

Main message

Regional specialisation: The restructuring of the North East England economy towards areas of activity with the potential for future growth has occurred to an extent. ERDF projects funded under Measures 2.4 and 2.5 have played a role in supporting that move, particularly through support for an emergent regional strategy based around health, process industries and new and renewable energy technologies as primary clusters for development.

Projects funded in this period have had mixed levels of success in terms of rebuilding a more positive regional specialisation. Overall there have been positive contributions to a shift towards new high growth regional specialisations, but activities funded by the Programme have focused more on building support institutions and research infrastructure than (so far) in direct job creation.

Innovation potential: Overall, projects funded under the selected measures have made a positive difference to individual firms, and aggregated up, this may suggest a beneficial outcome at a regional level in terms of improved competitive performance. Again this should be understood as an on-going process rather than as the outcome of a single Programme.

In terms of a strengthened Regional Innovation System (RIS), the Centres of Excellence - accounting for the bulk of funding awarded under Measure 2.4 - have been created as a set of intermediary institutions intended to remedy deficiencies in existing regional structures. As standalone entities, these have not produced significant outputs, but have, we suggest, made a difference in terms of softer additionalities to the RIS.

Introduction

This case study comprises an evaluation of selected ERDF measures in the 2000-2006 Objective 2 programme which were used to support the North East region of England in responding to challenges and opportunities arising from wider structural change and globalisation processes.

We examine two measures funded under Priority 2 of the 2000-2006 Programme (related to SME growth and competitiveness) firstly with regard to their effectiveness in supporting efforts to diversify the regional economy through support for targeted sectors, and secondly in relation to their contribution to the strengthening of the regional innovation system. These questions are examined in relation to two of the five hypotheses developed as part of a conceptual framework for the overall Work Package, relating firstly to the degree of industrial specialisation which has developed in the North East England over time, and secondly to the potential of its regional innovation system.

Semi-structured interviews were undertaken with individuals representing three broad groups of respondent:

- intermediary organisations financed under the selected measures;
- regional policymakers;
- regional Programme managing authorities.

Initially it was hoped to include interviews with beneficiary organisations (companies assisted by intermediary organisations financed under the selected measures), but these proved difficult to reach given the length of time since projects were operational. Some companies had ceased to trade, in others, key individuals had moved on, either through retirement or changing work or personal circumstances. Additionally, with funding primarily going to intermediary bodies, support was often provided to firms in ways which were not necessarily appreciated as involving ERDF support, making it difficult to quantify benefits received from funded support.

The case study firstly presents a historical narrative of the socio-economic circumstances of the North East England in order to explain the situation of the region at the start of the Programme. We then go on to examine the wider regional, national and European policy context in which the Programme was developed. The Programme content is then explored in more detail, in particular relating to the measures selected for study by our national expert in consultation with officials from the regional Government Office. The analysis in Section 3 presents evidence from interviews with regional policymakers and representatives from intermediary organisations funded under the selected measures. Finally the case study assesses the key findings and main messages arising from our study in the light of our original hypotheses.

1. Structural change and globalisation in perspective

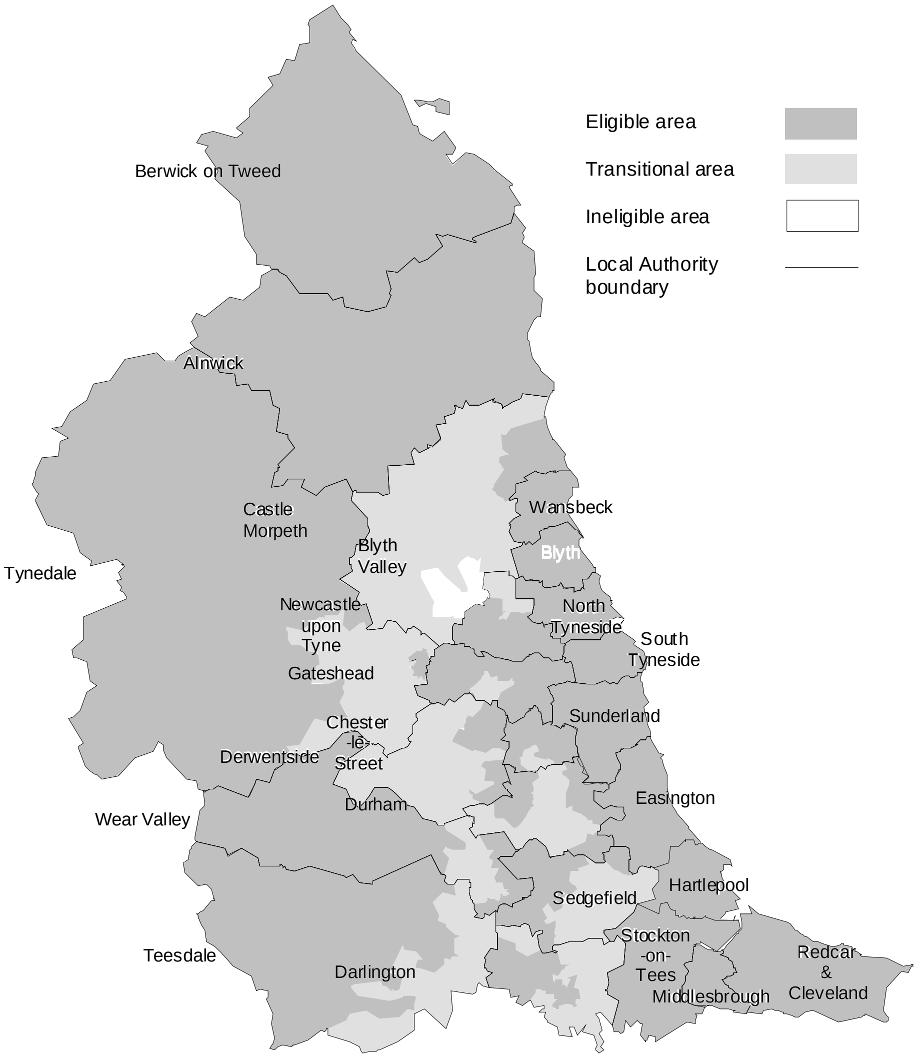
1.1 The region at a glance

The North East England is the smallest of the English regions with a population of 2.55 million in 2006 which has been in decline in recent decades. During the 2000 to 2006 period the population of the region fell by 1.5% compared with a national rise in population of 1.7%, a consequence of relatively low historic immigration, a low share of ethnic minority groups and out migration to other parts of the UK. The region is focused around two main former industrial conurbations, Tyne and Wear in the centre of the region and Tees Valley in the South, but otherwise has some of the most sparsely populated areas in England. The demographic and economic fortunes of the region are tied together in this geography with long entrenched relative and absolute economic decline in the cities and relatively weak and marginal rural economies, in many areas on highly marginal hill country.

The North East saw significant employment growth in the period up to 2000 which initially continued, before the current recession. Employment in the region fell sharply at the end of the 1970s, and whilst employment slowly grew again from the late 1980s through to 2000 the manufacturing component continued to decline with a trend towards a much higher share of service jobs and jobs for female workers. At the start of the Programme, the Socio-Economic Analysis component of the SPD identified the region as performing poorly relative to the national average on a number of key economic and social statistics. In terms of Gross Domestic Product (GDP) per head, the region had the lowest rate of all the English regions, consistently throughout the 1990s performing at about 15% below the UK average. Between 1981 and 1997 the North East lost over 110,000 jobs in primary and manufacturing industries, although at the end of the 1990s, manufacturing remained important to the region’s economy, accounting for just under 20% of regional employment (Government Office North East, 2002). Gross Value Added (GVA) per head in manufacturing was highlighted as one of the few indicators where the region performed reasonably well, being slightly above the national average. However, whilst manufacturing remains an important element in the regional economy, this should not be interpreted as demonstrating that the regional production system is either robust or balanced (The North East England European Partnership, 2001: 35).

87% of the region’s population lives in the Objective 2 area with only some of the wealthier rural areas being excluded (see Figure 1.1 and Table 5.1). The region’s conurbations are almost completely covered by the Objective 2 area. The two Teesside areas are 100% covered and Tyneside and Wearside are over 90% eligible, with only three wards in the Ponteland area, part of the county of Northumberland but located on the western fringes of the urban centre of Newcastle upon Tyne, not covered by the Objective 2 area (see also Table 5.1). Within the Programme area, wards are categorised as either core (eligible for full Objective 2 assistance) or transitional (no longer eligible for full Objective 2 assistance but qualifying for a lower level of transitional ERDF support intended to consolidate activities undertaken during the previous Programme). The designated transitional areas lie broadly in a crescent shape running from the coast in Castle Morpeth in Northumberland, through the south east of Tynedale, the west of Derwentside, the greater part of the City of Durham, the eastern edge of the Wear Valley and on to the south east edge of Teesdale. Pockets are also located in Tyne and Wear, Sedgefield, Darlington and Chester-le-Street. Transitional areas are largely rural and lowly populated, although do include a number of more populated market towns, including Morpeth, Bishop Auckland and Barnard Castle, as well as more densely populated areas of Derwentside and Durham. Some residential areas in Tyne and Wear and the Tees Valley (Darlington) additionally have transitional status. Deprivation indices in the transitional areas are largely below the regional average (SPD Volume I).

Figure 1.1 – North East England Objective 2 programme 2000-2006



Source: GONE (2007)

Table 1.1 - Regional performance in comparative perspective (NUTS1) -Basic data

Indicator	Unit	Regional			
		1995	2000	2006	Δ(%) 2000-2006
Population	Thousand	2,607	2,588	2,550*	-1.5
GDP per capita	€ PPP	13,678	17,724	21,598*	21.9
Gross Value Added	€ million basic prices	28,473	46,353	53,763*	16.0
Employment rate	% employed on number of people aged 15 and over	n.a	53.0	54.0*	1.9
Unemployment rate	% unemployed persons on number of people aged 15 and over	n.a	9.2	6.2*	-33.3
Indicator	**Unit**	**National**			
		1995	2000	2006	Δ(%) 2000-2006
Population	Thousand	58,500	59,617	60,623	1.7
GDP per capita	€ PPP	16,337	22,259	26,715*	20.0
Gross Value Added	€ million basic prices	789,026	1,389,189	1,605,072*	15.5
Employment rate	% employed on number of people aged 15 and over	n.a	59.0	59.0	0.0
Unemployment rate	% unemployed persons on number of people aged 15 and over	n.a	6.1	5.2	-16.7
Indicator	**Unit**	**EU15**			
		1995	2000	2006	Δ(%) 2000-2006
Population	Thousand	371,167	378,076	388,779	2.8
GDP per capita	€ PPP	16,958	21,890	26,500	21.1
Gross Value Added	€ million basic prices	6,058,125	7,822,555	9,735,114	24.4
Employment rate	% employed on number of people aged 15 and over	n.a.	44.4**	52.9*	19.1
Unemployment rate	% unemployed persons on number of people aged 15 and over	n.a.	8.3	7.8	-6.0

** Data for 2005. ** Data for 2001*
Source: Core team processing of Eurostat data

1.2 Searching the roots of change: socio-economic history of the region

The North East England had been a highly industrialised region since the early part of the nineteenth century and its long industrial decline became well established from the 1920s with the relative decline in shipbuilding, the exhaustion of the older parts of the North East coalfield and a relative loss of dynamism in some of the engineering sectors. Some areas of growth remained, but the decline in the traditional heavy industries characterised the period such that the region was named as one of the four initial industrial development zones of the 1930s Special Areas Act, and has been at the heart of UK regional policy ever since. Re-armament during the 1940s led to a revival in the region's shipyards and engineering plants but the post-war period saw a continued decline in coal and engineering and a shift to newer light engineering plants largely based around external (and often US-owned) investment.

The most dramatic period of change was perhaps in the 1960s with modernisation strategies both in terms of urban development and economic structures. Economically, the long dependence on the coal industry ended, with massive closures of small unproductive pits across the region, leaving only the newer coastal mines to survive for another couple of decades. Employment however was shifted into new manufacturing industries springing up on government sponsored industrial estates. With the closures of mines and associated polluting activities such as coking works, major land reclamation schemes transformed the appearance of the region. New forms of employment included light engineering, electrical and electronic industries, chemicals and consumer oriented manufacture such as clothing and food, mostly in the form of branch plants of UK and US owned firms. At the same time the urban centres were being radically modernised – slum clearance and rebuilding through the riverside communities, new motorways and large scale city centre redevelopment. However the 1970s downturn following the oil crisis left the region again facing economic difficulties. What was significant though during the 1960s and 1970s was the knitting of the old industrial communities into a city regions as a result of deliberate planning – new road networks to connect the industrial areas, the metro to integrate the communities along the Tyne, and new town and expansion projects which built up the areas between former villages. Washington was a classic example of this, a new town built around three former mining villages and a very large expanse of highly polluted land, connected by motorways into Newcastle and Sunderland, and offering a new growth pole for manufacturing industry.

The 1970s saw relatively stable levels of employment throughout the decade, although with a collapse in employment around 1980, with the loss of around 10% of jobs in the region. Sectors which saw significant decline include the mining industry which saw its biggest fall at the beginning of the 70s. Other traditional sectors were harder hit in the 1978-81 period, especially metal manufacturing, mechanical engineering and shipbuilding sectors, but also textiles and clothing, electrical engineering, construction and chemicals – all with much higher levels of decline in the 1980 recession than the regional average. However miscellaneous services, printing and publishing, and especially financial services continued to grow even in the recession.

Table 1.2 - Percentage change in sectoral employment 1978-1981

	1978	1981	%
13 Textiles	12,300	7,700	-37.40
06 Metal manufacture	39,500	26,100	-33.92
15 Clothing and footwear	21,900	14,800	-32.42
12 Metal goods N.E.S.	12,500	9,100	-27.20
07 Mechanical engineering	56,600	42,400	-25.09
20 Construction	79,000	59,800	-24.30
09 Electrical engineering	43,000	34,300	-20.23
19 Other manufacturing	12,400	9,900	-20.16
16 Bricks, pottery, glass, cement	11,800	9,600	-18.64
10 Shipbuilding and marine engineering	33,800	27,600	-18.34
05 Chemicals and allied industries	41,300	34,100	-17.43
02 Mining and quarrying	46,300	38,400	-17.06

	1978	1981	%
11 Vehicles	11,000	9,200	-16.36
01 Agriculture, forestry, fishing	10,100	8,600	-14.85
03 Food, drink and tobacco	24,800	21,600	-12.90
27 Public administration and defence	77,900	70,100	-10.01
17 Timber, furniture, etc	9,600	8,800	-8.33
08 Instrument engineering	3,800	3,500	-7.89
04 Coal and petroleum products	2,600	2,400	-7.69
23 Distributive trades	124,300	116,800	-6.03
22 Transport and communication	55,600	52,800	-5.04
25 Professional and scientific services	155,200	148,300	-4.45
21 Gas, electricity and water	16,500	16,600	0.61
26 Miscellaneous services	110,800	111,700	0.81
18 Paper, printing and publishing	16,500	17,100	3.64
24 Insurance, banking, etc	29,400	35,200	19.73
14 Leather, leather goods and fur	600	800	33.33
Regional Totals	1,059,000	937,400	-11.48

Source: Census of employment data analysed through NOMIS

The most significant consequence of the restructuring process that commenced in the 1980s was the decline of many of the traditional engineering companies in the region, such as Parsons, Vickers Armstrong, and Reyrolles, as well as the loss of 1960s and 1970s inward investors. The reasons were often quite different, the traditional firms closing due to a lack of competitiveness faced with the internationalisation of their markets and low levels of investment in innovation, whereas the inward investors had typically invested in a particular generation of technology which was becoming redundant, and simply closed down capacity. Some of the large establishments in traditional engineering industries had previously been reliant on domestic markets and close relationships with public sector customers such as in the electricity generation industry, British Coal and the Ministry of Defence. With privatisation and the opening up of these markets to international competition the Tyneside firms were often too small and lacking in technology to compete. Some of the FDI plants also focused on domestic markets such as telecommunications and were squeezed out by international competition. The consequence for the region was the loss of the technical expertise and skills of the indigenous firms, which were often the source of new small companies, yet the policy prescription was to replace the inward investors with a new round.

The 1980s saw employment bottom out at a little under 900,000 and recover slightly towards the end of the decade, but the consequences for different sectors were highly varied. The traditional industries continued to decline, mining falling to less than a third of its level, and metal manufacturing almost matching that. Privatisation of utilities also led to downward adjustments in energy and water, and the run-down of shipbuilding. Lack of railway investment led to falls both in railway operations, but also in the production of rolling stock. Chemicals also continued to decline, as did electrical engineering, despite new inward investments in both sectors – the plants closing and job losses in continuing plants were much greater than the new plants entering the region.

Within the manufacturing sectors, mechanical engineering made a recovery back up towards its 1981 level, automotive engineering saw growth with the investment of Nissan, and food and clothing managed to maintain an equilibrium.

The service sectors tended to perform much better, especially the public services. Business services grew strongly, but not financial services. The real growth though in absolute terms was in education, health and other services to the public.

Table 1.3 - Sectoral change in the 1980s

	1981	1984	1987	1989	1991
Agriculture and horticulture	8,000	8,200	7,700	***	***
Forestry	500	***	400	***	***
Fishing	200	***	***	***	***
Coal extraction/manufacture: solid fuels	37,200	30,800	18,200	13,300	11,100
Coke ovens	1,800	***	***	***	***
Extraction: mineral oil/natural gas	700	1,700	***	***	***
Mineral oil processing	600	***	***	***	***
Nuclear fuel production	0	0	0	0	0
Production/distribution: forms of energy	13,600	11,500	10,600	10,200	9,400
Water supply industry	3,000	2,800	2,200	2,400	1,900
Extraction/preparation: metalliferous ore	0	0	0	***	***
Metal manufacturing	24,100	14,800	11,300	11,000	9,900
Extraction of minerals (Other)	2,100	1,100	2,300	2,200	2,000
Manufacture: non-metallic products	10,000	8,400	7,100	7,600	6,500
Chemical industry	32,900	29,400	29,400	29,300	27,600
Production of man-made fibres	1,000	***	***	0	0
Manufacture of metal goods (Other)	9,900	8,300	10,600	12,200	10,700
Mechanical engineering	44,700	34,900	36,400	37,100	41,500
Manufacture: office machinery/D.P. equip.	500	***	***	***	***
Electrical/electronic engineering	34,600	29,700	24,900	25,100	23,600
Manufacture: motor vehicles/parts thereof	5,900	4,700	5,500	7,700	7,500
Manufacture of other transport equipment	29,400	16,800	8,800	6,500	8,000
Instrument engineering	3,300	2,900	2,900	3,600	3,100
Food, drink/tobacco manufacturing	23,100	18,100	17,900	18,700	21,000
Textile industry	5,800	6,400	5,000	4,100	3,200
Manufacture of leather/leather goods	300	***	***	***	***
Footwear/clothing industries	16,100	15,900	18,500	18,800	15,300
Timber/wooden furniture industries	9,000	9,900	10,900	11,400	10,800
Manufacture of paper/paper products; etc	17,000	13,400	13,800	14,600	15,000
Processing of rubber/plastics	9,200	8,400	9,400	10,100	9,200
Other manufacturing industries	1,800	2,100	2,200	2,200	2,600
Construction	56,100	49,800	49,800	57,700	55,500

	1981	1984	1987	1989	1991
Wholesale distribution (not scrap/waste)	26,900	27,700	24,100	25,700	24,200
Dealing in scrap/waste materials	700	1,200	1,100	1,200	1,300
Commission agents	200	***	***	***	***
Retail distribution	95,800	88,600	88,900	87,400	94,800
Hotels/catering	44,100	42,700	44,200	52,600	51,200
Repair of consumer goods/vehicles	6,900	7,800	7,100	7,300	6,400
Railways	7,300	6,100	5,200	5,100	5,100
Other inland transport	22,400	20,700	18,700	23,000	21,800
Sea transport	1,000	400	***	***	***
Air transport	600	***	***	***	***
Supporting services to transport	4,200	3,300	3,500	2,900	2,500
Miscellaneous transport services/storage	3,600	3,000	3,300	5,000	4,400
Postal services/telecommunications	12,300	12,400	11,700	14,000	11,800
Banking/finance	15,000	15,100	16,000	15,000	14,900
Insurance, not compulsory social security	5,500	5,300	6,000	6,100	6,200
Business services	22,000	28,100	31,300	40,100	38,100
Renting of movables	3,700	4,900	4,900	5,200	5,600
Owning/dealing in real estate	5,700	5,400	4,500	6,100	7,400
Public administration, national defence	65,100	62,600	70,600	67,400	69,600
Sanitary services	10,300	11,700	15,700	15,300	21,000
Education	70,500	83,700	88,100	86,500	88,900
Research/development	2,100	2,500	2,500	2,300	2,300
Medical/other health: veterinary services	54,700	57,200	60,400	63,500	68,100
Other services to the general public	27,100	35,500	49,100	39,700	38,000
Recreational/other cultural services	21,000	19,900	20,500	19,800	19,200
Personal services	6,300	7,100	6,900	7,800	8,300
Domestic services	0	0	0	0	0
Column Totals	937,400	887,200	894,100	908,600	910,100

Source: Census of employment data analysed through NOMIS

The following provides a summary of the main transformations of the regional socio-economic system over the period from 1985 to the end of the 1990s and which, in many respects, continued over the period 2000-2006 (see also Table 5.3).

During the 1990s employment in the region rose steadily back towards 1970s levels, reaching one million again in 2002, however there has been a distinctive sectoral trend to this change which reveals a dependence on national growth and a weakness in the capacity to generate endogenous growth.

Primary industries continued to decline during the 1990s. As coal declined in employment significance, agriculture became the largest component but fell from around 7000 jobs down to under 5000 over the period. Other primary sectors were much smaller, but were largely stable or in decline, especially coal mining which is now negligible. Forestry saw some modest increase, but is a very small activity, although with a high level of GVA. Given these trends and the small scale of these sectors these activities no longer had a real strategic significance for the region in their own right. Agriculture is perhaps the exception in the potential for linkage with tourism through diversification, but in its own right its economic significance is very marginal, and its productivity level is appallingly low.

In general manufacturing, (including textiles, food, paper and other wood products) employment levels were relatively small and with declining levels in some of the largest sectors. Textiles and clothing performed worst, with the complete collapse of clothing manufacture and a reduction in the already small textiles industry. Given global trends here it is doubtful any recovery is possible and employment might be expected to continue to decline. The food sector also saw modest decline, but can be expected to survive in its current form.

Process and chemicals based industries performed in a very varied manner. Chemicals and metals manufacture continued to perform poorly, some elements facing considerable difficulties whilst niche areas saw growth. Overall though chemicals was well down over the decade. What is more worrying was that productivity in chemicals dropped to only three-quarters of the national level. Essentially the region remained fixed in lower value adding segments which were in decline, and had a smaller presence in the higher value elements such as biotechnology and pharmaceuticals. Any growth in biotechnology, pharmaceuticals and other high value products was small compared with the losses in basic chemicals. In addition, even in pharmaceuticals the region was dominated by low value added production activities whilst the high value R&D was in the South East regions. For an industry such as this, production is much less significant to corporate competitiveness than R&D. Rubber and plastic goods however saw growth – one of the few manufacturing sectors to perform well, albeit with productivity levels lagging behind the national average. It is interesting to note that more people were employed in rubber and plastic than in metal manufacturing, yet it tended not to attract any attention. Productivity levels in that sector were also not too far lagging behind the national level.

Engineering remained a core manufacturing activity for the region, albeit with a declining employment base. The one area with major growth was the automotive industry, with relatively high productivity also, over 20% above the national average. Yet this was highly dependent on one plant which remains vulnerable to future corporate investment plans and the effects of exchange rate policies. The electrical and electronic industries saw considerable change during the decade. Employment grew in the early 1990s after two decades of decline, mainly through new inward investments, but subsequently declined as many of the recent investors pulled out for lower cost locations.

The broader construction and services sectors all performed moderately well, with the biggest growth at the consumer oriented end of the scale. So retailing and hotels saw quite significant growth, construction saw modest growth, as had telecoms and post. To put this into perspective, retailing added around 25,000 jobs over the period, which is more than the total employment in any of the manufacturing sectors such as chemicals, or food, or machinery. Hotels and restaurants also added another 20,000. In productivity terms also, restaurants perform at around the national average level, whilst retailing lags the national figure by only 10%, both outperforming most manufacturing sectors. So relative to the rest of the country, retailing and hotels grew whilst maintaining high productivity, whilst manufacturing declined whilst maintaining low productivity.

The knowledge intensive business services in the region were one of the few other areas of significant growth, particularly in the main catch-all business service category where employment grew from 65,500 to 80,400, albeit that this growth was slower than in most other UK regions. Even bigger in proportional terms was the growth in computing and related services which more than tripled in size, again still lagging behind the national picture however. Finance and real estate saw very modest increases. The biggest problem in this group though is R&D activities, which fell dramatically from 4500 to 1500, although the figures seem to have been quite volatile and tend to be less reliable for such small sectors.

The final group of sectors are the public and personal services. Here again there was quite significant growth, especially in health and education, continuing a trend since the 1970s. Other public sector employment remained stable. Recreation, cultural and sport also saw a 32% growth during the period, mirroring the developments in hotels and restaurants. It is clear then that leisure and tourism was a major beneficiary of national economic expansion and growth in the public sector in the region during the 1990s.

The low level of productivity seen in terms of GDP or GVA per head in the region has been a longstanding problem, although in the past it was said that productivity in manufacturing was relatively high.

Low aggregate productivity could be due to two possible reasons. The first possibility is that there is a problem of the mix of sectors in the region, with too many low productivity sectors. So individual sectors may be internationally competitive but the region just has a concentration of those sectors that have a relatively low productivity compared with other sectors – the problem is one of the mix of sectors. The second possibility is that within each of the sectors in the region productivity is lower than the national average for that sector – the mix of sectors may be fine, but productivity within them is poor. In the first case the solution would be to change the mix of sectors, but it may not be necessary or possible to increase productivity in any individual sector, as long as the productivity of a sector matches the national performance of that sector. In the second case the problem is a need to improve productivity within sectors in order to approach national averages.

Comparing GVA/employee levels for sectors in the region and nationally, the nature of the problem is clear. For a small number of sectors, amounting to around 10% of employment, the region had productivity levels that are higher than those in the same sectors nationally. For the rest productivity was low, and in many cases very low. The problem was not the mix of sectors so much as the low levels of value added, which was mainly due to the emphasis on production and low skill tasks rather than the high value added and strategic functions within firms. Thus the policy response should be to strengthen the productivity of the existing sectors and focus on stimulating innovation within existing firms.

Table 1.4 - Productivity by sector in the North East relative to Great Britain 2002

	GVA £ million	Emp	GVA/ empl	GB GVA	Difference (GB>NE)	
02: Forestry, logging, etc	*8*	*300*	*26,667*	*19,946*	*-6,721*	*133.70%*
73: Research and development	*48*	*1,500*	*32,000*	*25,523*	*-6,477*	*125.38%*
34: Manuf. motor vehicles, trailers, etc	*707*	*14,200*	*49,789*	*40,604*	*-9,185*	*122.62%*
64: Post and telecommunications	*1,357*	*23,400*	*57,991*	*49,829*	*-8,163*	*116.38%*
37: Recycling	*32*	*800*	*40,000*	*36,936*	*-3,064*	*108.30%*
21: Manuf. pulp, paper and paper products	*192*	*4,000*	*48,000*	*44,488*	*-3,512*	*107.89%*
55: Hotels and restaurants	*847*	*60,300*	*14,046*	*14,045*	*-2*	*100.01%*
71: Renting machinery/equipment, etc	384	5,600	68,571	73,920	5,348	92.76%
52: Retail trade, except of motor vehicles	1,716	105,400	16,281	17,899	1,618	90.96%

	GVA £ million	Emp	GVA/ empl	GB GVA	Difference (GB>NE)	
26: Manuf. other non-metallic products	176	4,600	38,261	42,085	3,824	90.91%
28: Manuf. fabricated metal products, etc	455	15,200	29,934	33,826	3,892	88.50%
29: Manuf. machinery and equipment nec	596	17,700	33,672	38,269	4,597	87.99%
25: Manuf. rubber and plastic goods	382	11,900	32,101	36,755	4,654	87.34%
17: Manuf. textiles	86	3,200	26,875	31,557	4,682	85.16%
10: Mining coal/lignite; extraction of peat	31	1,000	31,000	36,750	5,750	84.35%
51: Wholesale trade/commission trade, etc	1,183	27,100	43,653	51,760	8,107	84.34%
60: Land transport; transport via pipelines	547	19,300	28,342	33,774	5,432	83.92%
27: Manuf. basic metals	218	7,400	29,459	35,871	6,411	82.13%
91: Activities membership organisations nec	130	11,100	11,712	14,638	2,926	80.01%
45: Construction	1,730	58,700	29,472	36,865	7,394	79.94%
74: Other business activities	2,126	77,700	27,362	34,530	7,168	79.24%
93: Other service activities	173	10,100	17,129	21,630	4,502	79.19%
63: Supporting/auxiliary transport, etc	327	9,000	36,333	46,170	9,836	78.70%
31: Manuf. electrical machinery/apparatus n.e.c. **	234	8,000	29,250	37,217	7,967	78.59%
36: Manuf. furniture; manufacturing nec	222	9,100	24,396	31,315	6,919	77.90%
22: Publishing, printing, repro recorded media	276	8,700	31,724	43,145	11,421	73.53%
24: Manuf chemicals and chemical products **	724	16,000	45,250	62,695	17,445	72.18%
50: Sale, maintenance/repair motor vehicles	547	19,000	28,789	40,154	11,364	71.70%
33: Manuf. medical, precision instruments etc	84	3,000	28,000	39,639	11,639	70.64%
72: Computing and related activities	425	12,000	35,417	52,226	16,809	67.81%
14: Other mining and quarrying	94	2,100	44,762	66,675	21,913	67.13%
85: Health and social work	*331*	*132,900*	*2,491*	*3,867*	*1,376*	*64.41%*
70: Real estate activities	341	10,800	31,574	52,642	21,068	59.98%
92: Recreational, cultural and sporting	337	21,500	15,674	26,375	10,701	59.43%
18: Manuf. apparel; dressing/dyeing fur	102	4,700	21,702	38,239	16,537	56.75%
35: Manuf. other transport equipment	131	4,000	32,750	61,575	28,825	53.19%
90: Sewage/refuse disposal, sanitation, etc	243	10,800	22,500	48,339	25,839	46.55%
01: Agriculture, hunting, etc	12	4,800	2500	5,622	3,122	44.47%
80: Education	*63*	*90,800*	*694*	*2,333*	*1,639*	*29.74%*

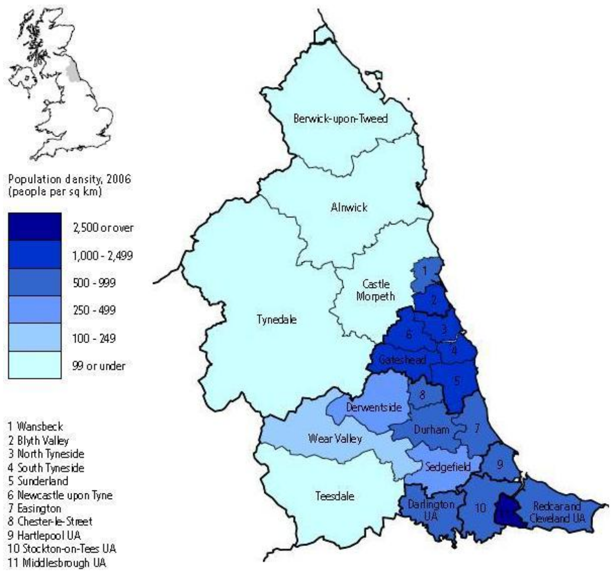
Source: Author's calculations based on ONS data

1.3 Regional structural change and globalisation issues in 2000-2006

1.3.1 Dimensions of structural change

1.3.1.1 Socio-economic change and human capital

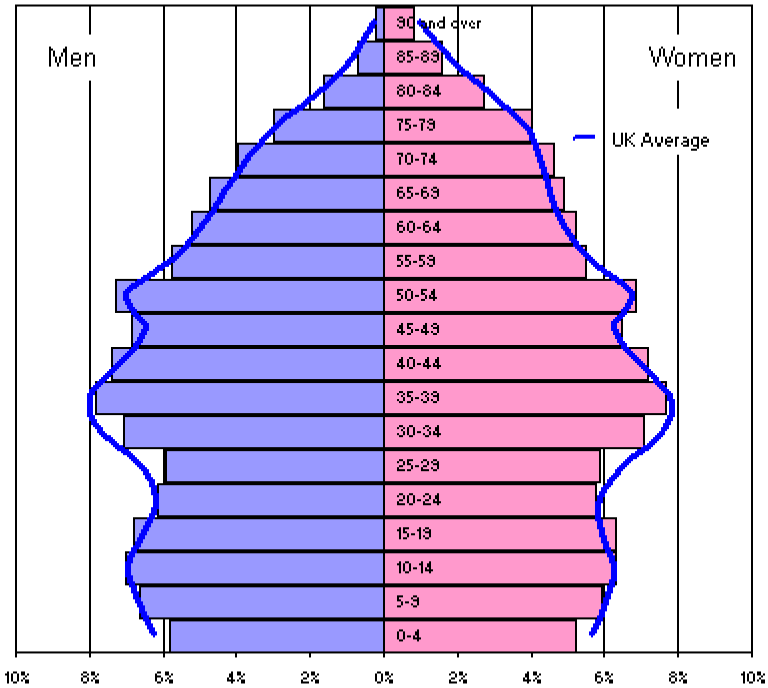
Figure 1.2 - Population density, 2006



Source: National Statistics

As already noted the North East continues to experience a declining population with a decrease of 1.5% in the period 2000-2005. The cause of the decline is not due to low birth rates as they remain higher than death rates, but is due principally to high levels of outward migration. High unemployment rates, lower income levels and being a peripheral area with a small local labour market are factors in the propensity for people of working age (skilled or not) to move to other parts of the UK, principally to the South of the country. The consequences can be seen in the demographic pyramid for the region which shows a shortage in the late 20s and 30s relative to the national average, whilst the additional bulge in the younger age groups is partly due to a net import of students who are only in the region temporarily for their period of study. This can be seen in the following chart.

Figure 1.3 - North East population pyramid 2001 census



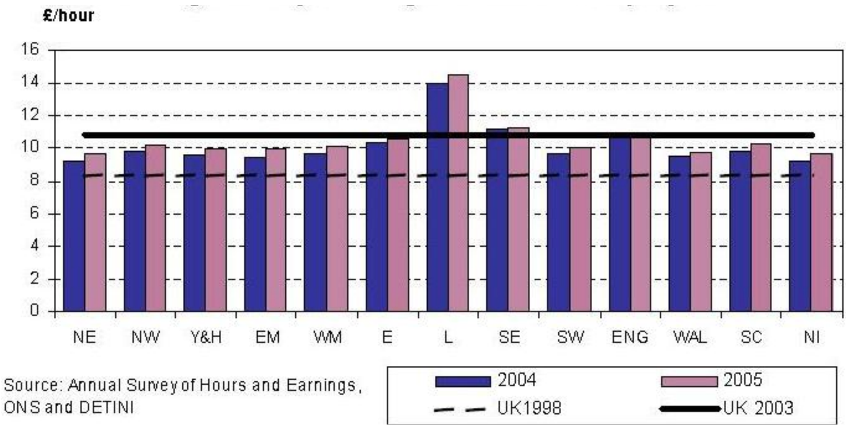
Source: Census of population/ONS

The North East region presents wide disparities at the NUTS2 level. On the positive side, growth of value added per capita and of GDP registered a positive performance during the period 1995-2002. At the NUTS2 level, positive performances in Northumberland - Tyne and Wear region leaves it as a borderline region between "low" and "intermediate" performer and GDP growth is ahead of the average of the EU eligible regions. On the negative side, Tees Valley and Durham areas together exhibit the lowest GDP per capita and growth of GDP per employed person of the whole UK. Unemployment rate (average 1995-2002) is almost 50% above the national average. In Tees Valley and Durham, during the period 1995-2002, the average growth of GDP per employed person was the worst in the whole of the UK. This under performance compared to the UK average is a clear reflection of the latent potential within the Tees Valley (sources: Eurostat, DG Regio, CSIL Milano, Government for North East).

Labour market and qualification structure

The North East has consistently experienced low salaries and in 2005 the region recorded the lowest average earnings in England at £9.70 per hour (the North East is second only to Northern Ireland in the UK). The gender pay gap, in terms of the ratio between female and male hourly earnings, has been decreasing in all regions during recent years. Demand for medium and high-skills is increasing while demand for low-skills is shrinking, a process that enhances income disparities. However, comparisons of the value of hourly earnings between regions as well as over time should be interpreted with caution: these estimates do not take account of regional variations in the cost of living and, to that extent, do not represent the true 'buying power' of these earnings (source: National Statistics).

Figure 1.4 - Average hourly earnings of full-time employees



Source: Annual Survey of Hours and Earnings, ONS and DETINI

The region also experiences low levels of participation in the workforce as well as high unemployment. Whilst overall levels of employment in the UK in winter 2005 were about three-quarters of working age people in employment; in the North East the percentage was around two-thirds. Partly this is due to higher levels of unemployment as described below, but partly it is due to high level of registered invalidity, especially among older male workers in the former mining areas and partly due to levels of female non-participation that remain higher than the national average.

Between winter 1999 and winter 2005 unemployment rates decreased in most UK regions. This is particularly true in North East, also because the region presented the highest unemployment rate in the whole country, but percentages remain extremely high (the average in 1995-2002 was almost 50% above the national average). High unemployment was sustained by stagnant economic growth, well below the national average. Middlesborough exhibited the worst unemployment rate in the whole region (9.4% in 2004).

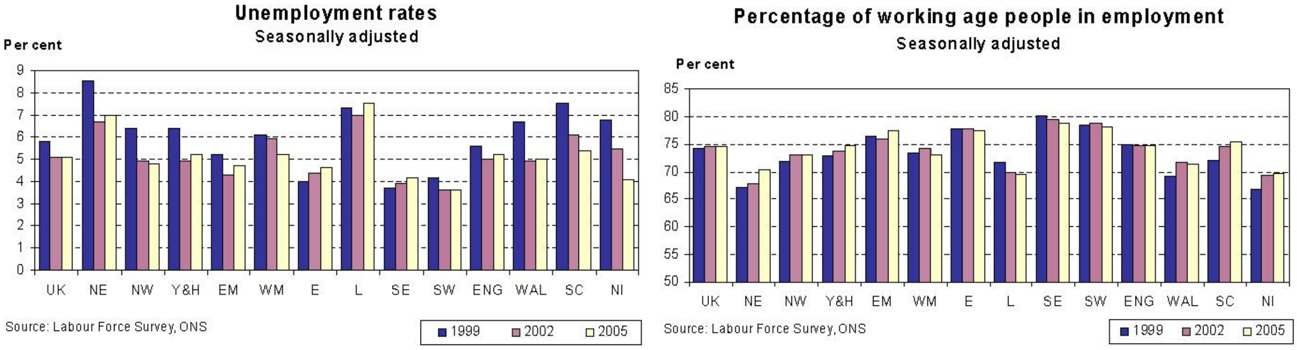
Table 1.5 - Employment and unemployment rates in North East England 2000-2006 (NUTS2)

NUTS2 region	2000	2001	2002	2003	2004	2005	2006
Employment rate of the age group 15-64, by NUTS2 regions - (%)							
Tees Valley and Durham	65.5	64.4	63.5	62.0	66.2	66.6	67.6
Northumberland, Tyne and Wear	64.0	65.6	66.6	67.7	66.3	67.1	67.9
Female employment rate of the age group 15-64, by NUTS2 regions - (%)							
Tees Valley and Durham	59.3	56.9	58.4	56.7	61.6	61.8	63.2
Northumberland, Tyne and Wear	59.4	61.5	63.1	62.9	61.6	63.0	62.8
Unemployment rate of the age group 15-64, by NUTS2 regions - (%)							
Tees Valley and Durham	8.0	7.4	7.1	7.5	6.0	6.0	5.8
Northumberland, Tyne and Wear	9.0	7.1	6.4	5.6	5.9	6.2	6.9
Female unemployment rate of the age group 15-64, by NUTS2 regions - (%)							
Tees Valley and Durham	6.1	5.9	6.0	5.1	4.8	4.5	4.5
Northumberland, Tyne and Wear	7.3	5.5	4.5	4.7	4.8	5.2	5.7

Source: Eurostat

Claimant count[1] rates during March 2006 were the highest in the North East with a rate of 4.25% (English average 2.9 and UK average 3.0), but the region stands just below national average for long-term claimants (i.e. benefit recipients claiming for a year or more). However this is balanced by a very high level of claimants of invalidity benefit. All regions show a decrease in the proportion of claimants in the workforce between March 1999 and March 2006 (source: Labour Market Division, ONS).

Figure 1.5 - Percentage of working age people in employment and unemployment rates 1999, 2002, 2005



Source: Labour Force Survey, ONS

1.3.1.2 Regional specialisation

The economy of the North East is characterized by a higher proportion of large companies (mainly externally owned) than the UK average, it only has 60% of the national average of businesses per head and 1/3 of people are employed in public services. Manufacturing has a higher share of employment while services have a lower share compared to the UK average. As national growth in recent years has been driven by services, this leads to the region ranking at the bottom of the UK list in terms of economic performance.
Data from the EU Cluster Observatory (see Figure 1.5 and also Table 5.10), suggests that the North East is developing clusters in chemicals, construction and business services, although the analysis in the previous section shows the limits to service sector growth. A problem with this analysis from the Cluster Observatory is that some of the region's clusters may cut across SIC categories and so are not immediately obvious and hence are ignored. Aside from the obvious strengths of chemicals, especially on Teesside but with important companies across the rest of the region, the main clusters relate to engineering, especially marine, offshore and subsea[2] as one integrated cluster, and automotive. Beyond these clusters there are many cluster targets set by the region but without a significant critical mass or high levels of high value added activities.

[1] The claimant count is the number of people claiming unemployment related benefits, such as Job Seeker's Allowance, taken from monthly records.
[2] Firms operating in the offshore and subsea sector design, engineer, build, install, commission and operate complex systems that operate in hostile environments to produce oil and gas from underwater reservoirs.

Table 1.6 - NUTS2 clusters in North East England

All regional clusters in United Kingdom 1, 2 and 3 star regional clusters								
Region	Cluster category	Employees	Size	Spec.	Focus	Stars	Innovation	Exports
Tees Valley and Durham	Business Services	11 941	0.28%	1.19	2.80%	*	Medium	Strong
Tees Valley and Durham	Construction	15 957	0.24%	1.05	3.75%	*	Medium	N/A
Tees Valley and Durham	Chemical	4 554	0.47%	2.04	1.07%	*	Medium	Strong
Northumb and Tyne and Wear	Finance	22 619	0.32%	0.94	3.64%	*	Medium	Very strong
Northumb and Tyne and Wear	Education	20 721	0.58%	1.73	3.34%	*	Medium	N/A
Northumb and Tyne and Wear	Construction	18 003	0.27%	0.81	2.90%	*	Medium	N/A
Northumb and Tyne and Wear	Business Services	20 975	0.49%	1.44	3.38%	*	Medium	Strong

Source: Cluster Observatory

1.3.1.3 Production system

The region also suffers from a weak entrepreneurial culture: in the period 2000-2006, the North East had only 7.5% of people in self employment whereas the UK had 11.3% (2001) and in 2000 there were only 21 new start ups per 10,000 units of population (10.2%) compared to 38 in the UK (11.3%). The dominance in the region of large employers in externally owned plants and the public sector limits the potential for close links to local SMEs, and in this context technology-based SMEs, knowledge-based business services and innovative entrepreneurship end up being under-represented.

An indicator of business formations is the number of new Value Added Tax (VAT) registrations[3] each year as a percentage of enterprises registered for VAT at the end of that year. Registration rates in manufacturing industries were lower during 2004 than in 1998, both in North East and in all English regions. A similar pattern can be seen in service industries. Regarding business formation rates, the relative position of the region did not change markedly between 1998 and 2004, but it is evident that the gap between London and the rest of the UK has narrowed in recent years. Between 1998 and 2004, registrations per head were lowest in the North East (between 20 and 23 registrations per 10,000 adults each year), at just over half of the UK rate in 2004. However, between 1998 and 2004 the indices of all southern English regions fell, with the greatest drop in London of almost 15 points, while it rose in all northern regions. Despite this, the North East remains behind the English and UK average rates (sources: National Statistics and North East RDA).

Business survival rates detail the proportion of businesses remaining registered for VAT three years after their initial registration. Survival rates for the UK have been rising since 1993. Three-year survival rates were just over 62% for firms first registered during 1993, and increased over the years to a high of 67.4% for businesses registered during 1997, with a slight fall to 66.5% for businesses registered in 1999. This overall pattern has been repeated in most of the English regions, including the North East (sources: National Statistics, IDBR, ONS).

[3] VAT registrations are not synonymous with business start-ups; some registrations are the results of changes in ownership or legal status of a business. In Great Britain the total number of business start-ups is estimated to be around twice the number of registrations for VAT. It is estimated that between 1995 and 1999 there were around 530 000 businesses created. Businesses with annual turnover below the VAT threshold (£58 000 at the end of 2004) may decide not to register for VAT for a variety of reasons, and so would not be included in these estimates

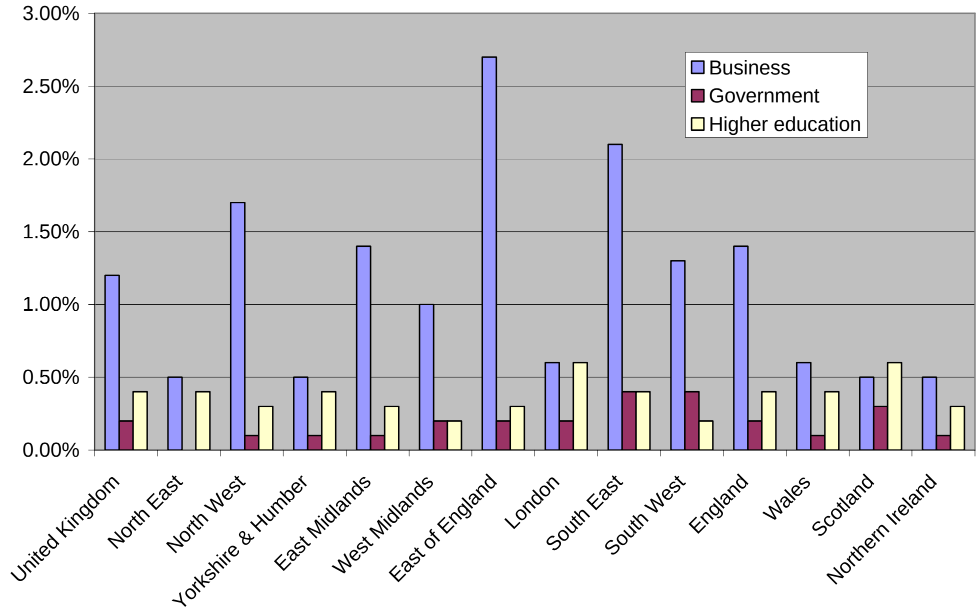
In addition to business start-up and business survival rates, a general measure of Total Entrepreneurial Activity (TEA) is an indicator of the enterprise within a region. Individuals adding value to the work they do by acting entrepreneurially can contribute to overall competitiveness and productivity. TEA (as a proportion of the total adult population) in the UK increased from 5.4% in 2002 to 6.4% in 2003 and dropped to 6.0% in 2005. The rate of TEA increased in all regions between 2002 and 2005. In the North East, TEA almost doubled in two years (2.9 in 2002, 5.0 in 2004), dropping to 3.8 in 2005, but the region still has the lowest level of TEA in the whole country. This trend is repeated in the proportion of adults who expect to start a business in the next three years: between 2003 and 2005, the UK rate increased from 7 to 8.7%, while in the North East it was from 5 to 6.6% (source: Global Entrepreneurship Monitor UK 2005).

1.3.1.4 Innovation potential

The North East has had a longstanding problem with innovation, despite a history of innovative leadership in the 19th century. Whilst other parts of the UK, notably in the South, saw growth of investment in R&D and high technology industries during the 20th century, the North East kept a focus on traditional sectors, later replaced by branch plant assembly activities with little or no independent R&D capacity. Innovation in SMEs has also lagged behind that in the South of the country.

Figure 1.6 illustrates the scale of the problem – business R&D is around 0.5% of regional GDP, compared with over 2.5% in East region. Investment in the university sector is respectable and at around the national average, but other public R&D investment is non-existent. Altogether then R&D in the region is less than 1% of GDP, and not particularly increasing. This compares particularly poorly with regions such as the East of England where business R&D alone is over 2.5%. The UK nationally has a GERD of around 1.8% which in itself is less than other leading EU nations and less than it was in the 1980s when the figure was over 2%. The drop nationally has largely been due to a decline in defence R&D investment and a national sectoral focus on services rather than high tech manufacturing (see also Table 5.5).

Figure 1.6 - UK regional R&D by performing sector 2000



Source: Department of Trade and Industry

R&D however is not the same as innovation, and innovation is more difficult to measure. According to the results of the Community Innovation Survey, the regional differences in innovation in the UK are much less pronounced than the levels of R&D. Analysis by Michie et al (2004) of the CIS3 data shows that the North East respondents were only slightly less likely to be product innovators than UK firms as a whole, although they were significantly less likely to be novel product innovators. Variations in product innovation are relatively small ranging between 24.9% and 19.4%, with the North East being at the lower end of the spectrum at 20.8%. However only 37% of these were novel product innovators compared with a UK level of 44.3% and 53.5% in Scotland. Overall 7.7% of North East respondents were novel product innovators compared with a UK figure of 9.5%

Table 1.7 - Number and percentage of product innovators and novel product innovators

Region	**CIS 3 responses**	**which answered the relevant question**	**which were product innovators**		**which were *novel* product innovators**		
	(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**
	Count	*Count*	*Count*	% $\frac{(c)}{(b)} 100$	*Count*	% $\frac{(e)}{(c)} 100$	% $\frac{(e)}{(b)} 100$
England	6,826	6,799	1,475	21.7	641	43.5	9.4
East Mids	*699*	*696*	*152*	*21.8*	*76*	*50.0*	*10.9*
Eastern	*750*	*749*	*170*	*22.7*	*81*	*47.6*	*10.8*
London	*974*	*968*	*201*	*20.8*	*80*	*39.8*	*8.3*
North East	*444*	*442*	*92*	*20.8*	*34*	*37.0*	*7.7*
North West	*841*	*841*	*169*	*20.1*	*65*	*38.5*	*7.7*

Region	CIS 3 responses	which answered the relevant question	which were product innovators		which were *novel* product innovators		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Count	*Count*	*Count*	% $\frac{(c)}{(b)}100$	*Count*	% $\frac{(e)}{(c)}100$	% $\frac{(e)}{(b)}100$
South East	*1,012*	*1,011*	*252*	*24.9*	*116*	*46.0*	*11.5*
South West	*621*	*618*	*148*	*23.9*	*59*	*39.9*	*9.5*
West Mids	*732*	*729*	*141*	*19.3*	*65*	*46.1*	*8.9*
Yorks & Humbs	*753*	*745*	*150*	*20.1*	*65*	*43.3*	*8.7*
Northern Ireland	162	162	32	19.8	11	34.4	6.8
Wales	379	379	83	21.9	38	45.8	10.0
Scotland	805	801	155	19.4	83	53.5	10.4
UK	8,172	8,141	1,745	21.4	773	44.3	9.5

Source: Michie, Oughton and Frenz (2004)

1.3.1.5 Relocation strategies and internationalisation

As already noted the region has been the beneficiary of considerable FDI in the past, with several previous rounds of investment and at times disinvestment, with some plants changing hands over time – so a plant that was once established by Caterpillar of the US was closed and then later reopened by Komatsu, and a semiconductor plant built for Siemens was closed and later sold on to Atmel from the US, before again being later closed. The point being made is that the region has a history of churn in FDI (see also Table 5.6).

The late 1980s and early 1990s saw a wave of investment in electronics and consumer goods in particular, mainly from Asian sources, and the 2000s have seen the withdrawal of a number of these plants and notably large and prestigious operations such as Fujitsu's semiconductor operation and the Samsung facility on Teesside. On the other hand in chemicals ICI has sold off most of its interests on Teesside on the Wilton integrated petrochemicals site to a variety of mainly international chemicals companies. Such diversity of outcome is expected to continue given the high exposure of the region to overseas investment and the difficult cost environment in the UK.

In services also there has been a combination of inward and outward flows of investment. The region has been active in attracting call centres, primarily from UK companies although some are internationally owned. However, the North East is in competition with offshore sites for this investment and some notable cases of call centres being moved offshore have been seen, such as Lloyds Bank which closed a call centre in the North East as part of a movement of work to India. This movement has not been just one-way with some firms bringing work back into the UK in response to customer complaints.

Overall the volatility of the FDI sector and lack of competitiveness of the UK in recent years has led to a shift of focus in the region away from FDI and to place a greater emphasis on entrepreneurship and innovation in existing companies.

1.3.2 Understanding the geography of structural change

Regional concentration of socio-economic change and human capital

From the comparison between North East England and national and European data, there emerges a clear regional tendency of a reduction in population. This reduction is partly explained by outward migration, which is a feature of peripheral regions such as North East England. A central problem is that the region finds it difficult to retain graduates - even though it imports students from the rest of the country - and a high proportion move to the south of the country.

The combination between higher unemployment rates (especially youth unemployment) and lower income levels is also a regional characteristic. High unemployment is sustained by stagnant economic growth, well below the national average. Middlesborough exhibited the worst unemployment rate in the whole region (9.4% in 2004; see also Tables 5.7 and 5.8).

At NUTS2 and NUTS3 scales, growth of GDP and GVA is as positive as in other English regions, but Tees Valley and Durham areas together exhibit the lowest GDP per capita and growth of GDP per employed person of the whole UK (see also Tables 5.7 and 5.9). The region also presented the lowest average earnings in England during 2005. In terms of employment, the North East registers only two-thirds of working age people in employment in 2005, while in the UK it was about three-quarters. This under performance compared to the national average is a clear reflection of the latent potential within the region, especially Tees Valley. R&D spend is also weaker in the North East than in any other UK region, and self employment rates as well as qualification indicators highlight a gap between the region and the rest of the country. These results suggest that the issues the North East is facing go beyond structural change in economy and involve the historical absence of an entrepreneurial culture (sources: Eurostat, DG Regio, Government Office for the North East).

Regional concentration of production system features

The North East is characterised by a higher proportion of large companies (often externally owned) than the UK average and a lower average of businesses per head. Eurostat data at NUTS3 level are partial, but highlight a widespread decline in agriculture and industry GVA and employment, with a shift towards the service sector. Nevertheless, manufacturing still has a higher share of employment while services have a lower share, compared to the UK average. Northumberland is now reversing the previous trend, but Tees Valley and Durham still have a very high share of manufacturing in total employment (20.90) and with a low share of population with tertiary education (23.12). There has been significant investment in the Tees Valley from major players in the chemical and renewable energy sectors but this has taken place without significant employment growth.

Between 1998 and 2004, VAT registrations per head were lowest in the North East and, despite the falling indices of all southern English regions, the North East remains backward compared with English and British average rates. The region also has the lowest level of Total Entrepreneurial Activity (TEA) in the whole country, while business survival rates have been repeated in most of the English regions, including North East (sources: North East RDA, Global Entrepreneurship Monitor UK 2005). This is further evidence of the absence of an entrepreneurial culture characterising the region, arising from its historical background.

1.3.3 The region in context – Objective 2 comparison

The Basque Country in Northern Spain has been selected as a comparator Objective 2 region for our North East case study. With a population of just over 2.1 million (Eustat, 2008) it is of a similar size to the North East (population 2.55 million) with a comparable economic heritage based on the steel and shipbuilding industries. Like the North East, its economy suffered during the wider economic crises of the 1970s and 1980s. Unlike the North East, the Basque Country has a strong regional government, created in the 1980s as one of the 'fast-track' historic autonomous communities in post-Franco Spain. Traditionally, the region has been characterised by a strong entrepreneurial spirit, although since the 1970s this has exhibited a notable decline, with low levels of business formation and a resultant policy push to support and encourage entrepreneurship (Del Castillo. and Barroeta, 2007).

Whilst both the Basque Country and the North East faced similarly adverse economic conditions in the 1970s, with falling GDP and significant unemployment, for the last three decades the Basque Country has undergone a period of economic growth, for example almost doubling GDP per capita in the period 1995-2005 (Sanchez, 2008). Manufacturing remains important in the region, although there has also been a significant growth in the service sector, and business services in particular (ibid.). The region's policy response has been characterised as focusing on restructuring in the 1980s, on structure and economic diversification in the 1990s, and on innovation and knowledge during the last decade (ibid.).

The following table compares key regional indicators in the North East with the Basque Country.

Table 1.8 - North East England and Basque Country comparison

	North East	Basque Country
GDP per capita (€ PPPs) 2003	20,038	26,240
GDP PPS per capita growth – Annual Average Selected Years 2000-2005 (%)	3.8	4.9
Total R&D spend per capita (€) 2004	251	372
Business R&D spend per capita (€) 2004	160	295
Manufacturing employment as % of total employment (2004)	13.6	29.4
% change in manufacturing employment as a share of total employment 1996-2003	-7.2	-2.9
High technology manufacturing employment % of total employment	6.7	9.3
Low technology manufacturing employment as % of total employment	3.6	4.0
ILO unemployment rate 2005	6.4	7.3
Long term unemployment (% of unemployed persons out of work for 12 months+) 2005	22.74	24.81
Economic activity (% of population in work or seeking work)	60	71
% of population educated to tertiary/degree level	22.6	40.8
Adult mortality estimate – probability of dying (per 1000 population) between 15 and 64 years	91	76

Source: International Benchmarking Study undertaken by ECOTEC on behalf of NERIP, 2007

2. Regional policy 2000-2006: strategy and objectives

2.1 Regional policy mix for structural change and globalisation

The region has been in receipt of Objective 2 funding from the 1989-93 round of Programming onwards, with the Programmes administered in the region by firstly the Department of Trade and Industry (DTI) in the region and then from 1994 the Government Office for the North East (GONE), until the advent of the current round of funding (2007-2013) for which control in the region has passed to the Regional Development Agency (RDA), One NorthEast (ONE). It is important to note that it was only with the creation of the RDAs in 1999 that the English regions (NUTS1 level) gained a body with overall responsibility for planning economic development *in the region*. The role of the Government Offices has been to deliver national policy regionally, representing central government in the regions, as well as communicating regional and local views back into central government.
The 2000-2006 Programme then was the first to coincide with this new tier of (unelected) regional governance, with the RDA charged with producing a regional economic strategy (RES) which set out a framework for regional business and economic development, intended to guide the activities of not just the RDA but of all relevant organisations and agencies in the region. The Objective 2 programme for 2000-2006 must be understood in the context of this wider regional strategy, which both informed the development of the Programme itself, but also looked to the Structural Funds as a funding stream which would contribute to the realisation of the aims and objectives set out in the RES.

The Programme was drafted in the region in 1999 and early 2000 and comprised three strategic components:
- To create a substantial volume of new jobs in order to reduce the gap between unemployment rates in the North East and the national (English) average.
- To improve the number and performance of small and medium sized enterprises (SMEs) in the region by increasing their competitiveness and turnover, and so reducing the productivity gap between the region and the national average.
- To tackle social and economic inclusion, specifically in respect of the employability agenda.

[Programme Complement, p.5]

The policy framework which informed the development of the Programme was not just regional however. There were clear steers from the European Commission in outlining the purpose of the Structural Funds, and these were both acknowledged in the context analysis of the 2001 SPD and in the strategic objectives of the North East Programme itself. The Commission's guidance notes (*The Structural Funds and Their Co-ordination with the Cohesion Fund: Draft Guidance for the Programmes in the Period 2000-2006. Working Paper of the Commission*) identified employment creation as the fundamental objective of the Structural Fund programmes and the principle method by which regional disparities could be tackled. The North East Programme subsequently identified its overarching strategic objective as the creation and sustaining of employment based on targets set out in the Regional Economic Strategy (the creation of 30,000 net additional jobs by 2005 and 90,000 net additional jobs by 2010). The national response to employment guidelines agreed between Member States in the European Employment Strategy was set out in the UK Employment Action Plan (UKEAP), and this provided a UK context to the North East Programme objectives (and indeed those identified in the RES). Additionally at a national level, the then Department of Trade and Industry's (DTI) Competitiveness Agenda, set out in the 1998 White Paper (*Our Competitive Future: Building the Knowledge Driven Economy*) set out the UK policy context in relation to business and enterprise development, and in particular the progression towards a 'knowledge driven economy' where successful economic performance would increasingly come to depend on "the generation and exploitation of knowledge" (DTI *UK Competitiveness Indicators 1999*: 6). Further to this, the government's position on and response to variations in regional productivity were set out in a series of seven *Productivity in the UK* publications (published between 2000–2007) which identified five drivers of regional productivity, namely : skills, investment; innovation; enterprise and competition. Attempts to address each of these can be identified in the North East 2000-2006 Objective 2 programme.

National targets for regional development were set out in the Treasury's Comprehensive Spending Reviews (for example in the 2000 CSR the DTI and Department of the Environment Transport and the Regions (DETR) had a joint target to "Improve the economic performance of all the regions measured by the trend in growth of each region's GDP per capita", and in the 2002 CSR, the DTI, the Office of the Deputy Prime Minister (ODPM) and the Treasury had a joint target to "Make sustainable improvements in the economic performance of all the English regions by 2008 and over the long term reduce the persistent gap in growth rates between the regions, demonstrating progress by 2006"). The economic development strategies which the RDAs were required to produce were tasked with supporting these targets (since they were could not be delivered by central government acting alone) and to take them forwards together with other regional partners. ONE produced two regional economic strategies during the lifetime of the Objective 2 2000-2006 Programme: *Unlocking Our Potential* (1999) and *Realising Our Potential* (2002). The Single Programming Document for the 2000-2006 Programme was, therefore, drawn up to support the aims and objectives outlined in the original RES. Following the Programme's mid-term evaluation it was tied in increasingly tightly with the revised RES.

The first RES identified six priority themes and these were elaborated on in its second iteration in 2002, broadly relating to the areas of productivity, entrepreneurship, skills, the role of universities and colleges in regional economic development, transport and communications infrastructure, and community development.

Table 2.1 - North East Regional Economic Strategy Priorities 1999 and 2002

	Unlocking Our Potential (1999)	Realising Our Potential (2002)
Priority B1	Creating wealth by building a diversified, knowledge driven economy	Creating wealth by raising the productivity of all businesses
Priority B2	Establishing a new entrepreneurial culture	Establishing a new entrepreneurial culture
Priority B3	Building an adaptable and highly skilled workforce	Creating a healthy labour market supported by a skilled workforce
Priority B4	Placing universities and colleges at the heart of the region's economy	Recognising our universities and colleges at the heart of the region's economy
Priority B5	Meeting 21st century transport, communications and property needs	Meeting 21st century transport, communications and property needs
Priority B6	Accelerating the renaissance of the North East	Realising the renaissance of our rural and urban communities

Source:

Together, a focus on these priorities would enable progress towards ONE's regional vision that "By 2010, the North East England is a vibrant, self reliant and outward looking region with the aspiration, ambition and confidence to unlock the potential of all its people".

In the English regional context at that time therefore, there was an understanding that regional policy was set out and shaped in the RES, with the European Structural Funds Programme – in those regions which were eligible – to be used as a funding stream for the realisation of that strategy. Clearly at the outset of the 2000-2006 Programme, both the RDA and the RES were relatively novel, but nonetheless there was an expectation that the European Programme would be aligned with priorities as set out in the RES. Respondents suggested that by the time of the Programme mid-term evaluation and following the first revision of the RES in 2002, this relationship became much closer. Pre-Programme analysis which was done as part of the process of drafting the SPD thus supported rather than shaped the agenda which had already been set out through the work of One NorthEast. Additional policy outlines were also to be developed by the RDA (for example, the Skills Strategy, the Innovation Action Plan) and these would provide a further strategic framework in relation to the development of the Programme itself.

The Mid-Term Evaluation report in 2003 recommended a closer alignment with the revised RES and with a number of new regional and sub-regional policy initiatives, specifically the FRESA (Framework for Regional Employment and Skills Action), the Rural Action Plan, the Sub-Regional Action Plans (pertaining to Single Programme funding devolved by ONE to the four sub-regional partnerships – County Durham, Northumberland, Tees Valley and Tyne & Wear), ONE's reform of the Business Brokerage model (intended to rationalise and improve the effectiveness of the business support network in the region) and ONE's flagship science policy, the Strategy for Success, involving the creation of the five Centres of Excellence. Of these, the FRESA and the new Business Brokerage model came about as responses to national policy initiatives (the Skills White Paper in 2003 and the *Cross Cutting Review of Government Services for Small Business* in 2002, the policy paper *Small Business and Government – the Way Forward* in the same year, and the *Government Action Plan for Small Business* in 2004). The Rural Action Plan was drafted in the wake of the 2001 foot and mouth crisis.

Realignment of the Programme was suggested to be particularly evident in relation to Measure 2.4 (Transferring technological assets to SMEs), which following the evaluation became largely focused on a smaller number of large 'impact' projects (principally ONE's Strategy for Success science policy) which were expected to be more supportive of RES objectives than the less focused approach which preceded the evaluation.

2.2 Overall strategy of the 2000-2006 Objective 2 programme

The principal difficulties which the region faced in relation to structural change are identified in the Programme's SWOT analysis, and the underpinning strategy of the Programme, as well as the Programme's strategic Priorities, should be understood as a response to this analysis. The SPD identifies as the single largest issue for the region the fact that it is "*desperately short of jobs*" (SPD Volume III: 9). The Socio-Economic Analysis for the Programme (SPD Volume I) explicitly identifies the place of the region in a wider global economy as a cause for past regional downturns as well as key to the region's future economic development and prosperity. Significant restructuring in what were once key regional industries – particularly coalmining and shipbuilding – has taken place largely due to factors occurring outside the regional boundaries with the

long-term "deep-seated structural problems" which the region now faces due as much to external changes as well as more internally rooted ones. Past regional responses to these structural changes, and specifically the region's abilities to adapt to changing economic circumstances, are, however, identified as contributing to the *persistence* of these difficulties (SPD Volume I: 8).
As set out in the Programme Complement, the SWOT highlights that "A very large proportion of employment in the North East is in sectors that are declining and which are subject to growing technological and competitive pressures. The regional economy is not structuring fast enough to compensate, although opportunities exist for the development of new businesses, new sectors and the extension of existing strong sectors. Economic underperformance over several decades has resulted in a relatively low density of employment, the economic and social consequences of which have become highly concentrated in specific locations and segments of the population".

The overall strategy of the 2000-2006 Programme can be understood in terms of three main components intended to alleviate the situation described above, with a primary focus on employment generation:

- to create a substantial volume of new jobs, so reducing the gap between the North East's unemployment rate and the national average;
- to improve the number and performance of small and medium sized enterprises (SMEs) in the region by increasing their competitiveness and turnover, again reducing the gap between the North East's performance and the national average;
- to tackle social and economic inclusion and reduce employment disparities within the region.

Within the Programme, four strategic Priorities reflected the main areas where the region was expected to have capabilities and to be able to make progress. These Priorities related to:

Priority 1: Establishing an entrepreneurial culture
Priority 2: SME growth and competitiveness
Priority 3: Strategic employment opportunities
Priority 4: Target communities: building capacity and connecting with jobs.

Priority 2 received the greatest weighting of funding (53% of core ERDF), and taken together with Priority 1 (accounting for 11% of core ERDF) meant that over 60% of the total Programme was targeted towards the creation and development of SMEs, reflecting the expected potential of SMEs to contribute towards employment generation, identified as the overriding objective of the Programme.
Whilst not couched explicitly in the language of globalisation, the Programme's SWOT analysis nonetheless identifies pressures resulting from external economic processes as key in contributing to the regional situation at the start of the programming period. The primary solution to this was identified in a major push towards job creation, principally by increasing the competitiveness of existing SMEs and fostering conditions which would support the start-up of new companies. As highlighted in the previous section (Section 2.1) this approach also nested within national and European priorities around employment generation as key to bolstering EU competitiveness and cohesion both within and between member states.
The Socio-Economic Analysis of the SPD characterises the productive system of the region as possessing a relatively strong manufacturing base (with GVA per head in manufacturing in line with the national average) although with a decline in the number of businesses apparent within this population of firms. The

analysis suggests an over-reliance on public sector employment in the region, with 11.6% of business stock in the public sector, compared to a national average of 9%. The number of public sector establishments in the region increased by 16.8% between 1994 and 1999, compared to a national average increase of only 7.8%. Conversely, the rate of growth in the financial and business services sector was much lower than the national average, at 9% in the region and 20% nationally (representing 20.7% and 26.8% of workplaces respectively). The retail sector is more important in the North East than nationally, accounting for 24.1% of all businesses in the region compared to 21.5% in England as a whole.

The Programme's Mid-Term Evaluation restates the conclusions of the SPD Socio-Economic Analysis of the North East as "*a poor performing region in a relatively poor performing country*" (ODPM/EKOS Consulting, 2003: 39). Substantively, conditions in the region did not change between the pre-Programme analysis and the Mid-Term Evaluation, with the North East continuing to underperform across a range of social and economic indicators. Consequently, changes introduced following the Mid-Term Evaluation were related to the management and monitoring of the Programme, rather than to any significant structural changes in the region.

The region was suffered from low levels of productivity (both as a result of persisting unemployment and a predominance of low value jobs), with below average levels of business start-ups and the absence of an 'entrepreneurial culture', low levels of business R&D, a lack of any public sector research establishments in the region, and poor links between the regional 'science base' (represented by the region's universities) and industry. Past policies encouraging inward investment had resulted in a significant amount of manufacturing employment within externally controlled 'branch-plants' with such investments remaining precarious and potentially mobile in the face of changing global economic circumstances.

Whilst the overriding objective of the Programme was job creation, priorities and measures also implicitly addressed a number of other areas relating to the effects of globalisation and structural change. Apparent deficiencies in the skills base of the region were tackled though a number of measures funded by the ESF component of the Objective 2 Programme, two of which were directly complementary to ERDF measures. Measure 1.4 provided support and training to individuals wishing to set up their own business, whilst Measure 4.4 was concerned with attempting to alleviate the effects of unemployment through the provision of training and development support for residents of the Programme's pre-defined 'target communities'. Measure 2.7 was directly complementary to Measure 2.5, providing training and support to fill skills gaps identified in developing SMEs operating within defined clusters and sectors in the region, as well as equipping the unemployed with the skills necessary to gain jobs in those clusters. Similarly, Measure 2.8 ran in parallel with Measure 2.4, providing higher level skills training and development activities focused on new technologies.

Measures providing support to bolster SME competitiveness and to facilitate the development of new and emerging industrial sectors under Priorities 1 and 2, whilst intended overall to contribute to job creation targets, also provided a means by which problems relating to past regional reliance on large externally controlled branch-plants and declining industrial sectors could be addressed. The Programme therefore implied an attempt to break away from old models of economic development in the region which had relied heavily on foreign direct investment, leaving the region vulnerable and open to low-cost competition from elsewhere, with high-profile examples immediately prior to the Programme of this type of footloose capital withdrawing from the regional economy (e.g. Siemens in North Tyneside and Fujitsu in Newton Aycliffe).

Table 2.2 - Synoptic view of the Objective 2 programme

	Brief description and objective	Budget					
		ERDF		ESF		Total	
		€ mln	%	€ mln	%	€ mln	%
Priority 1	Establishing an Entrepreneurial Culture Measures aim to create jobs through an increase in the number of SMEs in the region.	69,323	11	11,639	9	80,962	10.8
Priority 2	SME Growth & Competitiveness Measures aim to improve the competitiveness of SMEs and therefore create new jobs.	324,937	53	54,334	40	379,271	50.8
Priority 3	Strategic Employment Opportunities Measures aim to create jobs through investment in specified areas and assets.	124,537	21	1,382	1	125,919	16.9
Priority 4	Target Communities: Building Capacity & Connecting with Jobs Helping people living in the most disadvantaged parts of the region	86,074	14	66,957	49	153,031	20.5
Technical Assistance		6,110	1	1,358	1	7,468	1

Source: GONE Objective 2 Programme Annual Report 2006

With over 60% of the Programme budget allocated to Priorities 1 and 2 (with Priority 2 taking the bulk of that funding) the main thrust of the Programme, bearing in mind the overall objective of job creation, was towards supporting the development of new SMEs and increasing the competitiveness of existing ones. As suggested earlier, a secondary outcome of this was the potential to move away from the vacuum left in the region by the decline of a number of heavy industries which had historically been major sources of employment. The restructuring of the regional economy was therefore tackled, albeit indirectly, with a primary focus around the generation of employment. Through Measures 2.4 and 2.5 in particular there were attempts to move away from old patterns of regional economic specialisation via support both for industries which were new to the region and the reconfiguring of existing sectors.

Historically the Structural Funds have been used in the region as a means of strengthening the regional innovation system (RIS), and the 2000-2006 Programme was no exception to this, particularly during the latter part of the Programme (following the Mid-Term Evaluation) when a substantial proportion of the money allocated under the Technology Transfer Measure was used to finance five regional 'Centres of Excellence' in the areas of life sciences, renewable energy technologies, nanotechnology, the process industries and digital and media technologies, part of One NorthEast's flagship science policy the 'Strategy for Success'. In line with the overall objectives of the Programme, however, the benefits of this technology transfer support were understood primarily in terms of the potential to create significant employment gains, particularly in higher value industries.

With a significant proportion of the Objective 2 budget (Priorities 1 and 2) focused on improving the competitive position of regional SMEs (as well as the creation of new firms) the primary mode of intervention in the Programme was through targeted business support. In addition to those measures already discussed, Measure 2.3 provided funding to business support organisations working with SMEs in order to help them break into new geographical markets in order to take advantage of the opportunities offered both by EU enlargement and by changes in the global economy. Priority 3 (representing just under

17% of the total Programme budget) was concerned with capital investments in strategic sites throughout the region, which, it was expected, would then generate significant employment opportunities and would include major tourism and culture developments (for example Alnwick Gardens[4], now recognised as a visitor attraction of national importance). Priority 4 (20.5% of the total budget) was a package of measures aimed at producing targeted support and assistance for some of the most disadvantaged communities in the region, particularly in terms of improving skill levels and employment prospects for the unemployed in these pre-defined communities as well as providing some capital funding to create the infrastructure through which such training programmes would be run.

2.3 Selected fields of intervention and measures

2.3.1 Selection logic

Priority 2 was intended to support SME Growth and Competitiveness, and was focused on the need to develop the existing SME base of the region in the context of increasing external competitive pressures, sectoral change and a continuing weakening of traditional industries. Hence much of the Priority was dedicated to helping regional SMEs to enhance their productivity, address new markets and improve their ability to innovate, with an overall strategic objective (for the Priority) of creating jobs though the improvement of competitiveness of existing SMEs.

Table 2.3 - Measures relevant with respect to structural change and globalisation: main features

Measures	Brief description (including date of implementation)	Financial weight		N° of projects / beneficiaries	Type of intervention	Structural change dimension	Relevance with structural change and globalisation *
		% tot. budget (ERDF)	% expenditure				
2.1	Business support (2001)	15.3	9.1	111	Business support	*Does not fit directly with hypotheses outlined in 1st Intermediate Report*	*
2.2	Financial support (2001)	12.4	10.6	22	Business support	*Does not fit directly with hypotheses outlined in 1st Intermediate Report*	*
2.3	Expanding into new markets (2001)	3.2	2.4	32	Business Support	Internationalisation and relocation	**
2.4	Technology Transfer (2001)	12.3	8.9	64	Innovation & technology	Innovation potential	***
2.5	Clusters and Sectors (2001)	3.8	2.4	41	Business support	Regional specialism	***

** Legend: * marginally relevant, ** relevant, *** extremely relevant*

[4] A complex of formal gardens adjacent to Alnwick Castle in Northumberland. Redevelopment was instigated by Jane Percy, the current Duchess of Northumberland, in 1997, with the first phase of development opening to the public in 2001. By 2003 it had been in receipt of some £450,000 of European funding and by 2004 had become the 3rd most visited paid entry garden in the UK with over half a million visitors.

Measure 2.3 was intended to improve the competitiveness and survival rates of existing SMEs by supporting them in developing and exploiting new markets, recognising both the small size of the internal regional market, but also new trading prospects which were opening up globally. Whilst the measure therefore explicitly identified opportunities arising from changes in the global economy which SMEs could take advantage of, its focus was on exporting and e-commerce rather than in any broader response to regional restructuring. Accordingly it has not been selected for an in-depth analysis regarding its contribution to structural change in the region.

Measure 2.4, Technology Transfer, was intended to improve SME access to advanced technologies, so increasing their competitiveness. It was very much linked in to delivering ONE's regional science policy, the 'Strategy for Success'. Through this, five sectors had been identified which linked in to existing regional strengths, either directly (as in the Centre for Process Industries, which was allied to the existing chemicals and food processing industries in the region), or indirectly (as, for example, with NaREC, the New and Renewable Energy Centre, which built on a small pre-existing renewable energies sector in the region, but also on the region's more general engineering strengths, which could be reapplied to this relatively new sector). The measure thus represented an attempt to diversify the regional economy away from declining specialisms and open up new sectoral opportunities which would make individual firms and ultimately the region more competitive in global markets.

Measure 2.5 was intended to support SMEs operating in a further set of clusters and sectors where analysis had suggested the region possessed distinct competencies and thus had the potential to develop and grow. None of the clusters identified were particularly strong, however, and so intervention was deemed necessary in order to bring these clusters on and encourage a greater focus on collective action, in order to emulate the way successful clusters of firms were believed to operate in some of the stronger European regional economies.

Together, these three measures aimed to provide existing SMEs with a high degree of targeted support, offering intensive assistance (rather than lower level generic business support) which was intended to increase the competitiveness of and improve survival rates of existing SMEs (Regeneris Consulting, 2006). Measures 2.4 and 2.5 in particular would – if they were successful – support moves to diversify the regional economy away from traditional sectors. They have therefore been selected as key for our study in the light of the continuing structural problems evident in the North East economy as a result of past reliance on sectors which were now in decline, and the continuing presence of sectors with low or very low levels of productivity. The remaining ERDF measures funded under Priority 2 were, we believe, less directly concerned with restructuring the regional economy. Measure 2.1 (Support for the expansion of SMEs) was intended to fund business support organisations in disseminating best practice to SMEs. Measure 2.2 (Access to finance) supported loan funds and grant schemes available to SMEs through intermediary bodies. Both Measures 2.1 and 2.2 could, therefore, potentially relate to a wide range of SME activities, all ultimately concerned with increasing SME competitiveness, but not to regional restructuring in particular. Finally, Measure 2.6 (Business Accommodation Measure) was concerned with capital spend only in respect of business premises, and finally Measures 2.7 and 2.8 were ESF funded training and development measures.

From the overview of the North East region presented in Section 1, it is clear that at the beginning of the programming period the region was still suffering the consequences of gradual economic decline over several decades punctuated with points of crisis, as for example, during the recession of the 1980s. The region’s specialisation in a particular set of industrial sectors – including coalmining, shipbuilding, metal manufacturing, mechanical engineering and textiles and clothing – together with low levels of value added in existing industry, low levels of R&D and an emphasis on basic production activity rather than high value and strategic functions, left it vulnerable and poorly positioned to respond to any wider global economic downturn.

The 2000-2006 programme implicitly recognised a need to address the consequences of this past specialisation through fostering new areas of economic activity in the region (based on pockets of existing expertise). Additionally there was felt to be a need to improve the competitiveness of existing companies and to strengthen the regional innovation system through supporting institutions which would operate in the spaces between the region’s research and industrial bases.

As outlined in the conceptual model presented in the *First Intermediate Report*[5] specialisation can be both an advantage and a disadvantage in regional economies. Operating – as it primarily has done in the past – at the lower end of the value-chain – the North East’s reliance on particular industrial sectors, some of which have suffered severely from external competition, has not been advantageous in terms of economic development.

Hypothesis 2 of the conceptual model: regional specialisation

A certain degree of specialisation and distinctive core-competences linked to the regional innovation system and to promising markets could be a competitive advantage for a region. Some Objective 2 areas, however, specialise in industries that suffer from severe external competition. Problems of structural change and vulnerability to globalisation are frequently a consequence of lock-in effects and negative selection mechanisms that slow down the necessary change and restructuring.

The case study will therefore examine the effects of measures supported by ERDF in attempting to diversify the economy and move away from a past (and increasingly unsuccessful) reliance on traditional areas of activity.

A second area of interest relates to innovation in the region – a long-standing focus of previous European actions in the North East both in terms of improving the competitiveness of individual companies and in strengthening a regional innovation system. This relates to a further hypothesis outlined in the underpinning conceptual model, regarding the innovation potential of firms in the Objective 2 area, in terms of internal capabilities and capacities, but also as elements of a wider innovation system.

Hypothesis 4 of the conceptual model: Innovation potential

Apart from significant differences among Objective 2 regions in terms of institutional thickness, their innovation systems may suffer from missing innovation drivers on the demand side. Barriers to innovation are determined by a lack of absorptive capacity by local firms. Especially in old-industrial areas, path-dependence from existing technological trajectories constrains product and process innovation.

In this context, the research seeks to examine the contribution of the selected measures to the strengthening of the regional innovation system: has the creation of a set of intermediary institutions increased the region’s

[5] See the *First Intermediate Report* for an overview of the conceptual framework underpinning the study: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2006/wp4_1st_int_report.pdf

ability to respond to external economic events and pressures? Have the internal capacities and capabilities of individual firms improved following support financed through ERDF interventions?

2.3.2 Detailed description of the selected measures

Both the SPD and the Programme Complement identified the need for a dynamic and vibrant SME base as a pre-requisite for sustainable economic growth in a "modern knowledge economy" (*Programme Complement*, 2007: 43). Using as a competitive benchmark the "best performing regions in Europe" (ibid.: 43) a number of characteristics were highlighted which were typical of such successful regions. These included "a high proportion of businesses in emerging and growth sectors, a highly skilled and flexible workforce, good links with the research base, excellence in the application of ICTs, strong investment in R&D and a buoyant market for externally sourced business development services" (ibid.: 43). Whilst it was recognised that there were some exceptions, the North East was felt to be largely lagging in the development of a similarly competitive industrial base, and the measures set out under Priority 2 were identified to tackle this situation. Not only were particular strands of support necessary to improve the performance of individual SMEs and selected cultures, but equally there was a need to bring about a shift in SME culture in the region, towards the acceptance of the importance of both "knowledge and know-how for commercial exploitation" (ibid.: 44). Together, the measures implemented under Priority 2 would result in an integrated support service for existing but growing SMEs.

There has been a continuing history of low levels of technological activity amongst the region's SMEs, with very low levels of business investment in R&D. Such research capabilities that existed in the region at the outset of the Programme were largely (although not exclusively) located in the region's universities. Problems in the regional innovation system (RIS) were identified not on the supply side but rather in terms of demand, and in particular in establishing, translating and managing the relationship between academia and the region's industrial base.

Measure 2.4 (Transferring technological assets to SMEs) was intended to accelerate the regional journey towards a knowledge-based economy, particularly by improving SME access to advanced technologies as represented by the five new regional Centres of Excellence established as a major plank of ONE's regional science policy the 'Strategy for Success'. The measure was intended to focus activity on a small number of high-impact initiatives whose goals would be "the bringing together of innovating small businesses and technological experts to share ideas and commercialise research" (*SPD Volume III*: 63). The measure would finance activity in two distinct but complementary strands. Firstly to support the development of the Centres of Excellence which in turn would support high technology growth companies. This would be delivered through revenue (i.e. funding to support day-to-day project costs) and some limited capital expenditure (funding for tangible assets). Secondly a revenue stream to finance other project based technology support to develop new products and processes for the benefit of, and in collaboration with, SMEs. Following the Mid-Term Evaluation and in the resultant second phase of the Programme, it was intended that the Strategy for Success would provide the framework which would allow the co-ordination of activities financed under this measure. SME support financed under the measure would be of a higher level of intensity, equivalent to a minimum of five days of assistance or of a minimum value of €3,000.

Measure 2.5 (Developing SMEs in clusters and sectors), which like Measure 2.4 had an overall objective of increasing employment through job creation, was intended to improve SME competitive advantage through cluster development. A set of regionally significant clusters had been identified by ONE, and these were recognised under the Programme as the designated clusters which would be eligible for support under the measure. In the original SPD, bioscience and nanotechnology were included as 'emerging clusters' in this list of eligible sectors, but for the second phase of the Programme (following the MTE) they were to be supported under Measure 2.4 via the appropriate Centre of Excellence. Again, support was to be at a higher level of intensity (equivalent to a minimum of five days of assistance or to the value of €3,000 and above).

3. Effects of the selected ERDF measures on the process of structural change and adaptation to globalisation

This section aims to analyse the success of Measures 2.4 (Transferring technological assets to SMEs) and 2.5 (Developing SMEs in clusters and sectors) in supporting structural change in the region and enabling existing SMEs to respond to threats and opportunities inherent in changing economic circumstances.

3.1 Assessment of the structural and socio-economic effects

3.1.1 Performance of selected measures

Here we will examine in more detail the projects funded through money made available in Measures 2.4 (Transferring technological assets to SMEs) and 2.5 (Developing SMEs in clusters and sectors), as well as overall outputs and results for both of these measures.

At the time of the Mid-Term Evaluation (MTE) in 2003, 28 projects had been approved under Measure 2.4, of those 10 were operating in both core and transitional areas. At this point applications by 12 project sponsors had been approved, including all the region's universities, One NorthEast and a number of other development and technology transfer agencies and intermediary organisations. The Universities of Durham, Newcastle, Northumbria, Sunderland and Teesside, the North East Innovation Centre and RTC North Ltd were all running more than one project under this measure, indicating, the MTE suggested, a good level of engagement in this measure by higher education institutions, with a majority of activity at this point related to technology transfer.

By July 2009, a total of 64 projects had been funded with 17 of these operating in both core and transitional areas, and a total of 17 project sponsors. Following the MTE, efforts under this measure were focused on supporting the Centres of Excellence created under ONE's 'Strategy for Success', accounting for 60% of all approvals and some £28.6 million. The Universities continued to be major beneficiaries of support under this measure (receiving around £7.3 million) for technology transfer activities. RTC North Ltd, the region's major independent technology transfer and innovation company, received in total around £2.6 million.

Table 3.1 - Measure 2.4: Outputs: Core Area

	Target	Achieved	%
Outputs			
O1 - Number of SMEs assisted, of which:	6,295	1,733	28
O1.1 - No. of O1 SMEs receiving assistance valued between £2,000 & £3,999 (minimum of 5 days)	1,259	1,102	88
O1.2 - No. of O1 SMEs receiving assistance valued between £4,000 & £9,999 (minimum of 10 days)	5,036	1,000	20
O10 - Area of Land Developed	4.9	0	0
O10A - Area of Greenfield Land Developed	0.4	0	0
O10B - Area of Brownfield Land Developed	4.5	870	19,333

	Target	Achieved	%
O17 - Area of Specialised Technology Accommodation Developed	12,474	4,871	39
Results			
R1 - Gross New Turnover in SMEs (£)	364,872,000	96,879,398	27
R2 - Gross Safeguarded Turnover in SMEs (£)	156,400,000	124,698,884	80
R3 - Gross New Jobs Created in SMEs	5,106	1,572	31
R4 - Gross Safeguarded Jobs in SMEs	2,189	2,735	125
R5 – SME investment (£)	31,464,000	42,124,355	134
RR1 - Number of all SMEs assisted implementing the outcome of assistance	5,036	1,672	33
RR15 - Area of premises developed / refurbished occupied at 31 December 2008	10,603	2,067	19

Source: Government Office North East, July 2009
N.B. Final version of these tables not available at time of writing – figures may be subject to revision

Table 3.2 - Measure 2.4: Outputs: Transitional Area

	Target	Achieved	%
Outputs			
O1 - Number of SMEs assisted, of which:	548	97	18
O1.1 - No. of O1 SMEs receiving assistance valued between £2,000 & £3,999 (minimum of 5 days)	110	98	89
O1.2 - No. of O1 SMEs receiving assistance valued between £4,000 & £9,999 (minimum of 10 days)	438	73	17
O10 - Area of Land Developed	0.5	0	0
O10A - Area of Greenfield Land Developed	0.1	0	0
O10B - Area of Brownfield Land Developed	0.4	0	0
O17 - Area of Specialised Technology Accommodation Developed	1,085	0	0
Results			
R1 - Gross New Turnover in SMEs (£)	31,728,000	2,060,578	6
R2 - Gross Safeguarded Turnover in SMEs (£)	13,600,000	32,847,045	242
R3 - Gross New Jobs Created in SMEs	444	156	35
R4 - Gross Safeguarded Jobs in SMEs	190	529	278
R5 – SME investment (£)	2,736,000	614,939	22
RR1 - Number of all SMEs assisted implementing the outcome of assistance	438	57	13
RR15 - Area of premises developed / refurbished occupied at 31 December 2008	922	0	0

Source: Government Office North East, July 2009
N.B. Final version of these tables not available at time of writing – figures may be subject to revision

Generally there were low levels of achievement for performance measures in both core and transitional areas. GONE believe that this partly reflects the higher than expected unit costs associated with providing the level of in-depth and specialist support associated with this measure.
Measure 2.5 was intended to help address an apparent sectoral imbalance in the region's economy, with insufficient growth in the region in sectors which were expanding nationally (*Programme Complement*, 2007).

This also reflected a national policy push towards identifying key economic clusters, for example, through the DTI's cluster mapping exercise in 2001. Linkages in most of the clusters identified in the North East were found to be weak, and the developing of these was felt to be a major concern (ibid). There was clearly common ground between several of the clusters identified in the Programme and the five Centres of Excellence supported under Measure 2.4.

By the Mid-Term Evaluation point in 2003, 30 projects had been approved with 11 of these covering both core and transitional areas, and with successful applications from a total of 15 sponsors. By July 2009 this had increased to 41 project approvals, with 13 of these operating in both core and transitional areas, and with 20 successful project sponsors in total. The largest beneficiary under the measure was the Arts Council North East, which received grant of £6.1 million to support activities in cultural and related areas. One NorthEast also received a significant amount of support under the measure, with grant of £2.3 million, primarily focused around the nanotechnology, digital and media, and tourism and culture sectors.

A majority of targets were exceeded under the measure, in both core and transitional areas.

Table 3.3 - Measure 2.5: Outputs: Core Area

	Target	Achieved	%
Outputs			
O1 - Number of SMEs assisted	1,541	1,965	127
O1.1 - No. of O1 SMEs receiving assistance valued between £2,000 & £3,999 (minimum of 5 days)	594	1,246	210
O1.2 - No. of O1 SMEs receiving assistance valued between £4,000 & £9,999 (minimum of 10 days)	947	1,157	122
O3 - Number of SMEs given advice / information	1,467	8,830	602
O21 - Number of marketing campaigns / group initiatives supported	16	187	1,169
Results			
R1 - Gross New Turnover in SMEs (£)	117,000,000	312,086,812	267
R2 - Gross Safeguarded Turnover in SMEs (£)	50,100,000	15,629,649	31
R3 - Gross New Jobs Created in SMEs	1,995	3,251	163
R4 - Gross Safeguarded Jobs in SMEs	1,472	6,584	447
R5 – SME investment (£)	9,900,000	13,644,317	138
R11 - Gross tourist visitors	755,445	673,415	89
R12 - Gross tourist visitors expenditure (£)	41,000,000	29,562,160	72
RR1 - Number of all SMEs assisted implementing the outcome of assistance	1,585	2,999	189

Source: Government Office North East, July 2009
N.B. Final version of these tables not available at time of writing – figures may be subject to revision

Table 3.4 - Measure 2.5: Outputs: Transitional Area

	Target	Achieved	%
Outputs			
O1 - Number of SMEs assisted	81	231	285
O1.1 - No. of O1 SMEs receiving assistance valued between £2,000 & £3,999 (minimum of 5 days)	52	155	298
O1.2 - No. of O1 SMEs receiving assistance valued between £4,000 & £9,999 (minimum of 10 days)	29	148	510
O3 - Number of SMEs given advice / information	128	1,525	1,191
O21 - Number of marketing campaigns / group initiatives supported	1	1	100
Results			
R1 - Gross New Turnover in SMEs (£)	10,200,000	5,638,682	55
R2 - Gross Safeguarded Turnover in SMEs (£)	4,400,000	511,278	12
R3 - Gross New Jobs Created in SMEs	174	102	59
R4 - Gross Safeguarded Jobs in SMEs	128	1,376	1,075
R5 – SME investment (£)	800,000	93,900	12
R11 - Gross tourist visitors	65,691	145,981	222
R12 - Gross tourist visitors expenditure (£)	900,000	6,258,191	695
RR1 - Number of all SMEs assisted implementing the outcome of assistance	138	332	241

Source: Government Office North East, July 2009
N.B. Final version of these tables not available at time of writing – figures may be subject to revision

3.1.2 Contribution of selected measures to structural change and globalisation

Interviewees point out that the measures (and indeed the 2000-2006 Programme itself) should not be seen in isolation, but are rather part of an on-going process in the region which began with the 1989-1993 Programme. Over this timeframe, the Programmes have created the space for building relationships between different parts of the regional economy, and changing cultures - within project providers and Programme managers, as well as within Programme beneficiaries. The 2000-2006 Programme was important, however, in bringing forwards an emphasis on (potentially) higher impact, more strategic activity, and similarly, brought a move towards more targeted support for SMEs, characterised in the Programme as 'intensive', rather than a more generalist approach of low-level intervention which had been apparent previously. Anecdotally in interviews, the internal capacity of companies to make use of the assistance on offer, and receptivity towards that assistance, was suggested to have improved. However, despite the desire to focus more on intensive support, the nature of the focus on targets and outcomes for SMEs still tended to push intermediaries to focus on services across large numbers of beneficiaries. The nature of the sectors supported under Measure 2.5 also encouraged this with the Arts Council projects, for example, focusing primarily on micro-businesses and hence volume indicators.

Whilst clearly economic development outcomes in the region do not tie in to the lifecycles of Programme funding, the outcomes of assistance to individual firms and beneficiaries may not be evident within the life (and evaluation period) of a Programme either. One example was put forward from the NHS Innovations

North project (part financed by Measure 2.4 during the Programming period) A company had been assisted in the creation of a specialist piece of equipment which had taken a total of five years to develop, but which is now beginning to enjoy success in global healthcare markets. The benefits that this product is bringing to the company are only now being realised, and so were not picked up in NHS Innovations North's reports to the Programme.

Whilst the primary objective of both Measures 2.4 and 2.5 was job creation – in line with the overall outcomes which the Programme aimed for – each also attempted to tackle particular problems arising from the region's changing economic structures in terms of the need to diversify activity away from declining industrial sectors, with Measure 2.4 additionally attempting to address perceived deficiencies in the regional innovation system, largely through support given to the Centres of Excellence and One NorthEast's Strategy for Success. The Centres of Excellence were thus intended to play a dual role in the region's development, firstly in terms of supporting attempts to diversify the economy through supporting new and embryonic areas of activity which could be expected to harbour potentially strong economic growth in the medium to long-term. These were to be based on existing strengths in either the region's academic or industrial base, but would support the development of the region as a site for relatively new areas of economic activity, as yet untied into any particular locations. The selected areas of activity were renewable energy technologies, nanotechnology, life sciences, digital and media technologies, and process industries (largely based on existing chemical industry specialities but with the potential for areas of new growth).

Secondly, the Centres were intended to join up perceived gaps in the region's innovation system by acting as a bridge between the region's scientific and research base (largely though not entirely located within the five regional universities) and new or existing industrial sectors. Clearly the intention was to benefit regional industry, but also if the Centres were to establish themselves as truly 'excellent', or at least as credible centres of expertise, then there was a need to look beyond the region towards national and potentially international activity.

Measure 2.5, with its focus on supporting activity in predefined clusters and sectors, also attempted to bolster areas of activity with the potential for future economic growth. A number of clusters had been identified in the SPD, several of which overlapped with the five areas in which ONE intended to create their Centres of Excellence.

So through both the RES and the SPD, and increasingly as the Programme progressed, in further research commissioned by ONE, areas of economic activity were identified which built on or linked in to existing areas of regional strength (either academic or industry based). Through the Objective 2 Programme and also ONE's Single Programme, money was channelled into institutions or initiatives which it was hoped could create new synergies in existing activities and help build a critical mass to take the region forward in terms of establishing new areas of significant economic growth.

If we think then about the regional specialisation hypothesis outlined in the Work Package's conceptual model, and as discussed in Section 2.3.1, we have seen that the North East region has suffered from a past dependence on industries which have now all but disappeared from the regional economy, in particular, mining and shipbuilding. Additionally, entrepreneurial spirit can be characterised as poor, with very low levels of business start-ups compared to the national average, and this is often attributed to a labour market with a historic reliance on very large employers as well as continuing above average levels of public sector employment. Measures funded under Priority 1 (outside the scope of this case study) were intended to remedy this apparent entrepreneurial deficit.

Through their attempts to kick-start new or embryonic areas of economic activity – albeit with the intention that these should be based on existing regional strengths – Measures 2.4 and 2.5 can be understood as a policy response to a regional specialisation 'problem'. The remainder of this section will discuss their impact in terms of the Centres of Excellence and the Strategy for Success, (which took the bulk of funding under Measure 2.4 and a proportion of funding under Measure 2.5).

In early 2001, ONE commissioned the consultants Arthur D Little (ADL) to undertake a review of the region's research base in relation to the current and future requirements of key regional industry clusters. The resulting report recommended the creation of a Science and Industry Council, a regional exploitation fund, and a concentration of effort to create 'interdisciplinary centres of research' around five key 'cluster' areas (life sciences; nanotechnology; renewable energy; digital technology and media and process industries) which were expected to build on existing university and industry strengths in the region (One NorthEast, 2001).

ONE's response was the 'Strategy for Success', with a policy proposal sent to the DTI for approval in autumn 2001 implementing most of the recommendations from the ADL report, including a Science and Industry Council and the five Centres of Excellence. Initially, resources were made available by ONE to pump prime the Centres for a five year period, by the end of which they were expected to become self-financing and to have established for themselves a place in the regional economy. The RDA estimated it would spend something in the order of £200 million on the programme over five years, whilst aiming to leverage a similar amount through ERDF, the Framework Programme and other national policy programmes (ONE, 2003). ONE was always clear, however, that the Strategy was a long-term venture for the region, with a minimum of ten years of activity before results were expected to be evident.

The overall objective of the Strategy, principally through the creation of the Centres of Excellence, was to develop more effective linkages between industry and the regional science base "in order to generate innovation, competitiveness and growth, bring about a knowledge-driven economy, and thereby lay the foundations for the Region's future economic growth and prosperity" (House of Lords, 2003: 168). The principle function of the Centres was to "condition" technologies developed in the region's science and research base to a point where they could be exploited commercially (ibid.:168.). How this was to be put in practice was left in the hands of the individual Centres, although with overall guidance from the regional Science and Industry Council. The Centres would be managed by industry-led boards headed up by Chief Executives of "international standing" (ibid.: 140). They would provide a means of facilitating collaboration between academia and industry, ultimately creating a critical mass of activity in key sectoral areas. Centre activities would, it was intended, support technology transfer into existing companies, facilitate the creation of new companies spinning off from the science base and additionally act as a regional attractor in encouraging new companies or investment into the region to link in with the science base (ibid.: 140).

Funding awarded under the 2000-2006 Programme came at a relatively early stage in the lives of the Centres, and was primarily used to support capacity building in the new institutions.

NaREC (the New and Renewable Energy Centre) received some £8 million through Measure 2.4, and attempted to build on existing regional activities with a track-record going back over thirty or so years in both the private sector and regional universities specifically in renewable and more generally in complementary regional engineering specialisms including the shipbuilding and offshore industries. Additionally, NaREC was able build on existing physical infrastructure in the region, securing a site at Blyth docks which housed testing facilities for the offshore industry, and went on to create a series of assets around renewable energy system testing at the same location, including wind turbine blade testing facilities, high and low power laboratories, a photovoltaic laboratory and wave tanks for testing tidal energy applications.

CPI (the Centre for Process Industries), which received just over £2.6 million under Measure 2.4, was also able to make use of existing regional facilities focused around the former ICI complex at Wilton in Middlesbrough, and eventually incorporating the European Process Industries Competitiveness Centre (EPICC) originally based at Teesside University and supported by a number of large process industry companies in the Teesside region, including ICI and British Steel (later Corus). CELS (the Centre of Excellence in Life Sciences) built upon existing activity in the region, including the International Centre for Life (ICfL) (at the time hosting Newcastle University research laboratories, a bioscience incubator, visitor attraction space with science and genetics themed exhibitions, a research centre in the sociology and ethics of genetics technology and a biotechnology cluster development body BioSci North) and a number of research programmes and regional networks initiated by Newcastle University.

Codeworks (the Digital Centre of Excellence) was funded under both Measure 2.4 and Measure 2.5 and was intended to establish the region at the leading edge of particular areas of digital and media technologies, including accessibility, games development, grid computing and web-based services. Ultimately Codeworks evolved as more of a virtual centre linking a number of cluster groups across the region. CENAMPS (the Centre of Excellence for Nanotechnology, Micro and Photonic Systems) was intended to link in to an academic research base, including the University Innovation Centre for Nanotechnology at Newcastle University and photonics expertise at Durham University.

During the summer of 2004, the Strategy for Success programme was the subject of a Regional Assembly 'Scrutiny'.[6] Following this, ONE themselves undertook a review of the programme and subsequently outlined a plan of 'Phase 2' activity, involving significant modifications to the Strategy. The review identified three of the five Centre of Excellence sectoral areas as presenting the greatest opportunity for future economic growth, with activity now to be structured around the three 'pillars' of Healthcare (incorporating CELS), Process (incorporating CPI) and Energy and Environment (incorporating NaREC). Codeworks and CENAMPS now became remodelled as institutions which underpinned and supported the whole strategy. Each 'pillar' was anticipated by ONE to have the potential to contribute around £2 billion to the regional economy, working towards closing what they had identified as the region's £9 billion productivity gap, and in addition to the remaining Centres of Excellence would also encompass ONE's cluster programme and the activities of other 'delivery partners' (including the universities).

There is a broad consensus amongst interviewees that whilst the Centres of Excellence have been less important for the region in terms of their *direct* outputs, the broader actions around structural change – of which they are one element – have been critical as the region attempts to reposition its economic activity. Both NaREC and CPI were able to build activity upon an existing set of physical assets and relationships in the region and so established more of a concrete regional presence earlier on. Whilst the chemicals and pharmaceuticals sector has been suffering in the current economic crisis, with a number of companies hit by either job losses or closures (including, in the last year, DuPont, Croda, Elements, and the Dow Chemical Company), as a business cluster, regional relationships in the sector appear to remain strong. At the same time, renewable energy technologies and related activity are being hailed as a regional success story. The

[6] One of the key roles of the North East Regional Assembly being to scrutinise the efforts of ONE policies in relation to key objectives outlined in the Regional Economic Strategy.

Regional Minister for the North East - Nick Brown M.P. – submitted evidence to the House of Commons North East Regional Committee in July this year stating that "we have emerging in our region a very strong set of industries based on the need to tackle climate change" (House of Commons, 2009). NaREC has been able to establish relationships with major players in all the renewable sectors it operates in and believes that facilities and critical mass it has established have been important in encouraging and facilitating a number of new related regional developments. Clipper Windpower, for example, a US based wind turbine technology developer, has sited its Britannia project in the region as a result of a relationship built with NaREC based on the latter's blade-testing facilities at Blyth. It is hoped that this project will result in new manufacturing jobs in the region, with the creation of a production facility on the north banks of the River Tyne.

CENAMPS has now disappeared, with its activity being subsumed into a broader CPI remit following the amalgamation of the two Centres in 2008. Codeworks has focused on sector development, and has been successful in establishing itself as a cluster organisation, for example through the activities of its GameHorizon network for UK computer gaming companies and also through its Codeworks Connect programme targeted at a range of digital companies.

Largely we believe that the Programme (and concurrent developments in the region at the time) were important in bringing a greater degree of focus to policy actions, with resources being directed towards a fewer number of activities in order to maximise impact. In the case of some areas of activity – for example in the renewable energy sector - it is arguable that positive results have been obtained which will be sustainable beyond the life of the Programme, although the importance of ERDF funding in all this is difficult to isolate. Whilst regional development strategy – as outlined in the RES – had identified future strategic plans, which could be broadly characterised as a direction of travel for the region, the Structural Funds in general, and ERDF in particular, have – in some cases – accelerated the pace of that change. Whilst it is problematic to trace the causality of ERDF measures in recent economic developments in the region, or to identify the counterfactual, there are now some sectors in the region which appear to be in a stronger position than they were pre-Programme, for example, the sub-sea and renewable energy sectors. This is not the case right across the piece – electronics and textiles in the region have continued to decline, and as highlighted earlier in this section, the chemicals sector in the region has suffered in the face of the recent global economic downturn.

The Programme further enabled the region to implement a range of actions that were unlikely to have been funded otherwise. The Structural Funds have also been used to make other regional and national sources of finance more efficient and effective through the matching of One NorthEast Single Programme money, or UK government money which had been won by regional institutions. For example, DTI funding for the Manufacturing Advisory Service (MAS) in the region and Department of Health awards for the regional NHS Innovation Hub were both been matched with ERDF money. In the case of NHS Innovations North, the original Department of Health grant was intended to capitalise on intellectual property developed within the NHS – matching this with ERDF finance under Measure 2.4 allowed the Hub to bring small business into this equation, and has built new links between the NHS and industry.

In terms of the innovation hypothesis outlined in the conceptual model underpinning the research project around the need to fill gaps in innovative drivers on the demand side and improve absorptive capacity in existing firms, (see Section 2.3.1) we can see that the programme has focused its support for innovation largely on strengthening the supply-side, recognising the low levels of R&D in the region. This is to some extent a shift from previous programmes which emphasised more the need to respond to demand from

SMEs, but were often focused on business support measures with low levels of sustainability and relatively low impact on the businesses assisted.

This can be seen most clearly in the support for the Centres of Excellence, focused on strengthening the region’s research base and then commercialising the resultant emerging technologies. Projects funded under this approach include significant research investment – this is clearly a supply-push approach. Previous centre support was focused on delivering information services and training whereas under the 2000-2006 programme much greater emphasis was placed on hard infrastructure for R&D and R&D activities themselves. This includes direct assistance to universities in areas that might contribute to the wider diversification of the region, for example, the funding given to Teesside University under Measure 2.4 to support the development of a Virtual Reality Centre. This has fed into subsequent regeneration and economic development activity in the sub-region, evident for example in the Digital City initiative.

Knowledge House, a collaborative service from the region’s five universities run through Universities for the North East, offering help to companies in accessing Universities skills, expertise and resources, is one of the few examples of a more demand-driven area in that it responds to firm problems. Knowledge House was originally established with support from ERDF in the mid 1990s specifically to ensure that the region’s five universities were assisting local SMEs with short term problems, but with the intention of helping to build longer term collaborative relationships. Knowledge House is widely regarded in the UK and internationally as best practice such that the model is being adopted in several other UK regions. This success has been summarised in a review by Regeneris in 2006.

“There can be little doubt that Knowledge House represents a successful example of knowledge transfer delivery, and quite possibly one of a select few in the UK over recent years. Despite facing the significant challenge of co-ordinating the commercial outreach activities of five extremely diverse universities, Knowledge House appears likely to have made a significant positive contribution to small business productivity in the region, and by consequence a notable contribution to economic prosperity by generating value added and both safeguarding and creating jobs.

Knowledge House can boast a variety of glowing testimonials from the public sector, business and academia, and it is evident from our review that the project is establishing best practice in an activity (knowledge transfer) that has had few good practice models to work from. It also appears to be yielding the valuable indirect benefit of bringing a stronger business ethos into the North East’s universities.

The role of Knowledge House is probably even more substantial than its deal flow suggests; its mere presence in the region is symbolic and even its light touch interventions appear likely to have been valuable, particularly in comparison with some of the more shallow interventions widely accepted to have been recorded under the ‘SMEs assisted’ indicator in ERDF frameworks.”

Regeneris (2006) Knowledge House: A Review, Regeneris,

Table 3.5 - Summary of Knowledge House activity, 1996-2006

	Last four years	**History of Knowledge House**
	2003-2006 inclusive	**1996-2006**
Number of completed projects	545	1,097
Total value of completed projects (£)	4,377,528	7,741,676
Total number of enquiries	2,389	4,194

Conversion rate (number of completed projects per enquiry)	22.8%	26.2%
Average project value (£)	8,032	7,057

Source: Universities for the North East
Note: Split provided for 2003-2006 as annualised data considered more reliable post-2003

There is evidence from intermediary organisations in the region that throughout the whole run of ERDF Programmes which the region has been the beneficiary of – so both before and after the 2000-2006 Programme – absorptive capacity in firms has increased. Firms have become increasingly receptive to the sorts of softer assists which are on offer through ERDF funded projects, whereas in earlier rounds of funding, as one respondent put it, "[companies] would say, can't you just give me the money?'". This was described by one interviewee as a 'culture change' in the companies he assisted, and had come about through relationships established with particular SMEs over a number of ERDF cycles, as well as the move (evident in the 2000-2006 Programme) to more intensive types of assist, rather than lower-level more generalist types of support which had been typical of previous Programmes.

Box 1 - New and Renewable Energy Centre (NaREC)

NaREC was set up as one of One NorthEast's five Centres of Excellence, part of its flagship regional science policy the Strategy for Success. The Centres of Excellence were intended to operate in the space between industry and the regional scientific and research base (housed mainly, though not entirely, in the five regional universities) which was felt to be poorly connected. The Centres would act as a site of expertise but were also intended to be well connected to industry and the research base within the region but also beyond. They would act as a technology transfer mechanism and help sustain and support the building of a critical mass of related activity in the region. A consultation exercise, led by the consultants Arthur D. Little, attempted to identify areas of regional strength which had real commercial potential. The Strategy was therefore both an attempt to build on existing activities in tandem with the creation of new regional scientific capacity.

NaREC (the New and Renewable Energy Centre) built on some thirty years of activity in the region in the renewable energies sector, encompassing both private sector activity and a number of research strengths across the region's universities. Additionally, NaREC were able to acquire a set of marine test facilities at their site in Blyth in Northumberland (wave and tidal tanks), but also added to these with the creation of a newly built wind turbine blade test facility, a low power network and a photovoltaic's research centre. The latter represented the transfer of a number of assets from a private sector research facility in the UK (BP Solar) which was to be closed down and relocated to Madrid. This was felt to be an issue of national policy importance and the then DTI became involved in discussions along with representatives from the University of Northumbria at Newcastle (UNN, with a significant research strength in photovoltaics) and NaREC about the future of the remaining assets and staff. NaREC was felt to be a suitably neutral vehicle (in a way which the universities were not) for the remaining kit and staff to transfer to, providing both the region and beyond with an open access research facility.

NaREC received some £8 million ERDF investment under Measure 2.4 in the 2000-2006 Programme, and this was used (supplemented by Single Programme investment from ONE) for two primary lines of activity. The first of these was to establish the Centre itself as both a physical site and a centre of regional expertise in renewable energy technologies. Secondly was the creation and remodelling of large-scale open access technology facilities detailed above. In interview it was suggested that it was these assets in particular which had enabled NaREC and the region to take on a leading position at a point when renewable, and in particular offshore renewable, are becoming an economic reality. So whilst outputs from that phase of funding were described as 'fairly limited', the funding was significant in terms of asset and capacity building, which has subsequently been of importance in the region attracting additional economic activity.

Box 2 - The North East Proteome Analysis Facility

NEPAF (the North East Proteome Analysis Facility) was funded through Measure 2.4 of the Objective 2 programme, receiving in excess of £1.5 million. NEPAF provides access to equipment, techniques and methods for the use of proteomics (the study of the structure and functions of proteins) in drug discovery, development and manufacture, and in the diagnosis and monitoring of disease, and so support commercial, academic and clinical R&D. Whilst proteomics expertise existed in the region prior to the creation of NEPAF, this was held largely within the universities and so was not easily accessible to SMEs. The ERDF funding was used to provide a minimum of ten days assistance to regional SMEs. Participating SMEs were not required to make any direct financial contribution, but incurred indirect costs through senior scientific staff time.

IDS (Immunodiagnostic Systems Ltd) is a stock market listed company who develop and supply immunoassay kits to global markets. They received 11.3 days assistance from NEPAF which contributed to the building of new R&D knowledge in the company. This will enable them to develop a novel immunodiagnostic assay ultimately extending the capability of their current product line.

ReInnervate Ltd is a biotechnology spin-out from Durham University operating in an area related to stem cell biology. They received 11 days assistance from NEPAF which gave them access to particular scientific expertise which they otherwise lacked. As a consequence of this, NEPAF and ReInnervate jointly authored a poster which was presented at a stem cell conference at the Wellcome Trust Sanger Institute based on the data generated by the NEPAF contribution. This has raised the profile of ReInnervate and also the North East region as a site for stem cell related activity.

Box 3 - NHS Innovations North

NHS Innovations North was initially funded under a UK Government Department of Health initiative to act as a hub to help the National Health Service (NHS) manage its internal intellectual property (IP) more effectively. The Hub acts in the same way as a technology transfer team in a university, but working with all the NHS Trusts in the region. Initially work focused on exploiting technologies that had been developed within the NHS with licensing deals and so on. The initiative was awarded ERDF funding of just under £244,000 in the 2000-2006 Programme under Measure 2.4, and this allowed the project to work with businesses and also to get businesses working with the NHS - traditionally a difficult market for small firms especially to break in to.

Healthcare markets are global, high-value and knowledge based, so are seen as ideally the types of markets that firms should be aiming to enter as lower value manufacturing has moved out of the region and relocated overseas. Within the overall health services market, there are a number of niche and specialist areas, so many potential opportunities for SMEs to become involved exist, although because of regulatory requirements entry barriers are high and finding an entry point in to healthcare markets can be problematic.

NHS Innovations North has a boundary spanning role between publicly funded health services in the region and companies who may wish to commercialise NHS innovations or who may themselves have developing products which they wish to sell into healthcare markets. Whilst there is no direct financial cost to the company in accessing the service offered by NHS Innovations North, there is clearly a significant cost in terms of accessing healthcare markets, and the Hub helps to support this through the services it supplies.

Box 4 - Transtek

RTC North’s Transtek project was funded through Measure 2.4 (receiving just under £450,000) with the ERDF money used to match funding for the Manufacturing Advisory Service (MAS), itself financed through national government money. A network of Manufacturing Advisory services were set up across the country, initially as a Department of Trade and Industry (DTI) initiative intended to make UK manufacturing more competitive globally.

Transtek supported SMEs in increasing their competitiveness in global markets through traditional assistance for exporting, but also in terms of overcoming entry barriers to overseas markets, and developing strategic links and alliances overseas through various mechanisms, including joint-ventures, the creation of overseas subsidiaries and licensing deals, in order to get access to overseas markets.

e-Therapeutics plc, for example, a company operating in the healthcare sector with a very high-tech range of products and techniques, are in the process of opening a new facility in China which will allow them to collaborate closely with Chinese firms in the same high-tech sector and develop new products for the Chinese market. They received support from Transtek in both the setting up of the new company and also in ensuring the protection of any resultant IP, enabling them to develop high-value new products through international collaboration whilst retaining control of their IP assets.

Orla Protein Technologies Ltd signed an agreement with a Japanese manufacturer which would allow them to take forward to the next stage of development a new technological device utilising both their own expertise and that of the manufacturer, operating in a different sector. They received advice from Transtek on commercialisation routes and guidance throughout contract negotiations.

3.2 Assessment of the effects on institutional capacity and policy learning

The overwhelming view from interviewees in the North East was that whilst Structural Funds Programmes *in total* since 1989 have been important in affecting institutional capacity in the region, it makes less sense to single out individual programmes in those terms. In the round, the Structural Funds Programmes have been important in establishing concepts such as partnership working in the region – although clearly there have been steers from the national government on this as well – but by the time of the 2000-2006 Programme such concepts were so well established as to be considered the norm. One interviewee did, however, argue that the 2000-2006 Programme was instrumental in bringing together a more collective approach based on a history of (at that point) ten years of ERDF experience and consequently maturing relationships between partners.

One respondent suggested that in terms of providing a strategic lead and framework for regional policy thinking, the 1996-1999 Structural Funds Programme had been key in the region, with the resultant SPD "effectively a RES" and emphasised the rigour of the Government Office analysis that preceded the 2000-2006 Programme. The majority of interviewees suggested that the first Regional Economic Strategy (1999) was a key document, and that the SPD had itself benefited from the analysis undertaken in preparation of the RES. Both the creation of the Regional Development Agencies together with the requirement placed on them by central government to produce a regional economic strategy was identified as a critical point for establishing strategic thinking at a regional level in the English context. Subsequently, in the North East region, the Structural Funds have been used to finance elements of activity which have been identified as strategically important through the regional economic strategy. Whilst the RES is a One NorthEast produced document, it is expected to be the outcome of a collaborative process, with input and - consequently, it is hoped – buy-in from all relevant regional partners and stakeholders.

Something which has been identified as a key aspect of the Programme by almost all respondents was the emphasis is placed on (and this has grown stronger subsequently) a more targeted approach to development projects in the region and a shift towards more in-depth assistance towards both individual firms and clusters in its SME support strands. The 2006 Regeneris produced *Evaluation of Objective Two Business Support Activities in the North East* was key in bolstering this attitude towards company support, identifying as it did the most successful support funded through the Programme’s financial measures (in particular the loan funds), and the more intensive assistance offered to firms through, for example, Measures 2.4 and 2.5. Also important was the Programme’s Mid-Term Evaluation which proposed a change in direction away from generalist funding towards more targeted support on fewer projects with a potentially higher impact. Some respondents suggest that prior to the 2003 MTE, the de-commitment rule mitigated against a more strategic approach to project selection, with a need to ensure primarily that money was spent before the N+2 point was reached.

The 2000-2006 Programme has varyingly been described by respondents as a “milestone” for the region which was “hugely beneficial” and as “a kind of ‘intervening’ one between the infrastructure investment Programme that came before and the one now which is more firmly focused on the knowledge agenda … [a] halfway house”. In both understandings the Programme is viewed as in some way pivotal. Our respondent portrayed the Programme as a milestone firstly in terms of the consolidation of the regional partnership around the funding which had evolved and matured over a number of years. This interviewee further suggested that whilst ERDF funding is now less important for the region (in terms of the amount of funding which it now represents as a proportion of regional GDP), and also that this diminishing importance is compounded by some reluctance from former applicants to bid for ERDF projects due to an increased administrative burden attached to the money, the partnerships built up through the regional experience of the Structural Funds, continue to flourish - “people are walking away from [ERDF], but they’re not walking away from each other”. Secondly, she believed the Programme to be seminal in terms of what it delivered for the region in terms of responding to structural change and using existing expertise in the region to diversify and change the direction of the North East economy.

A similar point was made by our respondent who described the Programme less enthusiastically as a “halfway house”. For him, the Programme was a first attempt to move away from the approaches evident in past regional Structural Funds programmes focused around infrastructure and a less targeted position with regard to business support, and towards a setting of new priorities around the importance of knowledge as a distinct regional asset. Whilst he recognised that the 2000-2006 Programme represented a move in that direction, he felt early investments to be “more style than substance”, which have subsequently become much bigger and more substantive in the current Programme. This interviewee also suggested evidence of some tension in the 2000-2006 Programme between different parts of the regional infrastructure, brought about by this move away from past approaches towards a more knowledge based focus.

Whilst the administrative load associated with ERDF projects was highlighted by a number of respondents as a negative aspect of the Programme, this was also identified as a site of regional learning. The rigour demanded by the Programme, particularly in the bidding phase for projects in putting together an application has filtered through to be replicated elsewhere, for example in ONE’s Single Programme funding – “in terms of rigorous appraisal and challenge, ERDF was ahead of the game … going back 6 or 7 years, Europe was much more rigorous and that’s filtered through”. The appraisal process which project applications must go through was suggested to be of benefit in ensuring that projects were properly developed, in particular in terms of costs and value for money, but also with regard to the Programme's cost-cutting priorities relating to equal opportunities, ICTs and environmental sustainability. These cross-cutting themes were described by one interviewee - who felt that the administrative burden of ERDF was largely over-blown – as "the bits that people call bureaucracy", but were nonetheless he felt, of critical importance, and it was absolutely right that project applicants were forced to give them due consideration.

Throughout the period in which the North East has been in receipt of Structural Funds money, the region has built up a level of expertise around European funding and project management. This is sometimes described as part of the 'regional development industry', but there is a point to be made here about regional capacity. People working in and around ERDF funding and projects have gained knowledge and skills through their involvement in the programmes, and this may relate broadly to project management or more specifically to the skills required for particular activities. One ERDF beneficiary organisation, for example, purposefully uses a mix of more and less experienced staff on funded projects, in order to build up competencies and expertise in less experienced staff. One respondent described this as just a "learning process for a small number of people involved in the game". The same respondent, however, highlighted as a positive the institutional capacity required simply to enter into the debate about the Programme content and the competencies necessary to negotiate a way through that, suggesting that the level of discussion and planning that went in to the Programme was far in advance of the first RES which appeared almost in tandem.

Taken as a whole, ERDF money in the region has clearly had mixed results in terms of outputs, with some areas of activity identified as relatively successful by respondents, and others highlighted which in retrospect have been less so. A benefit of the programmes though has been the capacity they have brought to the region to finance activity which might otherwise not have taken place, or to bring an additional level of funding to existing regional plans. Outcomes of programmes are thus felt broadly to be proportionate to the levels of funding which went in to them. At the time of the 2000-2006 Programme however, one interviewee noted, the wider economy was in a period of growth, and so it was in any case difficult to identify areas of market failure in relation to funded projects – "how could you determine market failure when the market was steaming ahead?".

Whilst not the focus of this case study, the 'Access to Finance' measures funded through both Priorities 1 and 2 of the 2000-2006 Programme (Measures 1.2 and 2.2) were identified by a number of interviewees as examples of innovative and sustainable action which were beneficial in helping to move the region away from a long-standing culture of grant dependency and towards an approach based on loan, equity and investment finance. As such, these access to finance measures were expected to have a life beyond the length of the programming period.

The Programme was criticised by one respondent for its aspatial treatment of the North East, with the region suggested to be understood as a single homogenous entity throughout the qualifying Objective 2 areas. Whilst the Socio-Economic Analysis of the SPD did examine the region at primarily a sub-regional level (NUTS2) with some additional analysis at local authority and ward level, location was not a factor in project selection criteria. A further regional dimension was highlighted in the funding requirement that activity be to the benefit of the North East – some beneficiary organisations found this to be restrictive, particularly in their attempts to establish themselves in national or international arenas – argued to be of particular importance in dealing with the challenges associated with globalisation.

4. Conclusions: key findings and main message

Key Findings

1. *Clearly the North East's economy has undergone a significant degree of restructuring in the recent past and some regional industrial sectors have suffered a great deal in the face of global competition.*

   Responding to economic changes which can be characterised as part of a process of 'globalisation' is an on-going issue which regional actors continue to face. The ERDF measures examined in this report, - whilst designed primarily with the objective of employment generation in mind - have clearly also attempted to offset some of the worst effects that the region has suffered through a push towards further regional economic restructuring and the diversification of the North East economy into expanding sectors. We suggest that the 2000-2006 Programme supported this push, though success was to be found less in direct outputs of activities funded through the measures and more in the overall situation which the region now finds itself in, and to which ERDF activity has been a contributing factor.

2. *The RDA – One North East – is a key actor, charged as it is by national government with the responsibility for drafting a Regional Economic Strategy (RES) which sets out regional priorities and actions for economic development, albeit that this should have the support of a range of regional actors and stakeholders.*

   In the North East context, Structural Funds monies are primarily seen as a funding stream for activity proposed in the RES – ERDF funding then is used largely to finance existing regional activity and priorities, it is not the driver for them.

3. *Whilst it is too early to assess the long-term effectiveness of regional policy instruments used to address issues faced by the North East around structural change, the current economic downturn serves to illustrate the difficulties of establishing a sustainable response to global economic flows.*

   Whilst some parts of the regional economy do seem to be better placed than they were a decade ago, that is not uniformly the case, with some areas - for example the chemicals sector - continuing to experience shocks from wider sectoral change.

4. *As a whole, the Structural Funds programmes which have been run in the region since 1989 have been important for the wider effects they have brought, which go beyond the financial.*

   For example, the Funds provided a push towards partnership working and brought a degree of rigour to project management (both overall as part of a wider funding stream, and within individual projects) that was previously largely absent. This, however, should be understood as part of a long-term process rather than as a standalone outcome of the 2000-2006 Programme.

Main Message

The case study has examined two measures funded under Priority 2 of the 2000-2006 Objective 2 programme considered to be the most interesting in assessing the contribution of the programme to structural change. These were tested in relation to two of the five hypotheses outlined in the conceptual framework underpinning the research project, broadly concerning 'regional specialisation' and 'innovation potential'[7].

Regional specialisation: the hypothesis outlined in the conceptual model states that regional specialisation can be a competitive advantage for a region, but equally, where a region specialises in industries which suffer from severe external competition, economic development can suffer and the region's vulnerability to structural change and globalisation may be pronounced. As described in Section 1, the North East's economy has been in a state of relative decline for decades, with a reliance on particular industrial sectors, some of which have suffered severely from external competition. Frequently, regional manufacturing has operated at the lower end of the value-chain, leaving it particularly vulnerable to low-cost competition from overseas. The case study therefore sought to examine the success of selected measures supported through the 2000-2006 ERDF Programme in attempting to diversify the economy.

The restructuring of the North East economy towards areas of activity with the potential for future growth – and thus regional competitive advantage – has occurred to an extent, and indeed, is an on-going process. ERDF funded projects under both Measures 2.4 and 2.5 have played a role in supporting that move, with a particular focus on supporting an emerging regional strategy based around health, process industries and new and renewable energy as primary clusters for development. The region has set targets for the growth of GVA in each of these and the ERDF programme underpinned the strategy in the 2000-2006 period.
The projects funded in this period had mixed levels of success in terms of rebuilding a more positive regional specialisation. The region is in a different situation now to ten years ago, prior to the start of the Programme, but clearly it is difficult to disentangle causality in this. Whilst strategic regional priorities were set outside the Objective 2 programme (in the Regional Economic Strategy), ERDF funding accelerated the pace of change and enabled some opportunities to be taken that might have been missed otherwise. In the health sector there has been some growth of new biotechnology firms, although with limited employment increases so far. The process industries have been stabilised to some degree, although there have been subsequent job losses in the global recession. Energy though is more positive and there are a number of projects emerging with the potential to create hundreds if not thousands of new jobs. In the latter case the support provided through the Programme to create the infrastructure for the renewable energy sector has undoubtedly been important. Outside of this economic strategy the Programme has had a positive impact on the creative industries and tourism.

Overall the ERDF Programme has contributed to a shift towards new high growth regional specialisations, but has focused more on building support institutions and research infrastructure than direct job creation so far. The nature of the task is very much a long term process, especially in the more difficult climate for attracting FDI and hence short term results would be much more difficult to achieve.

---

[7] See the *First Intermediate Report* for an overview of the conceptual framework underpinning the study: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2006/wp4_1st_int_report.pdf.

Innovation potential: the hypothesis outlined in the conceptual model states that innovation systems in Objective 2 areas may be lacking in institutional thickness, be missing innovation drivers on the demand side, and may be hindered by a lack of absorptive capacity in regional firms. Additionally, for some regions, particularly old-industrial areas, path-dependence from existing technological trajectories may constrain both product and process innovation. In this context, the case study sought to examine the contribution of the selected measures to the strengthening of the regional innovation system in two ways.

- have the internal capabilities and capacities of individual firms improved following support financed through ERDF interventions?
- has the creation of a set of intermediary institutions between the science and research base and regional industry increased the North East's capacity to respond to external economic events and pressures?

Data has been difficult to access at firm level given the length of time which has elapsed between the funding period and the present day, so in making a judgement about internal company capabilities and capacities we are relying on the (informed) opinion of those intermediary organisations funded under the measures and involved in supporting firms. Broadly we consider that some of the activities funded under our selected measures have made a positive difference to individual firms, and aggregated up, may suggest a beneficial outcome at a regional level in terms of improved competitive performance. Once again this must be understood as part of a process that runs through the entire history of Objective 2 funding in the region, rather than as the outcome of a single Programme. There has been policy learning between different programmes, but this has not always happened in a smoothly cumulative fashion. The 2000-2006 Programme was important in producing an evaluation which stressed the importance of more targeted and in-depth support for companies, and this has been key in shaping subsequent funding allocations (Regeneris, 2006).

In terms of making a difference to the Regional Innovation System (RIS) we can look at the example of the Centres of Excellence as a newly created set of intermediary institutions. As standalone entities, these have not produced significant outputs, but where they have made a difference, it has been in softer additionalities to the RIS, for example, in facilitating networking, acting as regional attractors through the provision of key facilities, adding to a critical mass of activities in the region and perhaps playing a role in delivering that. ERDF funding has also been used to join up activities in regional universities with firms. This has been successful for individual companies, but again raises the question of the impact of that on the wider economy.

Overall latest official statistics show a modest increase in R&D expenditure in business in the North East, up from £289m in 2005 to £310m in 2007, but this growth remains slower than the national average and as a share of UK R&D the region has fallen from 2.1% to 1.9%. So the impact seems to be highly limited in this respect (http://www.statistics.gov.uk/pdfdir/berd0109.pdf). This however is not the same as innovation and the impact on innovation can only be fully evaluated from the new Community Innovation Survey. It is our judgement that there has been a beneficial impact on innovation, but that it is more concentrated in process improvement than in significant new products.

5. Annexes

5.1 Additional statistical tables

Table 5.1 - Taxonomy of Objective 2 eligible areas (NUTS3)

	Population, 2004 Thousands	**% of regional population, within Objective 2 areas**	**Population in Obj 2 areas** Thousands	**Urban/rural category***
UKC11 Hartlepool and Stockton-on-Tees	277.2	100.0	277.2	1
UKC12 South Teesside	277.8	100.0	277.8	1
UKC13 Darlington	98.5	60.1	59.2	1
UKC14 Durham CC	497.4	68.5	340.9	1
UKC21 Northumberland	309.8	81.8	253.4	21
UKC22 Tyneside	802.4	92.1	739.0	1
UKC23 Sunderland	282.0	96.4	271.9	1

**1 = predominantly urban; 21 = intermediate rural, close to a city; 22 = intermediate rural, remote; 31 = predominantly rural, close to a city; 32 = predominantly rural, remote regions*
Source: Applica – Ismeri – wiiw. Ex Post Evaluation of Cohesion Policy Programmes 2000-2006 financed by the European Regional Development Fund in Objective 1 and 2 Regions. WP1, Task5 Final report.
Note: Please note that table does not include Ob.2 phasing-out regions.

Table 5.2 - Socio-economic change and human capital (NUTS1)

Indicator	**Regional**			**National**			**EU15**		
	2000	2006	Δ(%)2000-2006	2000	2006	Δ(%)2000-2006	2000	2006	Δ(%)2000-2006
% share of people aged 25-64 participating in education and training	17.0	18.2*	7.1	17.8**	20.7*	16.3	8.0	11.4*	42.5
% share of population aged 25-64 with tertiary education	17.3	21.8*	26.0	22.6**	26.3*	16.4	20.3	25.1*	23.6
% share of students at tertiary level	4.2	3.4	-19.0	-	-	-	-	-	-
Crude rate of net migration (%)	0.4***	0.9****	125	2.4	4.1	70.8	3.2	4.2	31.3
Long-term unemployment rate (%)	31.3	20.7	-33.9	26.7	22.4	-16.1	n.a.	42.32	-
% share of 25-34 years employed on total employment	24.0	20.5	-14.3	24.8	21.3	-14.4	n.a.	23.6	-

** Data for 2005** Data for 1999*** Data for 2001***** Data for 2003*
Source: Core team processing of Eurostat data

Table 5.3 - Regional specialisation (NUTS1)

Employment by sector (% on total employment)									
Indicator	**Regional**			**National**			**EU15**		
	2000	2005	Δ(%)2000-2005	2000	2005	Δ(%)2000-2005	2000	2005	Δ(%)2000-2005
Agriculture	0.8	0.7	-12.5	1.5	1.4	-6.7	5.6	4.6	-17.9
Industry	28.0	24.0	-14.3	25.0	22.1	-11.6	27.9	25.1	-10.0
Services	71.2	75.3	5.8	73.5	76.5	4.1	66.5	70.3	5.7

Gross Value Added by broad economic sectors (% on total GVA)										
Indicator	**Regional**				**National**			**EU15**		
	1995	2000	2005	Δ(%)2000-2005	2000	2005	Δ(%)2000-2005	2000	2005	Δ(%)2000-2005
GVA in Agriculture, hunting, forestry and fishing	0.9	n.a	n.a	n.a	n.a	n.a	n.a	2.5	1.8	-28.0
GVA in Construction	5.6	n.a	n.a	n.a	n.a	n.a	n.a	5.4	5.7	5.6
GVA in Financial intermediation; real estate, renting and business activities	17.3	n.a	n.a	n.a	n.a	n.a	n.a	22.3	23.4	4.9
GVA in Manufacturing	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.4	11.5	0.9
GVA in Mining and quarrying; electricity, gas and water supply	0.0	n.a	n.a	n.a	n.a	n.a	n.a	19.5	17.5	-10.3
GVA in Public administration and defence, compulsory social security; education; health and social work; other community, social and personal service activities; private households with employed persons	25.1	n.a	n.a	n.a	n.a	n.a	n.a	19.2	20.3	5.7
GVA in wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants; transport, storage and communication	n.a	n.a	n.a	n.a	n.a	n.a	n.a	19.7	19.8	0.5

Source: Core team processing of Eurostat data

Table 5.4 - Production system (NUTS1)

Manufacturing sector focus (NACE code D)											
Indicator	Unit	Regional				National			EU15		
		1995	2000	2005	Δ(%) 2000-2005	2000	2005	Δ(%) 2000-2005	2000	2005	Δ(%) 2000-2005
N. of local manufacturing units	Thousand	n.a	5,475	5,169	-5.6	188,355	170,167	-9.7	81,930	94,635	15.5
Gross investment in tangible goods	Eur mln, current prices	n.a	9,131	10,867	19.0	31,379	23,050	-26.5	225,684.1	190,152.3	-15.7
Investment per person employed	Eur thousand, current prices	n.a	5.7	10.4	82.5	6.0	7.3	21.7	8.9	8.5	-4.5
Regional specialisation index* *	%	n.a	1.1	1.1	0.0	-	-	-	-	-	-
Infrastructures											
Indicator	Unit	Regional				National			EU15		
		1995	2000	2006	Δ(%) 2000-2006	2000	2006	Δ(%) 2000-2006	2000	2006	Δ(%) 2000-2006
Gross fixed capital formation	Eur mln, current prices	1,660	9,131	11,214	22.8	260,744	427,077	63.8	1,708,063	2,079,850	21.8
Rail network at regional level	Km	n.a	n.a	n.a	-	17,008	16,222	-4.6	160,817	89,301	-44.5
Road network at regional level (excluding motorway)	Km	15,847	15,990	16,197	1.3	411,240	419,704	2.1	2,656,698	2,672,409	0.6
Motorway network at regional level	Km	56	58	58	0.0	3,577	3,670	2.6	50,931	57,561	13.0

** Data for 1997; **Ratio between manufacturing employment rate in the region and manufacturing employment rate in the country; *** Data for 2005*
Source: Core team processing of Eurostat data

Table 5.5 - Innovation potential (NUTS1)

Indicator	Units	Regional				National			EU15		
		1995	2000	2006	Δ(%) 2000-2006	2000	2006	Δ(%) 2000-2006	2000	2006	Δ(%) 2000-2006
Business enterprise expenditure on R&D – BERD	% of GDP	0.85	0.5	0.4	-0.2	1.2	1.1	-8.3	1.1	1.3	18.2
Gross domestic expenditure on R&D - GERD	% of GDP	1.22	0.9	n.a	-	1.9	1.8	-5.3	1.8	2.0	11.1
Employment in high-tech sectors on total	% on total employment	n.a	4.7	4.5	-4.3	5.8	5.2	-10.3	4.7	4.6	-2.1
Number of total publications	Units per million inhabitants	n.a	n.a	n.a	-	n.a	n.a	-	n.a.	n.a.	-
R&D personnel in all sectors	% on total employment	n.a	n.a	n.a	-	n.a	n.a	-	n.a.	n.a.	-

** Data for 2005; ** Data for 1999*
Source: Core team processing of Eurostat data

Table 5.6 - Relocations and restructuring

Company name	Province/ Commune	N. employed	Sector	Type of relocation/ restructuring	Employment effects
Power Generation	Tees Valley and Durham	n.a	Manufacture of machinery and equipment	Merger	-400
British American Tobacco	Tees Valley and Durham	85,000	Manufacture of tobacco products	Closure	-500
Bodycote	Northumberland and Tyne and Wear	n.a	Manufacture of basic metals	Internal reorganisation	-100
Lloyds TSB	Northumberland and Tyne and Wear	79,000	Financial intermediation, except insurance and pension funding	Delocalisation	-1,000
National Rail Enquiries	East Wales, Derbyshire and Nottinghamshire, Devon, Northumberland and Tyne and Wear	1,200	Other business activities	Delocalisation	-600
Samsung	Tees Valley and Durham	n.a	Manufacture of radio, television and communication equipment and apparatus	Delocalisation	-425
AXA	Lancashire, Tees Valley and Durham	n.a	Insurance and pension funding, except compulsory social security	Outsourcing + internal reorganisation	-700
Young's Bluecrest Seafood	Northumberland and Tyne and Wear	n.a	Manufacture of food products and beverages	Closure	-260
Standard Life	Northern Ireland, Cheshire, Essex, Eastern Scotland, Leicestershire, Rutland and Northamptonshire, Inner London, Kent, Northumberland and Tyne and Wear, South -Yorkshire, Hampshire and Isle of Wight	-	Insurance and pension funding, except compulsory social security	Closure + internal reorganisation	-360
Scottish Courage	Northumberland and Tyne and Wear	-	Manufacture of food products and beverages	Relocation	-110
Abbey National	Hampshire and Isle of Wight, Tees Valley and Durham	n.a	Financial intermediation, except insurance and pension funding	Delocalisation	-600
Merchant Retail	Northumberland and Tyne and Wear	613	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	Closure	-170
Nissan UK	Northumberland and Tyne and Wear	4,300	Manufacture of motor vehicles, trailers and semi-trailers	Business expansion	200
National Savings Agency	Lancashire, Tees Valley and Durham, South Western Scotland	-	Financial intermediation, except insurance and pension funding	Delocalisation	-250
Arla	Outer London, Northumberland, Tyne and Wear	-	Manufacture of food products and beverages	Closure	-400

Company name	Province/ Commune	N. employed	Sector	Type of relocation/ restructuring	Employment effects
Pressworks Metals	Northumberland and Tyne and Wear	292	Manufacture of fabricated metal products, except machinery and equipment	Closure	-292
Wynyard Limited	Northumberland and Tyne and Wear	-	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	Business expansion	800
Newcastle City Council	Northumberland and Tyne and Wear	-	Public administration and defence; compulsory social security	Internal reorganisation	-130
UK Coal	Tees Valley and Durham	-	Mining of coal and lignite; extraction of peat	Closure	-340
Pfizer (US)	Kent, Northumberland and Tyne and Wear	6,000	Manufacture of chemicals and chemical products	Merger + internal reorganisation	-971
Asda	Northumberland and Tyne and Wear	-	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	Business expansion	700
LG Philips	Tees Valley and Durham	760	Manufacture of radio, television and communication equipment and apparatus	Closure	-760
OneNorthEast	Northumberland and Tyne and Wear	-	Real estate activities	Business expansion	2,000
Corus	Tees Valley and Durham	-	Manufacture of basic metals	Internal reorganisation	-100
Hugh MacKay Carpets	Tees Valley and Durham	135	Manufacture of textiles	Closure	-135
ASDA	Northumberland and Tyne and Wear	737	Supporting and auxiliary transport activities; activities of travel agencies	Internal reorganisation	-315
NewLogic	Northumberland and Tyne and Wear	165	Other business activities	Business expansion	100
Northern Rock	Northumberland and Tyne and Wear		Activities auxiliary to financial intermediation	Business expansion	2,500
Norwich Union	Tees Valley and Durham, Lancashire	-	Insurance and pension funding, except compulsory social security	Internal reorganisation	-330
Barclays	Northumberland and Tyne and Wear	1,250	Financial intermediation, except insurance and pension funding	Business expansion	256
Tacle (UK) Ltd.	Northumberland and Tyne and Wear	-	Manufacture of furniture; manufacturing n.e.c.	Business expansion	250
Durham Pine	Northumberland and Tyne and Wear	200	Manufacture of furniture; manufacturing n.e.c.	Closure	-200
Elementis Chromium	Tees Valley and Durham	320	Manufacture of chemicals and chemical products	Internal reorganisation	-120

Company name	Province/ Commune	N. employed	Sector	Type of relocation/ restructuring	Employment effects
Newcastle City Council	Northumberland and Tyne and Wear	-	Public administration and defence; compulsory social security	Internal reorganisation	-200
Rivergreen Developments	Tees Valley and Durham	-	Real estate activities	Business expansion	1,500
Circatex	Northumberland and Tyne and Wear	200	Manufacture of electrical machinery and apparatus n.e.c.	Closure	-200
Vald Birn	Northumberland and Tyne and Wear	157	Manufacture of basic metals	Closure	-157
Stag	Northumberland and Tyne and Wear	-	Manufacture of furniture; manufacturing	Closure	-556
South Tyneside Council	Northumberland and Tyne and Wear	-	Public administration and defence; compulsory social security	Internal reorganisation	-219
Newcastle City Council	Northumberland and Tyne and Wear	-	Public administration and defence; compulsory social security	Internal reorganisation	-200
Stag Furniture	Northumberland and Tyne and Wear	550	Manufacture of furniture; manufacturing	Closure	-550
County Durham and Darlington Acute Hospitals NHS Trust	Tees Valley and Durham	6,000	Health and social work	Internal reorganisation	-700
Goodyear Dunlop	Northumberland and Tyne and Wear	2,500	Manufacture of rubber and plastic products	Closure	-624
Vald Birn	Northumberland and Tyne and Wear	157	Manufacture of basic metals	Closure	-157
Linlathen Developments	Tees Valley and Durham	-	Agriculture, hunting and related service activities	Business expansion	300
Tanfield Group	Northumberland and Tyne and Wear	-	Manufacture of motor vehicles, trailers and semi	Business expansion	400
Tacle Seating UK Ltd	Northumberland and Tyne and Wear	-	Manufacture of motor vehicles, trailers and semi	Business expansion	250
2Touch	Northumberland and Tyne and Wear	1,000	Other business activities	Business expansion	115
City Hospitals Sunderland Foundation Trust	Northumberland and Tyne and Wear	5,000	Health and social work	Internal reorganisation	-500
Procter and Gamble	Northumberland and Tyne and Wear	700	Other business activities	Business expansion	130
Zurich Financial Services	Northumberland and Tyne and Wear	500	Insurance and pension funding, except compulsory social security	Closure	-500
Jet2.com	Northumberland and Tyne and Wear	-	Air transport	Business expansion	200

Company name	Province/ Commune	N. employed	Sector	Type of relocation/ restructuring	Employment effects
Durham Police	Tees Valley and Durham	-	Research and development	Internal reorganisation	-300
Durham Tees Valley Airport	Tees Valley and Durham	-	Supporting and auxiliary transport activities; activities of travel agencies	Business expansion	2,000
ARC International	North East, Northumberland and Tyne and Wear	240	Manufacture of other non-metallic mineral products	Closure	-240
Bonne Bouche Limited	Tees Valley and Durham	200	Manufacture of food products and beverages	Closure	-200
Nissan	North East UK, Northumberland and Tyne and Wear	4,300	Manufacture of motor vehicles, trailers and semi-trailers	Business expansion	180
Virgin Media	North East ; Tees Valley and Durham	450	Other business activities	Relocation + internal reorganisation	-149
Garlands Call Centres	North East ; Tees Valley and Durham	3,000	Other business activities	Business expansion	300
Durham and Darlington Acute Hospitals NHS Trust	North East ; Tees Valley and Durham	-	Health and social work	Internal reorganisation	-5,000
Filtronic	North East ; Tees Valley and Durham	319	Manufacture of radio, television and communication equipment and apparatus	Internal reorganisation	-115
Cumbrian Seafoods	North East ; Tees Valley and Durham	-	Manufacture of food products and beverages	Business expansion	300
Garlands	North East ; Northumberland and Tyne and Wear	-	Other business activities	Business expansion	1,000
Student Loans Company	North East ; Tees Valley and Durham	130	Public administration and defence; compulsory social security	Business expansion	390
AMEC	North East ; Tees Valley and Durham	150	Other business activities	Business expansion	150
Atmel	North East ; Northumberland and Tyne and Wear	600	Manufacture of radio, television and communication equipment and apparatus	Closure	-600
Electrolux	North East ; Tees Valley and Durham	500	Manufacture of machinery and equipment n.e.c.	Delocalisation	-500
Pennine Home Improvements	North East ; Tees Valley and Durham	143	Manufacture of rubber and plastic products	Closure	-126
Waitrose	North East ; Tees Valley and Durham	100	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	Closure	-100

Company name	Province/ Commune	N. employed	Sector	Type of relocation/ restructuring	Employment effects
Nissan	North East ; Northumberland and Tyne and Wear	3,400	Manufacture of motor vehicles, trailers and semi-trailers	Business expansion	800
Eaga	North East ; Northumberland and Tyne and Wear	-	Other business activities	Business expansion	350

Source: European Foundation for the Improvement of Living and Working Conditions (www.eurofound.europa.eu)

Table 5.7 - Geography of structural change (NUTS3)

Gross domestic product per capita (€ PPP)				
Region	1995	2000	2005	Δ (%)
ukc11 Hartlepool and Stockton	16,050	19,535	21,337	9.2
ukc12 South Teeside	12,803	16,753	19,480	52.1
ukc13 Darlington	17,006	20,510	24,453	43.8
ukc14 Durham CC	12,279	15,314	16,910	10.4
ukc21 Northumberland	12,833	14,364	17,963	25.1
ukc22 Tyneside	14,092	19,903	25,635	28.8
ukc23 Sunderland	13,338	17,724	23,722	33.8

Unemployment rate (%)			
Region	2000	2006	Δ (%)
ukc11 Hartlepool and Stockton	8.9	5.7	-36.0
ukc12 South Teeside	12.1	6.6	-45.4
ukc13 Darlington	n.a	n.a	-
ukc14 Durham CC	5.7	6	5.3
ukc21 Northumberland	5.5	6.4	16.4
ukc22 Tyneside	10.3	7.1	-31.1
ukc23 Sunderland	9.3	6.6	-29.0

Source: Core team processing of Eurostat data

Table 5.8 - Geography of structural change (NUTS3)

Employment by sector (%)				
Region	Year	Agriculture	Industry	Services
ukc11 Hartlepool and Stockton	1995	0.7	33.9	65.4
	2000	0.2	32.2	67.6
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc12 South Teeside	1995	0.6	27.5	71.8
	2000	0.5	22.5	77.0
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc13 Darlington	1995	0,4	24,9	74,4
	2000	0.8	22.0	77.2
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc14 Durham CC	1995	2,6	33,5	63,9
	2000	1.6	30.5	68.0
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc21 Northumberland	1995	5,0	24,8	70,3
	2000	4.6	20.1	75.3
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc22 Tyneside	1995	0,2	22,1	77,8
	2000	0.1	19.3	80.6
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-
ukc23 Sunderland	1995	0,4	31,1	68,6
	2000	0.3	29.9	69.9
	2005	n.a	n.a	n.a
	Δ 2000-2005	-	-	-

Source: Core team processing of Eurostat data

Table 5.9 - Geography of structural change (NUTS3)

GVA by sector				
Region	Year	Agriculture	Industry	Services
ukc11 Hartlepool and Stockton	1995	0.3	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc12 South Teeside	1995	0.3	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc13 Darlington	1995	0.7	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc14 Durham CC	1995	1.3	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc21 Northumberland	1995	4.6	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc22 Tyneside	1995	0.1	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a
ukc23 Sunderland	1995	0.1	n.a	n.a
	2000	n.a	n.a	n.a
	2005	n.a	n.a	n.a
	Δ 2000-2005	n.a	n.a	n.a

Source: Core team processing of Eurostat data

*Table 5.10 - Geography of structural change (NUTS2) – Clusters**

Cluster category	Region	Employees	Size (%)	Specialisation	Focus (%)	Innovation	Exports
Construction	Tees Valley and Durham	15,957	0.24	1.05	3.75	Medium	n.a
Business Services	Tees Valley and Durham	11,941	0.28	1.19	2.80	Medium	Strong
Chemical	Tees Valley and Durham	4,554	0.47	2.04	1.07	Medium	Strong
Finance	Northumb and Tyne and Wear	22,619	0.32	0.94	3.64	Medium	Very strong
Business Services	Northumb and Tyne and Wear	20,975	0.49	1.44	3.38	Medium	Strong
Education	Northumb and Tyne and Wear	20,721	0.58	1.73	3.34	Medium	n.a
Construction	Northumb and Tyne and Wear	18,003	0.27	0.81	2.90	Medium	n.a

Source: www.clusterobservatory.eu
** Clusters in the fields of finance and construction have not been considered as not strictly relevant to the scope of the study.*
***Size**: Share of total European employment, within the same cluster category, in terms of the number of employees.*
***Specialisation**: if a region is more specialised in a specific cluster category than the overall economy across all regions, this is likely to be an indication that the economic effects of the regional cluster have been strong enough to attract related economic activity from other regions to this location, and that spillovers and linkages will be stronger. The 'specialisation' measure compares the proportion of employment in a cluster category in a region over the total employment in the same region, to the proportion of total European employment in that cluster category over total European employment:*
(Employment in a region in a category / Total employment in a region)(Total employment in Europe / Total employment in a category in Europe)*
***Focus**: if a cluster accounts for a larger share of a region's overall employment, it is more likely that spill-over effects and linkages will actually occur instead of being drowned in the economic interaction of other parts of the regional economy. The 'focus' measure shows the extent to which the regional economy is focused upon the industries comprising the cluster category. This measure relates employment in the cluster to total employment in the region.*
***Innovation**: Data is for region, regardless of cluster category. Based on 2006 European Regional Innovation Scoreboard, MERIT*
***Exports**: Data is national export data for the cluster category, regardless of region. Based on International Cluster Competitiveness Project, ISC at HBS*

5.2 References

- Del Castillo, J. and Barroeta, B. (2007) 'Spanish good practices in entrepreneurship policies design and delivery' in OECD LEED (Local Economic and Employment Development) Programme *Strengthening entrepreneurship, innovation and economic development at local level in Croatia – An active review* Final Report 30 September 2007 www.oecd.org/dataoecd/51/62/40208821.pdf

- ECOTEC on behalf of NERIP (2007) *International Benchmarking Study* www.nerip.co.uk/Reports_Briefing.aspx?id=421

- Eustat (2008) *The Basque Country in the EU27* www.eustat.es/documentos/EUSKADIEU27_2008_i.pdf

- Government Office for the North East (2002) *Key Facts and Figures*, June 2002

- Government Office for the North East (2007) *North East England Objective 2 Programme 2000-2006 Annual Report 2006*

- House of Commons North East Regional Committee, Evidence presented on *Industry and Innovation in the North East*, 16.7.09 www.publications.parliament.uk/pa/cm200809/cmneast.htm

- House of Lords (2003) *Select Committee on Science and Technology – Science and the RDAs: SETting the regional agenda – Evidence* London: HMSO

- Michie, J, Oughton, C and Frenz, M (2004) Innovation in Scotland: An Analysis of the Community Innovation Survey, Report to the Scottish Executive.

- North East EnglandObjective 2 Programme 2000-2006 (2007) *Programme Complement – Revised Draft for Endorsement by PMC*.

- One NorthEast (1999) *Unlocking Our Potential* ONE, Newcastle.

- One NorthEast (2001) *Realising the Potential of the North East's Research Base*, ONE, Newcastle upon Tyne.

- One NorthEast (2002) *Realising Our Potential* ONE, Newcastle.

- Regeneris Consulting (2006) *Evaluation of Objective Two Business Support Activities in the North East* undertaken on behalf of the Government Office for the North East, www.regeneris.co.uk/downloads/North%20East%20Objective%202%20Business%20Support%20Evaluation.pdf

- Sanchez, B. (2008) 'Basque Country, Spain' in A Review of Local Economic and Employment Development Policy Approaches in OECD Countries, Part III Case Studies of Regional Economic Development Models OECD http://www.oecd.org/dataoecd/61/54/42771716.pdf

- The North East England European Partnership (2001) *Objective 2 Programme 2000-2006 Single Programming Document Volume I: Socio-Economic Analysis* Government Office North East, Newcastle.
- The North East England European Partnership (2001) *Objective 2 Programme 2000-2006 Single Programming Document Volume II: Context of the Programme* Government Office North East, Newcastle.
- The North East England European Partnership (2001) *Objective 2 Programme 2000-2006 Single Programming Document Volume III: Strategy of the Programme* Government Office North East, Newcastle.
- http://www.go-ne.gov.uk/ne_region/go_ne_keyfacts&figures.pdf

5.3 List of persons interviewed

Name	Position	Interview
Peter Smith	European Funding Officer, Government Office for the North East [formerly Head of European Division]	Newcastle University, 2.6.09 Newcastle University, 14.7.09 Newcastle University, 22.7.09
Dr Glen Kemp	NEPAF Programme Manager	Newcastle University, 20.7.09 Newcastle University, 22.7.09
John Dersley	Currently Visiting Fellow at Newcastle University, but previously Deputy Director DTI at Government Office North East (to 1995) and then Director of Regional Development at Newcastle University.	Telephone interview 22.7.09
Ron Jamieson	Chief Executive, RCID (Resource Centre for Innovation & Design)	Newcastle University, 29.7.09
Gordon Ollivere	Chief Executive, RTC North Ltd	RTC North, Sunderland, 3.8.09
George Clouston	Managing Director, RTC North Ltd	RTC North, Sunderland, 3.8.09
Sheena Murray	Chief Finance Officer/Company Secretary, RTC North Ltd	RTC North, Sunderland, 3.8.09
Dr John Williams	General Manager, Centre for Advanced Industry/ Fabriam (formerly NEMI, The North of England Microelectronics Institute)	Telephone interview 28.7.09
John Lowther	Director, Tees Valley Joint Strategy Unit	JSU, Middlesbrough 10.8.09
Jo Povey	Head of Business Programming & Planning, ONE [formerly Head of Team responsible for Measures 2.1-2.5 at GONE]	Telephone interview 12.8.09
Laura Woods	Director of Academic Enterprise, Teesside University	Telephone interview, 18.8.09
Mark Pearson	Energy and Process Manager, ONE	Telephone interview, 19.8.09
Kevin Richardson	Senior Manager (Economic Strategy & Partnerships), Newcastle City Council	Newcastle, 19.8.09