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The regional competitiveness: some notions

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The regional competitiveness: some notions

1. The new role of regions

The concept of regions and regional development has drastically changed in the EU and OECD countries since the 70-80s. Indeed, this corresponds to a shift in production processes from Fordism towards flexible specialisation¹. The emergence of this new industrial pattern corresponded to a new evolution of the global demand: shortened product life cycle and tailored products. The principle of the Fordist economy characterised by mass production activities in sectors such as capital equipment and consumer durables, standardisation of outputs, assembly-line methods, technical division of labour and a rigid system of labour relations had been seriously challenged by new principles in production. This new production pattern was characterised by specialist units of production, decentralised management, versatile technologies and workforce, which were far more effective in satisfying increasingly volatile markets.

This evolution resulted in the transformation of big inflexible production structures into small flexible units far more adapted to the new type of global demand. Innovation and flexibility appeared to be the new keys of success in a globalised world at the expense of mass production and economy of scales. There were massive reductions of employment, discarding and selection of a lot of sub-contractors, valorisation of human resources in order to increase the flexibility to external constraints. The situation gave new opportunities for the development of SMEs and new types of collaboration between big enterprises and SMEs. The competition itself has evolved from a competition based on prices and each-for-his-own attitudes towards a new competition based on a better knowledge and understanding of the demand and a better adaptability to the market changes. New industrial patterns have been emerging, particularly in leading-edge industries (e.g. appearance of techno poles in high-technology industries), craft-based industrial niches, specialty niches within mature industries, as well as high performance companies that draw extensively on innovation, high quality products and specialist skills.

It appeared that those new industrial patterns developed best in locally integrated regional economies based around their specialisation in particular products and characterised by geographical clustering of productive activity, i.e. local production systems.

The development of flexible units has meant either focusing on a given territory for big firms or development of SMEs. The attractiveness of a territory has not been based on classical comparative advantages such as low cost of production factors and reduction of transport costs but rather on its capacity of creating an environment necessary for social and economic development allowing to adapt to the new requirements. Firms, governments and the public

¹ For more information see Recep papers:

Blandinières, J.P., *Реиндустриализация России: поучительный характер европейской стратегии.*

Blandinières, J.P., *Изменение основополагающих производственных и общественных парадигм.*

Трансформация общественного сектора в Европе. (опыт стран ЕС).

identify the specificities of regions (their workforces, entrepreneurs, administrations, amenities or what can be called “territorial capital”) as an element for increasing their competitive advantages, which are needed to successfully confront the globalisation process. Local production systems evolve or transform themselves not solely under the actions of enterprises but thanks to environment allowing a group of economic and social actors to develop common plans and projects.

The regional environment is characterised by:

- *know-how*, which are defined as a capacity to master the production process in all its components, i.e. technical, organisational and marketing. This capacity is crucial in order to cope with the technical changes and markets evolution.
- *culture and values*, which define the behaviour of actors and the relation between them. For example, it can be based on a principle of confidence and reciprocity or lack of trust and strict individualism, on cooperation or undermining attitudes, solidarity and mutual aid or each-for-his-own attitudes.
- *a social capital* measured by the knowledge each of the actors have on one another. This issue is essential when it comes to the setting up of networks.
- *the degree of openness to the outside world* characterised by the knowledge and understanding of markets and technologies.
- *the existing set of regional actors* such as big enterprises, SMEs, financing structures, administration, local decision-makers, public interfaces, professional associations, education and research institutions, etc.

The environment itself, which is difficult to quantify, is enhanced by what is called soft infrastructure (networks, services to enterprises, social capital building, knowledge infrastructure, etc). This environment is not inherent in a region: it has to be nurtured, sometimes incubated, and developed on a permanent basis.

Actually, the process of regional economic development can be defined as a triple capacity of an economic society. The first one is the capacity of innovation. The meaning of innovation has to be taken in its broader sense, that is not only technical or technological innovation but also innovation in organisation (production, marketing) and information sharing. The second one is what is called “spatial” solidarity. Regional solidarity is necessary to react to the changes of the outside world. Indeed, on the one hand it is obvious that it is necessary to have a minimum endowment (infrastructure, density of population, quantity of SMEs). On the other hand, it is necessary to create an informal network, which allows a group of entrepreneurs to react quickly to external constraints. This capacity to react will be more efficient if this network is open to other players (banks, administration, NGOs, consumers, etc.). The third factor is the capacity to regulate and give stability to these forms of solidarity in order to reproduce the conditions which are favourable to innovation. This regulation can be either explicit and institutionalised (via laws and rules) or informal and implicit (e.g. the solidarity plays during production phase but not during marketing phase).

Therefore, the regions ceased to be passive players subjected to decisions of a national centre or the fluctuations of the global economy but became active players who develop their own economic and social future.

The new international game of competitiveness is played and won on the regional level. The determinants of global competition are not only the products themselves but also the environment provided on the regional level. The role of the state has changed: it shifts from its traditional role in the development of industrial policy towards the role of facilitator for developing production systems at the local level.

2. What is regional competitiveness?

Before starting to speak about regional competitiveness, we will try to develop the notion of competitiveness and the context within which it is generally used.

In the microeconomic context (firm level), competitiveness is defined by the capacity of a firm to compete, to grow and to be profitable. Uncompetitive firms will see their market share decline and ultimately any firm that remains uncompetitive will go out of business (unless it is given artificial support or protection).

At the macroeconomic level, we can illustrate the notion by quoting definitions used in documents produced by the European Commission². We use on purpose the macro-level definitions, as competitiveness is generally defined as a macro-concept and not specifically a regional issue. Actually, regional competitiveness is generally associated with national competitiveness.

"A nation's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance and the economy's ability to shift output to high productivity activities which in turn can generate high levels of real wages. Competitiveness is associated with rising living standards, expanding employment opportunities, and the ability of a nation to maintain its international obligations. It is not just a measure of the nation's ability to sell abroad, and to maintain a trade equilibrium." The Report of the President's Commission on Competitiveness (1984)

"An economy is competitive if its population can enjoy high and rising standards of living and high employment on a sustainable basis. More precisely, the level of economic activity should not cause an unsustainable external balance of the economy nor should it compromise the welfare of future generations." European Competitiveness Report (2000)

"[Competitiveness is defined as] the ability to produce goods and services which meet the test of international markets, while at the same time maintaining high and sustainable levels of income or, more generally, the ability of (regions) to generate, while being exposed to external competition, relatively high income and employment levels'." and "In other words, for a region to be competitive, it is important to ensure both quality and quantity of jobs." and "[The definition] should capture the notion that, despite the fact that there are strongly competitive and uncompetitive firms in every region, there are common features within a region which affect the competitiveness of all firms located there" The Sixth Periodic Report on the Regions (1999)

² We have decided to focus on the definitions used by the European Commission and neglect those one used by other bodies such as the World Economic Forum, the International Institute for Management Development and so on. Indeed, the definitions and concepts of competitiveness developed by the above quoted bodies and other ones are largely discussed in the Recep paper "Competitiveness: a General Approach". Therefore repeating them, would be just an unnecessary overlapping. Secondly, we decided to focus on the notion of competitiveness such as perceived within the European Union rather than entering in the debate on the notion of competitiveness (see introduction).

“Competitiveness...is understood to mean a sustained rise in the standards of living of a nation and as low level of involuntary unemployment as possible”. European Competitiveness Report (2001)

One can make the following comments when analysing the macro level definitions:

1. A successful performance is related to rising living standards/real incomes. If we extrapolate a little bit our understanding of rising living standards and sustainability, i.e. associating it to well-being, we can easily include in the assessment of competitiveness elements such as social and environmental issues.
2. Goods and services have to be produced not only in free and fair market conditions but in open market conditions. This means that the economic development has to take place in an environment where there is a potential or actual competition from both domestic and foreign producers.
3. Competitiveness is not a short-term phenomenon but has to be sustainable and have a long lasting effect. Therefore policies such as social dumping or regional tax cutting dumping in regards to neighbouring regions are not relevant.
4. A competitive economy has to create jobs, and not any kind of jobs but jobs, which are qualitative and which contribute to raising real incomes/living standards.
5. In some cases competitiveness is understood as productivity. Nevertheless, productivity is no more than an important indicator of competitiveness. It is certainly not an explanation of competitiveness.
6. Competitiveness is defined in terms of the outcome (living standards/incomes), rather than by the factors that determine competitiveness.
7. It is not relevant or sometimes even dangerous to assimilate the competitiveness of a region or nation to the competitiveness of a firm. Indeed,
 - i. A nation or region even if uncompetitive does not go out of business.
 - ii. Competitiveness at regional level does not imply a zero sum game, where the success of one happens at the detriment of the others, as it is the case at the micro level. Actually, the success of a region creates opportunities for other regions as well, especially neighbour ones. Indeed, these regions can benefit, among others, from the growth pole effect generated by the dynamic region.
 - iii. Creation of employment (both on the qualitative and quantitative side) is one of the measures of success of a competitive region. This is obviously not the case if we refer to firm competitiveness. Even more, in case a region's economy is composed of highly competitive firms in the micro-economic sense but with activities that create low value-added per worker, the region will not be considered as competitive.
8. The fact that *“there are common features within a region which affect the competitiveness of all firms located there”* confirms that the region's environment is a factor/determinant of competitiveness, i.e. that competitive advantages of a region can and should be created rather than taken for granted and immutable (link to chapter one).

9. All these macro definitions have to be placed in the general EU framework induced by the ultimate objective of the Lisbon European Council, which aims that “the EU becomes the most competitive and dynamic knowledge-based economy in the world over the decade, capable of sustainable economic growth with more and better jobs and greater social cohesion”.

3. What are the main drivers/determinants of regional competitiveness?

Most of the studies and literature put forward some of the following factors as main drivers of regional competitiveness:

1. Clusters;
2. Human capital;
3. Enterprise environment and networks;
4. Innovation/Regional innovation systems;
5. Governance and institutional capacity;
6. Sectoral structure and type of enterprises;
7. Infrastructure (broad understanding);
8. Typology of regions and level of integration of firms;
9. Internationalisation and nature of foreign direct investment (FDI);
10. Geographical location;
11. Attractiveness for investments.

Nevertheless, one should not forget that the pre-determinants for regional competitiveness are established at the national level. Indeed, regional development to be sustained requires favourable conditions such as a macro-economic environment leading to growth, employment, and stability, and a tax and regulatory system encouraging business and job creation as well.

3.1 Clusters

The competitive advantage of firms in the new economy is greater specialisation, which results in more interdependency with other firms, organisations, and suppliers. Consequently, firms are more and more frequently becoming members of networks or clusters, where they can benefit, among others, from the advantages of pooling common resources and information sharing. More specifically, industrial clusters can be defined³ as firms in related industries that:

- are geographically concentrated in a particular region;
- gain a competitive advantage because of their proximity to each other in the region;
- share specialised supplier and buyer (marketing) advantages because of their location;
- are supported by advantageous infrastructure in the region, such as physical resources (e.g. a port or access to minerals), educational and research advantages (e.g. universities), financial institutions, labour advantages (e.g. training programmes).

Clustering provides firms with access to more suppliers and specialised support services, experienced and skilled labour pools and information sharing (formal and informal).

Clusters are important in regional development and for regional competitiveness in the measure that very often regional economies are specialised to varying degrees. Therefore the competitive

³ Blakely and Bradshaw.

advantage of regions can be best understood in terms of comparative advantages of specific industries within the region resulting from clustering. Moreover, clusters generate a snowball effect. Indeed, clusters attract not only similar but also complementary enterprises, which themselves develop clusters in turn. Numerous studies show the positive effect of clustering on economic development and productivity. Nevertheless, other studies show that despite the fact that clusters have without any doubt positive effect on regional competitiveness, they are not a condition 'sine qua non' for operating successfully in internationally competitive sectors.

3.2 Human capital

1. The level of qualification and structure of population in a given region affects the competitiveness of the region in the following ways:

- *They affect the type of industry which will establish itself in the region* and the type of product which will be produced. In other words, the higher the quality of the labour force, the higher the probability that the regional industry will develop higher added-value production.
- *The innovative capacity of a region.* The quality of human resources is the major factor behind the invention and diffusion of technology and it is a pre-condition for increasing the capacity of a given economy to absorb new innovations. Moreover, the development of regional innovation systems (RISs) involving technology-based industries and businesses supposes highly qualified human capital. Finally, experience in the EU shows that the level of innovation and technology of a region will determine technical specialisation of foreign-owned affiliates and their willingness to import innovation and technology.
- *The entrepreneur mentality of the population.* Indeed, the capacity of a region to produce entrepreneurs depends upon factors such as the age of the population (inverse relation) and the entrepreneurial culture/risk taking culture developed in the region. This in turn will influence the number of SMEs creation and therefore the dynamism and competitiveness of the regional economy⁴.
- *The efficiency of the workforce.* Indeed, the age of the population and social culture can have a real impact on the competitiveness of the workforce. We mean for example the flexibility of the workforce, the role of women in the labour market, the culture of work, etc.
- *The vitality of a region.* Indeed, the age of the working population, the population growth (or decline), and the migration flows are factors which are highly influencing the development and competitiveness of a region. For example, in the EU, regions characterised by an old working population and with negative demographic trends are called declining regions and are generally featured by low income levels and high unemployment. On the other hand, one can add that demographic trends are affected by social and economic developments. Indeed, migration flows are related to regional differences in labour market conditions and in the long term it affects birth and death rates.

⁴ See paragraph 'Sectoral structure and type of enterprises'.

- *The innovation capacity of a region.* The quality of human resources is the major factor behind the invention and diffusion of technology and it is a pre-condition for increasing the capacity of a given economy to absorb new innovations.

3.3 Enterprise environment and networks

The milieu or environment can be defined as a territorial system, which is opened to the outside and which integrates know-how, rules and relationship capital. It is linked to a group of actors and to both human and material resources⁵.

Networks are a key element in the creation and development of local environment, as they interconnect the different actors involved in the development of the region. The quality and the type of the network will affect the capacity of regional actors to react adequately to the external stimuli.

Networks can be of different type. Indeed, they can be either formal (business network structures, institutional networks) or informal. They can have a production, information sharing or know-how transfer finality or a mix of the three. Anyway, they are the conveyors between the firms and the environment they are in touch with.

Information and know-how sharing are both tremendously important as they influence the capacity of actors to:

- identify the changes in the market environment;
- adapt their behaviour to the identified changes;
- improve the collective learning process;
- formulate new projects and new solutions;
- create new resources.

When we speak about institutional networks, we think about all the institutions/actors/partners with whom a firm develops relations/partnership. It is for example public administration, financing institutions, education system, other enterprises, service to enterprises, professional institutions, etc. An active institutional network will allow enterprises to find funds, to integrate and develop innovation, to benefit from training, to acquire info, etc.

Business network structures can help the firms in some of the following ways:

- raising competitiveness;
- creating new business opportunities;
- developing and marketing new products;
- establishing new agents and distributors in new markets;
- pooling of individual products into complete product range.

⁵ For more information, see chapter 1, p.2.

The informal networks are made of informal personal relations developed by an entrepreneur in the region of his activity. They allow to develop solidarity mechanisms which strengthen the effect of formal networks. Despite the fact that it is very difficult to measure this phenomenon, it has to be taken into account and built upon.

The combination of these different types of networks will produce an environment which will eventually determine the competitive status of the region.

In particular, networking is important for innovation and diffusion of innovation.

3.4 Innovation/Regional innovation systems

“Innovation is a means by which less favoured regions can move immediately alongside the developed regions, not by attempting to imitate what the latter have already achieved but by trying to lay the groundwork, in accordance with their own features and requirements (...), for adapting to the conditions of competitiveness in a global economy.” Green paper on innovation, EC, 1995

1. It is widely accepted today that the ability of regional economies to withstand competition and to adapt to technological change is related to their capacity to innovate.

Indeed, innovation and flexibility are the keys of success in order to cope with globalisation. By saying innovation, we do not mean high-end technologies but we think of any improvement which could be introduced at the level of local firm production, marketing, management and organisational systems. This know-how once it develops in the right environment (networking, availability of information, involvement of actors, etc.) becomes a competitive advantage. Indeed, the innovation process is done in two steps: conceptualisation and realisation. This process in turn triggers new opportunities for innovation projects. In local production systems, innovation is rarely the result of one actor but it is the result of a multifunctional innovation network. An innovation network is made up of heterogeneous actors such as public labs, technical research centres, universities, enterprises, financial institutions, public authorities, etc.

The elements characterizing an innovative region are not given as such but can be induced by the authorities by developing a true regional policy. Some of the recommendations for developing an innovation system are:

- a) To involve the local actors and to develop/renew immaterial regional resources (know-how, specific technology, rules, principles of confidence and reciprocity, etc.).
- b) To stimulate synergies (interactions, networks, etc.) and learning process between the local actors. This means the development of both the proximity advantages and the collective capacity for changing (consensus, anticipations, etc.), i.e. development of change management. This is essential for the innovative environments in order to compensate the lack of economies of scales and the transaction costs.
- c) To keep permanently in touch with the technology and market environment (extra territorial networks). This means to obtain information about markets and technologies, canvass, management, technology transfers, labour training, opportunities for financing innovation and risk.

2. Technological side of the innovation and development of knowledge intensive activities are high on the regional development agenda. Several typologies of regional innovation systems (RISs) can be distinguished according to their governance or business innovation dimension.

From a governance point of view, there can be three modes of technology transfers.

The first ones, grassroots RISs are characterised by local initiatives, diffuse fundings (banks, local government, chambers of commerce), applied and near market research, low level of technological specialisation and local coordination. The second ones, network RISs, can be initiated at several levels (local, regional, federal, or governmental). The funding are generally coming from banks, firms, and government agencies. The research is mixed, aimed at both applied and pure technology with flexible specialisation. The third ones, dirigiste RIS are initiated, funded and animated typically by central governments. The research is rather basic or fundamental, with typically high level of specialisation, to be used in larger firms/multinationals in or beyond the region in question.

Another typology divides the RISs according to their business innovation dimension. First, localist RISs, have few large firms, either indigenous or multinational. The research reach of individual firms is not great but there is a reasonably high degree of association among entrepreneurs and between them and local policy makers. Second, the interactive RISs, have a balance between large and small firms, a mix of public and private research institutes reflecting the involvement to promote the innovation base of the economy of both large firms and local authorities. Third, globalised RISs, dominated by multinational enterprises, often supported by clustered supply chains. The research is mainly internal and highly private, rather than public. The new technologies are then diffused or not in the region.

The public sector plays a vital role in developing regional innovation systems. Indeed, it builds systemic linkages that transfer knowledge and innovation within and beyond the regional economy. It achieves that by developing social capacities, networks, institutional thickness and by assisting the functioning of untraded interdependencies. Actually, the public sector takes the role of both an animator and part-funder.

The role of higher education establishments is also vital in the development of regional innovation systems. Indeed, they play a valuable role in the regional knowledge infrastructure by promoting the transfer of knowledge and human capital through business-university linkages. On the other hand, the existence of an active scientific knowledge infrastructure has proved to be influential in the location decisions of big and multinational firms.

3. Evidence shows that there is a triangular relationship between high technology growth, talent and diversity. Indeed, places with high level of opportunities and low entry barriers attract talents from everywhere. In turn, this environment made of high levels of talents attracts high technology industries and so on.

Box 3.1 Role of public structures in the development of regional innovation systems: some EU study cases

1. La ZIRST in Grenoble

La ZIRST (zone pour l'innovation et les réalisations scientifiques et techniques de la région grenobloise) is a zone reserved for high-tech firms in the region of Grenoble (France). It was created in 1975 in order to orient the scientific and technical potential of the regions (University, Polytechnics, public research centres such as CNRS or CEA, private labs of Air Liquide or Sogreah, big firms users and producers of technologies such as Merlin-Gerin, etc.) towards business purpose. The creation of the zone, which was achieved by several steps, involved the local public authorities, the regional and local development agencies, local and international investors, and the Crédit national. The role of the public authorities was to be initiator, coordinator, fund guarantor and monitor of the process.

Twelve years after its creation, the Zirst was already a zone with 138 firms employing 3,142 persons, where 70% were firms set up by entrepreneurs, 28% were subsidiaries of big groups and 2% were subsidiaries of research centers.

Important synergy effects developed between the micro-enterprises of the zones, the big high-tech firms installed in the region (Merlin-Gerin, Hewlett-Packard, Bull, etc.) and both the education and research structures (both private and public) of the region.

2. Regional innovation systems in Finland and Sweden

The trend in the Nordic countries, especially Finland and Sweden, is that there is a shift of the private sector innovation from large private R&D laboratories towards scientific research in universities. Indeed, the number and scale of central laboratories of large multinational firms have been reduced in order to save costs. At the same time, research knowledge has been increasingly outsourced to public facilities. This situation required a new governance mechanism allowing for more synchronisation between government science policy, university research and industry innovation. These three-ways relationships are now embedded in the innovation system of Finland and Sweden and have the input of senior government figures.

3. The technology centres in Valencia

The region of Valence (Spain) is defined by an industrial tissue made of SMEs with a medium or high level of specialisation notably in the field of textile, shoes and ceramics. Most of the SMEs are export-oriented. The region of Valence has based its R&D and technology transfer policy on technology centres associated to networks of enterprises (regrouped according to their industry sector) having a status of non-profitable organisations.

Technology centres are bodies created in order to offer services related to technology and have a recognised and approved status in the EU, somewhat similar to regional development agencies (RDAs). Their activity destined to support the R&D activity of their clients is mainly related to:

- applied research;
- control, certification, standardisation and homologation;
- information, consulting and training in the field of technologies.

The financing of this these centres is coming from three different sources: public funds (European Union, State, regions), voluntary and tax contributions, contracts. Each technology centre serves a network of enterprises in the relevant industry sector. The main role of the public authorities was to support the start-up of these centres by among others investing in the establishment and necessary equipment. In addition to that, each year, there is a contract established between the

centres and the local government defining the development and planned activities of the centres.

3.5 Governance and institutional capacity

A lot of studies showed that there is a clear link between regional competitiveness and the nature of economic development governance and regional capacity.

The trend in the EU and OECD has been to shift from traditional “top-down” policies towards a more “bottom-up” (or endogenous) approach to economic development and employment creation. The consequence is that responsibilities are now increasingly shared among different levels of government, as well as with private and civil society actors. The underlying principle to this approach is that greater involvement and co-ordination among them will improve the design and implementation of public policy. Furthermore, measures are more likely to be long lasting and more equitable if they are built on consensus through responsibility sharing and local empowerment. Public/private partnerships are intended to avoid overlapping and undue competition among similar authorities, while ensuring that common macro-regional concerns in functional areas are addressed. This school of thought that has been labelled as New Public Management (NPM) emphasises the need to reorganise the traditional bureaucratic structures towards greater delegation, desegregation and contracting-out into the private sector. Some of the most relevant examples are the public-private partnership for infrastructures or services provision developed on the regional level or the functioning of structures aimed at regional development such as the regional development agencies (RDAs).

Moreover, regional economic development is not based on particular single projects but on long-term integrated development programmes and the use of synergy and complementarity effects of individual measures. Development programmes are designed on the basis of a strategic plan. Each strategic plan is specific for a region and cannot be copied per se. Indeed, a strategic plan is based on the identification of potentials and analysis of restraints (SWOT analysis, strategic analysis), which are unique for each region. From there, one can deduce the development objectives, and consequently, determine the means and instruments required/available, i.e. the formulation of a regional strategy optimizing the allocation of resources and creating synergetic effects.

Principles of good governance and institutional capacity seem to be highly relevant for Central and East European Countries, as recent empirical evidence identified that once a certain degree of macroeconomic stabilisation has been accomplished, the institutional environment becomes the more important determinant of growth⁶.

Box 3.2 Public-private partnership

Partnership is considered as a key instrument in regional economic development. The trend towards partnership is part of the more general shift from traditional “top-down” policies towards

⁶ Moers, 2002.

a more “bottom-up” (or endogenous) approach to economic development and employment creation. Partners can be administration (at any level), social partners, public institutions, institutions, people or association of people, economic players and private enterprises, etc. Partnership can be developed at any stage of the conception, programming or execution of a strategy or project.

One of the most common partnerships is the public-private partnership (PPP). The areas of application of PPP in the EU (and the OECD) in the field of regional/local economic development are very wide and fields of specific activities cannot be used for the definition of PPP. We can quote as examples some of the following areas and activities:

- transport (motorways, freight centres, airport terminals, railways, urban public transport, etc.);
- urban planning and renewal (land development and ground cleansing, local marketing, communication policy);
- construction of social dwelling;
- development of technological centres;
- municipal networks of water supply or sewage;
- construction and maintenance of educational, cultural and administrative facilities;
- development of tourist infrastructure (marinas, leisure facilities, etc.).

The principle underlying this form of cooperation is that there is a split of responsibilities:

- the private partners take the responsibility for an effective achievement of their own mission, under the assumption that the private partner would certainly achieve it more efficiently/effectively than the public partner.
- the public partners take the responsibility for the respect of objectives of the general interest.

The final result will be a more optimal use of public resources, a better service for the final users of provided services, and eventually a more competitive region.

The formalisation of the partnership is developed basically along two different types of cooperation: the creation of mixed companies and contractual relations.

The characteristic of a mixed company is the participation at the same time of public and private shareholders in the equity capital of the company. This allows the coexistence of public and private objectives within the board of directors. Often the participation of the public sector is organised so as to have a blocking minority and to exert, in this way, sufficient influence.

The public and private partners can also conclude a contract. The most common types of contracts are the following:

- *Concession contract*

This type of contract is generally developed when public authorities want to conclude a long-term contract (generally over 25 years) with a private company in order to develop assets which are public sector property. In this relationship, the private partner is responsible for all capital investment, operations and investment. Concession contracts are among the most current forms of PPP.

- *Cooperation contract*

The organisational details of the cooperation are fixed by contract while for the rest the

partners remain independent from one another.

- *Contract of company management*

Often this type of contract has a limited effect in time and is generally used in order to compensate a deficiency when it comes to management skills, personnel and know-how.

- *Operation contract*

Generally, it happens when the public sector entrusts a private partner to create a company in order to plan, build and finance a facility and operate this company for his own account.

- *Leasing contract*

This generally happens when the buildings and the equipment (e.g. power stations, municipal networks, etc.) are planned, financed and built by the private partner and rented or given in leasing to the public sector.

Box 3.3 Strategic planning

Both the EU and international experience have showed that the indiscriminate financing of individual projects, sectors or geographical areas leads only to a waste of resources if there is not a proper resource planning system in place. Indeed, development plans work effectively only where there are properly conceived ideas that take into account the real economic priorities and match these to the available financial resources. This process is called strategic planning and aims basically to answer the following fundamental questions:

Where do we want to go (vision)?

How does it get there (strategy)?

What is its implementation plan (action plan and resources)?

How does it know it is on the right track (monitoring and evaluation)?

Consequently, strategic planning addresses geographical, administrative, economic and social issues, which are factors closely interlinked with one another. In summary, one could define strategic planning as the process leading to the establishment of a long-term plan destined to assure the socio-economic success of a given socio-economic space (local, regional, national).

A strategy is a combination of vision, long-term strategic goals and mid-term objectives (or specific objectives). A vision (a realistic expectation) should be defined for a long-term period of some 20 years, long-term strategic goals are generally set for around 10 years, while mid-term priorities have a duration of 5 years or less.

There are some basic principles related to strategic planning:

Partnership in the strategy building process and implementation. Consequently, all relevant stakeholders are invited into the process. Most often they are representatives of local authorities, various institutions, business associations, chambers of commerce, enterprises, NGOs, civil society, etc.

Common ownership and association. This approach ensures a broad social consensus and public support for strategies and programmes.

Transparency of the process. This means that decisions at all stages of the process should involve public discussion and wide dissemination of results.

Strategy building is a continuous process. Indeed, on the one hand, a strategy is something flexible, which has all the time to incorporate and take into account changes happening in the environment. On the other hand, the strategy must be rigid enough so that it can be respected and implemented. Therefore, the developed strategy document has to be continuously monitored, analysed and elaborated.

Hierarchy of strategic plans must be respected (principle of subsidiarity). Indeed, strategic plans of higher levels develop higher scope issues and set the framework for more specific actions at lower levels, while the lower level strategic plans must be developed within the manoeuvring room left by the higher levels.

The approach in strategic planning must be a step-by-step approach allowing the outcomes of one step to be used as inputs for the following step. Therefore, a strict coordination of all phases of process and groups is required. Moreover, outputs of each phase should be the subject of discussions and approval at the decision making stage thanks to events such as conferences, forums, government round tables, etc.

The actors in the strategy planning are decision-makers, selected representatives from stakeholders influencing the development process and experts from different sectors. They participate in the process thanks to working, partnership and focus groups. One should draw the attention to the fact that in the EU, development agencies and other development institutions play a focal role in the strategy building process. Indeed, they can act as coordinator, supervisor, implementation and fund raising actors, and/or institution in charge of monitoring, analyzing and updating the strategy document.

3.6 Sectoral structure

"An unfavourable sectoral structure together with a lack of innovative capacity seems to be among the most important factors underlying lagging competitiveness..." and "...the extent to which activity is concentrated in advanced, high value-added sectors as opposed to more basic, low value-added sectors may be at least as important as differences in the division of employment between broad sectors." European Commission's Sixth Periodic Report (1999).

The industrial structure of a region will influence competitiveness in the fields of productivity per capita and wealth production. Indeed, high value-added sectors will have more influence on regional growth and regional GDP than low added-value sectors. In other words, the competitiveness of a region will be influenced by the productivity of its sectors of activity. The sectors themselves will be influenced by the intra-sector productivity. For example, there can be large differences between high-tech sectors and traditional metal-bashing activities. Another example is the service sector, where one can have tourism services not associated with particularly high productivity levels or, on the opposite, financial and business services characterised by the highest productivity. This is also true for rural regions where one can find regions with low agriculture productivity and high employment or, on the opposite, regions with high levels of agriculture productivity.

It is also important to stress that evidence points out the limits of comparative advantage development. Indeed, the evolution of technology, production and exports appears to be mainly driven by the pattern of structural changes, rather than by comparative advantages. Therefore, in order to achieve higher economic and employment growth, it is important for a region to be active in the "right", faster growing industries, rather than in the fields of greater relative specialisation.

3.7 Type of enterprises

1. Both theory and practice show that firm growth is inversely related to firm size and age. Moreover, a firm's growth in terms of employment and/or turnover is positively related to an increase in the firm's GVA (gross value-added). Consequently, regions where activity is mainly situated in large mature firms show a relatively lower GVA growth path (hence lower growth path in GVA per capita) than regions with buoyant SME activity. The experience in the former accession countries might serve as a good illustration of this.

2. The competitive status of a region will be determined by the level of integration of the firms in the region. Indeed, a firm can choose a region, either in order to optimise the factors of production (low level of integration) or to benefit from the externalities due to the multi-level development produced by the commitment of the different regional actors. In this scheme, the firms themselves become actors of regional development and creators of regional environment.

3. It will be also good to repeat an evidence and that is that the competitiveness of a region will depend upon the competitiveness and dynamism of its businesses, which itself directly depends

upon a climate (regulatory, institutional, etc.) conducive to investment, innovation and entrepreneurship.

3.8 Infrastructure (broad understanding)

“..., developing regional competitiveness depends on modernizing and diversifying the productive structure once a sufficient endowment of physical infrastructure and human capital is attained.” Third report on Economic and Social Cohesion (2004).

a) The above quotation is indicating that the notion of infrastructure goes far beyond the usual understanding of infrastructure (transport and communication). Indeed, it includes concepts such as territorial infrastructure, social infrastructure, knowledge infrastructure, etc. This understanding derives from the fact that the EU notion of competitiveness incorporates values such as:

- effectively targeted social protection;
- quality of the natural environment;
- quality of healthcare;
- social services;
- quality of life;
- etc;

which are all determinants of the well-being of the population, a notion associated to the definition of regional competitiveness. Therefore the infrastructure favouring these values is certainly one of the determinants of regional competitiveness, independently of the fact that there is an undeniable economic ratio underlying their existence.

b) Regional success and decline increasingly result from an uneven distribution of capacity to valorise local collective goods. Therefore, the development of the different physical infrastructure mentioned here below implies that there is a clear policy and planning structures for developing the region, i.e. the existence of a territorial/spatial development policy based on prospective approach.

Transport infrastructure

The importance of transport infrastructure for improving the competitiveness and the accessibility of regions is widely recognised. Indeed, networks and transport systems have a crucial role to play in terms of assisting economic development in the regions, as regions with better access to markets are likely to be more productive and more competitive than others. In fact, economic actors need reliable and reasonably priced access to markets and citizens need to have access to a good public transport system. The objective for regions is, in this sense, to remove the obstacles and “missing links” that enterprises and travelers face and to improve the quality of the transport systems and transport infrastructure in general. In the EU, this necessity is widely taken into account in the policy of structural funds.

One can also remind that the problematic of transport infrastructure is not only a regional problematic but also an intra-regional, national and international one, which results in “transport corridors” policies. For example, in the EU, this can be illustrated by the Trans-European Networks-Transport (TENs-T), which has the potential for opening up the European territory by generating new opportunities for the peripheral regions as well as addressing the problem of missing intra-European links.

Telecommunication and ICT infrastructure

The rapid development of telecommunications and the information society (IS) has opened vast new possibilities for economic development. It has enlarged the commercial options for companies and may help peripheral areas to keep employment and to develop new areas of activity (on-line electronic commerce for instance) less dependent on the localisation factors. An efficient telecommunication infrastructure is a basic condition for these types of services and the general access to the Information Society, even if it is not the only one. Other actions in this priority area also include the promotion of e.g. new telecommunication and/or information technology services (such as for example the broadband lines). Indeed, electronic commerce (e-commerce) is expanding rapidly and forces firms to rethink their business processes, to set up new forms of organisations, new types of markets and different kinds of business relations. That is, the existence of the information society changes structurally the competitiveness of firms and ways of doing business. In addition to that, information and communication technology (ICT) is at the base of the knowledge economy, which boosts both innovative capacity and competitiveness. Moreover, access to ICT is especially important for peripheral and remote regions and those with geographical handicaps not only because its existence reduces the significance of distance and the time required to reach markets, but also because its non-availability is almost certain to damage their development and competitive prospects and to deter businesses from locating there.

Energy infrastructure

The availability of energy in a region, the flexibility of supply in terms of the diversity of different sources and high-degree of self-sufficiency are important for regional development. Indeed, it defines the limits to growth and employment, the type of output produced, the consumption of energy per unit of output, the capacity to reduce environmental pollution, hence it influences the economic development path of the region.

Therefore, access to clean, reliable and competitively priced energy sources is considered to be an important factor of regional competitiveness. This objective leads, among others, to policies of liberalisation of markets (i.e. avoiding situations when monopoly suppliers tend to be prevalent), improvement in the distribution networks and availability of supply in peripheral regions.

It is also important for a region to pursue a portfolio policy when it comes to types and origins of energy used in order to increase security of supply. For example, the Commission has set a target of doubling the share of renewable sources of energy (such as biomass, wind and solar energy as well as hydro-electricity) in overall energy consumption in the EU to reach 12% by 2010. In the same logic, a more rational use of energy should be encouraged.

Infrastructure for water treatment and waste disposal

If the growth of an economy has damaging effects on the environment, it will ultimately limit its development. Consequently, the availability of resources and the measures taken to protect the environment are factors which determine the long-term competitiveness of a regional economy.

One of the key natural resources to protect and manage is water. Indeed, in addition to the fact that water is a sine qua non condition for life on earth, it is also a key element of economic development. Indeed, water is heavily used by both agriculture and industry and for activities such as electricity generation and tourism. Therefore, it is very important to increase both the efficiency with which water reserves are used and the one of waste water treatment of .

Given that most of the population lives in towns and cities, it is also important to pay as much attention to the damage that household waste disposal can do to the environment, as to the one caused by industry and agriculture. Moreover, re-cycling activity, in addition to resource conservation, can have net positive effects on employment and economic activity.

Therefore, putting in place the necessary infrastructure to treat water and dispose of waste is (in addition to the use of cleaner technologies by industries and development of eco-industries) essential to reduce the pressure on environment.

Social and quality of place infrastructure

Social infrastructure including, in particular, schools, colleges and hospitals, is also a factor affecting competitiveness. Indeed,

- availability of high quality social infrastructure can influence decisions of where to locate investment and set up business. More precisely, such infrastructure is becoming an important part of the development policy of regions seeking to attract high-value added, knowledge-based activities.
- social infrastructure is important in maintaining population in the region. Indeed, it can keep people from moving away from their region and provoke an imbalance of the demographic and social structure of the region⁷.
- social infrastructure, together with environmental conditions is a key determinant of the quality of life in any region.
- social infrastructure maintains social cohesion in a region and allows to fully use the human potential available in a region.

We can mention also the necessity for a region to provide homes for all groups in a community and services for households (childcare facilities, cultural and sport facilities, pleasant environment, etc.), which are more related to quality of place infrastructure.

Social infrastructure is as important as systems of transport and other more traditional forms of infrastructure for regional competitiveness.

Knowledge infrastructure

⁷ For more information see paragraph 'Human capital'.

Knowledge and access to it has become the driving force for growth in advanced economies like the EU. Know-how and intellectual capital, much more than natural resources or the ability to exploit abundant low-cost labour, have become the major determinants of economic competitiveness since it is through them that economies increase their productive efficiency and develop new products. In other words, the quality of knowledge infrastructure determine innovation, which is itself a determinant of competitiveness⁸.

In addition to that, knowledge infrastructure influences:

- social cohesion of a region. Indeed, it has been proved that there is an inverse relation between the level of qualification and unemployment, or in other words employment prospects rise with level of education. Moreover, it makes the region a good place to live, as it allows the population to nurture its aspirations and achieve personal fulfillments.
- the typology of the industries installed in the region⁹. Indeed, the horizontal development and diffusion of knowledge allows to maximise the use of human potential available in a region, while the human potential will influence the typology of the industries and sectors of activity present in the region.

Business infrastructure (hard infrastructure)

Setting up or upgrading business infrastructure can have a positive influence on local business development. This notion is very comprehensive and can address the issues of industrial lands, business parks, technology parks, incubators, water and sewer facilities, etc. A well developed business infrastructure makes a region more attractive, as it reduces the time between the moment a firm decides to set up an operation and its effective beginning, can highly influence the costs of an operation, provides a framework for business development, etc. It can determine not only the decision of an operator to invest but also the type of industries which will be developed in the region.

Institutional and business support related infrastructure (soft infrastructure)

By saying institutional and business support related infrastructure, we have in mind any institution or structure which promotes the development of local enterprises. They are part and actors of what is called the environment of a region. They can take the form of services to enterprises, financing institutions, professional associations, chambers of commerce, etc. The existence of such an institutional framework is a condition for regional development and competitiveness, but it is not a guaranty of success. Indeed, “magic” will happen according to the mix of other factors determining the environment, including the existence and effectiveness of networks¹⁰.

3.9 Typology of regions

⁸ For more information see paragraph ‘Innovation/Regional innovation systems’.

⁹ For more information see paragraph ‘Human capital’.

¹⁰ See chapter 1 “The new role of regions” and paragraph ‘Enterprise environment and networks’.

The typology¹¹ of a region will influence the development strategy/path and therefore the competitiveness of the region. For example, a region can be:

- a reconversion area, where the natural resources are disappearing with both the know-how and the collective memory;
- a territory dominated by a big group specializing in a given segment in technology where the SMEs are sub-contactors;
- a territory dominated by services and public service employment;
- a depressed rural area;
- a rural area with agro-industry;
- a cosmopolitan agglomeration;
- etc.

Moreover, a region can be typologised according to its development path. Indeed, it can take some of the following forms:

- development by agglomeration of activities, where firms are developing because of the advantages provided by the concentration of human resources and activities.
- development by specialisation, where the economic tissue is dominated by one industrial activity or one product. In this situation, the region grows by developing similar or complementary activities.
- development thanks to the production of a unique product typically related to the region (e.g. Great wines production);
- etc.

This will also determine the competitiveness of a region.

3.10 Internationalisation and nature of foreign direct investment (FDI)

The role of multinationals in influencing the competitiveness of regions is not to be demonstrated anymore. Indeed, foreign direct investments (FDI) bring transfers of technology, innovation, quality standards, and know-how (product, management, marketing, etc.). According to whether the investment is horizontal or vertical, multinationals can open (to a higher or lesser extent) a region to international markets. Moreover, it leads very often to clusters of highly competitive and dynamic manufacturing companies. The most striking example of this is the dynamic economy of Ireland, which developed its competitiveness on a policy promoting FDI. The result was the establishment of foreign-owned manufacturing companies, particularly in electronics and pharmaceuticals, and more recently, internationally traded services such as financial services and call centres.

Nevertheless, the level of technology and know-how brought by multinationals will be determined most of the time by the environment surrounding its regional location and its willingness to integrate in the existing regional environment. Indeed, several studies identified

¹¹ See also chapter 5.

that in the EU the technological specialisation of a foreign owned subsidiary depends on the position of the region in the fields of innovation and technology. In summary, inward investment can generate regional competitiveness by importing innovation, technology, know-how and clustering activities, nevertheless these investments very often occur where such advantages already exist. Moreover, the level of technological diffusion on the regional level depends very much on whether a multinational has chosen its location uniquely on the basis of production factor costs or because of the territorial externalities produced by a region.

3.11 Geographical location

The geographical location of a region plays an important role when it comes to its development and competitiveness path. Indeed,

- a region located near a growth pole or metropolis will benefit from the spillover effect generated by the neighbouring growing economy;
- a region located on a transport corridor will have competitive advantage on the others;
- peripheral regions and regions with geographical handicaps have an important competitive disadvantage;
- border regions can have a competitive advantage;
- etc.

Moreover, climate conditions can have a considerable negative influence on the competitiveness of regions. One can think of fires provoked by heat, draught, flood, violent storms, etc.

3.12 Attractiveness for investments

It seems trivial to stress that a region in order to grow and to become competitive needs investments, be it foreign or domestic. Therefore the more attractive a region is for investors, the more competitive it will be. Indeed, a potential investor before investing will have to make a trade-off between different potential locations. The decision will be made taking into account the mix of criteria such as distance and connection to markets, availability of suppliers, infrastructure, socio-economic environment, surrounding regulative framework, taxes framework, labour cost, skills and matching of the workforce, quality of life, public subsidies, etc.

European practice shows that price factors (e.g. cost of labour, tax rate, etc.) are not playing a decisive role in most of the location choices. Actually, these factors start to play a role when it comes to the location decision only once other non-price factors (infrastructure, adequate labour, markets, agglomeration externalities, innovative environment, technological spillovers, etc.) are considered to be equal between the different locations. Therefore, it does not make much sense for a region to choose a low price factor strategy if the region has no non-price factors attractive for direct investments.

There are also some strong deterrent for investments such as unstable and inconsistent legislative and regulative framework, social and political instability, practices preventing business

development and entry barriers (administrative, legislative/regulative, political, mafia, others), etc.

4. The indicators of regional competitiveness

4.1 Understanding regional competitiveness in the EU

The concept of competitiveness¹², as seen in the EU, could be summarised as “high and rising standards of living and high rates of employment on sustainable basis”¹³.

The traditional measure of competitiveness/standards of living is generally calculated by the GDP per head, despite the fact that some other indicators should be defined in order to integrate the social, environmental, health and well-being dimensions.

GDP per head can be broken into two main components: employment rate (proportion of working age population in work) and productivity (GDP per person employed).

Productivity is considered to be a good indicator of competitiveness following the assumption that productivity growth will increase competitiveness, which will in turn favour a higher growth of GDP. The growth of GDP will boost employment.

Employment rate and productivity are closely linked to one another but they should be considered separately. Indeed, high level of one does not necessarily go with a high level of the other. For example, one can remind the period of “jobless growth” which struck the EU in the 80’s, and which was characterised by high gains in productivity and poor gains in employment creation. Nevertheless, achievement of high employment growth and high productivity are not necessarily in conflict with one another. Indeed, if an economy grows above a given threshold (2% for the EU) and this level is maintained over the long-term, there will always be net creation of employment. Therefore, we can say that in the long-term, there is always a positive relationship between productivity and employment creation.

Lagging regions in Europe have always a productivity below average while employment is most of the time (but not always) less important. Actually, in the EU, there are two types of lagging regions:

- regions with employment rates similar to the average but with lower productivity;
- regions lagging in both productivity and employment.

The challenge for lagging regions is to increase/boost productivity by a mix policy without having adverse effect on employment.

The policy of the EU regarding competitiveness is to practice a non-price competitiveness in order to keep and improve the living standards, the social and the moral values/models of its societies as a whole. Consequently, the EU places emphasis on structural factors underlying competitiveness which determine the long-term growth, in particular research and innovation, information technology and human capital.

¹² See chapter 2 ‘What is regional competitiveness’.

¹³ Third report on economic and social cohesion, EC, 2004.

This commitment was confirmed by the ultimate objective of the Lisbon European Council, which has stated that “the EU becomes the most competitive and dynamic knowledge-based economy in the world over the decade, capable of sustainable economic growth with more and better jobs and greater social cohesion”.

There is a clear relationship between innovation, human capital and information technology when it comes to competitiveness. Indeed, the capacity to innovate is perceived as the best answer to global competition, the needs to adapt to technological changes and to constantly produce new products, which are elements characterizing the post-Fordist production system¹⁴. The capacity to constantly innovate and to absorb innovations is directly linked to the level of education of the population. Information technology is a key element when it comes to knowledge development and policy.

In summary, in the EU, developing regional competitiveness depends on modernizing and diversifying the productive structure (by developing knowledge-based economic activities and innovation) once a sufficient endowment of physical infrastructure and human capital is attained. This has to be achieved respecting a horizontal condition, which consists in achieving a sustainable development in environmental terms.

Key instruments for developing regional competitiveness in the EU are the Structural Funds, which integrate a lot of policies destined to improve competitiveness and productivity of regions in order to expand income over the long-term. Indeed, they support investment in infrastructure, in human capital, in innovative capacities and in environmental improvement.

4.2 Indicators of regional competitiveness (European Commission)

The explanation offered in the previous paragraph allows us to understand and to put into its framework the different indicators used by the European Commission in order to measure the competitiveness of the EU regions. For information, on the level of member states the Commission is using a benchmarking methodology focusing on structural indicators in the field of innovation, enterprises environment, new technologies, etc. reflecting the Lisbon competitiveness strategy¹⁵.

As we already mentioned in the first part, some other elements (social, health, environment, etc.) than the productivity per head should be incorporated as indicators of competitiveness. Nevertheless, further work is needed to develop better measure of progress in these areas. In addition to that, statistics describe determinants of competitiveness or factors favouring the development of determinants such as innovation. Nevertheless, the difficulty faced by policy-makers when it comes to innovation is to measure both the factors which give rise to it and their effect on competitiveness. Moreover, the competitiveness in the EU is based on structural

¹⁴ See chapter 1 ‘The new role of regions’.

¹⁵ For more information see Recep article:
Walter, G., *Competitiveness- a general approach*.

reforms (not on macro-economic level and price competitiveness) and therefore it is difficult to provide indicators.

We will take two examples of use of indicators in order to measure competitiveness to illustrate the problematic: Reports on Economic and Social Cohesion and indicators for monitoring and evaluation in the framework of Structural Funds.

a) Reports on Economic and Social Cohesion are studies produced by the EC on a regular basis about the EU regions. In order to compare the regions with one another and determine their level of development and competitiveness, the following classes of main regional indicators have been proposed:

Economy

- GDP/head (PPS)
- employment by sector (agriculture, industry, services)
- European patent applications (per million people)

Labour market

- unemployment rate (total, long-term unemployed, women, youth)
- employment rate (% population age 15-64, total, women, men)

Demography

- population
- population density (inhabitant/km²)
- % of the population aged under 15, between 15-64, more than 65

Education

- educational attainment of those aged 25-59 (low, medium, high)

One can draw the attention to the fact that the methodology does not weigh the factors that contribute to regional competitiveness but analyses the factors that it contends have the greatest bearing on it, as the relative importance of the factors of competitiveness will vary between types of regions.

b) For the programming period 2000-2006, the EC has proposed indicators for monitoring and evaluating programmes and projects financed or co-financed in the framework of Structural Funds. The fields of intervention are classed by category and sub-category. Each of these fields of intervention is defined by indicators (which are proposed and not imposed). Here below one can find some examples of fields of intervention destined to boost the competitiveness of the recipient region and the indicators which are associated with them¹⁶.

Field of intervention: Research, technological development and innovation (RTDI)

¹⁶ The comprehensive list of fields of intervention and related indicators can be found for example in the following document: "The New programming period 2000-2006: methodological working papers, Working paper 3, Indicators for Monitoring and Evaluation: An indicative methodology". The document is available on the website of the European Commission (<http://europa.eu.int/comm>).

Research projects based in universities and research institutes

Output indicators: Number of research projects supported, Number of supported research students (Men/Women)

Result indicators: % projects successfully completed (publications, etc.); Number of supported researchers obtaining a PhD (Men/Women); Increase of RTD personnel employed (number and % of total jobs, Men/Women)

Impact indicators: innovations being developed; Number of new firms started by academics

Innovation and technology transfers, establishment of networks and partnerships between businesses and/or research institutes

Output indicators: Number of firms receiving financial support for RTDI projects and technology purchase; Number of advice/training sessions, Number of SMEs assisted; Number of collaborative projects between firms and research institutions supported

Result indicators: enterprises involved in supported joint research projects (of which SMEs); Increase of investment in RDTI by enterprises involved in joint projects; % SMEs satisfied with the service

Impact indicators: Number of collaborative arrangements between research institutions and assisted firms after one year; Number of regional enterprises involved declaring positive spin-offs after 18 months (of which SMEs); Number of assisted firms purchasing patents, licenses or involved in collaborative projects (after one year); Number of new products/processes marketed by firms receiving financial support; Value added generated after two years; Gross/net employment created or safeguarded after 2 years (number and % of total jobs)

RTDI Infrastructure

Output indicators: Surface area made available (Ha); Floor space constructed/refurbished (m²); Number of joint services created

Result indicators: Number of R&D jobs created (FTEs Men/Women); Number of SMEs having access to joint services

Impact indicators: Number of small firms established in park (after one year); Number of small high-tech firms established in park (after one year); Gross/net employment created or safeguarded after 2 years (number and % of total jobs)

Field of intervention: Telecommunications infrastructure and information society

Services and applications for SMEs (electronic commerce and transactions, education and training, networking)

Output indicators: Number of start-up firms providing Information Technology related services (on-line, e-commerce, etc.)

Result indicators: Number of SMEs receiving financial support getting access to services created (Internet access); Number of SMEs developing and commercialising Information Technology services; Number of internet PoP (Point of presence) per local call area

Impact indicators: Gross/net employment created or safeguarded after 2 years (number and % of total jobs)

Field of intervention: SMEs

Business advisory services (information, business planning, consultancy services, marketing, management, design, internationalisation, exporting, environmental management, purchase of technology)

Output indicators: Number of SMEs (Men/Women owners) receiving advisory services

Result indicators: Number of SMEs becoming new exporters; Number of SMEs exporting to new markets; % SMEs satisfied with services provided

Impact indicators: % export sales in turnover of assisted SMEs after 18 months; Increase in value added generated after 18 months; Gross/net employment created or safeguarded after 2 years (number and % of total jobs)

Field of intervention: Human resources

Workforce flexibility, entrepreneurial activity, innovation, information and communication technologies- Assistance to persons, companies

Output indicators: Number of employees in training programmes (type, duration); Number of SMEs reached receiving financial support for training (size, type, duration); Number of beneficiaries

Result indicators: Increase in SMEs training budget (% increase)

Impact indicators: Number of beneficiaries (persons) having launched a business after 2 years (Men/Women); Increase in value added after 18 months; Rise in worker productivity as a result of raised skill levels (% increase in turnover /employee); Gross/net employment created or safeguarded after 2 years (number and % of total jobs)

Field of intervention: Transport infrastructure

Rail

Output indicators: Km of high speed railway constructed or upgraded (% degree of network completion); Railway track improved (km)

Result indicators: Time saved (journey time x number of users); Time saved (journey time x freight/passengers volume); Accessibility (reduction of equivalent straight-line speed)

Impact indicators: Increase in flow of passengers/freight after one year (%); Environmental impact (% increase/decrease); Change in traffic noise (%); Gross/net employment created or safeguarded after 2 years (number and % of total jobs); Satisfaction rate of users (%)

4.3 Indicators of regional competitiveness (others)

Some other studies outside the European Commission context were also trying to define regional indicators of competitiveness. We can quote some of the following ones.

- a) *Competing with the World* (2002, Barclays Bank and alter) compared 15 competitive regions around the world (where 10 are EU regions) and attempted to identify generic factors of competitiveness. The report stressed the difficulty in finding consistent or comparable data across the 15 regions and concluded that only a very small number of generic success factors were found to occur in each region.
- b) *Regional Competitiveness Indicators* (UK DTI) selected 14 indicators supposing to give a balanced picture of regional competitiveness. Nevertheless, many of the factors do not determine regional competitiveness but measure outcomes reflecting the competitiveness of a region.
- c) *Benchmark to the competitiveness of the East and West Midlands* (1997, Ernst and Young) compared the competitiveness of the East and West Midlands against other regions in Europe and tried to identify measures to promote regional competitiveness. The study used a 'multi-dimensional regional competitiveness benchmarking model' made of 55 competitive indicators scored to reflect their relative importance.
- d) *Regional investment climate study* (Ecorys-NEI) developed a benchmarking methodology that measured the quality of the regional investment climate over 40 regions in North West Europe further to the results of surveys of entrepreneurs located in the regions. The variables of the survey were broken according to market relations variables and productive environment factors.

5. Typology of regions and competitiveness

5.1 Typology of regions: theoretical notions

Generally, the specialised literature defines regions into productive and non-productive ones. The productive regions are classified into three categories¹⁷.

a) *Regions as productive sites*

These regions derive their productivity above all from cheap inputs due to their factor endowment (labour, land, etc.). They are appropriate for low-cost sites and often attract vertical foreign direct investment (FDI). Their attractiveness relies not so much in localisation or agglomeration economies, but rather in the absence of or of limited urbanization diseconomies.

b) *Regions as sources of increasing returns*

These regions base their growth on a selected number of industries taking advantage of agglomeration economies. Key determinants of competitiveness are the labour skills, inter-firm division of labour, market size effects and the availability of suppliers.

c) *Regions as hubs of knowledge*

These regions are often made of large urban areas and take advantage of agglomeration economies to develop growth based on cross-sectoral development. These city-regions are hubs of knowledge and information, are open to international activities, offer the best career opportunities (and therefore attract talented workers from elsewhere) and bring about the best matches between labour demand and supply. They are also characterised by high levels of research and development (R&D), entrepreneurship, new firm formation and patent activity. Key determinants of competitiveness are an outstanding quality of human resources, excellent access to international markets and information, availability of capital, business services, etc.

5.2 Typology of regions in the EU

1. Generally speaking, three sets of patterns can be distinguished in the EU when it comes to regional economic structure and productivity/competitiveness. Indeed, one can find the following regions within the EU:

a) *lagging regions*

These are regions which have a concentration of activities in low value-added sectors and have a productivity below average¹⁸. They are generally featured by high employment in agriculture, often an above-average share of employment in industry and low employment in services.

b) *regions with high employment in industry*

These regions can be either prosperous or non-prosperous regions because of the significant variation in value-added between manufacturing industries.

¹⁷ See among others the literature in the field of economic and new economic geography.

¹⁸ See chapter 4, part 1.

c) regions with high employment in services

Generally, these regions are characterised by a share of services of 70% and more. They are mostly prosperous regions and include a lot of capital cities. Nevertheless, there belong also some regions with relatively low level of GDP per head, as their employment is concentrated in basic services such as catering and tourism.

In the EU, the tendency has been towards a general shift of employment from primary and secondary industries towards services with higher value-added. Nevertheless, in the recent years, employment in industry stabilised and value-added increased. This implies that there is a rationale for regions to maintain at least a small but key competitive manufacturing sector as part of their regional economy and strategy.

2. There are some other factors such as the geographical location of a region, the demographical situation in the region, the fact of being a growth pole or not, the fact of being able to benefit from spill-over effects, which allows to establish a typology of EU regions. Moreover, in the EU, there is a clear relationship between the urban/agglomeration effect on growth and competitiveness, as dynamic urban systems (and the spillover effect they generate) are still the engines of regional development. Taking into account the above-mentioned characteristics, regions in the EU can also be classified in the following categories.

a) 'growth metropolises' regions

These are cities and conurbations located in the core parts of Europe, including capital cities where company headquarters, research activity and education and cultural facilities are concentrated. These are the richest regions in the EU.

b) dynamic urban regions outside the core

These regions have a population and an economic potential strong enough to attract research activity and to link up over time with the main European and international centres of decision-making.

c) rural areas integrated in the global economy

These are regions experiencing economic growth and increasing population. They are located in general close to urban centres. Employment is in manufacturing and services but most of the land is used for agriculture.

d) intermediate rural areas

These regions are relatively far from urban centres but with good transport links and reasonably well-developed infrastructure. They tend to have stable population and to be in the process of diversifying economically. Very often large farms are located in these areas.

e) isolated rural areas

These regions are sparsely populated and often situated in peripheral areas, far from urban centres and main transport networks. Generally, they tend to have an ageing population, poor infrastructure endowment, a low level of basic services and income per head, a poorly qualified

workforce and an economy not well integrated into the global economy. Their population is generally dependent upon agriculture to a large extent and in decline.

f) *declining regions*

These regions are characterised by a declining population. They have generally the following features: low income levels, high unemployment and a large proportion of the work force employed in agriculture and industry, small number of young people and low density of population. The exception are some capital cities which are affected by a phenomenon of suburbanisation.

g) *regions with geographical handicaps*

These are regions with specific and permanent geographical features which constrain their development. Indeed, these regions are constrained by highest remoteness, islands and mountains. Because of this, they suffer from special problems of accessibility and integration with the rest of the EU. In many cases, the population, or size of the market, is below the critical mass required to warrant investment in economic term. This problem is increased by an ageing and declining population as young people tend to leave.

h) *regions in economic transition*

These are mostly lagging regions, which have been deeply re-structuring their economic tissue further to the low competitiveness of their previous economic and sectoral structure. They are generally characterised by high unemployment and low GDP levels.

i) *other regions* which cannot really be completely classified in some of the above mentioned categories.

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Introduction

“Russia needs to be competitive!” This one of the most often heard statements coming from various decision-makers in the Russian Federation.

This preoccupation is fully reflected by the number of requests coming from the different institutions collaborating with Recep on the subject of competitiveness in general and on the topic of regional competitiveness in particular.

Indeed, the issues of regional economic development and regional competitiveness have become one of the highest priorities on the agenda of the Russian Federation, as it is widely understood that the objective set by President Putin, i.e. the one of doubling the national GDP by 2010, is achieved by the emergence of competitive regions.

Nevertheless, experience shows that a true understanding of issues related to regional competitiveness and regional economic development is not widespread among the decision-makers and people in charge of regional economic development across the Russian Federation.

Therefore, this paper is intended to act as a kind of short handbook on the topic of regional/territorial competitiveness. The target groups are all actors involved in regional development and administrations on all levels dealing with the issue, in particular. Therefore, the author tried to make the paper as educational and clear as possible, without developing too far the theory underlying regional competitiveness. From this perspective, the author decided also to briefly recall some topics closely related to regional competitiveness that are generally not completely mastered across the Federation. We mean for example topics such as the post-Fordist production system and the new role of regions, the regional planning issues, the understanding of competitiveness, indicators, typology of regions, etc.

A special attention is paid to competitiveness from the European Commission and European Union perspective and experience, despite the fact that the debate on competitiveness is not closed yet. This choice is not due to the fact that Recep is a project financed by the European Commission, but is prompted by common sense. Indeed, the experience of the European Union in developing its regions by boosting structural competitiveness rather than price competitiveness seems to be far more adapted to Russia than any policy focused on development of comparative advantages based on extremely low salaries and low taxes. Indeed, one should not forget that Russia has got at its doorsteps two giants, i.e. China and India, with more than one billion inhabitants each, which can practice price competition far better than Russia.

The paper is divided into five chapters.

Chapter one reminds about the features of the post-Fordist production system, the new role of regions and their capacity to create for themselves their competitive advantages.

Chapter two explains the notion of regional competitiveness by using definitions or fragments of texts from various documents of the European Commission. From there, consequences, conclusions and comments are developed.

Chapter three is made of an exhaustive list of the main drivers/determinants of regional competitiveness, including among others clusters, networks, regional innovation systems, governance and institutional capacity, infrastructure, etc. Each point is thoroughly developed and explanations are given on how the particular factor/aspect determines regional competitiveness.

Chapter four elaborates on the indicators used in order to measure the competitiveness of regions. A special attention was given to indicators used by the European Commission and the policies that are associated with them. It also passes in review studies and indicators used by other institutions in order to measure the competitiveness of regions.

Chapter five reminds about the typology of regions and their influence on regional competitiveness. A special focus is on the typology of regions existing within the European Union.