

# **Regional Policy, National and Regional Foresight In Central and East European Candidate Countries**

Paper prepared for the

STRATA – ETAN Expert Group Action

on

**"Mobilising the regional foresight  
potential for an enlarged European Union"**

European Commission - Research DG - Directorate K  
July 2002  
Brussels

By Slavo Radosevic  
School of Slavonic and East European Studies University  
College London  
[s.radosevic@ssees.ac.uk](mailto:s.radosevic@ssees.ac.uk)

## **Introduction**

The prospects for growth in central and east European candidate countries (CEECs CCs) are usually considered to be positive. Their current low levels of income, legal and institutional frameworks which are nevertheless quite respectable given their income levels and their relatively skilled human capital basis, are the main factors that will enable them to grow over the long-term (see for example, Gross, 2001). However, growth is a complex phenomenon in which various socio-economic, institutional, political and technological factors come into play. Learning and technology upgrading, which underpin long-term growth, are non-linear processes with various threshold levels and changing requirements. One emerging threshold or structural bottleneck in CEECs is how to meet the institutional and technological requirements of a knowledge-based economy.

This paper argues that once central and eastern European candidate countries (CEECs CCs) join the EU, the building of a knowledge-based economy will become more difficult and will encounter increased gaps in knowledge and innovation related activities. The weak technological capability of the Candidate Countries (CCs) will exacerbate any cohesion problems. A long-term rate of growth that should enable convergence of CCs to the EU average will not be possible on low value-added activities, which currently dominate CEE exports.

At the core of the cohesion problem is the (non) emergence of national and regional innovation systems in candidate countries (see Radosevic, 1999, 2002) and their integration into an EU-wide innovation system. Innovation systems in the CEE CCs are either non-existent or are highly fragmented with enclaves of innovation activities in large domestic and foreign firms. A major proportion of non-innovative small firms and weak or non-existent linkages between public and private parts of the system make weak foundations for building knowledge-based activities.

This paper focuses particularly on the role of regional foresight as a potential tool to enhance regional innovation systems in CCs. We evaluate the regional foresight in the candidate countries from a regional governance and innovation systems governance perspective. For the smaller candidate countries like Slovenia, Estonia, Latvia and Lithuania regional level can be identified with national..

In the first section we briefly analyse the position of candidate countries in building the European innovation system by drawing on innovation scoreboard type data and approach. In the second section, we characterise the state of regional policy and regional development in Central and East European countries in order to provide the context for regional foresight . In the third section, we discuss which specific features should be taken into account when designing, and implementing foresight in CEE CCs.

### **1. Central and East European candidate countries in building the European innovation system: the weak link**

CEE CCs have benefited greatly with the opening of domestic and EU markets through improved export competitiveness and increased competition in domestic markets. They have also benefited from the proliferation of production linkages through increased FDI flows and subcontracting, driven greatly by their proximity to the EU. However, these benefits come at the price of increased dependence on EU markets. Also, globalisation is driving these economies towards being exclusively production locations based on highly specialized subsidiaries in low value added activities. This further highlights the weaknesses in these economies, which are related to knowledge-based activities and to the limitations of their national and regional systems of innovation. The challenge for them - and for the EU once

they become members - is how to balance the beneficial and adverse globalisation factors and the winners and losers across countries and regions.

CEEC accession countries are mainly integrated as markets in the wider European economy. In the last 10 years a few central European countries, especially Hungary, Czech Republic and partly Poland, have become important European production locations for automotives and electronics. Several of the CEECs have become important European locations in labour intensive activities like clothing (Romania, Poland) and furniture (Poland) manufacture. All CEECs have become integrated into EU company networks through market seeking FDI.

The inclusion of CEECs as production locations and as markets is undoubtedly a positive development, especially given the poor prospects of domestic led modernisation. However, market and production integration of the CEE CCs does not mean that these countries will be also technologically integrated into the EU economy. *Technological integration* is the integration of domestic enterprises into the dynamic learning processes of MNCs whereby they become involved as active contributors and recipients in the production of knowledge for generating technical change. In contrast, *technological marginalization* indicates that a domestic enterprise is not involved to any significant degree in the processes of technological accumulation at the international level (Radosevic, 1999b). The capability to integrate technologically will become even more important within the EU after enlargement as the knowledge flows should connect and network all member states (EPC, 2002, p. 3).

In policy terms this problem has been already addressed in the pre-accession period through involvement of the CCs in the Fifth Framework Programme, support for the Centers of Excellence, support for building regional strategies in selected regions of the CCs and also support for networking in technology transfer and innovation activities. However substantial these activities may seem it will be necessary for the EU to continue such programmes and also develop new ones. By pooling the efforts, knowledge and resources of accession countries the EU will be able to compete on a global scale and develop a sound knowledge-based economy. This will require developing the EU innovation system to which CCs should be active contributors. Unless CCs develop stronger national and regional innovation systems they will be only marginally integrated into the European Innovation Area, which will weaken the basis for long-term growth of the EU. In the rest of this section we assess CEE CCs in terms of their innovative capabilities.

CCs are further behind the EU in terms of technology than in terms of levels of development. For example, IT expenditures per capita for the CEEC-8 are 13% of the EU average level while their GDP per capita is 44%.<sup>1</sup> This gap is wider than the gap in per capita income of the ten poorest CEEC regions where the level is between 18 and 26% of the EU-15<sup>2</sup>.

The Luxemburg group of CEEC CCs (Hungary, Slovenia, Czech R, Poland and Estonia) is the least behind in terms of human resources and knowledge creation indicators, especially R&D (EC, 2002; Mickiewicz and Radosevic, 2001). This groups biggest gaps are in transmission and application of knowledge, i.e. in issues related to the overall interconnectivity within national systems of innovation. In particular, the share of innovative small firms is far behind the EU average. A small share of innovative SMEs and domestic large firms that are undergoing privatisation and restructuring, means that foreign firms and dispersed domestic medium sized firms are the main sources of new knowledge and innovation in industry.

---

<sup>1</sup> Data are for 1998 and include Czech R, Slovenia, Slovakia, Hungary, Poland, Bulgaria, Romania, and Estonia. Data are in PPS. Source: Eurostat, Yearbook on candidate countries, 2001 and World Bank World Development Indicators.

<sup>2</sup> These levels are in terms of per capita GDP in purchasing power standards

Qualitative assessments of national systems of innovation confirm this lag in innovation activities in CEE. In all CEECs, there is lack of effective mechanisms for promoting cooperation between industry and universities. For example, evaluation of the Polish national system of innovation concludes that the 'R&D sector is a closed system that produces for itself without any cooperation with [the] outer world in [the] formulation of its objectives' (Phare, 2000).

One of the major conclusions of the UK project on East – West industrial networks is that the weakest node for further industry upgrading of the CEECs is national networks, i.e. large and small local firms, their mutual links and their links to infrastructure organizations (university, business services).<sup>3</sup> Central European countries, like Hungary and the Czech Republic, have already reached their limit for industrial upgrading based only on foreign direct investments (FDI) or foreign-led modernisation. This pattern of upgrading is characterised by intra-firm productivity improvements in foreign investment enterprises and the absence of production and innovation linkages between foreign and domestic firms. However, the majority of CEECs, and particularly Bulgaria and Romania, are still struggling to integrate with international production networks. In their case, integration at any technological level is a solution when compared to their limited opportunities for domestic led modernisation.

Industrial upgrading is a continuous process and today's specialisations may not be sustainable or economically profitable in the medium or long term unless improvements are made in local production and innovation networks. Technological change cannot be driven by foreign investments entirely. The structural problems of S&T systems studied in the TSER project 'Restructuring and reintegration of S&T systems in economies in transition' demonstrate the importance of a diversified knowledge base and the building of regional, sectoral and national systems of innovation for long-term growth of CEECs.<sup>4</sup> The knowledge based economy rests on a diversified knowledge base and on a diversity of public – private linkages. By fully embracing the institutional systems of a market economy and open competition CEECs are now facing new barriers to further growth in the quality of their university system, R&D base and labour force skills. The CEECs may not be able to overcome future structural barriers unless they develop strong public R&D systems and enhance their links with industry

In the long term, growth of the CEECs cannot be sustained without a restructuring of their national systems of innovation. These systems need to be geared much more towards the diffusion of knowledge, especially absorption from abroad, rather than only on its generation, as has been the case in the past.

Data on FDI show that foreign plants are highly productive subsidiaries closely integrated into global production networks but with very limited or no linkages to domestic firms.<sup>5</sup> Econometric research suggests that spillover effects from foreign investments in CEECs are either non-existent or negative (Holland et al, 2001, Konings, 2001).

Fragmented national innovation systems with significant gaps between domestic and foreign firms, between large and small firms, between high technology and traditional small firms, and between new and old sectors will require a long-term innovation policy response. The optimistic view would be that spillover effects do not come immediately and automatically and that continuation of FDI inflows will ensure the necessary upgrading and should induce changes in national systems of innovation. While this may be so we should bear in mind that innovation systems are mixtures of public and private institutions. In

---

<sup>3</sup> For a series of working papers on this issue see [www.ssees.ac.uk/esrc](http://www.ssees.ac.uk/esrc)

<sup>4</sup> For project summary visit [www.sussex.ac.uk/spru/tser.html](http://www.sussex.ac.uk/spru/tser.html)

<sup>5</sup> See firm and national case studies of the project 'The emerging industrial architecture of the wider Europe' at [www.ssees.ac.uk/esrc](http://www.ssees.ac.uk/esrc)

addition, FDI rarely leads and mainly follows growth. Also, the presence of FDI in CEECs is highly uneven being mainly confined to Hungary, Poland and the Czech Republic. The key elements of the innovation process are networking, clustering, science – industry links, intangible assets and the mobility of workers. In all these respects, CEECs CCs are very weak. Currently, relatively high growth rates of the CEECs CCs - especially when compared to the EU, as well as continuous inflows of FDI are masking rather than revealing structural problems that will undermine the long-term prospects for growth in these economies.

There are serious weaknesses in the ability of CEE CCs to generate venture capital, which would increase the number of innovative small firms. This problem seems to be a serious stumbling block for the expansion of new knowledge based activities. For example, while in conventional banking services central European CCs are integrated as markets into European banking, international venture capital firms are active only in three countries (Poland, the Czech Republic and Hungary). However, this problem cannot be reduced to the availability of finance; it also involves the issue of institutional infrastructure and uncertainty for long-term investing.<sup>6</sup> A relatively underdeveloped financial market, coupled with a general economic and market situation which does not favour long-term financing, the lack of entrepreneurial culture, extremely poor links between the academic community and the financial sector, are all factors that exacerbate the weaknesses in national systems of innovation in CEE CCs.

This brief summary of the state of innovation in CEE CCs suggests that in building the EU as a knowledge-based economy huge gaps in knowledge related activities in its Eastern part will be encountered. In relative terms, these gaps are wider in terms of knowledge absorption and diffusion than in knowledge generation. Integration of CEE CCs as market and production locations into the EU economy has not been followed by integration of their national systems of innovation into the European Innovation Area. In effect, these systems have further fragmented and weakened.

Yet, however weak the national innovation systems in CEECs are, they still dominate over regional systems, which, in CEE CCs, suffer from inadequate, or absent systems of governance, weak competencies and resources at the regional level. In order to strengthen national innovation systems and their links to an emerging EU innovation system the region as a locus of innovation activities will have to become stronger. This is one of the keys to the improved diffusion and absorptive capacity of the CEECs. We next address the problems and policy challenges in developing regions as loci of innovation activity in the CEE CCs.

## **2. Regions and regional policy in CEE: an important context for regional foresight**

EU member states have diverse patterns of regional and local governance. The diversity of regional and local governance has evolved largely on the basis of country specific historical path dependencies.

Until 1989, the system of local government was relatively unimportant across CEE. In centrally planned economies proximity was not an asset and potential local linkages were not used as sources of efficiency improvements or innovation (Radosevic, 1999c). The dominant linkages were inter-regional and were organised within individual sectors or within large *combinates*. This created dependence of regions on the center and reduced regional policy to sectoral policy for the industrialization of rural peripheries (Gorzalak, 1996).

Despite some differences across countries the systems of local governance in CEE were relatively homogenous. They were characterised by the absence of horizontal networks and

---

<sup>6</sup> I am grateful to Lajos Nyri for drawing my attention to these points.

the lack of regional autonomy. The dominance of inter-regional vertical production chains and few horizontal intra-regional linkages were coupled with the social role of large firms in the local community. As result the state owned enterprises (SOEs) were socially strongly embedded in the locality but their forward and backward production linkages were rarely located in the region. The system of governance was centralised and at national level with very weak local governments.

From the onset of the transition period we immediately saw a trend towards decentralisation and fragmentation of local government into municipalities and communes.<sup>7</sup> These lowest levels of governance were given broad autonomy, including finance. Given this new freedom, local governments have tried to strengthen their position by, as Peteri (1993) describes it, 'enterprising local government' or transferring the rule of the private sector into areas of public services. They established production and service companies along with an increase in institutional and council rents and revenues. However, given their small tax base and small size the new situation has actually increased the role of national government. This trend towards fragmentation of regional governance into municipalities and communes was followed by a re-concentration of power into national government. The mezzo or regional level was either abolished (Czech R and Slovakia), became an appendage of central government (Poland, Bulgaria and Romania), or had only marginal powers (Hungary) (Hughes et al, 2001 based on Horvath, 1996:22). Administration at the intermediary level operates through de-concentrated state offices (ibid). The importance of regions and regional policy in most of the CEECs, with exception of Poland, is fairly small (Gorzalak, 2000). Hence, lack of institutional maturity, resources and autonomy, typical across the EU at a regional level, is even more pronounced both in absolute and relative terms in CEE CCs.

The economic transformation exacerbated regional differences in levels of unemployment and per capita income.<sup>8</sup> Economic growth is based around a small number of metropolitan areas and regions with diversified economic structure. In these core regions the rate of growth of GDP is high and they are much more able to develop a growth trajectory away from more marginal areas. This includes all capitals where agglomeration economies are driving growth and leading to low unemployment. Examples of regional centers with a diversified economic structure are Gyor (Hungary), Varna (Bulgaria), and Plzen (Czech R). Regions with a more diversified economic structure usually have lower industry share and hence less structural problems. This led to either intensive new firm formation or foreign investments as, for example, in Poznan province, Krakow in Poland, Csongrad (Szeged) in Hungary and Timisoara in Romania. Foreign investors favour these regions, which have a skilled labor force, relatively better international transport and telecommunication facilities and a cultural background that is more attractive to foreign investors. Thus, FDI has become an additional factor in regional polarization in central Europe: foreign investors have tended to invest in western parts neglecting, to a large extent, the eastern CEECs with Hungary being only a partial exception.

Monostructural regions with a single sector heritage (defence; agriculture; heavy industry) and branch plants of multiplant ex-socialist firms, have suffered most as these plants were closed down (Begg and Pickles, 1998).<sup>9</sup> The 1990s saw widespread branch-plant closure as large firms sought to maintain benefits and labor in their core plants. The industries that dominate in the poorer regions are state-owned, inefficient and are facing shrinking demand.

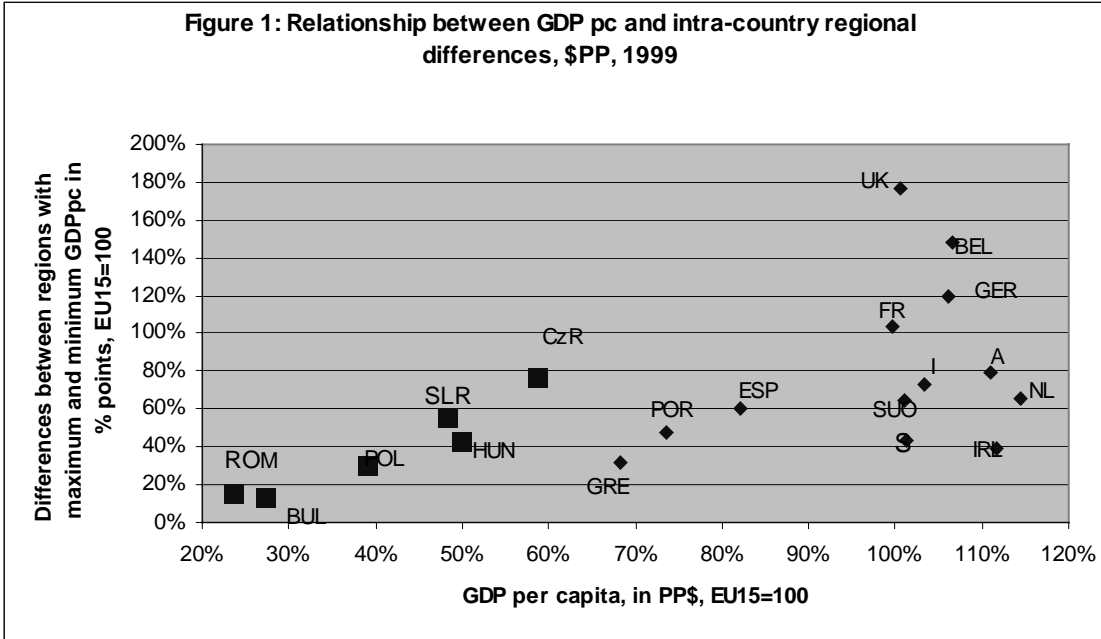
---

<sup>7</sup> For example, in Hungary the number of municipalities increased by 96% between 1991 and 1998 while in Czech R it increased by 50% from 1989 to 1993. (Hughes et al , 2001)

<sup>8</sup> For example, Romania, which had very low level of regional inequality, experienced a rise in regional inequality during the period 1993 to 1996 (Shankar and Shah, 2001).

<sup>9</sup> An example of the old industrial center in Hungary is the BAZ region (see Lorenzen, 1995) and Lodz in Poland (Dornisch, 2000). However, similar cases can be found even in very small CEE countries, like Slovenia, with its old industrial center of Maribor.

However, compared to countries in the EU regional differences are not still great. If unemployment rates are taken as an indicator then regional divergence is not huge. In terms of differences in income per capita between the richest and poorest regions in CEECs CCs as a proxy for regional disparity these differences are at the far low end of the EU scale (see figure 1). Within the CEE CCs as a group these differences seem to follow differences in national per capita GDP.<sup>10</sup> This suggests that the lack of regional differences in the poorer CEE countries has a deeper developmental reason. In fact, we may expect that further growth is likely to increase regional differences. Yet, looking at the EU countries no clear path can be discerned and we may find countries with very diverse degrees of regional differences.



During the 1990s there were no comprehensive regional policies formulated in any of the CEECs. Even after 10 years of transition, no coherent regional policy agenda had been set. The impression is that most CEECs are still in the process of learning and defining regional policy within a policy discourse that has been dominated by transition issues and recently by the accession agenda. However, there are regional aspects to the FDI policies in some CEECs (Hungary, Poland, Czech R) in terms of bigger incentives for investors in backward regions.

In addition, economic policies have emphasized short-term efficiency with reduced scope for redistributions. Regional policy is being degraded and funding for it marginalised. Regional authorities are essentially the agents of central government with small budgets and with no policy-making capabilities.<sup>11</sup> Transition has increased centralization at the territorial level limiting self-government to the municipal level (Gorzela, 1996).

Throughout most of the 1990s with the exception of Poland regionalization was not perceived as an important policy issue. However, by the end of the 1990s with the emergence of the Commission's Opinions on readiness of each applicant country, regional policy and regional capacity became a major concern for CEE governments. Chapter 21 on regional policy and coordination of structural instruments has become one of the main incentives for strengthening regional governance. As Hughes et al (2001) point out 'the imperative of finding appropriate organizational forms to meet requirements for EU regional and cohesion

<sup>10</sup> Correlation coefficient between these two variables is 0.95.

<sup>11</sup> Only in Hungary, local expenditures are 18.7% of GDP while in other CEECs they amount from 3.3 (Romania) to 9.8% (Czech Republic)(Gorzela, 2000).

policies has been a catalyst for the reform of local and regional government in the CEECs' (p. 21). In a nutshell, a Europeanised regionalization has been pursued 'from above', by national governments anxious to meet the EU conditions one of which is to enhance 'regional capacity'.

Hughes et al (2001) point out that during the early years of the enlargement process the Commission actively promoted an implicit symmetric model for CEE candidates as a way of rationalising their preparations for structural funds. This included structuring regions according to the average size of NUTs-II regions, establishing regional development agencies and regional development councils as well as substantial financial and legal autonomy within regions. However, as the differences between CEE accession countries became evident over time this preference for institutional symmetry was abandoned (ibid). Also, it has been realized that the need for extensive decentralisation may be necessary only in the two largest economies, Poland and Romania. Weak national administrative capacity further complicates the strengthening of regional administrative capacity. Implementation of regional programmes by national ministries/agencies is seen as a pragmatic solution to weak regional administrative capacity.

Although this pragmatism is a convenient shortcut it may not be the best solution in the long term. Regional governance mechanisms should enforce face-to-face negotiations between actors - something that will be lost when the national level is the intermediary in the delivery of structural assistance.

As EU regional policy is closely tied to the dispersion of structural funds we may expect that this will revive the role of regions. However, due to implementation procedures for structural funds, which are very likely to vary across accession countries, the dispersion of regional funds may not necessarily bring regions closer to the EU level, especially where structural funds will be managed by the national government. CEE CCs are neither federal nor do they have strong regional governments. Thus, we may expect that the CEE regions will be not very strongly embedded in EU regional policymaking. To some extent this may not apply totally to Poland and Hungary.

Furthermore, surveys in several CEE regions suggest that the local elites see the major benefits of enlargement to be far greater at the national than at the local level (Hughes et al, 2001). In addition, their knowledge about EU programmes is limited. This disengagement of local elites from the enlargement process is partly the result of weak implementation and enforcement of EU rules and policies that have been agreed at national level (ibid).

In summary, we can see a shift from the absence of policy making aimed at the regional level in most of the CEECs towards policymaking that is driven by the conditions of EU funding regimes. This has already become the case with the R&D system where participation in the Fifth Framework Program (FP) has strongly shaped the development of domestic R&D systems. These important influences can be positive as well as negative. FP will undoubtedly mean that the R&D systems of the CEE CCs will become more effective in terms of EU integration, average quality and excellence. However, this does not mean that these systems will become more relevant for local economies. In fact, we may expect that the gap between domestic industry and domestic R&D could deepen further. Centres of excellence may be integrated into the EU R&D system as well as into EU-wide company networks. However, this alone will not resolve the key weaknesses in national innovation systems and may exacerbate them. All this points to the need for giving increasing importance to the regional level and providing support for diffusion, absorption and innovation at the local level.

The CEECs have a very weak layer of regional institutions and competencies for independent decision-making at regional level. We have already highlighted that, with the exception of Poland, government in CEE countries control the tiers of territorial division above the local level. Only in Hungary can the system of public finance be labelled as

relatively decentralised (Gorzalak, 2000, p. 144, 145) or 'less centralised'<sup>12</sup>. As Smith (1998, p. 281) points out that foreign supported programs have involved piecemeal attempts to construct an entrepreneurial local state in the sphere of regional development. This involved the formation of Regional Development Agencies as the mechanism to bring into partnership the range of other local and external agents. The development agency acts as a 'broker' or catalyst for the formation of a wider network of relations between local agents and government both at central and at local level. While being important agents of change in the long term, the weaknesses of the enterprises and other organizations in the region have undermined the role and potential of agencies for inter-regional networking. These new organisations must re-establish themselves as political as well as administrative agents and create linkages with county, municipality and national levels.

The redistributive focus of regional policy arises implicitly from the definition of objectives of regional policy, which is focused on spatial allocation. However, the regional policies in the CEECs will have to strike a somewhat different balance between their focus on redistributions vs. their focus on local actions and support to endogenous activities. In the near future regional policy should be oriented much more towards enhancing absorptive and technological capability of regions rather than towards subsidies, except in extreme cases of areas dominated by old industries (Gorzalak, 2000).

The 1990s have seen localized activities to foster regional innovation. Innovation centres and incubators have been established in all CEECs in at least a few places. Although we have not come across a comprehensive review of these initiatives there is enough evidence to suggest that their effects and results are not very encouraging (Webster, 1996; SQW, 1994). For example, very often S&T parks that were meant to strengthen knowledge exchange, operate as renting areas. Most often they were initiated through foreign assistance programs and operate successfully only as long as foreign assistance is in place.

Experience with free economic zones and industrial parks seem to have been mixed. It has been very positive in Hungary where the industrial park model supported by local governments is one of the key mechanisms behind the emergence of Hungary as a global production location in electronics (Radosevic, 2002b). In Poland, experience with free economic zones (FEZs) seems to be much less successful (Dunin-Wasowicz et al, 2002) partly due to weaknesses in design and implementation of this policy (Strykiewicz, 2000). Other CEECs, with the possible exception of the Czech Republic, have not used free economic zones (FEZ) and industrial parks as instruments of regional policy. EU pre-accession conditions have reduced the autonomy of CEE CCs in this respect, as FEZs are as seen as incompatible with EU rules. This further reinforces the need for the EU to expand new regional initiatives towards CCs in order to compensate for their lack of policy autonomy.

The key message from this brief overview of regional policy in CEE CCs is that the weak regional governance in terms of political empowerment and administration will strongly shape the regional foresight activities in the CEECs. Regional foresight even when there is a strong demand at the local level is unlikely to be effective without support from the national and EU level. So far, political governance at the regional level has been developed only in Poland. Elsewhere, regionalisation has been perceived, accepted or implemented only as an administrative task. Therefore, even when the administrative capability exists there is no guarantee that regional governance mechanisms will be in place to implement regional foresight recommendations or to diffuse its process benefits.

The next section analyses the conditions for and implications of foresight in CEE based on the previous two sections.

---

<sup>12</sup> Lajos Nyiri, personal communication.

### **3. Nature of foresight activities in central and east European candidate countries**

In Section 2 we analysed the specificities of the regional policy in the CEE CCs, which provide the context for the introduction, and diffusion of foresight activities. In this section we analyse the nature of foresight activities in CEE CCs. The nature of foresight activities reflects the nature of the S&T system and policy in a specific country. Therefore, we try to highlight those features of foresight activities that seem to be specific to CEE and which should be taken account of when designing and implementing foresight in CEE CCs. This information is derived from (still very limited) practical experience in doing foresight in CEE CCs and experiences in S&T and innovation policy and practice in regional policy in CEE.

#### **1. National vs. regional foresight**

The regional level provides the geographic and cultural proximity that is desirable if technology foresight is to be effective. However, the analysis in the previous sections shows that we might expect difficulties in implementing regional foresight and in ensuring its positive contribution to S&T and innovation policy. Two factors may undermine the effectiveness of regional foresight in CEE CCs. First, the lack of regional governance mechanisms will undermine any potentially positive effects. Second, the mechanisms for distribution of structural funds assistance, which are very likely to be implemented via national governments, will further undermine the relevance of regional foresight, i.e. regional foresight may not be used as mechanism for initiating change at regional level that could than be supported by structural assistance.

However, this may be a problem only in the bigger CEECs, in particular in Poland and Romania. In the smaller CEECs, for example, Slovenia and the Baltic states, national foresight is almost identical to regional foresight and such problems are unlikely to arise. The situation in the future is less clear for medium sized CEE CCs (Czech R, Hungary, Slovakia and Bulgaria). Given that Hungary is relatively more decentralised than other medium sized CEE CCs we may expect that regional foresight could be effectively promoted in this country, especially given Hungary's early experience with technology foresight.

Given this specificity of the CEECs we will use the terms national and regional foresight interchangeably.

Irrespective of whether foresight in CEE CCs is likely to be national or regional we could expect that enlargement will create a new incentive structure for local and regional authorities. Accession has already provoked initial changes in this direction, which seem in most countries, with the exception of Poland, to be limited to administrative capacity for regional policy. The more EU integration progresses the more it should revitalize regions by providing a governance level in CCs. However, given the lack of regional governance mechanisms this will likely be achieved in the long-term rather than the medium-term. Therefore, it seems that national level technology foresight should precede regional foresight exercises in CCs. Yet, it would be wrong to discourage those regions where local 'product champions' for such exercises are willing to use this mechanism as a tool for promoting structural change in the region.

#### **2. Foresight as an endogenous learning process**

CEE CCs are faced, in almost all sectors of economy and society (education, health, pension reform, industry restructuring, market system, etc.), with the challenge of how to cope with large-scale restructuring. In such a situation, (in)ability to articulate priorities in the S&T system is often rationalised in the following terms: ‘We do not need foresight. Our priorities are those of the Fifth Framework Programme’. Indeed, national priorities in many areas reflect EU priorities and do not take into account local capabilities and local priorities. This is to a degree understandable given the strong pressure within the government administration and political elite to speed up the accession process as much as possible.

In such a situation, the danger is that foresight may be seen as either irrelevant or one more way of conforming to EU ‘best practice’ in innovation policy. Either of these assumptions would undermine the effectiveness and benefits of foresight whose main value added should be in developing an active approach in addressing growth objectives and priorities. In addition, the endurance amongst the public mindset of the planning ‘mode’ (Havas, 2001) may be a big additional barrier to accepting and understanding foresight.

Fixation on EU priorities in part reflects the lack of understanding as to where a country or region stands in a particular sector in relation to the world and to comparable countries. Hence, the great value of foresight in CEE CCs would be in developing a strategic view of the local situation. We should not forget that foreign consultants through various international programs have conducted much or almost all of the strategic analyses in the CEE CCs. While this has ensured relatively good quality it has left very little understanding or policy analysis domestic capability. Information that has been generated has not resulted in the creation of endogenous knowledge. The unique value of foresight is that the analysis and assessment should involve a large number of local experts and stakeholders in different sectors. It is only through collective processes of learning and debate that a common understanding of the key issues, objectives and priorities will emerge. This process must be locally driven and only facilitated from outside.

### **3. Trade off between methodological rigour vs willingness to participate**

Havas (2001), based on the Hungarian technology foresight experience, argues that there is a trade-off between methodological rigor vs. willingness to participate. If potential foresight participants are likely to be ‘deterred’ by sophisticated, demanding methods then one would opt for simpler, expert panel based methods. Yet, this may undermine the achievement of maximum learning benefits. The issue then is how to ensure analytical rigor with relatively light methodological rigor. These two objectives may be difficult or impossible to reconcile. There is a great need to draw from experiences of other countries in order to achieve the right balance between methodologically and analytically sound foresight activity for each CC.

### **4. National (regional) foresight as a mechanism to improve regional and national governance in innovation activities**

The distribution of power between central, regional and local authorities varies widely between CEE accession countries though significantly less than in the EU. A common feature of the CEE CCs is very weak regional governance.

Foresight can clarify and validate institutional and power competencies between national level and regions in a variety of areas, which emerge as important from national (regional) foresight exercises. The advantage of foresight is that the debate over national vs regional

governance and on systems of innovation governance is depoliticised as it is couched in strategic terms and should involve a variety of stakeholders.

**5. The importance of foresight is in active promotion of linkages across all four levels of governance: European, national, regional and local.**

National and regional foresight exercises should demonstrate that tackling national technology and innovation issues requires closely connected and independent different levels of governance. Foresight should identify those activities that require cooperation between actors at local, regional, national, and EU level.

So far, accession has enabled formation of Euro-regions or international partnerships between towns, communes, associations and districts as well as between associations and other organisations of border regions, established on a voluntary basis. These initiatives have been mainly driven by hopes of securing assistance funds for such structures. Foresight exercises should show which of these initiatives for partnerships at different levels are justified in the long-term .

**6. Foresight should support a restructuring of the science and technology systems and the emergence of national (regional) innovation systems focused on absorption and transfer of innovation and technology.**

Foresight should be instrumental in restructuring of the S&T system towards absorption and diffusion of knowledge. A shift from knowledge generation oriented national systems of innovation towards diffusion oriented should complement the competition principles of the Framework Programme, which will integrate R&D systems of CCs into a Europe-wide R&D system. This does not mean that science foresight is not necessary in CCs but only that foresight should address much more downstream type activities like innovation and supporting activities and knowledge-based services.

**7. Foresight as mechanism to develop networking culture**

CEE societies are fragmented and lack cohesion and trust. Much of this is the result of the fast and disruptive nature of socio-economic change that has taken place in the last 10 years. In addition, scarce resources coupled with still very low domestic value-added make it difficult to achieve consensus on social objectives. In such a situation perceptions of risk among different social groups vary widely. Uncertainty, lack of trust and short-termism, which seems to now to be endemic, may make foresight unrealistic without significant cultural change.

Foresight can be instrumental in developing a culture of networking which is one of the key preconditions for developing trust and reducing uncertainty. Experience elsewhere shows that networks active in regions or small states are vital to foresight. In CEE CCs these seem to be very weak. However, we should not wait for these networks to strengthen in order to

promote foresight. In fact, quite the opposite. Foresight should be employed as a way to enhance local dialogues in a meaningful and structured way by depoliticising debate on growth and its trade offs. It is a convenient mechanism to address trade-offs between different objectives (growth, competitiveness, sustainable development, equality) in interactive and consensual way. The problem is that these indirect learning benefits of foresight like building trust, developing learning and technical capacity and networking are by nature difficult to assess. It is a methodological challenge to try to assess these indirect benefits in a way that would ensure proper assessment procedure compatible with the assessment of public programmes.

## **8. How long is the long-term?**

Greater uncertainty in CEE CCs, due to still on-going large-scale privatisations, institutional transformation and fast changing industrial structure, may reduce the effectiveness of long-term foresight exercises. As Havas (2001) points out the inherent contradiction between the long-term nature of foresight issues and policy recommendations, on the one hand, and the substantially shorter time horizon of politicians, on the other may be much greater in the CEECs than elsewhere. This raises the issue about what is the best time-horizon for foresight exercises or how long is the long-term in CEE. In principle, one should aim for short and medium-term exercises, which should ensure the interest of participants and policy makers.

## **9. How to bring together all the relevant stakeholders?**

Inability to include all the significant stakeholders may hinder the relevance of foresight activities. A strong selectivity in the choice of stakeholders will depend on who is the coordinator. For example, assigning the role of coordinator to the Academy of Sciences would very likely lead to a science bias of foresight. A different bias might apply if the coordinating role is given to an individual Ministry. Probably, the most satisfactory solution would be to organise foresight as an inter-departmental activity with an independent advisory body. The key issue is how to ensure financial, organizational and intellectual independence combined with political support and relevance.

In the case of most of the CEECs, one of the most important stakeholders is the foreign investors or their associations, which should be part of a national or regional foresight process. Their active role in this process may have positive direct effects. For example, foresight activities could enhance their role in shaping education programs by introducing into the curriculum the skills and knowledge demanded by the specific employers. Also, they can be involved in upgrading laboratories in universities and research institutes in exchange for customer-oriented services like highly specialized analyses or long-term cooperation agreements (Phare, 2000). In the CEECs, the area much more receptive to foresight may be branch-based or technology based foresight activities. Technology or branch based foresight

activities should enable inclusion of foreign investors who in many sectors are the leading actors.

Foresight is the appropriate mechanism to bring in a variety of stakeholders that usually have not been considered as relevant to innovation policy, for instance SMEs and professional associations and other NGOs.

#### **10. What should be the main focus of CEE foresight exercises?**

Hungarian technology foresight experience shows that huge importance was given to non-technological issues (institutional) in foresight exercises (Havas, 2001). Slovenian foresight is considering separate socio-cultural Delphi analysis (Usenik et al, 20001). It may be that the CEE foresight exercises will or should be much more focused on non-technological aspects given that the nature of these countries' technological problems is mainly related to institutional set-up and diffusion issues. We may see a different balance in focus between issues of growth vs. social and environmental objectives. Also, CEE participants are more likely to put more emphasis on factors that underpin growth and competitiveness.

#### **11. How to link up foresight to other policy activities?**

Regional and national foresight should be promoted in those regions that are likely to benefit from RIS/RITTS exercises, and EU grants for the support of the regional network-based projects aimed at support of technology transfer infrastructure. It should serve as a frontrunner activity, which would be followed up by programmes that can bring to realisation some of the ideas developed during the foresight activities. An alternative would be for RITTS/RIS to be the forerunner of a foresight exercise, which can be then based on improved trust and cooperation. Probably, decisions on sequencing should be based on preferences and the local conditions in individual countries and regions.

#### **4. References:**

Begg, Robert and John Pickles, (1998) "Institutions, social networks and ethnicity in the culture of transition: industrial change, mass unemployment and regional transformation in Bulgaria", In Pickles, John and Adrian Smith (eds.), *Theorising Transition. The Political Economy of Post-Communist Transformation*, Routledge, London and New York, 1998.

Dornisch, David, (2000) *The Social Embeddedness of Polish Regional Development: Representative Institutions, Path Dependencies, and Network Formation*, To be published in *Democracy in Poland*, CEU Press, Budapest.

Dunin-Wasowicz, S., Gorzynski, M. and Woodward, R. (2002), 'Integration of Poland into EU global industrial networks: the evidence and the main challenges', ESRC Project 'The emerging industrial architecture of the wider Europe', *Working Paper No. 15*, SSEES – UCL.

European Commission (2002): 'Innovation policy issues in six applicant countries: the challenges', Study funded by EC DG Enterprise ([http://www.cordis.lu/innovation-smes/src/studies3.htm#studies\\_candidate\\_countries](http://www.cordis.lu/innovation-smes/src/studies3.htm#studies_candidate_countries)), CORDIS, 2002. (ADE, MERIT and SSEES),

Economic Policy Committee (2002) *Report on Research and Development*, Working Group on R&D, January 10, EPC/ECF/01/777-EN.

Havas, Attila, (2000) *Evolving foresight in a small country in Transition. The Design, Use and Relevance of Foresight Methods in Hungary*, paper submitted for publication in the *Journal of Forecasting, special issue on Technology Foresight*.

Hughes, Jim, Gwnedolyn Sasse and Claire Gordon (2001) The regional deficit in eastward enlargement of the EU: top down policies and bottom up reactions, ESRC Program 'One Europe or several?', *Working Paper 29/01*.

Horvath, G. 1996 (1996) Transition and Regionalism in East-Central Europe, *Occasional Papers No. 7* (Tubingen: Europaisches Zentrum fur Foderalismus –Forschung)

Gorzalak Grzegorz, (1996) *The Regional Dimension of Transformation in Central Europe*, Jessica Kingsley Publishers and Regional Studies Association, London.

Gorzalak Grzegorz, (2000) The dilemmas of regional policy in the transition countries and the territorial organisation of the state, In Petrakos, G., G. Maier, and G. Gorzelak, *Integration and Transition in Europe. The economic geography of interaction*, Routledge, London and New York.

Gross, Daniel (2001) Health not Wealth, *CEPS Policy Brief No.2*, Center for European Policy Studies, Brussels, April

Holland, D., M. Sass, V. Benacek and M. Gronicki (2000) The determinants and impact of FDI in CEE: a comparison of survey and econometric evidence, *Transnational Corporations*, Vpol. 9, No. 3 (December), pp. 163-212.

Konings Jozef (2001) The effects of FDI on domestic firms, *Economics of Transition* Vol. 9 (5), p.619-633

Lorentzen, Anne, (1996) *Crisis, institutions, and technological change in the BAZ County, Hungary*, Paper presented at the 8th General EADI Conference, Vienna, 1996.

Mickiewicz, T. and S. Radosevic (2001) 'Innovation capabilities of the six EU candidate countries: comparative data based analysis, Background paper for the study on 'Innovation Policy Issues in Six Applicant Countries: the Challenges', 2001, Study funded by the EC DG Enterprise ([http://www.cordis.lu/innovation-smes/src/studies3.htm#studies\\_candidate\\_countries](http://www.cordis.lu/innovation-smes/src/studies3.htm#studies_candidate_countries))

Peteri, Gabor, (1993) 'From the "Enterprising" Local Government towards Local Economic Development', In Public Policy Institute Foundation (1993) *Private Sector Development and Local Government in Hungary*, Papers and Proceedings of the Conference Organized by the Centre for International Private Enterprise and the Public Policy Institute Foundation, Eger (Hungary), 10–11 September 1993, Budapest.

PHARE (2000) *Reform Programme for the Science and Technology Sector (SCI-TECH II). Development of a National and Regional Innovation System for Poland*, CAN/DTI/UNICONSUL Consortium.

Radosevic, Slavo (1999), 'Transformation of S&T systems into systems of innovation in central and eastern Europe: the emerging patterns of recombination, path-dependency and change', *Structural Change and Economic Dynamics* 10 (1999), pp. 277-320.

Radosevic, Slavo (1999b), *International Technology Transfer and 'Catch Up' in Economic Development*, Edward Elgar, Cheltenham.

Radosevic, Slavo (1999c) 'Prospects for Building Regional Technology Policy in Central and Eastern Europe', In Morgan, K and Nauewealers, C (eds): *Regional Technology Strategies : The Challenges for Less-favored Regions*, HM Stationery Office in cooperation with Regional Studies Association, London, pp.160-178.

Radosevic, Slavo (2002) 'Regional Innovation Systems in Central and Eastern Europe: Determinants, Organizers and Alignments', *Journal of Technology Transfer* 27, 2002, pp87-96,

Radosevic, Slavo (2002b), The electronics industry in central and eastern Europe: an emerging production location in the alignment of network perspective, ESRC Project 'The emerging industrial architecture of the wider Europe', *Working Paper No. 20*, SSEES – UCL.

Shankar, R. and A. Shah, Bridging the economic divide within nations: A scoreboard on the performance of regional development policies in reducing regional income disparities, *World Bank Working Paper*, November 2001

SQW (Segal Quince Wicksted Limited), (1994) *Survey of the Innovation Infrastructure in Central and Eastern Europe*, A Report to SPRINT, EC-DGXII.

Stryjakiewicz, Tadeusz (2000), Implications of globalisation for regions and localities in an economy in transition: the case of Poland, In Parysek, J. and T. Stryjakiewicz, *Polish economy in transition: spatial perspectives*, Bogucki Wydawnictwo Naukowe S.C, Poznan.

Usenik, Hedvika, Marko Kos, Peter Stanovnik, Cene Bavec, Predvidevanje tehnološkega razvoja Slovenije, institute za ekonomska raziskovanja – Ljubljana, Maj 2001

Webster, A. (ed.) (1996) *Building New Bases for Innovation: The Transformation of the R&D System in Post-Socialist States*, Anglia Polytechnic University, Cambridge