4 Regional capabilities and the European Employment Strategy

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1 The regional dimension of the European Employment Strategy

The European Employment Strategy (EES), among other things, was designed to improve the integration of groups which are currently underrepresented into the labour market. Women, older workers, the long-term unemployed, young people, early school leavers, low-skilled workers, people with disabilities, immigrants and ethnic minorities are explicitly mentioned in the 2003 Employment Guidelines. The creation of a more inclusive national employment order is being pursued above all through a new, more open method of co-ordination, based on the definition of common targets, and a common evaluation of the outcomes and mutual learning processes (see Philippe Pochet's chapter 12 in this volume; De La Porte, Pochet and Room 2001; Hodson and Maher 2001; Ferrera, Matsaganis and Sacchi 2002; Scharpf 2002).

Initially, the EES was focused mainly on the national level. In 2000, the foundations for local and regional employment policies were laid. Since 2000, the importance of the regional level has not only been emphasised in the Employment Guidelines, the European Commission also calls for a 'local dimension for the European Employment Strategy'.[1] This was legitimated with a high share of government expenditures at the local and regional level, the employment potential of smaller businesses and the large impact of the third sector, the non-profit organisations.

Until now, the effects of this decentralisation have been extremely limited, according to the Commission in an evaluation of the EES in 2002.[2]

[1] EC (2000a).

[2] 'Since European policies tend to reach the local level not so much at the policy track but in the context of funding operations, respective incentive measures and, particularly the ESF [European Social Fund], have played a major role . . . The EES, which is itself partnership based, tries to stimulate *a partnership approach* also at local level, visible for instance in the promotion of Local Action Plans for Employment (LAP), which proved that such an approach is feasible. Local authorities are expected to play a major role in this context, but there is still a significant lack of information not only with regard to

This may be the result of defining a given region too narrowly – a definition that focuses on the social and ignores the productive dimension of the region. Regional employment and unemployment disparities are at the centre of the regional dimension of the EES.[3] Regions are considered as areas of social services and social exclusion, but not as areas of entrepreneurial activities and innovation strategies. The Commission seeks and promotes the involvement of regional and local authorities, public employment services, social partners and civil society, but it does not mention the involvement of entities such as regional companies and business associations. Regional innovation policies are also not mentioned.[4] The productive and economic prerequisites for the creation of regional jobs have not yet been incorporated into the EES; it thus risks limiting its territorial dimension to a mere symbolic practice, or to a policy which mainly exists to redistribute funds (via the structural funds).

Our thesis is that a more comprehensive approach to regional employment and unemployment policies requires that *the region has to be regarded as a productive system.* Such a system has to be characterized by a set of horizontally and vertically interrelated companies and a regional order (public authorities, educational facilities, research and development institutes, industrial relations and business associations . . .) facilitating the creation of new, and the recombination and path-dependent development of existing, productive capabilities. By these means, the productive bases of regional disparities can be directly addressed without having to rely merely on redistribution policies. *Regional capabilities* are the crucial basis for regional employment. Regional employment strategies should therefore not only concentrate on redistribution and on patterns of social exclusion, but should also address the origins of unsatisfactory

techniques and instruments, but also with regard to their role as such . . . The role of the social partners in local strategies is less pronounced, and that of businesses and other groups in society even less.' (Impact evaluation of the European employment strategy supporting EC 2002b.), emphasis by the author.

[3] In the 2003 Commission proposal for the 'Guidelines for Employment Policies of the Member States' it is stated: 'Member States should implement a broad approach towards reducing regional employment and unemployment disparities. The potential for job creation at the local level, including in the social economy, should be supported and partnerships between all relevant actors should be encouraged. Member States will:
– promote favourable conditions for private sector activity and investment in regions lagging behind;
– ensure that public support in regions lagging behind is focused on investment in human and knowledge capital, as well as adequate infrastructure.
The potential of the Cohesion and Structural Funds and the European Investment Bank should be fully exploited' http://europa.eu.int/comm/employment_social/employment_strategy/ prop_2003-gl_en.pdf; accessed on 17 July 2003.

[4] See chapter 7 by Robert Villeneuve in this volume.

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regional employment performance by enhancing regional productive competences.

There is also a second way in which the EES could profit from an increased involvement at the regional level. In section 4, we will show that more inclusive labour market regimes are empirically linked to higher educational levels and more knowledge-based forms of production (for example, advanced services). Supporting regional production networks may therefore, also be an indirect way of increasing the inclusiveness of labour markets.

This chapter is based on the analysis of regional innovation systems (Braczyk, Cooke and Heidenreich 1998). It will thus focus on the *collectively* created, institutionally and organizationally reproduced productive capabilities of a region or territory. How can these capabilities be linked to labour market structures?

In section 2, the institutional and organisational bases of regional capabilities and their path-dependent evolution will briefly be summarised. We will then (section 3) analyse the two-dimensional structure of regional capabilities and discuss their possible connection to regional patterns of labour market exclusion. In section 4, we will address the possibilities of political support for regional innovation systems. Section 5 briefly concludes.

2 The evolution of regional capabilities

The regional concentration of industrial competencies is a well-known phenomenon – at least since the classic work of the British economist Alfred Marshall (1982 [1890]). Observing the early industrial districts of England, he wrote:

> The mysteries of the trade become no mystery; but are as it were in the air . . . Good work is rightly appreciated, inventions and improvements in machinery, in processes and the general organisation of the business have their merits promptly discussed: if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of further ideas. (Marshall 1982: 225)

These regional capabilities are not a characteristic of early industrialisation; industrial competencies are still regionally concentrated today. This is true for traditional industries as well as for the information technology (IT) and multimedia industry, finance services, advertising and biotechnology. In Germany, for instance, the multimedia industry is concentrated in Cologne, Munich and more recently in Berlin; the microchip industry is based in Munich and Dresden and their

immediately surrounding areas. In Hamburg, the advertising industry plays a considerable role in the city-state's economy, and nearly all German kitchens are manufactured in eastern Westphalia. The automobile and mechanical engineering industries are of major importance in the Stuttgart region, and the German biotechnology industry is concentrated in Munich and around Heidelberg. Financial services are concentrated in Frankfurt, textile mechanical engineering in the Krefeld region and medical technology and instruments are produced in the Tuttlingen region.

This regional concentration and accumulation of industrial capabilities is addressed in the discussion on industrial districts, on regional and national clusters (Cooke 2002), on learning regions and on regional innovation systems (Storper and Salais 1997, Braczyk, Cooke and Heidenreich 1998; see the overview in Storper 1997 and Amin 1999). While the discussion on clusters is focused on the industrial structure of a region and the existence of territorially concentrated, socio-culturally embedded and institutionally stabilized interorganizational networks that facilitate the accumulation, recombination and utilization of technical knowledge in specific technological fields, the discussion on regional innovation systems addresses the *institutional order* of a region and the provision of regional 'collective competition goods' (Le Galès and Voelzkow 2001).

These regional innovation systems (RIS) can be defined as

> places where close inter-firm communication, socio-cultural structures and institutional environment may stimulate socially and territorially embedded collective learning and continuous innovation . . . Basically, [a] regional innovation system consists of two main types of actors and the interaction between them . . . The first actors are the firms in the main industrial cluster in a region including their support industries. Secondly, an institutional infrastructure must be present, i.e., research and higher education institutes, technology transfer agencies, vocational training organisations, business associations, finance institutions, etc., which hold important competence to support regional innovation. (Asheim and Isaksen 2002: 83–84)

The basis of regional capabilities is the experience and implicit knowledge that regional businesses and employees have accumulated through their close involvement in the production of a specific product or the use of a specific technology. Such implicit, context-specific, non-tradable competencies can best be passed on through direct interactions and regional co-operation networks facilitated by close geographic proximity. Regional capabilities are therefore anchored in the institutions and networks that facilitate such patterns of *inter-organisational learning*.

Regional capabilities are not only the result of current organizational or political strategies. Many regional case studies have demonstrated

that regional capabilities are developed in a sometimes century-long history of cooperation and competition, and that accidental factors often have a much stronger impact than planned political interventions. Regional trajectories, regional variation, selection and stabilisation processes (see Nelson 1995; Cooke 1998a), sub-optimal, cumulative and path-dependent learning processes (Edquist 1997) and regional inertia and lock-in-effects have to be taken into account so as not to overestimate the contribution of a regional innovation policy in improving the performance of regional employment. An evolutionary framework is useful because it points to the limits of political interventions: simply put, not every major university can establish a biotechnology district, and not every country can establish a Silicon Valley or a global financial services centre.

An evolutionary perspective on regional innovation systems has to show what the basic units of the regional innovation system are, and what the 'mechanisms' of regional variation, selection and stabilisation processes are. First, similar to organisational rules and routines that determine the capabilities of organisations (see Chandler 1992; Teece, Pisano and Shuen 1997; Teece 1998), the capabilities of a region are anchored in institutionally stabilised patterns of co-operation and competition (*basic units*). These patterns are the 'memory' of a region and are often the result of long-lasting interorganisational experiences of co-operation and conflict. The accumulation of implicit knowledge in a region results from these recursive processes of interaction; they are crucial for shaping the learning and innovation opportunities that regional firms have.

Second, the *variation* of regional capabilities requires the development of new intercompany patterns of relationship and co-operation. This can be accomplished through the creation of start-ups or new regional institutions, for example.

Third, new patterns of relationships can be more easily established when they have the benefit of being able to rely upon previous regional capabilities, relationships and institutions (*selection*). This refers to the path-dependent nature of regional capabilities. Previously developed productive capabilities constrain certain trajectories and facilitate the development of others. For instance, a region such as Stuttgart, which is dominated by the automobile, electronics and mechanical engineering industries, film, entertainment and multimedia firms would have very few opportunities to co-operate with established industrial companies, and this would considerably reduce their chances of survival. On the other hand, the chances for production-related services would be excellent (Strambach 2002).

Fourth, patterns of co-operation and learning between firms can be stabilized by regional institutions or governance structures (*stabilisation*).

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Ethnic or professional communities are possible means for attaining such a stabilization. Such a phenomenon has been demonstrated in the central Italian industrial districts, the former Parisian and New York clothing districts and the current Frankfurt banking milieu. An alternative to such a *socio-cultural* basis of trust is the idea of regional and national institutions such as employers' professional and business associations, trade unions, schools and universities, public research and development institutions or public technology transfer institutions, which work to stabilise regional patterns of communication, cooperation and mutual learning by the provision of collective competition goods.

In conclusion, regional capabilities are a possible focus for strategies which could be implemented to improve the regional employment and unemployment situation. Regional capabilities are one example of a collective investment in people's capabilities, which are at the centre of a capability approach. The goal of this approach is not only to increase the number of regional jobs, but also to increase the technical content, the innovativeness and the sustainability of these jobs. While an employment-centred approach tries to reduce individual and regional disparities in income and employment opportunities, a capability approach tries to increase the *quality* of these jobs by, among other methods, the creation of a collective investment in regional productive competencies (in the sense of the 'highroad' strategies analysed by Sabel *et al*., 1989). Such investments have to take the evolutionary, path-dependent nature of regional capabilities into account.

In section 3, we will argue that a shift from an employability-centred to a capability-centred approach may also be useful for another crucial objective of the EES, the creation of more inclusive labour markets.

3 Regional capabilities in Europe: is there a link between innovativeness and inclusion?

The EES aims to improve the employment possibilities, especially for females and younger and older people, thus making the European labour market regimes more inclusive. This reflects a project of societal modernisation, which is characterized by a shift from particularistic to universalistic orientations, from ascription to achievement and from diffuse to specific obligations. The intended modernisation of European labour markets can be criticised from two, partially complementary; points of view. First, this project ignores the existence of path-dependent patterns of evolution: the central objective of European employment strategies is a higher inclusion of females and older and younger people, and this means a radical change–especially for Mediterranean and some Continental European labour market regimes. Second, if such a shift from exclusive

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to inclusive labour markets is nevertheless possible, it may undermine the specific competencies linked to exclusive, segmented labour markets (for example internal, professional or vocational labour markets). The strategies of social closure, which are the principal target of employability-centred strategies, are also the basis for specific industrial relations and strategies which have been analysed as flexible production (Piore and Sabel 1984), 'diversified quality production' (Streeck 1991) or 'co-ordinated market economies' (Hall and Soskice 2001). More inclusive labour markets also require a different institutional and organizational environment: a different production model. A employability-centred strategy, such as that implemented by EES, cannot be implemented without the development of different forms of regional capabilities.

This thesis will now be discussed based on the available regional data for the so-called 'NUTS-2' regions of the European Union.[5] On this basis, the diversity of regional capabilities and the corresponding patterns of exclusion and inclusion can be analysed, even if longer time series are not available and even if the available indicators for regional capabilities are extremely limited.

On the basis of the five variables described in table 4.1, a factor analysis was performed for 203 of the 211 European NUTS-2 regions. This analysis explains 82 per cent of the initial variance. Two factors with an eigenvalue of more than 1 emerged, each of which strongly correlated with three of the variables (see table 4.1). These correlations suggest that the first factor can be used as an indicator for the basis of the region in terms of qualification. A high level of employees with a upper secondary or tertiary qualification, a high share of research and development expenditure (GERD) and a high share of employment in knowledge-intensive services indicate the importance of formally certified, abstract qualifications and systematic innovation activities. The second factor points to the relative impact of industrial- in comparison to service-based forms of production and organization. As will be shown later, this factor refers also to the relative importance of tacit, especially production-related competencies.

The values for the two factors can be calculated for each region. These regional factor scores cluster within a nation: the total regional variation can be reduced by 82 and 29 per cent if the 'nationality' of the respective region is known. For illustrative purposes the values for the 203 regions can be aggregated on the national level (table 4.2).

[5] The nomenclature of territorial units for statistics (NUTS) established by Eurostat is a hierarchical classification that sub-divides the EU Member States into seventy-eight regions at NUTS-1 level and 211 regions at NUTS-2 level. The UK, for example, is subdivided in twelve government office regions and thirty-seven counties or groups of unitary authorities.

Table 4.1. *The two-dimensional structure of regional capabilities in 203 European regions: the results of a factor analysis*

	Descriptive statistics		Factor analysis		
	Mean (weighted)	Standard deviation (weighted)	Factor loadings of the first factor (formal knowledge)	Factor loadings of the second factor (service orientation)	Communality
Share of persons ages 25–59 with a high or medium educational attainment (% of the total age group; 2000)	66.44	17.61	**0.87**	0.05	0.75
GERD (1997)	1.61	1.02	**0.84**	0.04	0.70
Share of employment in knowledge-intensive services (ISIC Rev.3: I61, I62, I64–I67, K70–K74, M80, N85, 092; % of total employment; 1999)	32.00	8.08	**0.72**	**0.60**	0.89
Industrial employment (% of total employment; 2000)	28.89	7.15	0.15	**−0.93**	0.89
Service employment (% of total; 2000)	66.73	8.66	0.40	**0.86**	0.89

Notes:
No. of European NUTS-2 regions: 203.
GERD: Gross domestic expenditure on research and development in % of GDP.
ISIC: International Standard Industrial Classification.
Method of extraction: Principal components analysis.
Method of rotation: Varimax.
Sources: Own calculations on the basis of data provided by European Communities/Eurostat, various years: *Regions. Statistical Yearbook*. Luxembourg: Office for Official Publications.

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Table 4.2. *Regional capabilities in EU countries: nationally aggregated regional factor scores*

Country	Formal knowledge (factor 1)	Service orientation (factor 2)
Austria	0.09	−0.51
Belgium	0.05	0.87
Denmark	0.88	0.57
Finland	0.69	0.14
France	−0.02	0.12
Germany	0.75	−0.79
Greece	−1.66	−0.03
Ireland	−0.39	−0.35
Italy	−0.83	−0.10
Netherlands	0.35	0.94
Portugal	−1.92	−0.39
Spain	−1.20	−0.29
Sweden	1.72	0.47
UK	0.61	0.44

Sources: Own calculations on the basis of the factor analysis described in table 4.1 and in the text.

This data shows that the Scandinavian, Dutch, Belgium and British regions are characterized by a relatively strong service sector and a qualified labour force, whereas the Mediterranean regions are characterized by a higher proportion of low-skilled inhabitants and a higher share of industrial employment. Germany, Austria and France are in an intermediary position. Their service sector is much smaller while the formal qualification of their population is as high as in the service-oriented economies of northern Europe.

In the next step, we will analyse the patterns of inclusion and exclusion within this two-dimensional space of regional capabilities, taking as an indicator selected age- and gender-specific employment and unemployment rates. In the case of older people, the difference between the employment rates of the fifty-five–sixty-four-year-old population and the core age group (thirty-five–forty-four years) is taken as an indicator. For younger people, the unemployment rates are a more adequate indicator for exclusion processes, because the low employment rates of younger people can also be the result of prolonged participation in the educational system. Women can either be constrained to non-paid jobs (childcare, etc.) or they can be unemployed. These two forms of exclusion are indicated by gender-specific differences of the employment and unemployment rates.

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In table 4.3, the results of five linear regression models are shown. The dependent variables are the total employment rate and the four exclusion variables just mentioned. The independent variables are the two factors described in table 4.1. GDP *per capita* is used as a control variable. These regressions show that the inclusion of women in the labour market is strongly correlated with the first factor, indicating the effects of a higher education. This confirms that women are the principal winners of the educational expansion. The same is true for younger people; their inclusion in the labour market is facilitated by formal qualifications. This explains why the total employment rate strongly depends on the share of persons with a high or medium educational attainment. This variable, however, does not significantly influence the relative share of older employees. Other aspects of labour market institutions, for example public pre-pension schemes, may be more important.

However, the labour market involvement of women and young people also depends on whether the respective region is service- or industry-oriented. In service-oriented regions, the relative *employment* rates of women and older people as well as the *unemployment* rates of younger people are higher. For a thorough interpretation of these facts, much more detail on the regions and their labour markets would be necessary. A reasonable first interpretation of these results could be that employment in industry-oriented sectors is accompanied by specific forms of labour market segmentation, which accounts for the exclusion of female and older employees and the inclusion of younger ones. These forms of labour market segmentation are the result of strategies of social closure, which limit the access to privileged occupational positions to skilled male industrial workers. Younger workers are also relatively privileged by these patterns of segmentation because the transition from school to work is facilitated in German-speaking and Scandinavian countries by a system of vocational training. On the one hand, these forms of labour market segmentation are the basis for the exclusion of women and other groups, on the other, they are the basis for the accumulation and intergenerational transmission of work-related, experience-based skills. This is a major advantage of closed labour markets, examples of which are the professional and internal labour markets. Even if segmented labour markets are not specific to industrialized regions, industrial forms of production are apparently more dependent on the accumulation of experiences and practical skills than services.

In conclusion, the available data show that two dimensions of regional capabilities can be distinguished for more than 200 European regions. The first dimension is *formalised knowledge*, which is the product of systematic education and of systematic research and development activities.

Table 4.3. *Regional capabilities and labour market exclusion of women and younger and older people (203 European NUTS-2 regions)*

	Employment rate (% of population aged 15–64); 2000	Difference between the employment rates of men and women (% of total; 2000)	Difference between the unemployment rates of men and women (% of total; 2000)	Difference between the average and the youth unemployment rates (% of total; 2000)	Difference between the employment rates of the 35–44 and the 55–64-year-old population; (2000)
Constant	61.18***	16.57***	4.83***	13.73***	35.34***
GDP/head (PPS): 2000; EUR15 = 100	0.04	0.02	−0.02	−0.05*	0.09*
Formal knowledge (factor 1)	3.91***	−6.59***	−3.21***	−2.82***	−1.02
Service orientation (factor 2)	−0.39	−1.23**	−0.002	1.71***	−1.97*
R^2 (corr.)	0.283***	0.574***	0.468***	0.24***	0.035*

Notes:
Linear regression models. Level of significance: *: 5%; **: 1%; ***: 0.1%.
Sources: See table 4.1.

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The second is *industrialised forms of production*, where tacit, experience-based forms of knowledge apparently play a somewhat larger role than in service-based forms of production. The first factor is strongly negatively correlated with the exclusion of female and young people; indicating the inclusive nature of regional capabilities based mainly on formalized, explicit knowledge. The second factor is linked to the exclusion of female and older people and the inclusion of younger employees, thus illustrating the specific patterns of labour market segmentation mainly in the highly industrialized, German-speaking European countries.

For the EES, this means that a higher level of inclusion of females and younger and older people in the labour market may threaten the production-related, experience-based skills that have been previously generated and transmitted in segmented, exclusive labour markets. The development of an alternative, less exclusive labour market regime, especially in Mediterranean and Continental European countries, therefore requires not only a reorganisation of the labour market, but also different educational and production concepts. Forms of production more strongly based on explicit, transferable qualifications will be required to facilitate a shift to a more inclusive labour market, which is the primary target of the EES. This could be achieved if the organisations and regions involved increase their innovativeness. Therefore, the 'employability' approach of the EES should be complemented by a 'capability' approach, which attempts to strengthen the innovative capacities of regional production systems. Whether or not, and how, this may be possible will be discussed in section 4.

4 The political support of regional capabilities: limits and possibilities of cluster policies

Besides the provision of an adequate regional 'knowledge infrastructure' (research and development, technology transfer infrastructures, education, training), regional patterns of co-operation and competition are a crucial feature of regional innovation systems. These patterns can be politically facilitated on three different levels. First, the state can create institutions on the national level that promote the development of *co-operation and relationship networks* across the boundaries of an industrial branch. Secondly, the same idea can be applied on the regional level. Thirdly, attempts can be made directly to create *interorganisational co-operation networks*. Cluster policies can therefore be concentrated on the national level, on the regional level and on the micro level of actual co-operation networks. Their main objective is the selection and sometimes the creation of new, promising networks. We will illustrate the

corresponding political conceptions with the aid of some case studies reported in Braczyk, Cooke and Heidenreich (1998) and OECD (1999).

4.1 National cluster policies

A national cluster policy could be particularly interesting for countries with close interindustrial production and value chains. In this case, it would be important to overcome traditional industrial boundaries through an economic, research and technology policy that fosters patterns of co-operation across the traditional boundaries of branches and areas of technology. An example of this is Denmark, a country with a relatively high share of smaller businesses. In Denmark (nearly) the entire economy has been divided into six 'resource areas'. These areas are separated into groups based on their commonly known characteristics: food, consumer goods and leisure, construction and housing, communication, transport and supply industries, medico/health and general supplier businesses. In each of these resource areas, a co-ordination group has been founded with the participation of businesses, employee representatives and public authorities. These co-ordination groups develop policy recommendations taken from the respective legislator or from specific committees.

In Finland, national economic policy is also designed to support knowledge-based economic clusters. The public authorities promote the telecommunication cluster, for example, through targeted research and education politics and through the active support of the development of international standards for the industry. The state also acts as a demanding customer for domestic industry; this does not mean primarily favouring domestic firms, but promoting products and standards that will also be attractive to foreign customers. A cluster policy on the national level therefore aims to orient the 'knowledge base' of a country, its firms, research, training and education facilities, towards new demands and co-operation opportunities.

4.2 Regional cluster policies

On the regional level, public policies can be used to stimulate interorganisational patterns of co-operation and regional innovation networks through research and technology centres and technology transfer facilities. An example of this is Wales (Cooke 1998b). After the decline of the mining industry, foreign companies opened new engineering, electronics and automotive plants. Through innovation and technology transfer centres, science and technology parks, supplier networking initiatives, and joint research initiatives and education facilities, the Welsh Development

Agency (WDA) and other public authorities tried to promote new linkages and networks between the newly settled production plants and local firms and institutions which were already in place. In this way, the foreign plants were used as focal points for the creation of new industrial clusters. At the end of the 1990s, job losses in the larger manufacturing firms exposed the limitations of these attempts.

Another example of a regional cluster policy is the ERVET system in the central Italian region of Emilia-Romagna. The industrial districts of this region are based to a considerable extent on small enterprises. Over 40 per cent of the regional industrial personnel work in enterprises with fewer than twenty employees. Such firms do not have the production-related services necessary for the development and subsequent global commercial exploitation of new products. However, many firms in the same branch are concentrated around one single town. The food industry is concentrated in the province of Parma, clothing in Carpi and Modena, shoes in Fusignano, furniture in Forli and ceramics in Sassuolo. The region therefore decided to support these industries through nine regional competence centres, concentrated in the ERVET organisation. Part of ERVET is a quality control centre, a centre for the shoe and leather industry, a centre for agriculture machines and a centre for the textile and clothing industry. These centres are jointly administered by the region, the relevant business associations and by nearly 1,000 firms. Costs were divided almost equally between private firms (34 per cent), the region (36 per cent) and national and European sources (30 per cent). The main function of such centres is to provide information and services that small regional firms cannot feasibly manage or adequately finance alone. Such competence centres strengthen the economic profile of a region, they are the expression of a common local pattern of development, thus facilitating the co-ordination, orientation, motivation and legitimisation of local entrepreneurial efforts. However, this example also demonstrates the limits of an exclusively regional orientation: regional competence centres cannot overcome deficiencies in national infrastructures, particularly in the fields of education, professional training and research.

4.3 Local cluster policies

At the local level, public authorities can attempt to directly create and stabilise interorganisational patterns of co-operation. A prominent example for this is the promotion of networks between small enterprises by the Danish Technology Institute. In the years 1989–92, a programme was created and initiated to support intercompany networks. The participating firms and forty network moderators (comprising local consultants,

agencies and associations) created over 300 such networks. The aim of this program was to improve the flow of information and co-operation between smaller businesses, and thus overcome some of their more notorious weaknesses: small purchase volumes, inadequate marketing capacities and limited research and development potential. These networks made it easier for the smaller businesses to observe market and technological development, and to initiate joint research projects and share expensive equipment. This also permitted these firms to specialise in complementary tasks. The network moderator program was broadened to other areas (tourism, environmental technology, export support) after 1992. However, a further evaluation of the network programs exposed their disadvantages; the costs per network were very high, and numerous networks could not be stabilised after the end of the initial public financial support. This points to the important role of common institutions such as the Joint Venture Silicon Valley Network, the Italian ERVET system or the German chambers of commerce in effectively stabilising such intercompany networks.

The experiments with cluster policies conducted in Germany, mostly since the mid-1990s, are mainly oriented towards the direct creation of co-operation networks. For illustration purposes, we will mention three of them: structural policies in North Rhine-Westphalia and the national Bioregio and Innoregio programs. North Rhine-Westphalia, our first example, has the longest experience of regional economic and structural policies. Regional innovation and technology projects have been developed since 1987 as a reaction to the crisis of the coal and steel industry in the Ruhr area. An evaluation of these projects questioned the strong similarity between different regional development projects, because they did not reflect regional specificity. It also stressed the overwhelming importance of more basic and conventional improvement measures such as upgrading the traffic infrastructure, providing sites for new firms and setting up technology transfer facilities (Heinze and Voelzkow 1997). In 1994, a second generation of thirty-five regional projects was started. This time, the major objective was to create and strengthen networks between firms, associations, research and development centres, public authorities, schools and universities (Rehfeld, Baumer and Wompel 2000). In 1996 the Federal Research Ministry started the successful Bioregio project designed to support the most efficient biotechnology regions in Germany. It has been claimed that this program has produced considerable regional synergies and has brought these regions closer to the level of the more advanced European and American biotechnology regions. In 1999 the Federal Research Ministry once again initiated a similar program, the Innoregio project. The target areas are twenty-five

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selected regions in eastern Germany, and various branches are addressed. These regions will be supported until 2005 to the tune of 250 million Euro. The Federal Ministry anticipates that this program will foster the creation of interorganisational networks and co-operation. In all three cases, the aim is to create new regional capabilities by linking regional actors in different ways. The Bioregio program was especially successful because it was able to create new patterns of co-operation between existing universities, clinics, research institutes, pharmaceutical and chemical companies.

In conclusion, cluster policies can successfully support strategies which are implemented to react to new challenges within the continuity of previous regional capabilities and development trajectories. In many cases, however, completely new technologies and organisations are needed in order to successfully cope with new situations. For example, the current strength of the manufacturing industry in Baden-Württemberg seems to be the result of the successful merging of old and new technologies – of mechanical engineering, car production, IT, new materials, micro-system technology and opto-electronic systems. There are therefore no simple recipes for a successful cluster policy. Just as spatial proximity is no guarantee for close co-operation between firms and their clients, suppliers and competitors, stable co-operation networks are no guarantee for reciprocal learning. Intercompany networks may also prevent learning and even support unsuccessful technological trajectories.

The theoretical basis for cluster policies should be an evolutionary understanding of regional strengths, weaknesses and trajectories. On one hand, it would be absurd to assume that political intervention could create a successful economic cluster in the middle of nowhere. Experience in eastern Germany have shown that even with an enormous amount of money it is difficult to create a competitive industrial base. On the other hand, there is no room for political fatalism. Political intervention can have a considerable, if sometimes unintended, impact on the development of new clusters.

5 Conclusion

The crucial objective of the EES is to create more inclusive labour markets. More specifically, the employment rates for women and younger and older people should be increased. Currently, the local and regional levels of the EES play a minor role in comparison with the national level. This is a major disadvantage, for three reasons. First, the regional level is essential in the creation of jobs in the social services area. The second disadvantage is that the regional level is the best-suited target for

innovation-centred policies. Finally, increased regional innovativeness has the potential to increase the inclusiveness of the labour markets.

The possible link between *innovation and inclusion* has been discussed in three steps. In the first step, it was pointed out that productive and innovative capabilities are very often regionally concentrated. This was reported not only for the jewellery, steel, coal, ceramics, wood, paper, leather, shoes, clothing and textiles industry, but also for the vehicle and mechanical engineering industry, for financial services, IT, multimedia, biotechnology, advertisement and other cultural products. The reason for this occurrence can be divided into four groups, which were originally proposed by Alfred Marshall: the availability of local resources, transaction cost advantages, specialisation advantages and learning and innovation advantages. These regional capabilities evolve in an path-dependent manner.

In the second step, it was demonstrated that the regional level may play also a major role for labour market inclusion. We have tried to show that regional capabilities in more than 200 European NUTS-2 regions can be analysed in two dimensions. These dimensions are the 'knowledge dimension', in which Mediterranean were distinguished from other European countries and which points to the importance of formal, explicit knowledge – in higher education, in research and development or in knowledge-based services, for example; and the second dimension which distinguishes between regions with a higher share of service employment and regions with a high share of industrial production (especially in southern und Continental European countries), thus highlighting the role of implicit knowledge usually created and reproduced in relatively closed labour markets. These forms of implicit knowledge seem to continue to carry more weight in industrial production than in service-based forms of production. A higher level of inclusion of females and younger people is positively correlated with a higher educational level in the regional population, higher research and development expenditures and a higher share of service production. More inclusive labour markets may therefore require an all-embracing reorientation of industrial and educational strategies – for example, shift towards more knowledge-based forms of production and services.

Finally we illustrated the possibilities and limitations of successful political initiatives that can work to promote regional innovation systems. The success of economic regions depends to a considerable extent on previously accumulated competencies and on previously established patterns of co-operation. Political interventions can influence innovative capabilities only where previous regional trajectories have already laid the appropriate foundation. Nevertheless, a cluster policy can influence the

development of regional competencies and patterns of co-operation both directly (through the political support of co-operation networks) and indirectly (through the creation of national and regional institutions). A regional cluster policy can therefore play an important role in creating jobs within a European strategy for employment that aims to facilitate the required, complementary reorientation to knowledge-based production forms. The political support of regional learning and innovation processes could work to facilitate a higher inclusion of relatively disadvantaged groups. The creation of more inclusive labour market regimes and the intended shift towards a more knowledge-based forms of production therefore could be mutually reinforcing – especially at the regional level.

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