

E. Policy messages from the integrated roll-forward scenarios

Basic messages

A number of policy considerations result from the elaboration and confrontation of the three integrated scenarios, keeping also in mind the outputs of the numerous thematic scenarios elaborated previously.

The first basic message is that the European territory will be confronted in the coming decades with a number of new challenges, independently from the fundamental policy options related to cohesion or competitiveness. In front of these new challenges, current policies appear insufficient or not adequately targeted. New policy approaches will be necessary in future, departing in many respects from the policies applied up to now. More information about the future territorial challenges and the related policy requirements will be provided hereafter.

The second important message is that the long-term evolution of European regions (more than 20 years) may significantly differ from the evolution in the short and medium-term (up to 15 years). Examples from the past are illustrative in this respect. The economic evolution of the Portuguese regions or of those of the so-called 'Third Italy' has been considered during many years as quite promising and these regions were shown as European examples of successful 'catching up' or 'economic take off'. More recent evolution since the beginning of the present decade, has however shown that insufficient technological inputs in industrial production and too modest advanced service industries were jeopardising the long-term continuation of this so far promising evolution. Looking at the long-term future, the question can be raised if the catching up process observed in the new member states is likely to have everywhere a long-lasting character. The same issue also exists in Western Europe, with regions which had so far a stable economy but may become severely hit by the challenges of globalisation.

The third message is that market forces and the general evolution of the European society have and shall have in future a very important impact on the evolution, compared with the impacts which may be expected from public policies. Although the hypotheses of the various scenarios vary significantly in terms of basic priorities and resource allocation, the regional patterns of development resulting from the scenarios are not fundamentally different, even if distinct characteristics cannot be overlooked.

Main challenges

The demographic challenge:

The demographic evolution of Europe is a long-lasting issue. The decline in fertility rates which started several decades ago, has resulted in a situation where the median age of the population is starting to grow significantly and the continuation of this evolution over the next decades is unavoidable. Whatever measures will be taken in terms of family policies or liberalisation of immigration, the impact will remain limited, although non negligible, especially in the short and medium-term.

Demographic challenges are however not homogeneous across Europe. The map representing the index of sustainable demographic development in 2030 shows rather significant territorial differences. Two clusters with a relatively strong demographic potential emerge: one stretching from south-east France towards Ireland across the Paris region and southern England, the second encompassing southern Scandinavia (Denmark, the southern regions of Norway and Sweden) and Lapland. The demographic potential of southern Europe is particularly weak (except southern France, Crete and Cyprus), but is slightly above that of central and Eastern Europe where most regions are affected by the combined impacts of low fertility rates over long periods and very low life expectancy.

Compared with present policies, future policies will have to be more ambitious in terms of support to families and of maintain of reasonable conditions of life in the regions most affected, in terms of services, income and job opportunities and accessibility. In central and Eastern Europe, in addition, health and child care are particularly serious issues for increasing life expectancy.

Migrations and especially immigration from outside Europe is a second important issue in the demographic sphere. The negative impacts of the natural demographic evolution on regional labour markets will call in a few years for the need of allowing substantial immigration of qualified people into Europe. The competitive scenario, allowing this possibility, shows that selective immigration will benefit primarily to already well developed regions and will somewhat enlarge the extension of the clusters which have a rather strong demographic potential.

In addition to selective immigration (so far left to the initiative of individual countries, but possibly with EU intervention in a few years), other forms of immigration are likely to continue or intensify (political refugees, illegal immigration etc.).

The issue of socio-cultural and economic integration of immigrants or of people born in Europe but originating from immigrant families will become a major issue in most European countries in the coming decades. Present evolution shows that successful integration is only possible provided that substantial and efficient integration policies are applied (which are so far just experimented at small scale in various regions and cities).

With regard to the territorial impacts of future demographic issues, the scenarios show that these will largely contribute to increasing existing imbalances: higher fertility rates will be found mainly in well developed regions of Western Europe (with a few exceptions such as Crete and Cyprus). Immigration (both legal and illegal) will benefit more to metropolitan areas (especially those of Western Europe) than to less developed rural areas. Progressing depopulation in remote rural regions is likely to generate long-lasting negative spirals of decline which will then make efforts of regeneration extremely difficult and costly. Various demographic factors will however be compensating for or attenuating the comparative advantages of more developed regions. The issues of socio-cultural and economic integration are mainly concentrated in large cities. In addition, further growth of metropolitan areas may generate negative impacts such as growing land and housing prices, increasing traffic congestion and suburbanisation, thus progressively limiting the attractiveness. Numerous retirees are likely to leave large cities and to move towards attractive rural areas, strengthening the residential economy of these regions.

In conclusion, issues generated by the demographic evolution in Europe in the coming decades will call for ambitious, but differentiated policy solutions, according to the individual regional contexts. As demographic factors interfere with many other issues, more integrated policy approaches will be necessary.

Challenges related to accelerating globalisation

Even if the policy response to accelerating globalisation is presently considered to be the Lisbon Strategy, the consideration of long-term perspectives in this respect may provide new insights into the real challenges to which European regions might be confronted in future.

The economic evolution has a much stronger volatility than the demographic one. Regional foresight research carried out in the past decades has very often substantially underestimated the scope and nature of economic adjustments and re-structuring, and therefore their real territorial impacts.

A particularly important impact of globalisation is that it increases the scale and size of businesses. The wave of mergers and acquisitions which characterises the present period as well as recent years seems to be the forefront runner of much more substantial transnational and intercontinental economic interactions likely to intensify in the coming decades. The level of global economic leadership which European enterprises will gain, maintain or lose will very much depend upon the evolution of their competitiveness in the global context, but also upon their economic penetration

and organisation at intercontinental scale. The still important fragmentation of the European economy is a significant handicap in this context. As liberalisation will be further progressing, especially in the competitive scenario, it is likely that activities which traditionally belonged to the public or semi-public sectors, such as rail transport, water and energy supply, health care etc. become, after privatisation, externally controlled by non-European companies. Signals of such an evolution can already be perceived to day.

A particular aspect of globalisation is the resurgence of heavy industries pushed by the enormous demand for basic products and equipments in the large emerging economies. The rapid and significant price increase of raw materials, which is taking place simultaneously to that of energy products, is a sign that large industrial, transnational and intercontinental conglomerates will dominate the world production of metals and basic chemical products (hydrogen liquefied or gasified coal etc.). What is really at stake is the part which European enterprises will play in this process. This evolution shows that accelerating globalisation does not imply only a further move towards the information and service economy.

In addition, as Europe cannot compete in the field of wage levels, the vertical segmentation of functions in enterprises will be more and more accompanied by a spatial spreading of these functions throughout the world, according to the balance between skill requirements, wage levels, final markets and economic security. For European regions, this has meant so far and in many respects, relocation outside of Europe (or –for a transition period- towards the less developed regions of Europe) of enterprises' functions which can be carried out with low wages or which are necessary to penetrate the growing markets of emerging economies. It is quite likely that competition – and the necessary economic adjustments – will in future not be only based on differences in wage levels, but more and more on technological productivity (combining technological outputs and prices). External competition will therefore increase in a number of sectors for which Europe had up to now comparative advantages and it will not be limited to industrial production, but will increasingly affect the service sector and activities related to the knowledge economy.

The territorial impacts of accelerating globalisation are likely to be manifold. It is rather difficult to anticipate with reasonable probability, especially in the long-term, which areas will benefit most from the globalisation process and which ones will be negatively affected, because the diversity of possible manifestations of the globalisation process is not yet predictable. What is however rather probable is the multiplication in the coming decades, of so-called asymmetric shocks which are likely to hit areas with very different economic characteristics in Europe. The competitive scenario shows that policies targeted at promoting global European competitiveness will generate a somewhat higher global economic growth in Europe, but also that territorial polarisation will significantly progress with metropolitan regions drawing higher benefits than less urbanised regions. This may however generate an important social cost or collateral damage, with a number of regions losing their vitality.

Spatial and regional policy responses to the process of accelerating globalisation will have to consider increasingly the diversity of possible impacts and opportunities generated by the globalisation process as well as the multiplication of their occurrence. They will have to create and consolidate regional environments and milieux in order to make them more robust and resistant to external challenges, while empowering them to throw arrows likely to penetrate the very large markets of the emerging economies. Agglomeration and network economies, innovative milieux, clusters of technologically advanced activities, good accessibility and availability of highly skilled and creative manpower will be more and more required. Further progress in reducing the fragmentation of the European economy, especially in the context of forthcoming EU enlargements, will also be a prerequisite. However, supply-side policies will not be enough as long as the internal demand within Europe is so weak and external demand from the emerging economies has not yet reached the European level. It is, therefore, important, to remember that even a higher productivity will not be enough to make the economy grow, if there is not enough demand for the products.

Towards a new energy paradigm

The third fundamental challenge for European regions in the coming decades will be to successfully implement the change of energy paradigm. For more than one century, the availability of oil and, more recently, of natural gas has made possible the considerable expansion of industrial countries during the 20th century. World resources of oil and natural gas are progressively being depleted in a context where the expansion of large emerging economies creates an environment of strongly growing demand. While resources will become more and more scarce, their price is likely to considerably increase, a trend which has started in the year 2000 when a barrel of crude oil was only \$ 9 worth, to reach \$ 70 by 2006. With the progressive depletion of European oil and gas resources in the North Sea, the external dependency of Europe in the field of energy is likely to increase substantially until 2030.

The oil and gas economy has penetrated most sectors of economy and society (transport and mobility, housing, industrial production, leisure and recreation, agriculture, services etc.). Changing the European energy paradigm can only be achieved in a long-term perspective with considerable efforts and investments. Territorial impacts are likely to be very significant. These have to be anticipated in the context of spatial development policies in order to avoid inconsistencies, conflicts and insufficient productivity. In addition, spatial development policies will have to facilitate and contribute to the change of energy paradigm.

In this respect, the first objective is to increase the energy efficiency of existing systems and therefore to curb down energy consumption. In territorial terms, this is related to the level of mobility of society, to the intensity and density of transport flows, to the evolution of modal shift, to the morphology of agglomerations (more or less compact,, with functions more or less integrated or segmented), to the insulation of buildings etc. the second objective is to favour the development and to optimise the use of renewable energy sources. This objective has very strong territorial dimensions, such as the location of residential and productive facilities in relation to climate conditions, the exploitation of local and regional renewable energy sources (solar, wind, tidal and other hydro-electric energy, biomass etc.), the prevention of land-use conflicts related to the exploitation of such resources (production of biomass versus food production; development of wind parks versus protection of landscapes and development of tourism etc.). The third objective is to ensure security and sustainable territorial development in relation to the location and development of conventional and innovative large-scale energy supply facilities (nuclear power plants, coal gasification and liquefaction facilities, hydrogen production plants etc.). the scenarios have shown that the policy choices may have very different impacts in terms of energy efficiency, reduction of the dependence from oil and gas, sustainability of energy systems, etc. While the competitive scenario favours the emergence of large-scale technologies which are promising for the future (hydrogen technologies coal gasification and liquefaction, nuclear fusion etc.), it neglects the exploitation of renewable energy sources in remote rural areas which generally needs incentives to really emerge. On the opposite, the cohesive scenario pays particular attention to renewables in rural areas and less developed regions, but it shows drawbacks in terms of technological innovation and breakthrough of new energy technologies and bundling of sufficient resources to enable their industrial implementation. In order to successfully move towards a new energy paradigm, a combination of the policy approaches proposed in the various scenarios will therefore be necessary.

Acceleration of climate change

The fourth significant factor challenging the competitiveness, cohesion and sustainable development of the European territory is the acceleration of climate change. This has numerous and significant territorial impacts. It is now widely admitted that the increase of greenhouse gas emissions is one of the main factors responsible for growing average temperature and for the related natural hazards.

With regard to the territorial impacts of climate change, a distinction must be made between those which have a temporary and local character, but may generate significant local or regional damages (floods, heavy rainfalls, storms, landslides etc.) and those which have a more sustained character (drought, elevation of snow altitude in mountains, rise of sea level, evolution towards a

moderate climate in northern regions etc.) which have long-lasting impacts with negative or positive character.

Climate change can hardly be curbed down through policies within a period of 20 or 30 years. An immediate and drastic reduction of greenhouse gas emissions at world scale would certainly not have significant impacts on the climate before the year 2050. This does not mean that such measures would be neutral in territorial terms. A drastic reduction of greenhouse gas emissions would for instance imply substantial changes in mobility patterns and transport systems. The scenarios do not concentrate however on such measures likely to have an impact on climate change after 2050. The deliberately attempt at showing that different policies targeted at alleviating the territorial impacts of climate change (and not at climate change itself) are likely to have very different effects in terms of territorial evolutions. Basically, the policy measures which are at stake are prevention or adaptation measures. Prevention measures are generally expensive and need incentives or support, especially in weaker regions. The counterpart is that physical damages caused by natural hazards or long-lasting economic drawbacks can be significantly contained and reduced. While measures like the implementation of retention areas along rivers are essential in limiting the impacts of flooding, regions affected by sustained drought in southern Europe may benefit from measures limiting water needs (such as irrigation), maintaining activities in agriculture and forestry through the adaptation of productions and practices in order to prevent wilderness and forest fires. Neglecting prevention and mitigation measures, as shown in the competitive scenario, may lastingly affect the economy of numerous areas in the long-term and counteract the objective of territorial cohesion.

Climate change is likely to have manifold manifestations and impacts in future. These have to be systematically monitored and anticipated in order to define the measures which are best suited to the regional contexts. Issues related to climate change should become in future a specific part of regular territorial development activities.

Other policy issues

The four main challenges facing future territorial development and cohesion in Europe described above are not the only ones which can be anticipated by the various scenarios, but they have a dominating and relatively new character. Other challenges and issues are also identified which have consequences for territorial policies. These are in particular:

- the need to limit the multiplication of unproductive heavy infrastructures with low leverage effect on private investments in less developed regions at the expense of more global competitiveness;
- the need to take more into account the regional and local specificities and potentials of the territory when conceiving and implementing public policies, favouring better synergies. This is not neutral in terms of territorial governance;
- the fact that various policies have different impacts on territorial integration and cooperation at cross-border or transnational level, some favouring networks between metropolitan areas (competitive policies), others cross-border cooperation between less developed regions, especially along external borders (cohesion policies);
- the high probability that enlarging significantly the EU territory without maintaining and deepening policies favouring cohesion may have in the long range detrimental impacts not only on territorial cohesion, but also on global competitiveness, because further enlargements will necessarily increase territorial imbalances;
- the need to use efficiently the new opportunities which will be offered to rural areas, such as the residential economy or the production of energy crops from maintaining a sufficient vitality and level of services and for counteracting the decline which may occur in other sectors of the rural economy (traditional agriculture, obsolete industries);
- the need to organise in a sustainable way the territorial development of metropolitan areas which will be subject to further growth, under the influence of market forces, independently from the public policies pursued.