Wissenschaftszentrum Nordrhein-Westfalen
Kulturwissenschaftliches Institut

Wuppertal Institut für Klima, Umwelt, Energie
Institut Arbeit und Technik

Discussion Paper:

Structural Policy in Selected European Regions – Results of a Comparative Assessment

Josef Muth & Dieter Rehfeld
with support from Noemi Fernandez-Sanchez
Institute Work and Technology (Institut Arbeit und Technik), Gelsenkirchen

Gelsenkirchen, October 2004

NRW. ZIEL 2 PROGRAMM

EUROPÄISCHE UNION
Europäischer Fonds für Regionale Entwicklung

Ministerium für Wirtschaft und Arbeit des Landes Nordrhein-Westfalen

NRW.

Contents

0 Introduction

The mid-term evaluations of the Objective 1 and 2 Structural Fund programmes were submitted in autumn 2003 as required under the regulations of the European Commission. For the actors responsible for the individual programmes, the challenge is now to draw out from the mid-term evaluations the implications for the second half of the programming period and to integrate these constructively into their programmes. In the context of the foreseeable restructuring of EU structural policy, in mid-2004 the regions also still face the open question of the level of Structural Fund resources which they will receive at the end of the 2000-06 funding period and on which principles these resources will be distributed.

A comparison of the different Structural Fund programmes in the European Member States highlights the wide range of approaches, priorities and expectations but also demonstrates certain commonalities. A key example of this – which lies at the heart of this report - is the strategic focus on **clusters**. The cluster approach emerges from a new direction in both regional science and regional policy which draws on concepts such as innovative milieus, regional networks or regional innovation foci. Following the seminal work of Michael E. Porter (1990, 1998), the term cluster is understood as the vertical (producers and suppliers) and horizontal (particularly research and development qualification, technology infrastructure, support agencies) concentration of interdependent firms within a single or similar economic sector in a restricted geographical area (see also Rosenfeld 2002). In this context, the term ‚production cluster' will also be used which similarly focuses on the spatial concentration of different components of a value added chain but which also emphasises the interfaces between internal and external economic interconnections in a region (see Rehfeld 1999, p43).

The cluster concept gained global visibility during the 1990s following the particular success of certain regions not only in high-technology areas such as Silicon Valley in the USA, but also in traditional production areas such as the so-called ‚Third Italy' (see European Observatory for SMEs 2002, 2003). In the second half of the 1990s, the cluster concept was further developed under the terminology of the ‚Regional Innovation System' (RIS). In order to separate, for analytical purposes, the various and often synonymous terms, the hierarchy used by the European Observatory for SMEs is a useful starting point (see Table 1). Terminological clarity is particularly important in identifying the different ways in which public institutions of regional competitiveness can be involved in the support of cluster activities.

Table 1
Definitional Hierarchy

Term	Definition
Regional Cluster	A concentration of ‚interdependent' firms within the same or related economic sectors in a limited geographical area
Regional Innovation Network	More organised cooperation (agreements) between firms, based on trust, norms and conventions, through which commercial innovation can be supported
Regional Innovation System (RIS)	Cooperation also between firms and various organisations of knowledge creation and dissemination

Source: European Observatory for SMEs 2002, p14

Despite the fact that there is no widely accepted single definition of the term ‚cluster', in general a central assumption is made that a cluster is more than the sum of its parts and that its competitive advantages result particularly from ‚network structures' (see GTZ o.J.). The relationships between the firms in these networks are characterised both by cooperation and (innovation-related) competition as well as mutual dependence (interdependence). The ability of the firms to communicate externally, therefore, becomes very significant and represents one of the central pillars of the cluster concept. Finally, it is assumed that the spatial proximity produces positive externalities for the involved firms such as a supply of labour with an appropriate qualifications profile or specific infrastructural provision (transport, R&D).

The cluster concept enjoys its current popularity for two main reasons: on the one hand, structural changes in the global economy play a role and offer regions the chance to concentrate on their sustainable and qualitative competitive advantages. On the other hand, the cluster approach offers a starting point for a strategic bundling of the ever decreasing resources of public support. In this contex, the cluster approach is regarded by the European Commission as one of the most promising strategic directions for future oriented structural policy. This is related not least to the strategic goal agreed by the European Council in Lisbon in March 2000 to make the Union the ‚most competitive and dynamic knowledge-based economy in the world' by 2010 (see European Council 2000). The European Council has formulated a global strategy in order to meet this goal within which Member States are encouraged to implement a ‚tailored macro-economic policy-mix' in order to create the preconditions for full employment again through an average economic growth rate of three percent.

As highlighted in the above discussion, the cluster concept is not fundamentally new. More recently, however, there has been a changing view within the European Commission as to the policy area under which this concept should be developed and applied. Thus, research on economic clusters, networks and cooperations has recently been carried out mainly by DG Enterprise of the European Commission. This means that cluster policy has, to date, been understood as part of economic and enterprise policy rather than as a central component of regional and structural policy.

The cluster approach focuses essentially on small and medium-sized enterprises (SMEs). This is related, first, to the fact that more than 99 percent of firms in the EU-19[1] are small and medium-sized enterprises with fewer than 250 employees; second, SMEs face particular challenges from rapid global changes such as globalisation, the new economy, and the information and knowledge society. Thus there has been a strong increase in economic competition in recent years even in those ‚niche markets' which were previously secure for SMEs. Various technological developments have made it possible for large firms to exploit the cost advantages associated with mass production in order to become successfully active in small market areas driven by individual customer demands (see European Observatory for SMEs). These conditions offer not only risks but also economic opportunities for SMEs which can, in particular, be exploited through cooperation with other firms in the framework of a cluster.

Against this background, the Ministry of Economy and Labour of the *Land* (state) of North Rhine Westphalia (NRW) organised a conference on 14-15 June 2004 entitled ‚Modern Structural Policy in a Europe of the Regions' which offered representatives of European countries a good opportunity to discuss experiences and approaches to cluster policy and draw from this transferable conclu-

---

1 The term EU-19 is generally used to describe the 18 countries of the European Economic Area (EU-15, Liechtenstein, Iceland and Norway) and Switzerland (see Observatory of European SMEs).

sions for their Structural Fund programmes[2]. One important aim of the conference was the stimulation of cross-country networks for regional development. This was all the more relevant given that a number of the mid-term evaluations highlighted the only hesitant attempts to date to exchange experience or create international networks.

The first version of this report was designed as a discussion paper to provide the starting place for an exchange of experience between the conference participants. The report was revised following the conference. It is based on Structural Fund programme documents from a variety of regions as well as the mid-term evaluations from a number of selected European regions. In addition, other relevant documentation (literature, brochures) was taken into account. At this point, we would like to thank the regional policy actors of selected comparative European regions for their support.

1 Selection and Description of the Regions

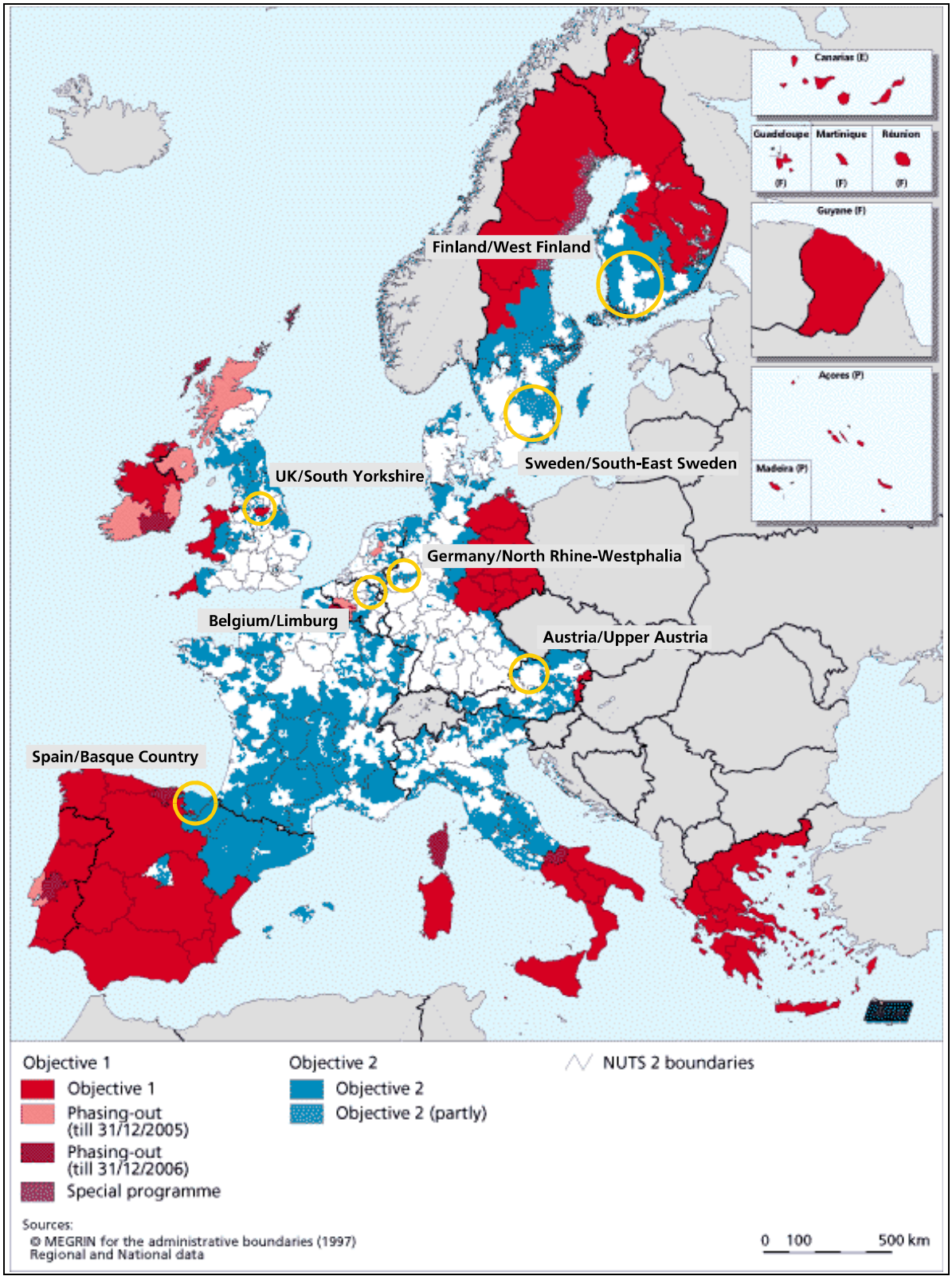
The participating regions were selected on the basis of whether (a) they had a recognisable cluster oriented support policy – either within the framework of EU structural policy (Objective 1 or Objective 2) or separate from this – and (b) those responsible for the programmes had an interest in the further development of this type of structural policy. Without doubt, the regions participating in the conference are not representative of the entire European Union. Rather, they show a spectrum of approaches with regard to the structure of the programmes and the implementation of cluster policy. It is this variation which allowed discussion at the conference to be enriched by the specific experiences of individual regions. The regions included in the report are Limburg (Belgium), North Rhine Westphalia (Germany), West Finland, South Yorkshire (Great Britain), Upper Austria, South-East Sweden and the Basque Country (Spain) (see Figure 1).

The map shows the wide geographical spread of these regions within the territory of the European Union. Each region has particular attributes based on its geographical characteristics and its social and economic history which underpin the specific challenges facing the further development of its structural policy. An overview of a number of quantitative indicators provides a statistical picture of these regional peculiarities (see Table 7 at the end of the report). The population living in the eligible regions ranges from ca. 800,000 inhabitants in Limburg to ca. 18 million in NRW. The spectrum of population density is equally wide between the regions. It varies from ca. 35 inhabitants per square kilometre in the sparsely populated region of West Finland to ca. 800 inhabitants in South Yorkshire. In terms of GDP development between 1995-2001, the lowest figure of 1.2% can be seen in NRW which continues to contend with overcoming its mining-based industrial heritage. In terms of economic structure, the southern European region of the Basque Country shows the highest proportion of employees in manufacturing with a figure of 37.9% in 2002; the share of the service sector is correspondingly low at only 60.1%. The service sector in South Sweden is significantly more developed with almost three-quarters of all employees active in this sector. The importance of the service industry reflects the ability of the region to innovate. If the number of patent applications is considered, South Sweden leads here as well with a figure of ca. 400 applications between 1999 and 2001.

---

2 On the second day of the conference, Workshops took place at various cluster locations throughout North Rhine Westphalia. The notes from the discussions as well as the presentations from the conference can be found on the website of the Objective 2 Secretariat (www.ziel2-nrw.de)

Figure 1
Geographical Distribution of the Regions



The framework conditions relating to geography and economic structure vary considerably between the selected regions. Although there is a dominance, in terms of regional policy goals, of regions attempting to shift from traditional industries to modern economic sectors (Objective 2), there are also strong agricultural areas in some regions (Austria, Finland). The previously mentioned diffe-

rences in the extent of development of the service sector are not necessarily an indicator of successful structural change but can also be interpreted as the result of weaknesses in the industrial sector. The following short descriptions are designed to build on the previous statistical overview and provide a more detailed picture of the individual regions.

The region of **Limburg** comprises the former mining area in the Hasselt district as well as the rural area of Haspengouw in Tongeren. Limburg region has a population of ca. 800,000 inhabitants. The high share of young in-migrants has resulted in a younger age profile in the region in comparison with the country as a whole. The economy is dominated by a high share of small and medium-sized enterprises. The automobile industry, on the other hand, is focused on a small number of large firms. The industrial structure is strongly oriented towards exports, within which the automobile and non-ferrous industries have a particular importance.

The Objective 2 area in **NRW**, which is dominated by traditional heavy industry (steel production and processing as well as coal), covers around a third of the total area of the *Land* (state) of NRW which has ca. 18 million inhabitants. The Objective 2 area is highly urbanised with a correspondingly high population density and relatively poor environmental quality and is characterised by a lack of economic growth and employment. The investment quota is low and productivity shows below-average growth. The increase in employment in the service sector in recent years has by no means offset the job losses in manufacturing. The scale of unemployment and long-term unemployment has been greater for years than in the *Land* as a whole and employment opportunities for women are particularly poor.

The region of **West Finland** includes a number of industrial centres as well as several large rural areas. Particularly important industrial sectors include metal, paper, wood processing and food. The share of employees in industry and agriculture is higher than in the country as a whole. A particular characteristic is the comparatively small share of employees in private services. The main problems of the region are the low overall employment level and the relatively high unemployment rate, particularly among women.

South Yorkshire is the only Objective 1 region which has been included here although it displays the fundamental characteristics of a declining industrial region. In 2001, the region had ca. 1.3 million inhabitants. Two-thirds of the eligible area can be classed as rural although two-fifths of the inhabitants live in the city of Sheffield. The traditional economic base of South Yorkshire – coal mining, steel production and mechanical engineering – has been in decline since the 1970s. Between 1971 and 1997, around 60% of industrial jobs were lost and these could not be compensated for through employment gains in the service sector. The region of South Yorkshire remains to a large extent dependent on declining industrial sectors which are expected to witness further personnel reductions and restructuring efforts in the future.

The region of **Upper Austria**, which has a population of ca. 1.4 million people, is located in the centre of Austria and borders the Czech Republic to the north and Germany to the west. While Upper Austria overall counts as one of the most economically dynamic regions in Austria, considerable structural inequalities exist within the region including, for example, above average unemployment in the rural border areas. While industrial production continues to play a dominant role, the development of the tertiary sector has, to date, been at a lower level. The Objective 2 area is divided into three distinct sub-regions: the declining rural area of the Mühlviertel which has been located for more than 40 years on the so-called ‘dead border’ with the Czech Republic and represents one of the economically weakest sub-regions in Upper Austria. The Innviertel borders Lower

Bavaria (Germany) and is an extensive rural area with primarily favourable agricultural conditions and an economic structure traditionally dominated by small- and medium-sized firms. Steyr-Kirchdorf, conversely, is a traditional industrial area.

The region of **South-East Sweden** includes parts of five administrative districts: Östergötland, Jönköping, Kalmar, Kronoberg and Blekinge. The population of the region was ca. 1.8 million in 2001. The number of inhabitants in the eligible area has been declining for many years. In particular, young people are moving to areas where there are better work and training prospects. Although the unemployment rate in the eligible area equates to the national average, there are sharp disparities within the region. The majority of employees are still employed within the manufacturing industry. Of particular importance are the agriculture, forestry and health provision sectors. Three-quarters of employees work here in small- and medium-sized firms. The small number of colleges is relevant in relation to the development of the regional human capital.

In Spain, the **Basque Country** has a population of ca. two million people and is traditionally dominated by industrial production. Together with construction, this sector alone accounts for nearly half of the total GDP. The industry is based on branches which have become less innovative eg. minerals, ferrous metals, non-ferrous products, paper or rubber. The distribution of firms is very uneven within the region and is concentrated on clearly defined urban areas such as Bilbao or San Sebastian – a phenomenon which has resulted in a polarisation of employment opportunities as well as environmental damage. In addition, the relatively low investment to date in research and development is disadvantageous for the region.

2 Structure of the Structural Fund Programmes

2.1 Overview of the Priorities

The overall aim of European structural and cohesion policy, as stated in Article 158 of the Treaty establishing the European Community, is the reduction of economic and social disparities in the Member States: „The Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas“. The role of the European Regional Development Fund (ERDF) is further specified in Article 160: „The European Regional Development Fund is intended to help redress the main regional imbalances in the Community through participation in the development and structural adjustment of regions whose development is lagging behind and in the conversion of declining industrial regions“.

The European Structural Funds support the specific regional and labour market policies of the individual Member States and therefore the identification of development priorities is primarily the task of the Member States or regions. As the European Union co-funds the implementation of these policies, the Member States are expected to take Community development priorities into account (see EUK 1999). In line with Article 10 (3) of the Council Regulation of 21 June 1999 laying down the general provisions on the Structural Funds, the European Commission published „broad and indicative guidelines on relevant and agreed Community policies“ designed to support the relevant national and regional authorities (Managing Authorities) in the creation of the programme planning documents for Objectives 1, 2 and 3. The guidelines are structured under three strategic priorities: (i) regional competitiveness; (ii) social cohesion and employment and (iii) development of urban and rural areas (including specific measures for fisheries areas).

As specified in the Structural Fund Regulations, the indicative guidelines of the European Commission were revised prior to the mid-term evaluation of the programmes in order to allow the Member States to adjust their programme planning documents in the light of changing economic, labour market and/or social framework conditions as well as in response to the conclusions of the mid-term evaluations (see EUK 2003). Thus Community priorities established at the start of the 2000-06 programming period gained a higher profile with the Commission view that they should be taken into account by Member States in the second half of the programming period. These included, in particular, the strategic goal agreed at the European Council meeting in Lisbon on 23-24 March 2000 (as previously mentioned in the report) that the Union should become the most competitive and dynamic knowledge-based economic area in the world by 2010.

An analysis of the Objective 2 programmes considered in this report highlights the fact that the regions have used their scope for manoeuvre to tailor regional policy interventions to their specific problems and areas of potential. At a general level, this can be seen in the number of programme Priorities which ranges from two in South East Sweden to five in the Objective 1 programme of South Yorkshire (see Table 2). The formulation of the Priorities naturally provides only a very general impression of the type of projects which are ultimately implemented as these are operationalised through the Measures. The detailed Measures as well as the allocation of the funding resources, the specification of national co-financing, the quantification of targets and objectives, the definition of target groups, the relevant legal bases or the institutions responsible for implementation are all laid down in the so-called „Programme Complement for the Single Programming Documents“.

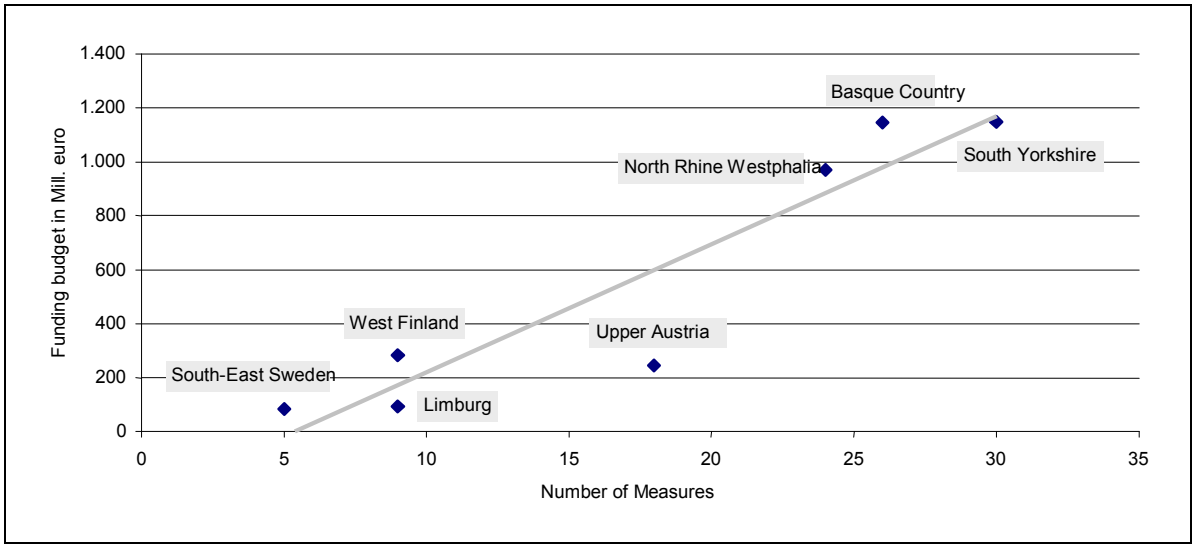
Table 2
Overview of Priorities in the Programmes

	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Belgium/ Limburg (Objective 2)	Supporting business and employment	Optimising overall conditions	Integrated rural development of Haspengouw		
Germany/ NRW (Objective 2)	Enterprise and business start-up financing	Innovation and development of competences	Innovation-related infrastructure	Support for particular target groups	
Finland/ West Finland (Objective 2)	Developing business activity and renewing the industrial structure	Developing expert workforce and technology	Developing the area structure and living environment		
Great Britain/ South Yorkshire (Objective 1)	Stimulating the emergence of new growth and high technology sectors	Modernising businesses through enhancing competitiveness and innovation	Building a world-leading learning region which promotes equity, employment and social inclusion	Developing economic opportunities in targeted communities	Supporting business investment through strategic spatial development
	Priority 6				
	Providing the foundations for a successful programme				
Austria/ Upper Austria (Objective 2)	Business infrastructure	Development of business, industry, services and tourism	Sustainable regional economic development		
Sweden/ South Sweden (Objective 2)	Attractive living environment and development of the economic sector	Development of human resources			
Spain/ Basque Country (Objective 2)	Improving competitiveness and employment and developing the productive infrastructure	The environment, nature conservation and water resources	The knowledge-based society (innovation, R+D, information society)	Developing transport and energy networks	Local and urban development

Source: Programme Documents of the Regions

The terminology used in the titles of the Priorities is often very similar across the different programmes as they all draw from the guidelines given by the European Commission. One possible correlation can be seen between the available programme budget and the number of Priorities. The ‚large' programmes in North Rhine Westphalia, South Yorkshire (Objective 1) and the Basque Country have four or five Priorities while the other ‚smaller' programmes have identified three or, in the case of South East Sweden, only two Priorities.

Figure 2
Correlation between Funding Budget and Programme Complexity



Source: Programme Documents; own representation

A further pointer in understanding the programmes is the extent to which the Priorities are subdivided into Measures. The spectrum in this regard ranges from a single Measure (South-East Sweden) to ten Measures (NRW) within individual Priorities (see Table 3). Figure 2 illustrates that the level of funding resources also influences the degree of sub-division at Measure level. Only Upper Austria shows a more marked deviation from this trend as the programme, which has a similar budget to the region of West Finland, has double the number of Measures (18 in total). Should the funding resources after 2006 be reduced, it would be beneficial to concentrate the funding on a smaller number of Priorities and Measures as otherwise the interventions will be absorbed into the existing funding structures and fail to have a sufficiently distinctive profile.

Table 3
Number of Measures in the Priorities of the Programmes

	Number of Measures in the Priorities							Total No. of Measures	Funding volume in Mill. €
	SP1	SP2	SP3	SP4	SP5	SP6	SP7		
Belgium / Limburg (Objective 2)	5	2	2					**9**	**92,7**
Germany / NRW (Objective 2)	5	10	5	4				**24**	**970,4**
Finland / West Finland (Objective 2)	3	2	4					**9**	**284,2**
Great Britain / South Yorkshire (Objective 1)	5	5	8	8	4			**30**	**1.149,4**
Austria / Upper Austria (Objective 2)	5	7	6					**18**	**243,7**
Sweden / South-East Sweden (Objective 2)	4	1						**5**	**83,5**
Spain / Basque Country (Objective 2)	4	5	6	4	7			**26**	**1.146,5**

Source: Programme Documents

In this context, it is worth asking whether the extent of sub-division reflects the existence of particular national- or regional-specific funding philosophies. In an international comparative study of different policy frameworks in the evaluation of the Structural Funds, Taylor *et al* (2001) identified two overall approaches to programme implementation. These lie at two ends of a potential spectrum along which various mixed approaches can be placed. A ‚subsumed approach' in this context means that the Structural Fund programmes are primarily linked to, or subsumed within, existing national and/or regional funding systems or programmes. At the other end of the spectrum is the ‚differentiated approach' whereby distinct implementation structures (institutions) have been created in the regions for the administration of the European Structural Fund programmes which operate more or less independently of the other domestic funding structures. The term ‚composite approach' characterises those implementation models which display aspects of both the differentiated and the subsumed approaches. Certain Member States can by ordered within the typology as follows:

Table 4
Management Structures for the Implementation of the Structural Funds in Selected European Member States

„Subsumed approach"	„Composite approach"	„Differentiated approach"
Germany Austria Spain	Finland France Italy	Belgium Denmark Great Britain Netherlands Sweden

Source: Taylor et al 2001, p346

A comparison of programme complexity (defined by the number of Priorities and Measures) with the funding budget and the implementation approach shows that there is no uniform link between the way in which the programmes are operationalised in the region and their complexity/financial size. Thus two of the three largest programmes being considered in this report – North Rhine Westphalia and the Basque Country – can be classified as ‚subsumed' programmes whereas

South Yorkshire is a programme which utilises distinct institutional structures (see Table 5). A similar situation can be seen for the two medium-sized programmes in Upper Austria and West Finland which take respectively a subsumed and differentiated approach. Only the two smallest budgetary programmes of South-East Sweden and Limburg take broadly similar approaches to their implementation structures. Based on these observations, the conclusion can be drawn that the responsible national or regional actors both enjoy and use considerable freedom in regard to the way the Structural Fund programmes are embedded within existing structures.

Table 5
Relationship between Programme Complexity, Funding Budget and Implementation Approach

	No. of Priorities	No. of Measures (Total)	Funding volume in Mill. €	Implementation Approach
Sweden / South-East Sweden (Objective 2)	2	5	83,5	differentiated approach
Belgium / Limburg (Objective 2)	3	9	92,7	differentiated approach
Austria / Upper Austria (Objective 2)	3	18	243,7	subsumed approach
Finland / West Finland (Objective 2)	3	9	284,2	composite approach
Germany / NRW (Objective 2)	4	24	970,4	subsumed approach
Spain / Basque Country (Objective 2)	5	26	1.146,5	subsumed approach
Great Britain / South Yorkshire (Objective 1)	5	30	1.149,4	differentiated approach

Source: Programme documents

Further differences can also be identified in the make-up of the programmes: ERDF and ESF support are, in some cases, separated into specific Priorities (South East Sweden) while in others, they are integrated within single Priorities. In terms of programme steering, these two variations have both advantages and disadvantages. Where ESF support is integrated, the loss of flexibility in strategic implementation is disadvantageous. While it is possible, where necessary, for the institutions responsible for individual Fund implementation to vire resources between different Measures of a single Priority without incurring large-scale administrative cost (only the relevant Monitoring Committee must agree), a virement between two Measures from different Priorities requires the agreement of the European Commission and brings with it a correspondingly higher burden both in bureaucracy and time.

On the other hand, an integration of ESF support into ERDF Priorities fulfils the wish of the European Commission, as well as many actors at implementation level, to bring labour market interventions more closely together with structural policy activities, for example in the framework of integrated projects (see Table 6). A number of previous evaluation studies have shown that these two policy areas often operate very independently in practice. A significant explanatory factor is the administrative and departmental structures for policy implementation but the difficulties can also be explained by the very different and sometimes contradictory aims and objectives (such as a focus on innovation versus target groups) which have to be simultaneously taken into account within a project. The genuine integration of structural and labour market policy therefore requires greater cooperative working within the political and policy culture of the regions – although there are also often technical hurdles to be overcome (such as Fund-specific finance and monitoring systems).

Experience from NRW shows that the introduction of new steering mechanisms or committees can, on occasion, be required in order to bring about Measures within which genuinely integrated structural and labour market policy initiatives can take place.

Table 6
Integration of ERDF and ESF Support within the Programmes

Region	ESF Support is dedicated Priority	ESF Support is integrated component
Belgium / Limburg (Objective 2)		X*
Germany / NRW (Objective 2)		X
Finland / West Finland (Objective 2)		X
Great Britain / South Yorkshire (Objective 1)		X
Austria / Upper Austria (Objective 2)	Only ERDF funding	
Sweden / South-East Sweden (Objective 2)	X	
Spain / Basque Country (Objective 2)	**	**

*Source: Programme Documents; *only a single ESF Measure; ** unknown*

2.2 Programmatic Framework for a Cluster-Oriented Support Strategy

The opportunities offered by the various Structural Fund programmes for a cluster-oriented support strategy are developed very differently between the regions. In some regions, cluster activities are explicitly mentioned in the general description of the Priorities (West Finland), while in other programmes, the cluster orientation is also included as a horizontal theme (NRW). Given this, it is useful for the discussion to propose a categorisation of the programmatic embedding of the cluster approach in the individual regions. Cluster support, however, is not always explicitly mentioned as such. In the following overview (see Table 5), terms such as networks, joint ventures or synergy building have also been interpreted as the basis for a cluster oriented policy. Some more specific comments about the embedding of the cluster approach in the funding programmes are provided after the Table.

The particular way in which cluster support has been built into the programmes reflects differing interpretations of this policy approach. This can be seen initially in the terminology used in the programme documents with cluster, competence fields or technology branches each referring to different structural policy prerequisites and strategic foci. Further, cluster policy and the support of network building are not always clearly related. Networks, for example, are fundamentally useful in all economic areas while clusters represent economic areas of excellence which are characterised by dynamism and above-average growth. The steering philosophy for the cluster approach is thereby more implicit, with greater similarities to a horizontal theme, following a method of policy practice whereby projects designed to develop individual clusters emerge ‘bottom-up’ and the relevance of the cluster is more as a criterion for project selection.

On the other hand, cluster management is understood more as the implementation of a coherent and wide-ranging structural policy strategy – although also here the implementation does not necessarily have to be ‘top-down’ and, due to the requirement for co-financing (particularly own financing from firms), can also display a strong bottom-up component. It is necessary to point out in this context that the implicit embedding of cluster support in the programme increases the openness for innovation activities. However, at the same time, it makes the coordination of strategic objectives and direction more difficult. An explicit embedding makes a strategic focus easier but can have the

danger of appearing, at first glance, to exclude areas of innovation potential which are not immediately obvious. Table 7 illustrates how cluster support is embedded in the Structural Fund programmes of the selected regions.

Table 7
Embedding of Cluster Support in the Regional Programmes

	Belgium / Limburg	**Germany / NRW**	**Finland / West Finland**	**Great Britain / South Yorkshire**	**Austria / Upper Austria**	**Sweden / South Sweden**	**Spain / Basque Country**
No explicit embedding in Programme							X
Embedded within the framework of a comprehensive regional development concept	X	(X)	X	X	X	X	
Embedded in Priorities			X	X	X	X	
Component of individual Measures	X	X	X	X	X	X	
Horizontal theme character		X					

Source: Programming documents

The following descriptions of how programmes embed cluster support highlight the fact that individual regions are following very different strategies of cluster management and tailor the framework set by the European Structural Funds to their own preconditions and strategies. This corresponds with the general experience that there is no single successful model of cluster management but rather that regional characteristics (sectoral and branch structure, firm size, regional cooperation culture etc) are always an influencing factor.

In the **Limburg** region, network building between small and medium-sized enterprises is explicitly supported under Measure 1.1. Infrastructure support targeted at so-called 'pioneer' sectors is available under Measure 1.2. Pioneer sectors are defined in this context as automotives, logistics, multi-media, food and construction. In addition, experimental platforms for firms and other organisations can also be supported under Measure 1.2. These are designed to stimulate innovative processes in firms through cooperation. In the framework of the ESF-funded 'Qualification' Measure 1.3, there is an explicit link to the multi-media sector.

In **North Rhine Westphalia**, elements of a cluster orientation can be found at different levels of the Objective 2 programme. At the general cross-Priority level, 12 so-called ‚strategic orientations' have been identified which, together with the Priority objectives, form the overall development strategy of the programme. The fourth strategic orientation is entitled „Developing competence fields and defining the regional profile". The background to this is the fact that the eligible area, which comprises a large proportion of the Ruhr with an industrial heritage in large-scale mining, has not yet developed a new and independent economic profile in the sense of a concentration of strengths and potentials: „the international division of labour requires that regions recognise their particular strengths and potentials and use them to create competence fields. This means that technological-

ly they must achieve a sustainable competitive position, that they must aim to extend their research and technology orientation and create self-sustaining growth processes and that they should use existing areas of strength to create internal and external networks“ (Objective 2 programme NRW 2000-06, p261).

More indirect references to the cluster approach can be seen in wording such as ‘developing visions and formulating strategies’ or ‘bundling themes and integrating policy areas’. Clusters which have been explicitly defined in the regional development framework are integrated as targeted Measures in the Objective 2 programme. These include in particular Measure 2.4 ‚Commercial Environmental Protection’, 2.5 ‚Media and Communication Economy’, 2.6 ‚Tourism, Leisure and Culture’, 2.8 ‚Future Energies’ or 3.4 ‘Logistical services and infrastructure’. Further, a focus on clusters defined within the Ruhr area is operationalised within individual Measures such as Measure 2.1 ‘Technology and innovation’ or Measure 3.3 ‘Technology and qualification infrastructure’. Finally, the responsible actors for the ESF Measures are required to take the defined clusters within the eligible area into account in training initiatives.

In the Objective 2 programme in **West Finland**, the support of clusters is explicitly mentioned as part of the overall objective of Priority 1 ‘Business development and economic structural change’. The development of clusters in this context should be achieved through the support of regional innovation systems, technology transfer, research services, the support of new firm formation and qualification initiatives. More specifically, funding opportunities for cooperation and network building between firms exist within Measure 1.1 ‘Stimulation of economy and business development’. Finally, in Measure 1.2, the development of cluster activities is explicitly highlighted. In Priority 2 ‚Development of Expertise in the Labour Force and Technology Development’, so-called ‚Clusters of Expertise’ in the regions are supported under Measure 1.2.

In Priority 1 ‘Support of economic growth and high-tech sectors’ of the Objective 1 programme of **South Yorkshire**, a focus on certain economic areas deemed to have a particularly high value added is emphasised. Named in this context include high level production services, media branches, high-tech production areas (computer hardware, medical instruments), knowledge-based production services, business and financial services as well as environmental and basic supply services and bio-sciences. Within Measure 1.4 ‘Increasing growth among sector leaders’, support is operationalised through the following activities: pro-active cluster development as well as analysis, research and marketing related to the identification of sector leaders.

The Objective 2 programme of **Upper Austria** is driven by ‘central strategic themes’. These include, among others, innovation and cooperation through clusters, soft economic investment through the increase of networking ability in firms and networks of municipalities and other administrative bodies. Overall, the cluster approach is key to the Upper Austrian Objective 2 programme and is explicitly mentioned within the framework of Priority 2. In this context, clusters represent network systems which are targeted at key sectoral areas. They are designed, through institutionalised contact between business and the science/research community, to create and secure a ‘knowledge-based competitive ability in key sectoral areas’. One element of funding practice which is particularly relevant to cluster support is ‘soft’ investment such as the creation and encouragement of networks between firms to increase their competitiveness. Measure 2 supports, in particular, initiatives in the automobile, synthetics, furniture and wood-working, eco-energy, food, health technologies and mecatronics sectors as well as the areas of logistics and design and media.

The Objective 2 programme in **South East Sweden** establishes the link to existing clusters as early as the SWOT analysis under the heading of 'core regional competences' to be further developed. Tourism is explicitly mentioned within Measure 1.1 'Development of local attractiveness and identity'. Eligible in this context include business network and joint venture initiatives. The support of networks and joint ventures is also possible under Measures 1.2, 1.3 and 1.4 although there is no explicit mention of clusters.

The **Basque Country** differs from the other regions considered here in the sense that the support of competence fields or clusters is not explicitly integrated into the Objective 2 programme. However, cluster policy is still carried out in this Spanish region as indicated in the introduction to Chapter 3 ‚Embedding of Cluster Support in the Regions'.

2.3 Definition of Clusters in the Regions

A question of particular interest is which clusters exist in the various European regions and, above all, which have been funded through the Structural Funds. The answer to this provides the starting point for possible cooperation between the regions. An initial finding is the lack of general restrictions on which branches or horizontal economic themes can, in theory, be developed or be eligible to become clusters. In practice, however, areas particularly suitable for inclusion in a cluster strategy are those which (a) build on the regional potentials of a region ie. on the areas of strength and (b) are also sustainable in the longer term because they reflect economic development trends and can expect in the future to witness an above average rate of economic growth.

In the funding programmes of the regions, therefore, a broad range of different clusters can be identified. Some of these are being funded in a number of regions while others are rooted more in the specific characteristics of particular regions. Table 8 brings together the clusters which are mentioned in the programmes. The terminology in the programme documents leaves a certain ambiguity in the categorisation process. The cluster 'synthetics', for example, could equally be categorised under either materials or chemicals.

Table 8
Clusters Named Explicitly in Regional Programmes

	Belgium / Limburg	Germany / NRW	Finland / West Finland	Great Britain / South Yorkshire	Austria / Upper Austria	Sweden / South-East Sweden	Spain / Basque Country
Automotives	X				X		X
Mining technology		X			X		
Chemicals		X	X				
Design		X	X	X	X		
Electrical machines							X
Energy technology		X	X		X		X
Financial services				X			
Forestry			X				
Information and communication technology and services	X	X	X				X
Logistics	X	X	X		X		
Space technology							X
Food industry		X	X		X		
Mechanical engineering		X	X				
Health, medicine and biotechnology		X	X	X	X		
Mecatronics					X		
Media			X		X		
Microstructure technology and microelectronics		X					
Furniture and wood production					X		
Paper production			X				
Production services				X			
Tourism, leisure and culture	X	X	X	X	X	X	
Materials		X			X	X	
Environmental technology				X			X

Source: Programme documents

A central question in this context is whether the nature of the respective structural policy strategy in the region can be extrapolated from the range of clusters. Thus, cluster support could, on the one hand, be understood *a priori* as a comprehensive regional development approach which finds its expression in a larger number of more widely defined clusters which provide the framework for a comprehensive regional development strategy. Such a policy would be most in line with the basic equalisation objectives of European Structural Fund support given that all eligible regions are likely to have at least some relevant starting points. Examples of such an approach can be found here in the regions of West Finland, Upper Austria or NRW, each of which name more than ten clusters.

On the other hand, a more narrow cluster approach can be identified from an analysis of the selected funding programmes within which clusters – such as those in South East Sweden – are embedded more as regional centres in a global network. The regions of South Yorkshire and Limburg can be classified between these two poles. These differing interpretations of cluster policy become clearer when a closer look is taken at the sectoral focus of clusters in the individual regions. With the exception of the materials cluster, the most commonly cited clusters are not necessarily those which would characterise industrial regions in transition but are rather branches which:

(a) have developed from existing sectors and therefore draw on regional traditions (logistics, design),

(b) are viewed as being future technology-oriented growth sectors (information and communication technology and biotechnology), or

(c) are interesting overall for the region because they touch on a visible and increasingly important basic supply need for the population (health economy in the context of demographic change) or because geographical conditions open up opportunities for otherwise industrially and economically less developed areas (tourism).

For this reason, it is important in many regions that the cluster concept, particularly where it is understood as a comprehensive development strategy, is also viewed as a way of diversifying the regional economic structure and not solely a method of 'strengthening strengths' (explicit for example in Upper Austria). Nevertheless, a number of uncertainties exist in this regard: there is a danger that too many regions develop the same clusters which significantly reduces their chances of success because of the increased competition. Further, a weak starting position increases the uncertainty of likely success. For this reason, control and monitoring instruments are particularly important in the context of a broad strategic focus.

3 The Embedding of Cluster Support in the Regions

If the cluster approach is to occupy a central place in structural policy, the question of the institutional embedding of cluster management becomes important. In order to address this, it is necessary initially to clarify what is understood to be included under cluster policy. The European Observatory for SMEs summarised the following characteristics in its research in 2002. They relate both to a cluster policy aimed at the support of existing or emerging regional clusters and to a policy which applies knowledge about the functioning of successful clusters to general economic policy or a wider regional policy strategy:

- Cluster policy requires a shift in emphasis within regional policy from single enterprise support to local or regional business groups as well as eligible supporting organisations or infrastructure.

- Cluster policy concentrates less on large firms and much more on local agglomerations of SMEs.

- Cluster policy concentrates in particular on endogenous growth processes in local business agglomerations and less on inward investment activities.

- Cluster policy means ‚strengthening strengths' as the regional policy focus is aimed at already or potentially strong economic actors. Cluster policy draws therefore not solely from the existing status of firms but also particularly from anticipated growth.

- Cluster policy focuses on the support of trust-based communication and cooperation between economic actors to increase the exchange of knowledge and information. Classical business support is conversely less emphasised.

- The decision about what constitutes an eligible cluster can come from the top down (eg. through authorities working with experts) or bottom up if the economic actors in the region initi-

ate and drive this process themselves. Public institutions can support this process through financial or organisational help.

- Cluster policy gives the public sector a concrete role as moderator or interface between both economic actors and between the firms and the various infrastructure providers, particularly of R&D.

The way in which cluster support is implemented in practice varies between the European regions because of their specific political, economic and cultural framework conditions and is further influenced by the prevailing understanding of cluster policy. Cluster policy can be implemented at national or regional level; in addition, various mixed approaches exist. Further, the relationship between cluster policy and the other national and/or regional policies is also of central importance. Publicly-supported cluster activities can, for example, be limited to Objective 1 or Objective 2 programmes or can extend beyond them. Finally in this context, it is important to see whether the cluster approach represents a funding strategy which should extend beyond the end of EU structural policy provision and therefore potentially rely on other forms of support after the end of ERDF funding in the current programming period. Numerous business clusters also exist in the regions which have been initiated and developed bottom up ie. without any public support. While the term ‚cluster' has been used for a number of years, in terms of policy visibility within regional policy there has been a recent increase in importance of these activities. Funding resources are now being invested in these clusters to try and expand them and make their management systems more professional. In this area, as has been shown in earlier experience in NRW with so-called joint projects (*Verbundprojekten*), 'implementation competences' at all involved policy levels can represent a decisive bottleneck for a successful cluster policy. For this reason, capacity building for cluster management represents a key challenge.

The following descriptions describe the organisational embedding of cluster support in the regions which participated in the conference „Modern Structural Policy in a Europe of the Regions".

The development of cluster support in Flanders, in the northern part of Belgium, has its beginnings in the early 1990s with the implementation of the so-called Flemish 'Innovation System' (FIS) and the creation of the Institute for the Support of Innovations through Science and Technology (IWT-Flanders), an institute belonging to the Flemish government. The IWT is a key instrument in the support of research and development in Flanders, where the region of **Limburg** is located. In parallel to the foundation of the IWT, other institutes were also brought into being at this point and new regional development instruments were created. These included a range of technology institutes, a number of impulse programmes and the support of clusters. The development of the Belgian cluster approach was inspired by the work of Porter as well as practical experiences from the autonomous regional policies of Quebec in Canada and Catalonia in Spain. The cluster policy in Flanders had a pioneering role in the country for two reasons: first, it was central in the search for a governing principle for a new regional development policy and, second, it was fundamental to a shift from a traditional top-down to a bottom-up approach in innovation policy. As a result, clusters emerged in both high-tech areas and traditional economic sectors. One disadvantage of the bottom-up approach subsequently turned out to be low dynamism in some of the cluster activities, which emerged primarily as an extension of existing sectoral organisations, resulting in a failure to bring about the hoped for network effects. Based on these experiences, and due to changed funding frameworks and conditions, a re-orientation of cluster support occurred in the second half of the 1990s in Belgium, with a shift more towards the notion of technological locations of international standing such as that modelled by Silicon Valley in the USA. Most recently, the Flemish govern-

ment has undertaken a consolidation and re-assessment of cluster activities and created new framework conditions which are embodied in the 1999 Innovation Decree. An example of the current implementation of cluster support in the Limburg region is the 'Logistics Forum Limburg' whose activities were presented on the second day of the conference in Seminar V 'Logistics'.

In **NRW**, the cluster approach displays elements of both a top-down strategy, through its integration into the Objective 2 programme, and a bottom-up strategy through the support of cluster activities which have emerged relatively autonomously in particular areas, in part with strong business involvement. Overall, the regional policy process of developing competence fields in the Ruhr up to 2003 can be described as a linking of a scientifically researched approach on the one hand with policy and political aims on the other. Equally, due to the regionalised implementation structures, the attempt to operationalise cluster policy in NRW can be seen as a compromise between the interests of the state (*Land*) government on the one hand and the regional actors on the other (see Jakoby *et al*, 2002).

The moves towards developing a cluster policy in NRW began in the mid-1990s with an experimental programme to support cooperation projects (see Rehfeld *et al*, 1999). Seven competence fields were initially proposed in a Ruhr Memorandum put forward jointly by the German trade union association and a consultancy firm. In the next stage, an organisation called the *Kommunalverband Ruhr* (KVR), a public body with a regional policy mandate, put together an „Action Programme Ruhr 2000+" which took these competence fields into account but modified their definition to reflect their implementation options and opportunities. In parallel to these activities, an international consultancy firm was commissioned by the state government of NRW to put forward a proposal for the identification and support of competence fields. These emerged as: (1) energy; (2) logistics and transport; (3) information and communication; (4) medical technology; (5) new materials; and (6) microsystem technology (see MWMEV 2001). In the discussion on implementation, six additional competence fields were proposed: mining technology; design; new chemicals; mechanical engineering; water and waste technology; and tourism and leisure. These 12 competence fields now comprise the building blocks of the structural policy in the Ruhr with a state-owned company entitled Projekt Ruhr Ltd. taking on a key role in implementation. In 2002, the Projekt Ruhr published a list of ‚joint development foci' (Kommunale Entwicklungsschwerpunkte) which draw on the above mentioned competence fields as well as three ‚areas of action' – (1) city development and urban quality; (2) Emscher Park[3] and (3) the development of sites for commerce and services.

Support for these development foci is central to the 2001 „Ruhr Growth and Employment Pact" which is a joint resolution between regional actors with the aim of strengthening the economic area of the Ruhr[4]. The fact that the individual competence fields have emerged very differently reflects the range of starting points and development approaches. Some areas, such as the chemicals initiative ChemSite, have developed a highly professional cluster management structure. In other cases, such as energy or medical technology, a wide spectrum of bottom-up activities can be identified but without clear coordination or strategic direction. Other fields, such as mining technology or design, have not yet shown any clear cluster activities.

---

3 The Emscher Park was created at the start of the 1990s at the heart of the Ruhr area. The Park links various open spaces including the remains of pre-industrial cultural landscape, industrial landscape and post-industrial areas.

4 More than 140 individuals representing the economy, politics, science and society in NRW have given the Pact their support through signature since its introduction in 2001. The Pact has a specified employment goal – 200,000 additional jobs by 2005 – and is closely linked to the NRW Objective 2 programme.

The support of regional clusters in **Finland** must be considered in conjunction with the 'Centre of Expertise' programme created by the government in 1994. Together with the 'Regional Development Act', this programme aims to combine local, regional and national resources in the use and application of cutting edge research and know-how. The Centre of Expertise programme, which also receives funding from the Objective 2 programme, supports not only the development of regional strengths and competences but also cooperation between the various Centres throughout the country. The programme started in 1994 with eight Centres; in 1998 and 2002 it was expanded to include both new Centres and additional thematic areas. By 2003, 22 Centres of Expertise were operating in Finland within which 45 clusters could be identified. Their lifespan runs from 2003 – 2006 ie. they will run to the end of the 2000-06 Structural Fund programming period. The Centres, which are located throughout the Finnish territory, also compete for national base financing which is decided on an annual basis. A cluster is classified as the collaboration of research, training and business activities as well as a functioning management with the support of the public actors in the region. The Centres are not purely technological in nature but also operate in areas such as tourism and culture. The programme therefore aims just as much at the modernisation of traditional industries as the development of new growth sectors.

In England, the support of economic clusters is an integral part of a wide-ranging regional development concept. Thus, cluster support is carried out throughout the whole region of Yorkshire and Humber. The lead in this area is taken by the Regional Development Agency (RDA) 'Yorkshire Forward' – one of nine RDAs in England – and comprises part of a strategy for the economic development of the region. The RDAs are so-called 'non-departmental public bodies'. A large proportion of the funding resources of the Objective 1 programme are utilised for the support of clusters. Action plans are put together for each cluster which cover planned activities over a three year period. The managing authority of the Objective 1 programme created an organisation in 2003 called 'Renaissance South Yorkshire' which is responsible for the implementation of cluster policy in the region of **South Yorkshire**. This organisation is also responsible for ensuring the long-term viability of projects after 2006. A central objective of the cluster policy is to encourage the financial and personnel participation of private firms in the clusters. A wide-ranging examination of the impact of cluster support to date is planned for the end of 2004 and start of 2005 and will include evaluation and benchmarking with other regions. On the second day of the conference, a representative from South Yorkshire reported as part of Seminar III 'Regional Growth Opportunities in Health and Life Sciences' on his experiences with cluster support in the area of bio-technology.

Cluster support in **Upper Austria** is a key component of the strategic programme 'Upper Austria 2000+' which is financed through the so-called 'Future Fund' of the Upper Austrian *Land* government. Around a quarter of the available programme budget of € 80.8 million is provided for cluster-oriented measures. The cluster approach in Upper Austria targets the expansion of areas of economic strength, the support of competitiveness and innovativeness particularly in small and medium-sized firms and the creation of innovations through business cooperation in networks. Cluster activities are financed through public funding as well as contributions of 'Cluster Partners' and sponsors. The self-financing level in the clusters ranged in 2003 from ca. 5% in the mecatronic cluster to 40% in the automobile cluster but a self-financing target of 50% overall is the goal by 2008. The Upper Austria Technology and Marketing Company (TMG), which is a regional investment agency situated in Linz, is responsible for the implementation of cluster support in the Upper Austrian region. The steering and implementation of cluster activities is carried out in three bodies:

- a 'Cluster Council', comprising 10-12 firms which supports the lead organisation in the area of strategic direction and evaluation of the activities,

- a ‘Cluster Team’, comprising 4-7 people which is responsible for the planning and implementation of the activities, and

- a ‘Jours-Fixes’ with representatives of the social partners, and particularly the Chamber of Commerce of Upper Austria, which provides political perspective and agreement on the activities.

The cluster activities of the TMG include information and communication, qualification, initiation of cooperation projects, marketing and public relations and internationalisation. The TMG also undertakes extensive monitoring, control and benchmarking as part of its cluster management role. On the basis of defined objectives, activities are continually checked and assessed against a range of indicators such as customer contact, participation in innovation programmes, vocational training, marketing or the improvement of the innovation culture. The cluster support in Upper Austria has been evaluated by external evaluators who noted a high degree of success to date in meeting activity targets. Future plans, undoubtedly also of relevance to other cluster regions, are likely to include the development of quality criteria and the introduction of measures for personnel development in the area of cluster management. In addition, the topics of ‘increasing the self-financing quota’ and the refinement of cluster methodology are on the agenda. The Upper Austrian approach to cluster support was discussed in Seminar III ‘Regional Growth Opportunities in Health and Life Sciences’ on the second day of the conference.

Sweden has a strongly regionalised implementation system for the Structural Funds, within which the County Administrative Boards (CABs) play the main role, including that of the managing authorities. The development of clusters has always been supported through the Objective 2 programmes. The central coordinator of the programmes is the organisation NUTEK, a national agency of the Swedish Ministry of Industry, Employment and Communications. NUTEK has national level responsibility for new firm formation, business development and regional development – competences which also include the national cluster policy. NUTEK supports networks and alliances of small and medium-sized enterprises and undertakes monitoring, evaluation and research. The implementation of the cluster policy is undertaken within the framework of the national programme ‘Visanu’ which is a cooperation project involving not just NUTEK but also ‘Invest in Sweden Agency’ (ISA) and the ‘Swedish Agency for Innovation Systems’ (VINNOVA). The type of activities which are undertaken as part of Visanu include process management, knowledge transfer and international marketing. Prerequisites for the support of clusters include:

- their embedding in the framework of a regional development programme,

- their international competitiveness or the existence of corresponding potential in this area,

- the operation of a business-driven cluster management, and

- an openness among those responsible for information exchange with other cluster representatives.

The **Basque Country** in Spain can, together with Catalonia and Scotland, be counted as one of the front runners in the development and implementation of a regional cluster strategy in the 1990s (see Porter, 2000). Key influences in this process included the Porter approach to cluster development mentioned in the introduction of this report as well as the input of consultancy firms which were commissioned to study the competitiveness of the Basque Country. The results of this study, and the corresponding proposals for implementation, were integrated with particular emphasis on

SMEs into the so-called Competitiveness Programme, which was agreed by the Basque government in 1991 as part of its Industrial Policy Plan 1991-95. The Basque government was tasked with the creation of working groups which ultimately formed the cores of the subsequent clusters. In addition, and as a result of the strong strategic drive, cluster support became integrated as part of a wider economic development strategy and was supported by corresponding instruments.[5] The Basque government then further agreed a Basque Technology Plan and the RETO-Programme (business management) as well as an Inter-Cluster Committee.

A total of nine clusters were brought into being under government supervision: Bilbao harbour, space technology, paper production, automotives, tourism and food industry; three of which were created on the recommendation of the consultancy firm: electronic machinery; mechanical engineering; and steel working. The cluster approach has been implemented in the region as a top-down model to „improve competitiveness on the basis of a broad cooperation strategy" which is expanded bottom-up at implementation level through the various relevant actors. Around half of the financing of cluster activities comes from the public purse together with private funding through membership contributions. The level of public financing is dependent on the area in which the cluster is operating and draws from various national and/or regional funding schemes including the EU Structural Funds. A peculiarity of the Basque cluster approach is the so-called „Cluster del Conocimiento" (Knowledge cluster) which draws on Porter's philosophy of the IFC (Institutions for Collaboration). This cluster was formed in the Basque Country to act as a support instrument for the other clusters created by the Basque government. It comprises a ‚horizontal' cluster linking knowledge institutions, research and educational institutions, colleges as well as consultancy firms and firms operating in the area of production services (management and information). In addition, firms from all sectors (end users of knowledge services) are represented in this cluster. The activities of the cluster include the preparation of meetings and events, the support of research projects, the initiation of institutional cooperation projects as well as the publication of studies and reports and the organisation of international conferences. Cluster policy is understood in the Basque Country to be part of industrial and economic policy and is implemented as such. There is no close link to the Objective 2 programme in this case, although funding resources from the programme are used to co-finance cluster activities.

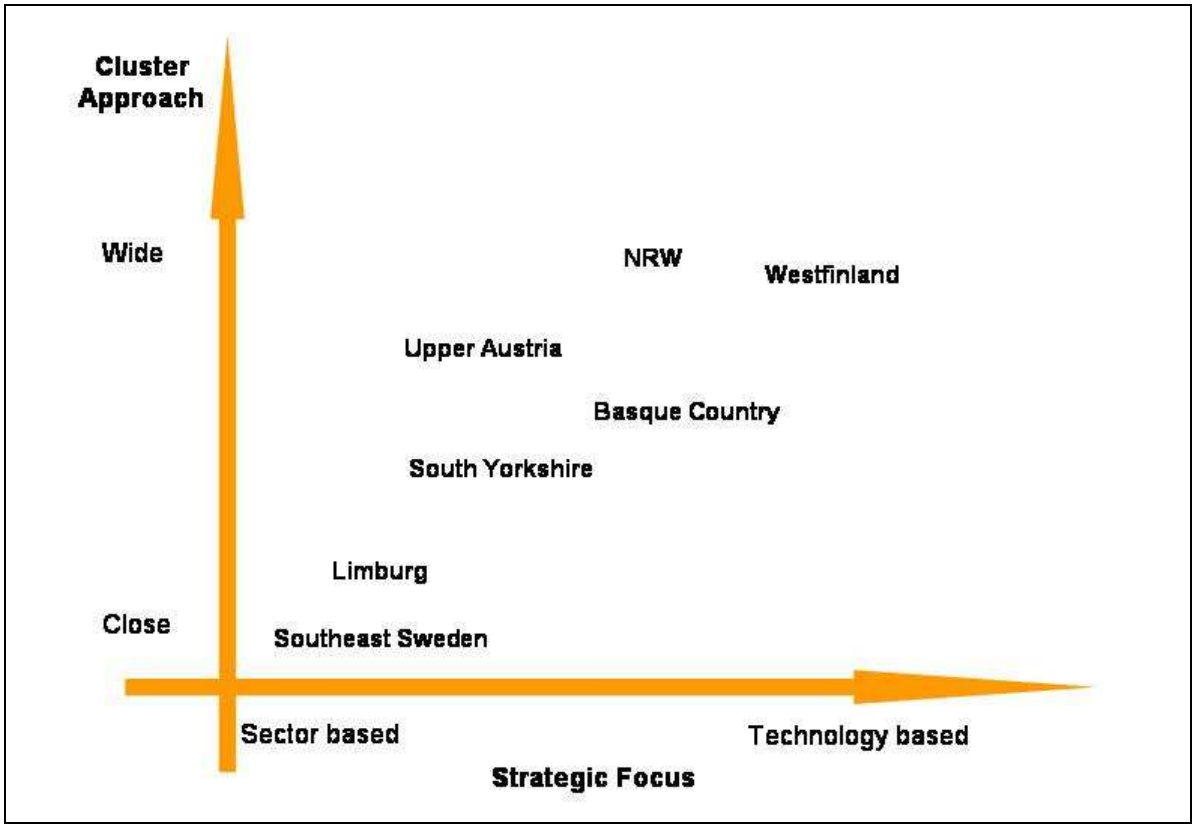
In summary, it can be seen that a cluster orientation relies on the active involvement of all participants and this increases the difficulty of both planning and determining expected outputs in comparison to previous Structural Fund concepts. A structural policy oriented towards competence fields acts more as a form of catalyst for the interaction between business and public actors. How this interaction should take place is viewed very differently by participants. For this reason, it would be important for any future implementation of a competence field-oriented policy approach to establish standards based on quality criteria addressing, for example, prerequisites and realistic aims, process planning and the requirements for public financial support.

Figure 3 presents the various cluster activities based on the scope of the cluster approach and the strategic focus. Thus South-East Sweden has a very narrow cluster approach with a strong sectoral link. West Finland, on the other hand, has a broad and technology-oriented cluster approach. These variations can be summarised under two idealised types.

---

5 Including EZTEN (risk capital) and EUSKALIT (Basque Association of Quality Improvement)

Figure 3
Variations of the cluster approach in selected European regions



In **Type A**, cluster support can be described as representing a comprehensive regional development concept. In this context, clusters are seen in particular from the perspective of (predicted) future developments. Cluster activities have the clear and firm objective of initiating processes in the regions (for example new firm formation, creation of infrastructure or the development of human capital) designed to make the regions 'fit for the future'. **Type B**, on the other hand, draws from the existing and internationally-oriented economic strengths of the regions and concentrates on achieving their further development. These regional strengths do not necessarily have to correspond with key future trends but the creation of a cluster in these cases is based rather on areas of current significance. Cluster support, therefore, is not the subject of a general development strategy which attempts to drive forward economic change in the region.

Table 9
Idealised Types of Cluster Approach

	– Type A – Comprehensive regional development policy	**– Type B – Strengthening existing clusters**
Cluster concept	Broad	Narrow
Management approach	Policy oriented	Business oriented
Implementation system	‚Subsumed approach'	‚Differentiated approach'
Activities	Top down	Bottom up
Instruments used	Broad range of traditional and new instruments	- Network formation - Monitoring - Key projects
Risks	Danger that the approach is diluted	Path dependency
Challenges	Concentration of strategic areas of operation	Complementary strategy for region without cluster potential

Both types have advantages and disadvantages (see Table 9). There is the danger with Type A that the approach is too broad and that the attempt will be made to fund more and more activities under the heading of cluster policy. If no clear priorities or strategic focus are applied, then the ‚watering can' is likely to re-enter by the backdoor. Conversely, with a narrow cluster approach, there is the danger that traditional sectoral paths continue to be followed and thus innovative developments are not taken seriously or supported.

4 Summary and Conclusions

The strategic focus on clusters is one of the fundamental innovations in structural policy in recent years. This focus promises particular success for regions undergoing economic restructuring as they already have the economic structures which can provide the basis or link point for new innovative developments. For this reason, this comparative report has concentrated on Objective 2 regions which practice cluster policy in one form or another and wish to develop this approach further. What has emerged is the wide variation in the embedding of the cluster approach in the Structural Fund programme structure, as well as in the relationship between European regional policy and national cluster policy.

This phenomenon cannot simply be explained by the regional peculiarities in structural policy or the available financial resources in each of the regions but rather also reflects differing interpretations of cluster policy. The regions have clearly exploited the scope for manoeuvre which exists within the framework of European structural policy to integrate cluster support within their programmes. On the one hand, the networking and innovative capacity of existing and internationally visible clusters has been supported. On the other hand, a broader approach has been taken which identifies not only existing strengths but also areas of future potential and overall can be viewed more as a comprehensive regional diversification strategy.

The mid-term evaluations of the 2000-06 programmes were the main reason and background for the structural policy conference in NRW. The evaluations are naturally very broad in coverage and deal with a wide range of questions from the European Commission. This report focused on the examination of cluster-oriented structural policy. Not all the mid-term evaluations of the regions ha-

ve covered the implementation of a cluster oriented development strategy depending on whether such a strategy was explicitly included in the respective programme and operationalised through corresponding objectives.

In terms of cluster support it becomes clear that the evaluators' conclusions reflect differing interpretations. In some cases, including for example North Rhine Westphalia, importance is placed on the **targeted maturing of the cluster approach** and on making its implementation more professional. For future funding activities in NRW, individual projects will specifically have to consider the state of play within the various competence fields and identify responsible actors who can provide professional cluster management. In some cases, steps will need to be taken to bundle activities while in others, the focus will be more on applied and practical networking with firms. The impression to date is that, for most competence fields or cluster areas, it cannot yet be assumed that the interaction of the various activities will automatically lead to dedicated permanent, independently sustainable structures. In the start-up phase, it was undeniably useful to stimulate and support bottom-up activities but in the coming years – particularly in the light of fewer available resources – the question of the strategic importance of further projects and activities for the permanent development of the competence fields should have a more prominent role.

The mid-term evaluation of the Objective 1 programme in South Yorkshire recommends that there should be a **re-examination** of the cluster areas defined under Priority 1 with regard to their current relevance and importance. The definition of the clusters, as well as the estimated targets for gross value added and employment, were undertaken at the end of the 1990s in a phase of economic upturn and the overly optimistic expectations were further influenced by the boom in technology-oriented firms, particularly in the information and communication branches. Taking into account activities to date, and looking forward to future developments, environment and energy are additional areas which should be integrated into the cluster 'Advanced production technology and metals'. The biosciences cluster should be expanded to incorporate the area of medical instruments. In this context, a re-naming of the existing cluster to become 'Biosciences and health technologies' should be considered. Finally, the mid-term evaluation supports a closer linkage and integration within the existing clusters of the development of regional human capital on the one hand and the support of firms on the other.

The mid-term evaluation of the Upper Austria region highlights the **critical restrictions** associated with the nature of the eligible area in the implementation of regional strategies within the framework of the Objective 2 programme. The requirements of a modern, network-focused technology policy are fundamentally at odds with the requirements of EU co-financed regional programmes. The strict boundaries of the eligible area mean that strategies which aim to promote cooperation through clusters, or increase the networking ability of firms through 'soft' investment, cannot be implemented through the Objective 2 programme, or only with considerable restrictions, and **parallel measures are therefore required through the activities of the *Land* or federal governments**.

In other evaluations, additional aspects have been highlighted. The *ex ante* report in Limburg, for example, suggests a **stronger diversification** and the avoidance of an overly narrow focus on a small number of clusters. The question of the **relationship between centralised and more strongly regionalised aspects** of cluster management was a theme in West Finland.

It is thus possible to assert that, as with the issues of embedding in the programmes and their strategic focus, the evaluations do not always present a unified position with regard to the strategic fo-

cus of the clusters or cluster management. The cluster approach is generally regarded as being useful but it is also obvious that associated problems do exist which require urgent clarification (although not necessarily a single solution). Above all, this relates to the relationship between a growth and equalisation policy focus.

The basic starting point of „strengthening strengths“ has to be qualified by the fact that not all regions are equally strong and therefore this approach will not be universally effective. The issue of territorial equality must also always be a goal for regional structural policy. For this reason, strategic concepts are critical for those regions which do not necessarily have strong pre-conditions for a cluster policy. Only when this area of tension is resolved, in whatever form, will there be any long-term chances of success for targeted cluster policy. In addition, the relationship between top-down and bottom-up elements is central. Successful cluster management depends on bottom-up components as it cannot function without the active participation of firms. However, particularly when a broad approach is being taken, a directive top-down input is also necessary (linked also to distributive decisions) in order to avoid a lack of coordination.

The advantages and disadvantages of the different interpretations are not clear-cut and thus it would not be right to put forward one particular approach as *a priori* superior. However, a definitional clarification would be useful – an issue which was emphasised a number of times in the conference workshops. In particular, a distinction should be made between the use of the term cluster to describe economic structures and the strategic focus on clusters within the framework of the Structural Funds. Further, it would appear more important to track cluster policy through on-going monitoring and control and to incorporate this into a process of learning. Given the generally long-term nature of cluster policy, short-term employment effects represent a very inadequate indicator for evaluation or the assessment of success. Indicators or quality criteria are necessary (at least in addition) which

- realistically capture the current position of the cluster in international comparison (benchmarking),
- provide timely signals of any need for alteration (eg. the development of new firm formation figures),
- point to self-sustaining structures (eg. financial involvement of businesses), and
- highlight synergy effects (eg. network building or intensity of cooperation).

The assessment of the cluster approaches in the mid-term evaluations is basically positive but by no means uniform. In addition, the mid-term evaluations point to areas of tension which must be clarified in advance of any further embedding of the cluster approach in European structural policy. These relate to

- the relationship between a focused growth orientation (‘strengthening strengths’) and a broader equalisation orientation in policy,
- the balancing of top-down (coordination, distributive decisions) and bottom-up components (self-organisation),

- the question of the extent to which classical instruments of structural policy, such as investment or infrastructure support, can be used in the formation of clusters or whether new instruments (and therefore also implementation structures) are necessary, and

- the question of the extent to which the regulations of European structural policy make effective cluster policy more difficult (eg. the current definition of eligible areas which is likely to change after 2006).

In the next few years, it will be critical for the regions to create professional and, as far as possible, self-sustaining cluster management structures. Further, it will be prudent in the long-term to base cluster management on quality criteria to a greater extent than before and to re-examine the criteria used to date. After 2006, it would also appear sensible to embed cluster activities explicitly in programme Priorities and Measures, as has already been undertaken by a number of the European regions considered in this report. In terms of the strategic focus of the European Commission, a frequent question in the workshops was whether the cluster activities of the various DGs should not be more closely coordinated. Experience has been gained within the framework of business and enterprise policy in particular which could be useful in the structural policy context. With regard to European spatial policy, it is worth asking whether the cluster approach demands a **differentiated spatial framework** that takes into account the various specialisations of the regions. Such a discussion would be rooted in the understanding that the strength of Europe lies in the diversity of its regions and their complementary characteristics.

In terms of European structural policy, to what extent does this policy area support or hinder the cluster approach? The intention of the European Commission to move away from strict area designation after 2007 represents an important step in allowing the proper consideration of economic linkages within structural policy. One open question relates to the role of SMEs. Cluster policy in Europe is mainly, and rightly, an SME policy. Many clusters, however, operate on the basis that small, medium and large firms work in cooperation. In practice, while solutions can be found to the associated administrative problems with funding (a fact highlighted in a range of discussions in the workshops), a clear policy direction does not exist. This is particularly true given that funding support, as with the cluster concept, is increasingly focused on enterprise networks and less on individual firms. This network emphasis is also problematic for the steering and assessment of cluster support (monitoring and evaluation), particularly in any consideration of cumulative effects. Finally there is the question of the focus of funding on projects on the one hand, and long-term development possibilities for clusters on the other. When a very long-term perspective to cluster development is taken, and thus impacts can only be measured after a considerable delay, then there is a clear necessity to have distinct projects which, where possible, build on one another. A multi-annual perspective would be worth considering within which there could be a regular assessment of the chances of success based on agreed and binding objectives.

Proposals, standards and quality criteria could be developed within the European structural policy framework. This should also include exchange and learning between European regions. The corresponding regulations of the European Commission should, however, continue to leave open the possibility for regionally-adapted implementation structures.

References

Beobachtungsnetz der europäischen KMU (2002): Regionale Cluster in Europa. Beobachtungsnetz der europäischen KMU, 2005, Nr. 5, Veröffentlichungen – GD Unternehmen der Europäischen Kommission

Beobachtungsnetz der europäischen KMU (2003): KMU und Kooperation. Beobachtungsnetz der europäischen KMU, 2002, Nr. 3, Veröffentlichungen – GD Unternehmen der Europäischen Kommission

Ekonomiaz. Revista Vasca de Economía (2003), n° 53 monográfico: La Política de Clusters en el País Vasco. Servicio Central de Publicaciones del Gobierno Vasco, Donostia-San Sebastián

Erdmenger, Katharina / Ziegler, Astrid (2004): Strukturpolitik nach 2006 – Der Vorschlag der Europäischen Kommission. In: WSI-Mitteilungen, Heft 6, pp. 325-331

EUK Europäische Kommission (1999): Mitteilung der Kommission über die Strukturfonds und ihre Koordinierung mit dem Kohäsionsfonds – Leitlinien für die Programme des Zeitraums 2000-2006. Brüssel: Amtsblatt der Europäischen Gemeinschaften 1999/C 267/02

EUK Europäische Kommission (2003): Die Strukturfonds und ihre Koordinierung mit dem Kohäsionsfonds – Überarbeitete indikative Leitlinien. Brüssel KOM(2003) 499

EUK Europäische Kommission (2004): Dritter Bericht über den wirtschaftlichen und sozialen Zusammenhang. Brüssel: Mitteilung der Kommission KOM(2004) 107

EUK Europäische Kommission (o.J.): Final report of the Expert Group on enterprise clusters and networks. Brüssel: Enterprise Directorate-General

Europäischer Rat (2000): Schlussfolgerungen des Vorsitzes. Lissabon: Sondertagung am 23.-24. März 2000

G.I.B. Gesellschaft für innovative Beschäftigungsförderung mbH (2004): Integration von Arbeits- und Wirtschaftsförderung – Ansätze und Erfahrungen, Perspektiven und offene Fragen. Dokumentation des Workshops vom 22. Juni 2004. Bottrop

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit (o.J.): EU-Annäherung und Clusterförderung – Konzeptionelle Grundlagen einer clusterorientierten Politik der Wirtschaftsförderung. Internet: http://www.gtz.de/eu-clusters

Independent High-Level Study Group (2003): An Agenda for a growing Europe. Brussels

Jakoby, Herbert u.a. (2002): Partners in Development. A Report on Structural Policy in Scotland and North Rhine-Westfalia, edited by Scottish Enterprise, Scottish Executive and the Ministry of Economy ,Energy and Transport of the State of North Rhine-Westfalia

Ketels, Christian (2004): European Clusters

Kilper, Heiderose / Lehner, Franz / Rehfeld, Dieter (1996): Wegweiser in die Zukunft : Perspektiven und Konzepte für den Strukturwandel im Ruhrgebiet. Essen

MWMEV NRW Ministerium für Wirtschaft und Mittelstand, Energie und Verkehr des Landes Nordrhein-Westfalen (2001): Kompetenzfelder für das Ruhrgebiet. Düsseldorf: MWMEV NRW, Einzelausgaben für die Kompetenzfelder Energie, Verkehr und Logistik, Information und Kommunikation, Medizintechnik, Neue Werkstoffe sowie Mikrosystemtechnik

Porter, Michael E. (1990): The competitive advantage of nations. New York

Porter, Michael E. (1998): On competition. Boston

Porter, Michael E. (2000): Basque Competitiveness. Boston

Rehfeld, Dieter (1999): Produktionscluster – Konzeption, Analysen und Strategien für eine Neuorientierung der regionalen Strukturpolitik. München und Mering

Rehfeld, Dieter / Grote Westrick, Dagmar / Gärtner, Stefan / Muth, Josef / Öz, Fikret (2004): Strategische Handlungsfelder in Nordrhein-Westfalen. Endbericht für das Ministerium für Wirtschaft und Arbeit des Landes Nordrhein-Westfalen. Gelsenkirchen: Institut Arbeit und Technik (unveröffentlicht)

Rehfeld, Dieter / Baumer, Doris / Wompel, Margarete (2000): Regionalisierte Strukturpolitik als Lernprozess – Verbundspezifische Projekte im Rahmen einer regionalisierten Strukturpolitik. Erfahrungen in Ziel 2-Regionen, Zwischenbilanz, Best Practice und Konsequenzen für zukünftige Projekte. Gelsenkirchen: Graue Reihe des Instituts Arbeit und Technik 2000-11

Rosenfeld, Stuart A. (2002): Creating Smart Systems – A guide to cluster strategies in less favoured regions. European Union-Regional Innovation Strategies. Carrboro, North Carolina, USA

Sölvell, Örjan / Lindqvist, Göran / Ketels, Christian (2003): The Cluster Initiative Greenbook. Stockholm

Taylor, Sandra / Bachtler, John / Polverari, Laura (2001): Structural Fund evaluation as a programme management tool: comparative assessment and reflections on Germany. In: Informationen zur Raumentwicklung, Heft 6/7, pp. 341-357

Tabelle 10
Ausgewählte strukturpolitische Indikatoren zu den Regionen

Region	Population		Economy						Labour market							Education			Region
					Employment by sector (% of total), 2002				Employment rate (ages 15-64 as % of pop. Aged 15-64), 2002			Unemployment rate (%)				Educational attainment of persons aged 25-64 (% of total), 2002			
	1000 inhabitants, 2001	Population density (inh./km^2), 2001	GDP growth (annual average % change), 1995-2001	GDP/head (PPS), 2001, EU15=100	Agriculture	Industry	Services	EPO patent applications per million inh., average 19999-2000-2001	Total	Female	Male	Total, 2002	Long term unemployed, 2002 (% of total unempl.)	Female, 2002	Young, 2002	Low	Medium	High	
EU15	379604	117,0	2,5	100,0	4,0	28,2	67,7	153,6	64,2	55,6	72,9	7,8	40,2	8,8	15,2	35,4	42,9	21,8	EU15
Austria/ Upper Austria (Oberösterreich)	1367	114,1	2,7	108,2	6,8	35,3	57,9	189,7	70,9	62,9	78,8	3,1	21,1	3,4	5,1	24,8	60,3	14,9	Austria/ Upper Austria (Oberösterreich)
Belgium/ Limburg	796	328,8	2,3	89,9	1,6	32,9	65,5	84,8	61,1	51,3	70,5	5,3	32,5	6,7	13,2	42,4	33,4	24,2	Belgium/ Limburg
Finland/ West Finland (Etelä-Suomi)	1821	34,8	3,6	97,2	5,5	32,5	62,0	291,4	67,7	65,1	70,3	9,1	27,1	9,6	22,0	26,0	43,6	30,3	Finland/ West Finland (Etelä-Suomi)
Germany/ North Rhine-Westphalia	18027	529,0	1,2	101,5	1,4	32,8	65,8	284,3	63,2	55,0	71,5	7,9	45,5	6,8	9,5	20,1	61,2	18,7	Germany/ North Rhine-Westphalia
Spain/ Basque Country (Pais Vasco)	2068	284,9	3,9	105,1	2,0	37,9	60,1	35,4	61,1	48,1	74,0	9,4	41,2	14,2	22,1	48,2	17,7	34,1	Spain/ Basque Country (Pais Vasco)
Sweden/ South-East Sweden (Smaland med Öama)	797	24,0	2,1	95,8	4,1	30,7	65,2	127,0	75,2	73,3	77,1	3,9	18,1	4,1	9,6	23,4	56,3	20,3	Sweden/ South-East Sweden (Smaland med Öama)
United Kingdom/ South Yorkshire	1267	812,2	2,0	77,1	0,6	28,6	70,9	52,7	67,9	61,1	74,4	5,2	24,6	3,7	12,4	21,5	56,2	22,3	United Kingdom/ South Yorkshire

Quelle: European Commission (2004): "Third report on economic and social cohesion" pp. 187-204