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The European Union Innovation Performance in View of the Lisbon Strategy

Abstract

The Lisbon Strategy was accepted by the European Council in March 2000 during the Lisbon summit. The Strategy is European Union's answer to many challenges resulting from the economic globalization and the dynamic development of information technologies. The importance of these challenges is paramount. Hence, it has turned out that new strategies based on the principle of balanced development which would modernize the European economy are indispensable.

Even though in the last decade of the 20th century integration process of Union's economies underwent considerable intensification, they still could not outweigh the American economy in the technological race. As a result European economies became less competitive in comparison with the American counterpart.

The rise in innovativeness of the EU economies plays a key role in the implementation of the major aims of the Lisbon Strategy. The ability to facilitate those innovations and to put them into practice have crucial importance for minimizing the economic distance between EU and US. The main aim of the paper is to present the innovativeness of European economies and Japan. The paper also evaluates the conditions and effects of the implementation of the strategic objectives of Lisbon Strategy.

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The paper is divided into four parts. First deals with the characteristics of the role of knowledge-based economy and innovativeness of the economic system in Lisbon Strategy. Second is devoted to the issue of innovativeness of the EU economies as compared to the US and Japan. Third presents evaluation of the Lisbon Strategy implementation. Fourth analyses the renewed Lisbon Strategy.

1. Introduction

The Lisbon Strategy launched by the European Council in Lisbon in March 2000 during the Lisbon Summit was European Union's response to numerous challenges resulting from globalization of economic processes and dynamic development of information technologies. The importance of these challenges is so huge that it was necessary to prepare the strategy for European economy based on the principle of sustainable development. Although the EU countries deepened their integration processes in the 1990s but they could not win the race with technological development of America. In consequence, the West European economies became less competitive in comparison to American economy. Additionally, the growing powers of China and India began to threaten the position of the Community.

The Lisbon Strategy has been the best developed programme increasing the competitiveness of European economies in the history of the European Union. The improved innovation performance (Radło, 2003, 2. 16) plays an important part in the implementation of the Lisbon Strategy. The ability to create and use in practice the stream of innovation is of utmost importance in an attempt to breach the economic and technological gap between the European Union and the US. This paper aims to present the essence of the Lisbon Strategy (the primary and amended version), to present innovativeness in the European Union as compared to the US and Japan, as well as to appraise the results of the up to date implementation of the Strategy.

2. The Knowledge Based Economy and Innovation of the Economic System in Lisbon Strategy

The characteristic feature of the Lisbon Strategy is a very ambitious plan to transform the European Union by 2010 into the best competitive and dynamic economic area in the world. The development of knowledge based economy

(KBE) through increase in effectiveness of research and development policy and activation of innovation will help to implement this objective (Halizak, Kuźniar, Symonides, 2004, p. 119). Other measures defined in the Lisbon Strategy involve: modernisation of European social model through investments in education and prevention of social alienation and unification of European market, liberalization of banking services, power and telecommunication sectors etc.

The most important aspect of the Lisbon Strategy is a plan to strengthen the research potential of UE countries and improve effectiveness of its use which should result in acceleration of innovative processes and consequently in bridging the technological gap between Europe and the US. The innovativeness of economy is a function of three principal factors. The first factor involves broadening the knowledge in sciences, technology and management. To this end modern public and private R&D centres underlying innovativeness of economy are needed. The second factor involves availability of highly qualified and flexible work force able to employ knowledge in order to improve work productivity. The volume of such work force is above all determined by development and efficiency of educational system. The third factor involves attitudes of entrepreneurs, whose inclination to get involved in risky enterprises determines economy's innovativeness. The significance of this factor is partly dependent on the impact power of entrepreneurship culture and partly on the openness of social institutions to entrepreneurship (Castells 2003, pp. 121-122).

The European idea of building the knowledge based economy has gained a strong support from the European Council decisions made at the summit in Lisbon covering the implementation of "e-Europa" project adopted at a similar summit in Helsinki in December 1999. Principal decisions involved:

- Prompt enacting by the European Parliament, still in 2000, the acts of law on electronic commerce, copyright, e-money, on distant selling of financial services,
- Increased access to Internet by 2000 and reduction of Internet costs,
- Providing all EU schools with access to Internet and multi-media resources by the end of 2000,
- Providing cheap and quick Internet for all member countries with financial support from the European Investment Bank (Marliński, 2000, p. 49).

An important component of the Strategy is establishment of the European Research Area defined as an area of free research exchange where scientific potential will be used to provide new jobs and increase competitiveness of member countries. The implementation of this project requires coordinated, flexible and non-bureaucratic measures at national and EU levels. Thus, the

Council of Europe suggested the European Commission and member countries to take measures consisting in: (Płowiec, 2001, p. 10-12):

- Developing adequate mechanisms aimed at creating national and joint programmes on freely selected research issues in order to obtain greater benefits from joint R&D potentials of partner countries,
- Improving climate for individual investments in research and employing highly advanced technologies with tax policy, venture capital and support from the European Investment Bank,
- Establishing by the end of 2001 the quick trans-European network for scientific - electronic communication linking research institutes, universities, academic libraries and centres,
- Eliminating impediments to scientific mobility in Europe and attracting high-class research talents to EU countries,
- Introducing by the end of 2001 the EU patent (together with a usable model) so that protection of patents in the whole Europe would be as easy and but not so expensive as in the US or Japan.

The European Research Area was established by the European Parliament in June 2002 and was based on the 6th Research Framework Programme (2003-2006). The main objectives of the programme involved: strengthening of scientific and technological base of European industry, increase of its competitiveness, promotion of scientific research in genomics, bio-technologies, nanotechnologies, nano-science, aeronautics and space research, information society technologies etc. Programme's total budget amounts to EUR 17.5 billion i.e. by 17 per cent more than the previous 5th Research Framework Programme.

The strengthening of EU member countries' research potential should be coupled with increased R&D expenditures. The Council of Europe summit in March 2003 decided that by 2010 the whole European Union should assign for this purpose 3 per cent of its GDP (according to 2001 data it was 1.94 per cent) (Halizak, Kuźniar, Symonides, op. cit., s. 124). Such considerable increase in R&D expenditures should result in an increased annual rate of growth (0.5 per cent) and in 400 000 new jobs yearly (Gadomski, 2003). For an example the Galileo project will cost EUR 2 billion and will create hundreds of thousands of new jobs in modern sectors of economy.

SMEs innovativeness is an important component of the Lisbon Strategy. The Lisbon summit adopted the "European Charter for Small Enterprises" and the "Fourth Multiyear Programme for Enterprises and Entrepreneurship 2001 – 2005". These documents stress the need to develop research and innovativeness activity of small and medium enterprises in new industrial and information technologies. The priorities set in these documents involve: SMEs' access to

innovation funding, development of vocational and lifelong learning, development of e-learning application and coordination of business support network in particular improvement of operation, co-operation and co-ordination of Euro Info centres.

The Lisbon Strategy has also appreciated the importance of education and training in the process of building innovativeness and the most technically advanced economy in the world. The education and training are horizontal in character in the sense that they are present to a smaller or larger extent in the remaining European strategies, pertaining to social issues in detail. For the most part it concerns the European Employment Strategy adopted by the Council of Europe in 1997. Education and training are the most important methods of operation in the first Pillar (improving employability) and play an important role in implementation of the Second Pillar (developing of entrepreneurship) and the Third Pillar (encouraging adaptability of business and their employees).

The programme for modernisation of education system set out by the Lisbon Strategy postulates to adapt the system to requirements of knowledge based society and need to increase quality of employment. Hence, the Council of Europe advised the member countries to take the necessary steps (Presidency Conclusions: Lisbon European Council, 2000, Article 26) to meet the following targets:

- a substantial increase in per capita investment in human resources;
- the number of 18 to 24 year olds with only lower-secondary level education who are not in further education and training should be halved by 2010;
- popularisation of education and training with use of IT skills;
- a European framework should define the new basic skills (foreign languages, technological culture, entrepreneurship , IT skills) which should be provided through lifelong learning;
- define, by the end of 2000, the means for fostering the mobility of students, teachers and training and research staff;
- a common European format should be developed for curricula vitae in order to facilitate mobility by helping the assessment of knowledge acquired.

The Lisbon Strategy recommendations have been further developed in “The concrete future objectives for education and training systems” approved by the Council of Europe in 2001 in Stockholm. This is a very important EU document presenting comprehensive approach to education and training policies of member countries. The document defines three strategic objectives promoting, firstly, improving the quality and effectiveness of education and training, secondly, making access to learning easier, thirdly, opening these systems to the world, that is their better adaptability to the needs of vocational

and social life, improvement of foreign language teaching, developing entrepreneurship etc. (Ciechański, 2003, p. 64-65).

3. The European Innovation Performance vs. the US and Japan

While analysing innovativeness of an economy the indicators are employed defining its ability to innovation, that is development and commercialisation of innovation as well as innovation activity defining innovative position of a particular country. According to the methodology developed by the European Commission, the European Innovation Scoreboard, the innovation indicators may be divided into two groups:

- indicators reflecting outputs for innovation activities presenting ability of an economy to innovation;
- indicators defining innovation activity results evaluating particular country's innovation position, that is, the results of combining society's creativity with financial resources in a particular economic and financial environment (European Innovation Scoreboard, 2007, p. 35).

The above classification of innovation indicators is an attempt to combine macro and micro-economic approach enabling comprehensive analysis of economy's innovation. Comparing mutually linked components describing material and non-material resources determining innovation dynamics of an economy it is possible to define the European Union position in science, technology and innovation activity. The indicators describing outlays for innovation include three principal categories:

- funding (individual and public R&D outlays, companies' expenditures for innovation, IT expenditures, venture capital etc.);
- human resources (youth gross enrolment index, lifelong learning, graduates in engineering, tertiary education ratio);
- environment supporting innovation activity (co-operation in innovation activity, SMEs innovation rate, broad-line Internet lines per 100 people).

Innovation activity indicators may be classified into three categories (European..., 2008, p. 35):

- research and innovation results (patents, functional designs, trademarks);
- employment (percentage of the employed in production of goods and services of advanced technology);
- knowledge commercialisation (the share of new and modernised products in the total sales, share of exports of highly advanced products in total exports).

The above mentioned indicators express relative values (e.g. the value of particular variables in relation to GDP or population in a particular country) enabling comparability at an international scale.

The results and scope of innovation analysis of EU vs. the US and Japan are presented in Table 1. The table presents 13 indicators measuring various innovation aspects; the indicators define five dimensions of innovation: innovation engines, knowledge creation, innovation and entrepreneurship, knowledge creation, innovation and entrepreneurship, implementation and intellectual property. The first three innovation dimensions involve indicators illustrating outlays on innovation activity. The fourth and fifth dimensions include indicators presenting the results of innovation activity in a synthetic manner.

Table 1. The EU Innovation Performance vs. the US and Japan in 2007

	Innovation criteria	UE – 27	US	Japan	UE leaders
1.	<u>Innovation drivers</u>				
1.1	Science & Engineering graduates per 1000 population aged 20-29	12.9	10.6	13.7	FR (22.5), LT (18.9)
1.2	Population with tertiary education per 100 population aged 25-64	23.0	39.0	40.0	FI (35.1), DK (34.7)
1.3	Broadband penetration rate (number of broadband lines per 100 population)	14.8	18.0	18.9	DK (29.6), NL (29.0)
2.	<u>Knowledge creation</u>				
2.1	Public R&D expenditures (% of GDP)	0.65	0.69	0.74	FI (0.99), SE (0.92)
2.2	Business R&D expenditures (% of GDP)	1.17	1.87	2.40	SE (2.92), FI (2.46)
2.3	Share of medium-high-tech and high-tech R&D (total)	85.2	89.9	86.7	SE (92.7), DE (92.3)
3.	<u>Innovation & Entrepreneurship</u>				
3.1	Early-stage venture capital (% of GDP) ^{b)}	0.022	0.035	-	DK (0.051), UK (0.047)
3.2	ICT expenditures (% of GDP)	6.4	6.7	7.6	BG (9.9), EE (9.8)

4	<u>Applications</u>				
4.1	Exports of high technology products as a share of total exports	16.7	26.1	20.0	MT (54.6), LU (40.6)
4.2	Employment in medium-high and high-tech manufacturing (% of total workforce)	6.63	3.84	7.30	DE (10.75), CZ (10.33)
5	<u>Intellectual Property</u>				
5.1	EPO patents per million population)	128.0	167.6	219.1	DE (311.7), FI (305.6)
5.2	USPTO patents per million population	49.2	273.7	274.4	FI (133.2), DE (129.8)
5.3	Triad patents per million populationd)	19.6	33.9	87	DE (53.8), NL (47.4)

^{a)} Chemicals, machine manufacture, office equipment, electric, electric, telecommunication equipment, automobiles, aeroplanes and other transport.

^{b)} Venture capital involves company investments in seed or start-up capital. The seed capital finances research, analyses and development of the early business ideas. The start-up capital finances product idea development, its initial marketing and sale.

^{c)} This kind of exports involves aviation, computers and office devices, electric machines, chemical processing.

^{d)} Triad patent involves European, American and Japanese patents.

Source: European Innovation Scoreboard 2007, Pro Inno Europe, February 2008, pp. 16-17.

The analysis of innovation indicators in the European Union (average values for UE-27) in comparison to the US and Japan allows to estimate that European innovations are lower. In comparison to Japan almost all EU indicators are lower while vs. the US, the two indicators (S&E graduates per 1000 population aged 20-29 and employment in medium-high and high-tech manufacturing as a percentage of total workforce) are higher.

The level and structure of R&D outlays according to the sources of funding are important indicators of innovation performance. The share of these outlays in terms of GDP varies considerably in particular EU countries. In some countries (Sweden, Finland, Germany, Denmark, France, Austria) this indicator exceeds the EU average while in Sweden and Finland it is even higher than in the US and Japan.

The volume of R&D funding does not provide sufficient basis for evaluation of innovation performance. The innovation performance is strongly determined by the structure of the funding (central government and business

funding). The comparative analysis of the innovation system structure demonstrates that innovation performance is higher in countries where funding comes from business rather than in countries where funding comes from central government. This is due to the fact that business is funding innovation projects that directly increase their innovation activity. The funding structure in the European Union is less advantageous than in the US or Japan. This is reflected by a relatively high share of central government R&D funding accounting for 36 per cent in the European Union against 22 per cent in Japan and 23 per cent in the US. (European Innovation..., p. 40). Some EU countries indicators exceed the EU average, e.g. Portugal with about 60 per cent, Italy – about 50 per cent, Greece – about 49 per cent, Poland – 68 per cent. On the other hand in several EU countries (Ireland, Belgium, Sweden, Finland) this indicator is close to the US and Japan.

4. Evaluation of the Lisbon Strategy Implementation

The nine years that have passed since the Lisbon Strategy was declared provide sufficient time span to evaluate progress in implementation of Strategy's strategic objectives. The analysis of the up to date effects of activities under the Strategy enables to draw several conclusions and to mention the most important dilemmas of implementation processes.

The evaluation of the Strategy implementation should take into account objective macro-economic conditions that disturbed the success of this process. In March 2000, when the EU authorities adopted the Lisbon Strategy, the European economy was in a good condition, investors were optimistic, high profits resulting mainly from proliferation of new technologies in IT and telecommunication were expected and stock prices of companies in the so-called new economy soared. The average EU GDP growth rate in 2000 reached 3.5 per cent. A year later it was a mere 0.9 per cent and in 2002 about 0.8 per cent (Otachel, 2003, p. 8). The economic melt-down in the last three years and political divisions in the EU caused by a war in Iraq significantly delayed implementation of the Lisbon Strategy.

Despite numerous obstacles on the way to implementation of the Lisbon Strategy the European Union countries were successful in several cases.

Firstly, the rate of household access to Internet increased in Europe from 18 per cent in 2000 to over 60 per cent in 2007.

Secondly, the new network and the new eu. domain name were developed. This enabled to create new European domain names for websites and

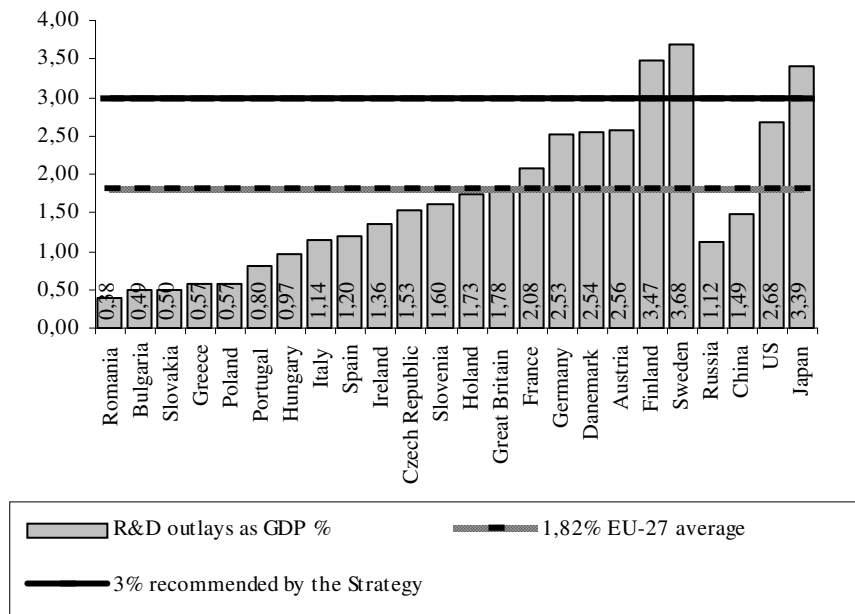
e-mail addresses. The eu. domain name supplements today the whole family of national and general domain names including .com and .org. The .eu domain name may be used by companies operating in Europe. Previously, the EU institutions used the Los Angeles based .int domain name which was assigned for such bodies as the UN and the NATO

Thirdly, an important role in the integration of R&D activity of EU countries was played by the 6th Research Framework Programme 2002-2006. The Programme formed a base for co-ordination of the research, most important from the view of development of modern technologies and building knowledge based economy. The consecutive 7th Framework Programme 2007-2013 is the largest programme for funding and developing Research and Development at a European level.

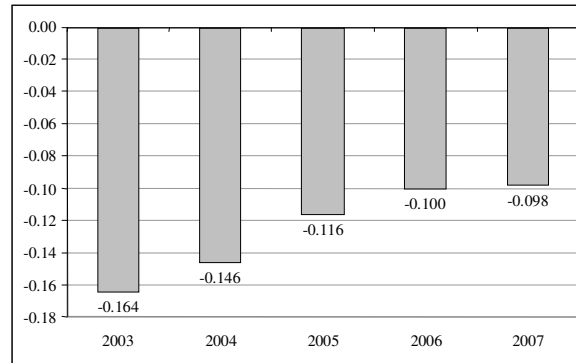
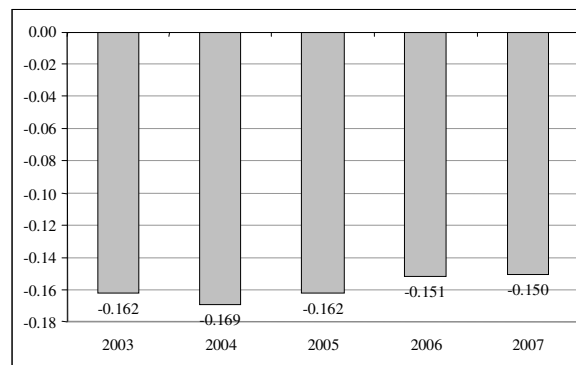
Fourthly, there was progress in liberalisation in energy market, transport and telecommunication sectors. The solution was adapted in reference to energy market that starting from the early 2004 industrial power consumers, and from 2005 all business entities in the European Union will be free to choose their gas and electricity suppliers.

The evaluation of priority objectives implementation of the Lisbon Strategy in innovation and competitiveness is not favourable and raises doubts so as to the future development of EU economies. It should be noted that none of the objectives will be achieved by 2010. The R&D outlays account for a mere 1.82 per cent of the EU GDP (2007 figures) while according to initial guidelines they should oscillate at 3 per cent in 2010. The achievement of this undoubtedly excessive rate was to be a main factor enabling transformation of the European Union into the most competitive and dynamic economic region worldwide. The Figure 1 demonstrates the gap between the 3 per cent rate set by the Strategy and the R&D outlays / GDP rates in selected countries. The 2007 R&D outlays / GDP rate accounted for 1.82 per cent and was considerably lower than the 3 per cent set by the Strategy and rates achieved by the US and Japan.

The above statistics indicate that in terms of innovation performance the US and Japan are ahead of the European Union. According to 2003-2007 figures these countries rank higher in the innovation race but the innovation gap has been declining. Summary Innovation Index is used to measure innovation gap between various countries and evaluate innovative performance. The value of the SII oscillates between 0-1 (European..., p. 15-16).

Figure 1. R&D to GDP ratio in selected countries in 2007

Source: Authors' own work based on: *OECD Factbook 2009*, Paris 2009, p. 165; *European Innovation Scoreboard 2007*, EC, Brussels 2008, pp. 39-40.

Figure 2. The EU Innovation gap in relation to the US and Japan (2003-2007)***a) EU-US****b) EU-Japan**

* Vertical axes show differences between the SII results for the EU, and the US and Japan.

Source: *European Innovation...*, op. cit., p. 15.

Figure 2 illustrates the European Union innovation gap with the US and Japan. The gap is set by the difference between Summary Innovation Index for the European Union, and the US and Japan. Conclusion may be drawn from the analysis of data presented in Figure 2 that the US and Japan are still ahead of the European Union but the 2003-2007 innovation gap has decreased. In the case of the EU-US gap it has dropped from 0.164 points to 0.098 points. On the other hand, the EU-Japan gap first rose in 2004 from 0.162 points to 0.169 points and then fell to 0.150 in 2007.

The lack of significant achievements in stimulating EU innovations may be attributed to numerous diverse reasons of complicated nature.

Firstly, the Strategy set out an excessive number of justified objectives resulting in antimony between the imperative to increase the competitiveness of EU economies and social objectives protecting the labour market from substantial changes.

Secondly, there is a lack of political will on part of the European Union leaders to consistently implement the Lisbon Strategy. They focus on current issues, or only on issues that can be solved between elections.

Thirdly, the co-ordination of national economic policies, under the open methods of co-ordination adopted by the European Union, is ineffective (Giddens, 2009, p. 202-203).

Fourthly, at time when the Lisbon Strategy was drafted, various stages of innovation development within the European Union were not taken into account. This became clearly visible after the European Union's extension in 2004.

5. The Renewed Lisbon Strategy

The Lisbon Strategy, although optimal in terms of theory and in conformity with EU philosophy of combining economic growth with social and ecological objectives, in practice, turned out to be not feasible. In 2004, the European Commission established the so-called High Level Group chaired by W. Kok. In November 2004 the group issued the report with critical appraisal of hitherto implementation of Strategy objectives. The report prepared foundation for future redefinition of Strategy's objectives.

The report authors found the reasons underlying the Lisbon Strategy still valid. Europe still needs strong innovation impulses, fundamental for development of competitiveness of European Union economy. The Strategy should be understood as a method of transformation of European economic systems and adapting these systems to meet globalisation and demographic challenges.

Recommendations entailing from the report prepared by W.Kok served as a basis for the European Commission for submitting a new version of the Lisbon Strategy, adopted later by the Council of Europe. The European Union abandoned the ambitious objective to outrun the leading world economies in terms of competitiveness. Delivering stronger, lasting growth and creating more and better jobs were set as priority policies of the Strategy. The following three

guidelines serve to this purpose (Polska wobec redefinicji Strategii Lizbońskiej, 2005, p. 15-16):

- A. Making Europe a more attractive place to invest and dwell.
- B. Taking advantage of knowledge and innovation for economic development.
- C. Creating more and better jobs.

A. Making Europe a more attractive place to invest and work:

- Extending and deepening the internal market;
- Ensuring open and competitive market inside and outside Europe;
- Improving European and national regulation;
- Expanding and improving European infrastructure.

B. Knowledge and innovation for growth:

- Increase and improvement of investments in R&D;
- Facilitation innovation, the uptake of ICT and the sustainable use of resources;
- Support for establishment of strong European industrial base.

C. Creation of new, better jobs:

- Attracting more people into employment and modernisation of social protection systems;
- Increasing the adaptability of workers and enterprises and the flexibility of labour markets;
- Investing more in human capital through better education and skills.

The renewed Lisbon Strategy explicitly stresses the need to further strengthen the „knowledge triangle”, that is research, innovation and education. In 2006 the European Commission adopted the new innovation strategy for Europe, called “ a broad-based innovative strategy for Europe”. The strategy set out integrated plan of action for promoting innovation in Community countries and above all for improving effectiveness of research in practice (Putting knowledge into practice, 2006). The Strategy sets out several priority policies, most of them closely related to research and innovation:

- The establishment of the European Institute of Technology, modelled after American MIT;
- Creation of open, competitive and uniform labour market for researchers;
- Improvement of knowledge transfer between universities, and business and public institutions;

- Financial support for innovation development at a regional level;
- Setting out new framework for state aid for research and innovation, and more effective application of tax incentives for R&D and innovation;
- Development of strategy for innovation friendly, lead markets, (IT, electronic equipment, precision instruments, telecommunication etc.).

In order to increase responsibility of member countries for implementation of the Lisbon Strategy objectives the Commission proposes to introduce a new method of managing the reform process. The most important changes involve:

- Introduction of National Action Plans for economic growth and new jobs, adopted by governments of member countries after consulting their national parliaments (reform plans);
- Appointment by each member country within their own government the persons responsible for co-ordination of actions related to implementation of the Lisbon Strategy („Mr or Ms Lisbon”);
- Facilitating and streamlining the reporting process on implementation of the Lisbon Strategy (a single EU report on the progress made in implementation of the Strategy and a national report – the reporting part of the National Action Plan, combining the most important reporting duties now in force, in one package);
- Commencement of a new three-year cycle of co-ordination of economic and employment policies.

A new problem emerged, even more clearly visible after the EU extension, the issue of differences in priorities of old and new members. The most important objective of the EU-15 countries is to make the European Union the most competitive and dynamic economic region in the world. Whereas for the new countries it is more important to gradually even the wealth level. These objectives do not have to be mutually exclusive. On the one hand the increase in wealth of the EU-10 will also be advantageous for the EU-15 since the common market will get bigger. On the other hand more investments in modern technologies and R&D activity in new countries will contribute to the development of other partners. The new member countries will co-finance the construction of the Trans-European Transport Network (TEN-T) and research under the European Research Area.

6. Conclusion

From these considerations it may be concluded that despite its many drawbacks the Lisbon Strategy still remains the sole Europe wide project supporting economic transformation of the European Union. The arguments that once contributed to the establishment of the Strategy still remain valid. Europe should improve its innovation performance, strengthen knowledge based sectors of industry and streamline technology transfer between EU member countries. The present trends in the European Union focus on creating systemic approach to innovation, increasing complementarity of national and regional policies and promoting new high-tech enterprises.

The reduction of priorities adopted by the original Lisbon Strategy and the premise to decentralise the Strategy (nationalisation) should improve implementation effectiveness of Strategy's objectives. The increased flexibility of the Strategy in terms of national preferences and conditions is of vital importance for Poland's economy. Owing to these decisions, the Poland's National Action Plan can adopt more feasible objectives for R&D expenditures and employment rate.

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Streszczenie

INNOWACYJNOŚĆ GOSPODAREK UNII EUROPEJSKIEJ W ŚWIETLE STRATEGII LIZBOŃSKIEJ

Strategia Lizbońska, przyjęta przez Radę Europejską w marcu 2000 roku podczas szczytu w Lizbonie, stanowi odpowiedź Unii Europejskiej na liczne wyzwania wynikające z globalizacji procesów gospodarczych i dynamicznego rozwoju technologii informacyjnych. Znaczenie owych wyzwań jest tak duże, że niezbędne okazało się przygotowanie strategii modernizacji europejskiej gospodarki, opartej na zasadzie zrównoważonego rozwoju. Wprawdzie w dekadzie lat 90. ubiegłego stulecia pogłębieniu uległy procesy integracyjne gospodarek Wspólnoty, to jednak nie potrafiły one dorównać gospodarce amerykańskiej w wyścigu technologicznym. Wskutek tego gospodarki zachodnioeuropejskie stały się mniej konkurencyjne w porównaniu z amerykańską.

Strategia Lizbońska jest najbardziej rozwiniętym w historii Unii Europejskiej programem zwiększenia konkurencyjności gospodarek europejskich. Istotną rolę w realizacji celów Strategii Lizbońskiej odgrywa poprawa innowacyjności gospodarek. Zdolność tworzenia i praktycznego wykorzystania innowacji ma kapitalne znaczenie dla zmniejszenia dystansu ekonomicznego i technologicznego między Unią Europejską a USA. Celem artykułu jest przedstawienie istoty Strategii Lizbońskiej (wersji pierwotnej i zmodyfikowanej), ukazanie poziomu innowacyjności gospodarek Unii Europejskiej na

tle USA i Japonii, a także dokonanie oceny dotychczasowych rezultatów w zakresie realizacji postanowień owej Strategii.

Artykuł składa się z wprowadzenia, czterech części i zakończenia. Część pierwsza poświęcona jest prezentacji roli gospodarki opartej na wiedzy i innowacyjności w Strategii Lizbońskiej. Część druga zawiera analizę poziomu innowacyjności gospodarek UE na tle USA i Japonii. W części trzeciej przedstawiono ocenę realizacji głównych celów Strategii Lizbońskiej, a w czwartej założenia nowej wersji owej Strategii.