

## **Understanding the Lisbon Strategy and policies from a Neo-Schumpeterian point of view.**

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### **ABSTRACT**

The Lisbon strategy is an urgent response of Europe to the global changes and challenges, which make a strong emphasis on entrepreneurship and innovation not just necessary, but vital for competitiveness, growth and jobs. The aim of this paper is 1) to provide a better understanding of the underlying rationale and theoretical foundation of the renewed Lisbon strategy and 2) to analyze the advances and evolutions in the priority areas: unlocking business potential, knowledge and innovation, and more and better jobs. Some advances have been made, but in order to be the most dynamic and competitive knowledge- based economy in the world by 2010, a much stronger and better coordinated emphasis is necessary and a fertile trade-off between excellence and structural homogeneity has to be made.

Key words: EU, Growth and Jobs, Innovation Economics

JEL: O30, O52, P41

## 1. INTRODUCTION

We are living in a complex and dynamic world in which knowledge and innovation are occupying a decisive role for the economic development and wealth of nations (World Bank, 1999). New information and communication technologies have enabled an unknown rhythm of globalization, knowledge flows and innovations. The production structure of the planet is changing and new competitors are arising. The position in the global value chains determines the benefits enterprises and regions are able to achieve in the international labour and production division. Large developing countries such as China and India are rapidly climbing up the value chains and will be serious competitors for Europe in the long run. Due to this global dynamics, the rising importance of the factor knowledge, as well as in order to create the political foundation for changes in the EU-budget expenditures from agriculture towards strategic secondary and tertiary sectors, the Heads of State and Government agreed in Lisbon in 2000 the strategic target to make Europe by 2010 “the most dynamic and competitive knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion” (e.g. COM (2005) 24). The Lisbon strategy suffered in the first years some serious coordination and implementation problems. But in 2005 a new impulse was given in the so-called Renewed Lisbon Strategy “Growth and Jobs”, focusing on unlocking business potential, creating more and better jobs, knowledge and innovation and a better coordination and implementation of the Lisbon targets and progresses (COM (2005) 24; COM (2007) 803 final). The renewed Lisbon strategy aims to give decisive impulses for innovation, better social cohesion and structural convergence between the Member States.

The purpose of this paper is the analysis of the Lisbon strategy from a scientific point of view, less presenting the exact policies and policy creating procedure of the Lisbon strategy of the European Union, but putting the focus on a deeper understanding of the basic rationale and theoretical foundation behind the Lisbon strategy. A rationale which currently is one of the main driver of the scientific research and policy recommendations of most leading international organism such as the World Bank, OECD, United Nations, as well as in the centre of the economic and technological

catch up-policies of large developing countries such as China and India. Chapter 2 of this paper shows the theoretical foundation of “Growth and Jobs” in Innovation Economics and especially the System of Innovation approach, chapter 3 present the political and economic evolutions in the key priority areas and chapter 4 discusses the challenges for Europe in the future

## **2. THE LISBON STRATEGY, INNOVATION ECONOMICS AND THE SYSTEM OF INNOVATION APPROACH**

The (Renewed) Lisbon strategy is build upon and strongly influenced by Neo-Schumpeterian and Evolutionary Economics, which present powerful scientific approaches to analyze and deal with the global challenges for European enterprises and economies by putting entrepreneurship and the qualitative transformation of economies “driven by the introduction of various and multifaceted forms of innovations and the related co-evolutionary processes” into the centre of the interest (Hanusch and Pyka, 2007a). Many of the policy papers of the European Union are written or strongly influenced by innovation economists, such as Chris Freeman, Bengt-Åke-Lundvall or researcher from the Maastricht Economic Research Institute on Innovation and Technology (MERIT). The generation, implementation, diffusion and imitation of knowledge and technology are in the core of European Growth and Jobs-Strategy. A Communication from the Commission to the European Council in 2006 (Com (2006) 589 final) provides a quite good understanding about the main idea behind the (renewed) Lisbon strategy when arguing:

*“Europe must do more to harness its creative power and ability to convert knowledge into high quality products, services and new business models for which there is a strong global demand. Progress on innovation will be central to the success of the renewed Lisbon Strategy for Growth and Jobs. (...) Innovation is the key to tackling the main challenges we face now, such as climate change, detection and prevention of diseases, congestion, insecurity, and social exclusion.” (COM (2006) 589 p.2)*

Certainly the key elements of the Lisbon strategy consist in knowledge, innovation and a socioeconomic setup (e.g. flexicurity-systems, further market integration and elimination of competence barriers) able to unlock business potential, entrepreneurship and innovation. Currently the best theoretical approaches to understand qualitative changes and global challenges caused by globalisation and the emergence of New Economies are given by Neo-Schumpeterian and Innovation Economics (Fagerberg et al., 2005; Hanusch and Pyka, 2007b), which put strong emphasis on the role of entrepreneurship and innovation for economic development. Thus it is not surprising that Neo-Schumpeterian concepts such as Innovation Systems and the promotion of Double- and Triple-Helix structures are major importance for the Growth and Jobs-policy papers.

## 2.1 The National System of Innovation-Approach

To get a better understanding of the Lisbon –strategy it is fruitful to get a glimpse on the National System of Innovation –approach, as it puts knowledge, innovation and the systemic interactions between different actors into its centre of focus. Since 1992, the terms National Innovation System (NIS) have been gaining a lot of attention in the academic world, especially under innovation economists of the developed world. Based in a Neo-Schumpeterian way of thinking, Freeman (1987), Lundvall (1992), Nelson (1993) and the OECD (1997) were pushing this approach, which receives much interest and acceptance in the academic world of the north and increasingly also in the public policy space, especially in the Nordic-European countries. Christopher Freeman gave in his famous 1987-book about “Technology Policy and Economic Performance: Lessons from Japan” a quite good and often cited definition of the term *innovation system* as he spoke about “*the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies*“ (Freeman, 1987). Several basic elements of the latter NIS-approach appear in this short sentence as it indicates a systemic approach of action and interactions between different institutions at different stages of the innovation process. Another fundamental work for the creation and promotion of the NIS-approach is given by Bengt-Åke Lundvall in his 1992-paper “National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning”. Lundvall speaks with regard of NIS

about “*the elements and relationships which interact in the production, diffusion and use of new and economically useful knowledge*” (Lundvall, 1992). Lundvall uses a broad definition as he refers to NIS as “*all parts and aspects of the economic structure and the institutional set up affecting learning as well as searching and exploring*” (Lundvall, 1992).

There are many other definitions of NIS (i.e. Patel and Pavitt, 1994; Metcalfe, 1995; Edquist, 1997), but the essence is captured quite well in the definitions given by Freeman and Lundvall. As argued by Heidenreich (2005), the basic elements of every NIS-definition consist mainly in 1) the central importance of institutions, 2) the systemic underpinnings, considering interactions between different actors, 3) the recognition of the different important stages of the innovation process as well as a 4) a certain conceptual ambiguity.

This last specific characteristic of NIS-definitions, the conceptual ambiguity or conceptual pluralism is often attacked by traditional economists who demand invariable 100 % defined and fixed concepts. The conceptual ambiguity of NIS can be considered the major weakness as well as its major strength (see also Johnson et al., 2003). Thinking in a Schumpeterian way of economic analysis, it is impossible to fix the complex and dynamic real world in just 2 or 3 variables<sup>1</sup>. NIS-economists take into account that the specific capabilities, opportunities and bottlenecks of each country, its economy and NIS depends on its specific economic, political, natural and social constraints and circumstances. Edquist (1997) pointed out that “there is simply no demarcation between a system and its surrounding context“. The real world is complex and economic models should be adapted to the specific characteristics of the investigated sector, country or region. There cannot be a single definition of an innovation system, whether it is good or bad. The NIS-approach must be adapted to the specific determinants of each single country or region and their specific strengths, weaknesses and opportunities.

In the same vain, trying to give a better explanation for the complex real world phenomena, the systemic approach of NIS-research considers also the importance of

human interactions and manifold interactions between the different economic, social and political institutions. The specific culture, customs and social interactions between the members of a country influence its economic performance and capability to innovate (see also Granovetter 1985). As Braczyk, Cooke and Heidenreich (2004) pointed out “the innovation performance of an economy is not only determined by the characteristics and abilities of its individual firms and other organizations, but also very much by the different kinds of relations between them and the way they interact with each other and the government sector”.

As mentioned before, the NIS-approach considers the institutions as central elements in the process of creation, implementation, diffusion and imitation of knowledge and innovations in a specific country. The term “institutions” in the NIS-approach does not mean just the government institutions, but also other private or public institutions such as banks or social organizations. As the analysis focuses on the interaction and quality of these institutions, a certain affinity and complementarity with the social capital-approach is evident. Woolcock and Narayan (2000) speak about four different perspectives of Social Capital: 1) the communitarian view, 2) the network view, 3) the institutional view and 4) the synergy view. Without speaking directly about social capital, the NIS-approach combines these 4 dimensions of social capital, but by taking the focus on the specific social, technological and economic capabilities, institutions and networks which are necessary for evolutionary learning and the creation, implementation, diffusion and imitation of innovations.

The NIS-approach should be understood in a broad way. NIS does not just deal with the innovation phase, but with the entire innovation process including important steps such as the pre-commercialisation phase and the diffusion phase (Balzat, 2002). Good interactions between all key players at all steps of the innovation process (novelty creation, implementation and commercialisation, diffusion and imitation) are vital to establish the conditions to generate, implement and diffuse innovations in a certain sector and create a fruitful climate for spillover-effects which can give positive impulses on the whole economy and society of a country. A good institutional framework and dense relationship between the science sector and the business sector (see also Triple-Helix-Model from Etzkowitz and Leydesdorff, 1997) are essential

for a successful innovation process and endogenous development.

## 2.2 Theoretical roots of NIS and the Lisbon Strategy

To get a better understanding of the NIS-approach and the Lisbon strategy it is very useful to have a short look on the historical roots and theoretical underpinnings of Innovation Economics. Be familiar with the basic foundations of Innovation Economics and the National System of Innovation-approach such as path dependencies, interactive and evolutionary learning, endogenous technical change, heterogenous and interacting agents and the different stages of the innovation process helps to understand the philosophy of the Lisbon strategy.

Some of the basic ideas behind the NIS-approach are going back to Friedrich List's (1841) concepts about 'national systems of production'. List argued that "the present state of nations is the result of the accumulation of all discoveries, inventions, improvement, perfections and exertions of all generations which have lived before us: they form the intellectual capital of the present human race, and every separate nation is productive only in the proportion in which it has known how to appropriate those attainments of former generations and to increase them by its own acquirements" (see List, 1841; in Heidenreich, 2005). Many modern concepts such as path-dependency, evolutionary learning and human capital as well as the importance of institutions can be found in Lists concept, developed as the German "catching-up strategy" in the 19<sup>th</sup> century. List took into account the need to build up the national infrastructure and institutions in order to promote the accumulation of 'mental capital' and use it to spur economic development (see Johnson et al., 2003). Naturally, he still did not consider: I&D departments, multinationals, global value chains or the international division of labour and production, but the deeper sense of his ideas are very actual in modern approaches of economic science (i.e. NIS or endogenous development) and development policy (i.e. knowledge vector of United Nations) at the beginning of the 21st century.

But maybe the most important scientist for innovation economists is Joseph A.

Schumpeter, who developed the concept of endogenous technological progress. In his book “The Theory of Economic, Development” (1912), he divided the innovation process into four dimensions, *Invention*, *Innovation*, *Diffusion* and *Imitation*. Close to the tradition of Austrian Economics he put the dynamic entrepreneur in the middle of his analysis. In Schumpeter’s theory, the ability and initiative of the entrepreneurs, drawing upon the discoveries of scientists and inventors, create entirely new opportunities for investment, growth and employment. The profits made from these innovations are then the decisive impulse for new surges of growth, acting as signal to swarms of imitators (Freeman 1982, pag.2).

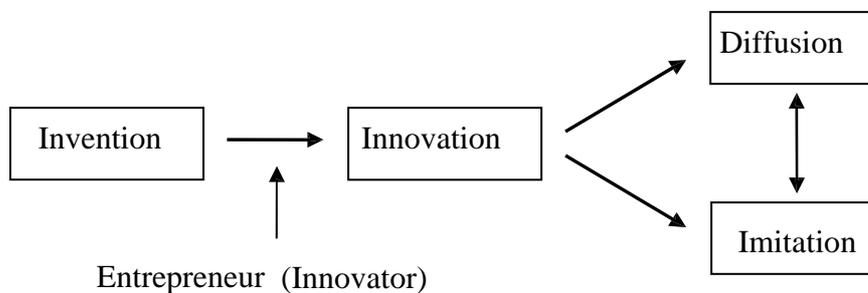


Figure 1: The Schumpeterian innovation process

Not every imitator makes big profits. When the bandwagon starts rolling some people fall off, profits are gradually “competed away” until recession sets in, and the whole process may be followed by depression before growth starts again with a new wave of technical innovation and organizational and social change (Freeman 1982, pag.2). In Schumpeter’s analysis, the invention stage or the basic innovation have less of an impact, while the diffusion and imitation process have a much greater influence on the state of an economy. The macroeconomic effects of any basic innovation are scarcely perceptible in the first few years and often even longer. What matters in terms of economic growth, investment and employment, is not the date of basic innovation, but rather the *diffusion* of basic innovation, the swarming process, the period when imitators begin to realize the profitable potential of the new product or process and start to invest heavily in that technology (Freeman 1982, pag.5). Also it is necessary to state that this swarming process does not occur immediately after the basic

innovation, but often some years or inclusive decades later, because it often requires additional conditions to be able to implemented or be used with bargaining by companies. A lot of inventions or basic innovations need other enabling innovations, including social, managerial and organizational innovations, to permit further advances and induce the swarming process. But once swarming does start, it has powerful multiplier effects in generating additional demands on the economy for new capital goods, for components, for distribution facilities and of course, for labour. This in turn engenders a further wave of induced innovations, of process and application innovations, some of which may be more important than the original one (Freeman 1982, pag.5) It is this combination of diffusion with related, induced and social innovations which give rise to expansionary effects in the economy as a whole (Freeman ed., pag.5)

The great importance of Schumpeter for the entrepreneurship and innovation economists is obvious. Schumpeter is the godfather of innovation economics and the theory of endogenous technological progress. The Lisbon strategy tries to establish the institutional, organizational and social framework to facilitate invention, implementation, diffusion and imitation of innovation in order to enhance endogenous economic development.

Many authors of the Lisbon strategy, policies and implementation-papers are strongly influenced by Neo-Schumpeterian Economics. Neo-Schumpeterian Economics can be defined as follows: “Neo-Schumpeterian Economics deals with dynamic processes causing qualitative transformation of economies driven by the introduction of various and multifaceted forms of novelties and the related co-evolutionary processes” (Hanusch and Pyka, 2007a). Qualitative change, punctuated equilibria and pattern formation (despite of uncertainty) are major characteristics in the Neo-Schumpeterian analysis of economic development (see Hanusch and Pyka, 2007a, 2007b). The Lisbon strategy wants to facilitate dynamic processes caused by entrepreneurship and innovation, taking also into account the importance of education, knowledge and the institutional setup to make them run as well as their impact on growth, jobs and the structural setup of the European socioeconomics.

Another pillar of NIS-thinking and the Lisbon strategy is a systemic approach, which takes the quantity, quality and structure of social interactions and its significance for economic development into account. Mark Granovetter enhanced the Social Network Analysis (SNA) with his famous works “The Strength of Weak Ties” (1973) and “Economic Action and Social Structure - The problem of Embeddedness” where he explained, by a vast recurrence of economic and sociological research papers, that social relations have a important influence on economic opportunities of a person as well as on the economic performance of a country. Granovetter (1985, pag.58) argues that personal relations have an irregular and changeable influence on the economy, its different actors, sectors and social networks. The structure density and quality of social relations must be considered while analyzing the economy of a country. Human behaviour is embedded in the network of personal relations (Granovetter 1985, pag.68). The Lisbon-strategy takes into account that the social interactions and networks of the participating agents decisively influence economic performance and the innovation process.

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Understanding the basic ideas of Schumpeter, List and Granovetter gives us a much better access to NIS-approach and the main rationale behind the Lisbon strategy. The impact of the NIS-thinking and definitions such as “*the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies*” (Freeman, 1987) or “*all important economic, social, political, organizational, and other factors that influence the development, diffusion, and use of innovations*” (Edquist, 1997) on the current socioeconomic policy of the European Union are obvious.

### **3 THE RENEWED LISBON-STRATEGY GROWTH & JOBS (GJ)**

In 2005, five years after the general strategic agreement to make Europe by 2010 “the most dynamic and competitive knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion, the progress has been at best been mixed (Com (2005)24). Apart from difficult economic framework conditions, sometimes conflicting priorities and an overload policy agenda,

failing co-ordination between the member states, and the member states and the European Union, have been serious stumbling blocks for implementing the necessary measures to achieve the Lisbon targets. While the first launch of the Lisbon strategy had been failing, the internal and external pressures to reach higher levels of knowledge and innovation in order to be enable growth and employment, have substantially augmented. Wim Kok indicates to the high urgency for a relaunch and better implementation of the Lisbon strategy by stating:

*The Lisbon strategy is even more urgent today as the growth gap with North America and Asia has widened, while Europe must meet the combined challenges of low population growth and ageing. Time is running out and there can be no room for complacency. Better implementation is need to make up for lost time (Wim Kok, 2004, cited in Com (2005)24, p.4).*

Due to this high urgency, the Heads of State and Government agreed in the Spring Council 2005, to relaunch the Lisbon strategy, putting a better and more efficient coordination and implementation between the Member States and between the Member States and the European Union (e.g. through Structural Funds or policy adjustments). The Heads of State and Government agreed to provide every year a National Progress Report, which gives detailed information about the national reforms and advances made in the Lisbon targets in each country. The new generation of EU Cohesion policy programs requires to direct in less developed regions at least 60% of funding towards the earmarked actions of the Lisbon strategy, as well as at least 75% in relatively more prosperous regions (COM(2007) 803 final).

### **3.1 Objectives and policies of the Renewed Lisbon strategy**

The Heads of State and Government agreed in the Spring Council of the European Commission (Com (2005) 24) to put emphasis on the three following priority areas:

1. Making Europe a more attractive place to invest and work,
2. Foster Knowledge and Innovation for growth, and
3. Creating more and better jobs.

The main rationale behind Growth and Jobs and the key areas is enabling economic development, social welfare and the creation of high-value added jobs through higher levels of knowledge, entrepreneurship and innovation. Market integration and efficiency, but also social cohesion and a conscious treatment of market failure are essential elements to do so. The three overarching policy pillars: 1) making Europe a more attractive place to invest and work, 2) knowledge and innovation for growth and 3) creating more and better jobs are intrinsically interrelated elements of the development strategy and system-functioning, the European Union wants to achieve by implementing “Growth and Jobs”. Europeans developmental model of competition and social market forces are underlying the strategy, but a stronger explicit focus on knowledge and innovation is set. It is important to state that the Lisbon strategy tries to implement a fertile and sustainable mix of innovation and social cohesion. The following subsections will give a brief overview of the policies and achievements in the three priority areas.

### 3.1.1 A more attractive place to invest and work

To facilitate more entrepreneurship, Foreign Direct investment (FDI) and innovation in Europe, the Commission aspires to extend and deepen the internal market, improve European and national regulation, expand and improve European Infrastructure and ensuring open and competitive markets inside and outside of Europe. (COM(2005) 24). The fundamental idea behind the policy programmes in the key pillar “making Europe a more attractive place to invest and work” are unlocking business potential, entrepreneurship and innovation based upon more competition, market integration and efficiency.

While there have been advances with respect to business start-up-regulations – it is now possible in all but a few Member States to start up a business within one week by means of a one-stop-shop - there persist major bottlenecks for further efficiency

improvements in the rather disintegrated energy and service markets (COM(2007) 803 final). In some strategic areas such as energy and transport system, the impact of national competence policies supposes mayor obstacles for more competition and market efficiency. The integration of the service and especially financial markets (e.g. with regard to venture capital accessibility) is less developed than most people would think in times of global value chains, stock market bubble explosions, Hedge Funds and al.

At the Lisbon Civic Forum in Augsburg (28<sup>th</sup>-29<sup>th</sup> of June), leading European economists<sup>1</sup> draw the attention to the facts that 1) the level of consumer finance integration in Europe is low, 2) there is not yet a truly pan- European bank able to serve the needs of pan European companies and 3) the national banks are predominantly attending national actors (e.g. Viermetz, 2007; Walter, 2007). Both from the supply and demand side of the Europe's economy, further integration towards a common Financial Market is necessary to enable consume, efficiency, competitiveness and innovation in Europe. Extend and deepen the internal market on all levels (esp. in finance but also in energy or transport) will be of substantial importance to create a more efficient, bigger and attractive place to invest and work. Apart from attracting Foreign Direct Investment, a strong focus, has to be done on Small and Medium Enterprises and qualitative entrepreneurship. To do so, a fertile collaboration between the possible entrepreneurs (e.g. start-up enterprise or opportunity exploiting companies), possible business partner (e.g. consultancies, supplier and distributors), the public sector (e.g. via establishing efficient regulation frameworks or providing fertile praxis oriented education) and the finance sector (e.g. through good accessibility of venture capital) is necessary. Thus in vein with the Comprehensive Neo- Schumpeterian Economics-approach of Hanusch and Pyka (2007a), there has to be a fruitful combination of the industry, finance and public pillars of an economy, in order to enable qualitative change.

### 3.1.2 Knowledge and innovation for growth

In order to understand the basic rationale behind the Lisbon strategy, it is important to

know that Lisbon strategy aspires qualitative change and competitiveness of Europe in the long run, not just by introducing technological innovations, but more generally to create, implement and diffuse knowledge in the whole socioeconomic setup considering the public, finance, agricultural, industrial and service sector of the economy as well as the interconnections and knowledge flows between different institutions in the private and public sectors (Hanusch and Pyka, 2007a, 2007b). The broad definition of innovation applied in the Lisbon strategy is explicitly stressed in a Communication from the Commission to the European Council from October 2006) when arguing:

*“While technological innovation is important, there is at least as much scope for non-technological innovation, for example through changes in business models, better design and process organisation. In fact, organisational change is needed to get the best out of technological advances.”* (COM (2006) 589)

Following the (Neo-)Schumpeterian idea of innovation being the implementation of new combinations (leading to the destruction of the general equilibrium), a broad definition of innovation is applied, considering not just technological, product and process innovation, but also innovation in organisation, market and inputs in all public and private sectors (Schumpeter, 1912; Hanusch and Pyka, 2007a).

#### *Policies and progress:*

The Lisbon policies in the key area “knowledge and innovation for growth” aim to increase and improve investment in Research and Development, facilitate innovation, promote the uptake of ICT, enable the sustainable use of resources and contribute to a strong European knowledge base as seedbed for innovation and comparative advantages of Europe (COM (2005) 24). Assessing the progress (based upon the National Progress Reports and empirical data) it gets obvious that innovation is broadly recognized as key factor for growth and competitiveness and virtually all Member States have increased their efforts in R&D (naturally some to more and others to less degree and quality).

Another positive fact is the fast technological catch-up process of some Eastern European countries. While in the short run, the new technological capabilities of Eastern European Member States and socioeconomic dynamics implying investment, production and labour shifts could lead to system adjustment costs for some regions, in the long run, the bigger market, broader European knowledge base and higher innovative capacity will contribute positively to the overall system competitiveness and global position of Europe. Fostering market efficiency, promoting centres of excellence and enabling are necessary, but in order to prevent major socioeconomic perturbations and nationalistic tendencies affecting negatively the integration process, there must be put also a strong emphasis on overcoming serious structural dissimilarities. There are still enormous regional and national disparities with regard to the knowledge base, framework conditions (e.g. venture capital, patent jurisdiction etc.) and innovation capacity.

*European Innovation Scoreboard:*

In order to reveal and compare the innovation performance of the Member States, the European Commission initiated the elaboration of the European Innovation Scoreboard (EIS) by the Maastricht Economic Research Institute on Innovation and Technology (MERIT) and the Joint Research Centre (JRC) of the European Commission. The EIS considers a comprehensive indicator set of innovation inputs and outputs and gives interesting insights in the innovative capacity and activities of the Member State. The following five dimensions are analysed in the European Innovation Scoreboard (MERIT and JRC, 2007):

- **Innovation drivers**, which measure the structural conditions required for innovation potential such as education and training
- **Knowledge creation**, which assess the public and private investments in R&D activities
- **Innovation & entrepreneurship**, which analyze the efforts towards innovation at firm level, especially Small and Medium Enterprises (SMEs)
- **Application**, which measures the performance expressed in terms of labour and business activities and their value added in innovative

sectors, e.g. employment in high-tech, sales of new-to-market or firm products

- **Intellectual property** measures the achieved results in terms of successful and codified know-how, e.g. patents

Upon the values in these five dimensions, the Summary Innovation Index (SII) is calculated. In Figure 2 (elaborated by MERIT and JRC, 2007) we can see the average growth of the Member States and comparator countries, such as Norway, Switzerland, Japan and USA on the horizontal axis, as well as the absolute Summary Innovation Index-value in 2006 on the vertical axis. Some interesting insights in the innovation performance and dynamics can be derived.

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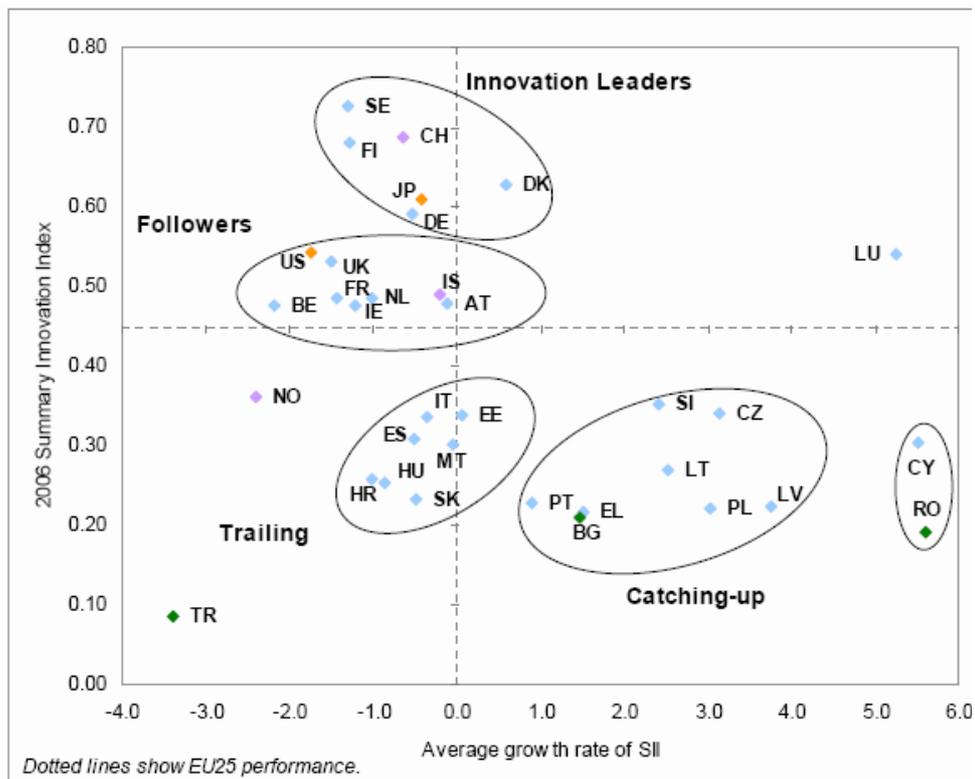


Figure 2: The Summary Innovation Index; Source: MERIT and JRC (2007)

Sweden, Switzerland, Finland, Denmark, Japan and Germany are in the leader group, followed by the USA, UK, Iceland, France, Netherlands, Belgium, Austria and Ireland in the follower group. With the exception of Denmark, the innovative advantage of these high innovation performance countries has declined in comparison with the average of the EU 25 (MERIT and JRC, 2007).

Romania, Cyprus and Luxembourg can present the highest average SII growth rates. Especially Luxembourg, considering the high initial level of this small European country, is showing a very impressive qualitative growth rate, but of course, also the catching-up processes of Cyprus and Romania, starting from low initial levels, are very recognizable.

There is a fruitful process of convergence perceivable, especially driven by some Eastern European countries, such as Latvia, Czech Republic, Poland, Lithuania and Slovenia, which are rapidly catching up. Achieving a higher level structural homogeneity of the EU 25 can give fertile incentives for knowledge flows, competition and innovation in the European Union. Major weaknesses can be seen in the low absolute levels and weak dynamics of some Mediterranean (Spain, Italy, and Croatia) and some trailing Eastern Member States (Hungary, Slovakia and Estonia). To promote further convergence and competition, and make Europe the most dynamic knowledge based economy in the world, the trailing countries must put much more emphasis on knowledge and innovation and catch up at least with the acceptable (but also improvable) growth rates of countries such as Bulgaria and Portugal.

#### *The regions between excellence and structural funds*

While growth poles and centres of excellence are necessary, the substantial disparities between the leading regions of Europe (predominantly in Sweden, Southern Germany, UK, Holland) and the low performer regions (predominantly in Greece, Portugal and Spain) (Hollander, 2006; Eurostat, 2007), can lead to system destabilizing socioeconomic imbalances and perturbations and hamper the overall growth and innovation potential. Thus, an adequate trade-off between the creating excellence centres and structural homogeneity has to be found.

### 3.1.3 Creating more and better jobs

In order to meet the needs and demands of the global knowledge based economy and reach good positions in the global value chain, higher levels of knowledge, flexibility and adaptability of workers and enterprises are necessary. Therefore the Lisbon strategy puts strong emphasis on 1) strengthening human capital through better education and training measures and 2) implementing well-functioning flexicurity systems, able to provide more flexibility of the labour force for the companies and higher levels of social security for the workers (COM, 2007a, 2007b). The ultimate objective is to gain and reach more knowledge- intensive, high-value added jobs in Europe. But in view of demographic change and unsustainable pension systems, not just qualitative improvements of human capital and jobs are necessary, but inalienable also more active labour force and tax-contributors. Therefore, several countries adopted or announced reforms to pensions and health care systems (e.g. increasing statutory retirement ages and strengthening incentives for older workers to remain in the labour market). These reforms led in coincidence with positive macroeconomic developments and some other advances in implementing the Lisbon targets, to the creation of 6,5 million jobs (COM, 2007a, 2007b).

It can be positively stated that an agreement on a common set of flexicurity principles has been reached, but still there is much to do with regard life-long-learning, modernise the social protection systems, as well as to get structural unemployment and rising social imbalances under control. An unacceptable rate of students leave school early and the integration of foreign citizens can be considered rather bad. In order to prevent social perturbations and to prevent the risk to leave considerable parts of the population behind and losing highly valuable and necessary human capital on the way to the knowledge based economy, better integration of foreign citizens, more emphasis in basic education and tackling the unacceptable rate of early school leavers are highly urgent measures. Both on the spatial and social sphere, an adequate and fruitful mix between excellence and structural homogeneity has to be reached, in order to make the system run and enabling social welfare for all

European citizens.

#### **4. CHALLENGES AND OPPORTUNITIES IN THE NEXT LISBON CYCLE**

“Keeping up pace with the change“ and „transform Europe into a creative, modern innovation-friendly, low carbon economy, with a dynamic business environment, a highly skilled work force and high-quality education, underpinned by a strong social model“ are the main challenges for Europe in the next Lisbon Cycle 2008-2010 (Barroso, 2007; in Com (2007) 803). Knowledge and innovation, unlocking business potential, investing in people and modernising labour markets continue to be key priorities, but a stronger emphasis will be put on the fourth key priority area: energy and climate change.

##### *Energy, climate and economic opportunities*

Climate change, rising oil prices and European energy dependence (e.g. from Russian gas) are starting to have preoccupying effects. Thus, when aiming to reduce greenhouse gas emissions (e.g. through taxation or subsidies), foster energy efficiency (e.g. through creating a single energy market, regulations) and promote renewable energy, the European union and its Member States are not just showing good will but rather something in between a response to socioeconomic pressures and a future-oriented strategy in order to promote sustainable growth and competitiveness.

The growth of China, India and other developing countries require energy. Rising global energy demand and rising external costs of (hydrocarbon-based) energy (e.g. pollution in Megacities), will make innovation in energy a tremendous economic opportunity for Europe to foster internal growth and jobs by reaching the forefront in new types of energy (producing, processing, organizing), and providing efficient energy systems (e.g. energy efficiency of buildings) with low external costs for the population, companies and regions.

##### *Fostering entrepreneurship, market integration and innovation*

In the more “traditional” key priority areas, some advances have been made (e.g. broad recognition of innovation as key factor for growth; implementation of easier and faster business-start-up procedures in some Member States; general agreement about fostering flexicurity systems) or are planned (e.g. adopting a European Small Business Act, which aspires to unlock growth potential at every stage of the life-cycle of SMEs) (COM, 2007a, 2007b). But a series of other necessary improvements, such as a common financial market, integrated energy and transport systems, and making the fifth freedom (= free movement of knowledge) reality, are far from be reached.

#### *Integration and innovation in services*

While industry is still the locomotive for growth and jobs in many European regions (and especially in the innovation hubs such as some Southern German regions), the importance of the service sector is steadily growing, interconnecting actors from different sectors, attending new demands (of enterprises and households), facilitating higher levels of efficiency, adding high value the products and process and introducing fruitful impulses to the system.

Currently, the service sector is the biggest employer in Europe and main contributor for growth, jobs and competitiveness of Europe. Knowledge, intensive business services are among the fastest growing sectors of Europe (Kox and Rubalcaba, 2007). In view of rising global competitors, which can present not just significant lower labour costs, but also impressive rates of technological catch-up, it will be virtually impossible to hinder further outsourcing of the (low-tech) industrial production and the correspondent lose of jobs. Additionally it has to be recognized that the percentage of value added by (industrial and agricultural) production in the (global) value chains is falling, while the value added by services (e.g. knowledge-intensive business services such as ICT-services or Marketing) is rising impressively.

Thus, Europe’s growth, competitiveness, welfare and position in the global value chains depend substantially on its capacity to foster integration and innovation in

services and enable the creation of knowledge intensive, high-value added jobs in the service sector. Unfortunately there persist obstacles for further integration and innovation in services on the regional, national and communitarian level. For example, influenced by lobbying and national competence policies, there are still low levels of integration in the energy, transport and finance sector, hampering efficiency improvements, new business and market opportunities and innovation.

With regard to the fifth freedom, the free movement of knowledge, there are still a lot of structural rigidities to overcome. For example, patent-jurisdiction and interoperable standards are not fully integrated, cross-border mobility of researcher is still weak (i.a. due to rigidities of pensions rate systems) and mutual recognition and evaluation of university degrees, credit points and marks are less a standardized than a case by case procedure (in dependence of the student, the university, the responsible persons, the country etc.). Furthermore, the high-speed internet usage has to be augmented in order to achieve the change towards the information society and knowledge-based economy (Com (2007) 803).

### *Knowledge flows*

Promoting the fifth freedom, the free movement of knowledge, is necessary to enhance interactive and evolutionary learning, foster mobility and flexibility of researchers, firms and employee, achieve excellence and allow Europe to capitalise on its creative potential. A strategic focus should be put on facilitating fertile innovation networks and knowledge flows between actors from private and public institutions, between research institutions and enterprises, between (regional) governments, research institutions, and enterprises, in order enhance knowledge flows and innovative capacity. The European Union tries to reinforce the education-research-innovation triangle, especially through the establishment and operation of the European Institute for Innovation and Technology (EIT) and the Joint Technology Initiatives (JTI). But this is not enough, more and better knowledge flows are necessary on all levels, between local, regional, communitarian and international actors. Production processes are becoming increasingly complex and no enterprise is able to overlook and domain all technical and market novelties and opportunities. Thus, a fruitful network of

business partner, research and finance institutions, consultancies, supplier and distributors is necessary to make use of market opportunities and enable entrepreneurship and innovation.

*Flexicurity, creative destruction and social sustainability*

Entrepreneurship and innovation are seen as key factors for growth and competitiveness, but while it is necessary to implement Schumpeter to achieve the forefront of technological and economic development in fast changing, globalized world, the internal (European) system needs also certain socioeconomic stability and (re)compensation mechanism to be socially viable and desirable. Thus, the question is how to achieve fertile creative destruction mechanism but maintain social stability and justice, corresponding to the intrinsic values of the European Union (e.g. democracy, social cohesion and freedom of the actors). The current response of the Heads of State and Government is trying to promote and implement strong flexicurity system, with high-skilled, flexible and mobile labour force, able to adapt themselves rapidly to the fast changes needs and demands in the globalized, knowledge based economy. In order to provide a socially sustainable system and smooth the negative effects and socioeconomic perturbations of the creative destruction process, the European Commission and Member States are want to support the actors, especially in the adaptation phase from one job to another, by strong social protection systems.

A series of subsequent question arise: Do the politicians in Brussels or leading company managers really think that the labour force wants to be, is able to, and will be flexible (in the nearer future), to change frequently from job to job and place to place? Are politician and business managers taking the importance of accumulative learning, routines and stability of the close socioeconomic environment for the workers, sufficiently into account? Are flexicurity systems socially sustainable or leading to unfertile destruction of social equilibria?

In order to achieve the declared objective of shaping the globalization in line with Europe's values and interests, combining competitiveness, solidarity and sustainability (Com (2007) 803), a solution to the following question has to be find in

a concerted way between enterprises, policy space, research institutions and the European citizens: How to enable a socially viable and desirable, and environmentally sustainable, creative destruction process?

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<sup>1</sup> E.g. Carlos da Silva Costa, Vice-President, European Investment Bank; Klaus Viermetz, Chairman of the Supervisory Board, Deutsche Boerse AG; Norbert Walter, Chief Economist of the Deutsche Bank Group

