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Article

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Policies Supporting Innovation In The European Union In The Context Of The Lisbon Strategy And The Europe 2020 Strategy

Abstract

In the context of increasing globalization, global competition and rapid change the EU sees innovation and its commercialization as an effective way to build long-term global competitive advantage. Innovation policy is a link between research and technological development policy and industrial policy and makes it possible to create conditions conducive to bringing ideas to the market. It is also closely linked to other EU policies regarding e.g. employment, competitiveness, environment, industry and energy. This paper presents the evolution, conditions and objectives of the innovation policy of the European, and describes the main assumptions of the Lisbon and Europe 2020 strategies. Additionally it indicates possible ways of assessing the measures undertaken within the above-mentioned policies and of determining the tools necessary to implement the strategies.

Keywords: *innovation policy, strategy, competitiveness, European Union*

JEL*: O31, O33, O52, E61, F36, L20*

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1. Introduction

The increasing globalization of socio-economic processes contributes to enhancement of the international dimension of innovation activities. In parallel, the role of transnational economic groupings and implemented regulatory solutions is also increasing. In this context, systemic solutions created at the level of the European Community are of growing importance.

Already at the end of the twentieth century the fundamental problems of the EU were diagnosed as the low level of innovativeness of its economy and weak knowledge potential, which hindered the competitiveness of the European economy and deepened the gap between the EU and the world economic powers.

The European Union's response to the challenges of globalization were contained in the strategies adopted in the following years. Thanks to strategies' comprehensive approach towards economic, social as well as environmental issues, they were aimed at contributing to the reform of the economies of the EU Member States, which in turn would improve their competitiveness and cause an acceleration of economic growth.

The development of innovation, deepening liberalization, and support of entrepreneurship were seen as keys to achieve these effects. It was also decided that social cohesion in Europe should be increased by means of the EU trade policy (Necewska-Twardowska 2015, p. 242).

Innovations have been a subject of interest to the European Union since its creation as the European Community. The treaty creating the European Community stated that it had to strengthen the scientific and technical basis of Community industry and to create conditions conducive to the development of competitiveness at the international level (Swałdek, Sadowski and Szmeling 2005, p. 115).

This paper presents the evolution of the European Union's innovation policy, and the assumptions and objectives of its major strategic documents (the Lisbon Strategy and Europe 2020 Strategy), the implementation of which should help to increase the competitiveness of European economies and accelerate economic growth. It also describes the possibility of assessing the measures taken in the area of innovation policy and the tools used for implementation of the strategies.

2. The evolution of innovation policy until 2010 – the Lisbon Strategy

The innovation policy of the European Union can be divided into three basic generations (Makulska 2011, pp. 286–289). The first occurred in the late 1980s and early 1990s. Innovation was seen as a process that was initiated in a research laboratory, and its subsequent stages as involving the transformation of new knowledge into a finished product that became widespread in the economy. Efforts were made to explain the paradox that, despite the significant achievements in the scientific area, the application of research results in the technological process was not satisfactory. The barriers included, *inter alia*, insufficient investment in research and development, large differences in the national legislation of the Member States, the problem of too little involvement of private capital, cultural and legal barriers that hindered the flow of capital, people and new solutions.

The next step in the development of innovation in the European Union was the adoption in 1997 of the first Action Plan for Innovation in Europe. This document for the first time established a framework for innovation policy pursued in individual Member States. The emphasis was put on developing an innovative culture, building the foundations of pro-innovative activities, and more effective dissemination of innovation. A program of regional innovation strategies and technology transfer, as well as regional development strategies, was elaborated (Romanowski 2015, p. 112).

The policy of the second generation, dating to the second half of the 1990s, was focused on infrastructure and network activities which would lead to the growth of innovativeness at the regional and local levels. Direct support for science and support for enterprises implementing innovations (especially technological) were introduced. More attention was paid to networking designed to facilitate the exchange of experiences and promotion of good practices. Two types of networks were created: a network of Innovation Relay Centres and a Network of Innovative Regions in Europe. The Centres were to promote innovation, and the Network of Innovative Regions was to link regions interested in innovation and exchange of experiences (Romanowski 2015, p. 113).

Institutions linking science and the sphere of production, in particular business incubators and innovation clusters, were also created, the task of which was to support the current performance and strategic position of firms. Thanks to their gaining access to specialized equipment and highly skilled workers, the firms were able to reduce their costs. They were also provided with access to knowledge and the ideas of partners cooperating in the cluster. Research centers and universities often cooperated within the networks, which further contributed to innovation thanks to, *inter alia*, the easier exchange of experiences.

The beginning of the innovation policy of the third generation of (RIS3) was the Lisbon Strategy. Innovative activity and innovation, in addition to entrepreneurship, social cohesion and liberalization, formed the bases of this strategy and were recognized as a means to realize the main purpose of the strategic document. Innovation, together with competitiveness and entrepreneurship, create a set of factors conducive to the economic and social development necessary for the economic growth of the EU member states (Romanowski 2015, p. 113).

Thus innovation was seen as the basic instrument of reforms and structural changes and played the role of a superior instrument to enhance the socio-economic development of the Union. The Lisbon strategy was an attempt to revitalize the European economy so that it could become the leading economic power of the world within the specified time perspective. The main objective of the Lisbon Strategy was to make the EU, by the end of 2010, the world's most competitive and dynamic knowledge-based economy, capable of creating new jobs and ensuring social cohesion (Matusiak, Nowakowska 2004, pp. 459–464).

The primary reason for adopting this strategy was the growing imbalance in the pace of economic development between the EU and other countries. In the last decade of the twentieth century the estimated ratio of GDP *per capita* of the EU in relation to the US increased by four percentage points (Denis et al. 2005, p. 9). The reaction to this situation was the decision that the European Union should become, by 2010, the most competitive knowledge-based economy in the world and capable of maintaining sustainable economic growth (European Council 2000).

Innovation and science policy were to be the keys to success in the implementation of the knowledge-based economy. The advisability of both control and monitoring procedures, implemented using the methods of benchmarking and evaluation, was emphasized in the strategy. The issues addressed by the Lisbon Summit were divided into areas, concerning the rapid transition to a knowledge-based economy, development, liberalization, entrepreneurship, employment and combating social exclusion, as well as sustainable development.

Innovation is stressed in the context of two thematic blocks: the European labour market and its policy toward small and medium-sized enterprises (Makulska 2011, p. 191). In the Lisbon Strategy the labour market policy was considered to be one of the basic types of macroeconomic policies. Therefore measures should be taken within the strategy aimed at combating high, particularly long-term and structural, unemployment, the prevention of youth unemployment, promoting a highly skilled workforce, and the opening up of markets which would be able to react flexibly to economic changes. Emphasis was also put on enhancing the competitiveness of the workforce within the European Union and creating a favourable environment for doing business. According to the strategy all activities helping innovative firms were to be supported.

The strategy also proposed the elimination of barriers, including administrative ones, which negatively affect the development of entrepreneurship, especially those that discourage entrepreneurs to set up new enterprises. The strategy also included provisions regarding the improvement of the quality of work by investing in human resources, increasing the mobility of workers, and promoting social inclusion. It was assumed that these measures would support innovation and lead to the creation of the future development prospects (Bachnik 2006, p. 20).

The second thematic block in the context of innovation was the policy of supporting small and medium-sized enterprises (SMEs). It was considered that these enterprises exhibit greater flexibility than large economic entities, quickly responding and adapting to market changes. They are able to make better use of regional and local resources than large enterprises. They also have better knowledge of the customers and the local market. Their innovative activities are to be encouraged by better internal communication, efficient information flows, and exchange of different solutions. These factors would contribute to the creation and dissemination of innovations (Romanowski 2015, p. 114).

The attempts to spur actions within the framework of the Lisbon Strategy did not bring about the expected results. No satisfactory results were recorded, primarily in the sphere of building a knowledge-based economy, restructuring the education and training system, deep changes in the area of R&D, and improvement of the innovativeness of the economy. Also, the mechanisms of the strategy's implementation did not function properly (Kwieciński 2007, pp. 92–104). The basic way to implement the strategy, the so-called *Open method of coordination*, based on national reform plans implemented by individual Member States, proved to be an imperfect form for the implementation of the basic assumptions. Moreover, the fragmentation of the objectives and priorities led to a dilution of the essence and importance of the Lisbon Strategy (Grosse 2008).

According to the 2004 report, which became a mid-term review, the achievement of the ambitious objectives of the Lisbon Strategy was slowed down by a number of factors. Among them there were external factors, such as the bursting of the "internet bubble" in 2001 and the increase in prices of resources (especially oil); as well as internal factors – primarily too little involvement of the EU itself and its member states, as well as ineffective strategy management (Kok 2004, pp. 9–10; The Commission of the European Communities 2005, p. 3).

The result was a further decline in the competitiveness of the EU, hence additional measures were taken in order to implement the renewed Lisbon Strateg, including the elaboration and achievement of more focused goals within the framework of national reform programs (Necewska-Twardowska 2015, p. 242).

3. Innovation beyond 2010 – Europe 2020

The Lisbon Strategy was continued in the document known as *Europe 2020*. The creators of this document required the legislators to consider how different aspects of smart, sustainable and inclusive growth are interrelated. Integrated smart specialization strategies respond to complex development challenges by adapting the policy to the regional context. The RIS3 policy supports the creation of jobs based on knowledge and development, not only in the leading centres of research and innovation, but also in rural and less developed regions. There are three main assumptions underlying RIS3 policy, i.e. the innovation policy of the third generation: the supply of innovation – expenditures on research, technology and development (RTD); creating systems and corresponding regional strategies; and making innovation a priority for all regions (the so-called 'total approach'). The RIS3 policy is a key part of the proposed reform of the EU cohesion policy supporting thematic concentration and reinforcing strategic programming and effectiveness.

The activities and investments in economic development within the RIS3 are oriented at the strengths of each region based on an analysis of its economic opportunities and new trends and on taking actions in order to increase the potential of its economic development. RIS3 assumes an increase in added value, impact, and transparency of EU funding. This provides adequate value for money in times of tight budgets and reduced public resources. In addition, the RIS3 ensures synergy between the policies of European countries and funding, thus complementing national and regional programs and private investment (Romanowski 2015, p. 115).

The RIS3 policy includes the development of performance indicators and their use in addressing and monitoring regulations and programs and their adjustment. It promotes the need for continuous evaluation and education in the area of policy, sharing experiences and methods of implementation and evaluation.

RIS3 requires an integrated and local approach to policy creation and implementation. Regulations have to be adapted to the local context, bearing in mind that there are different ways to achieve regional innovation and development. These include: a) rejuvenation of traditional sectors through higher added value activities and new market niches; b) modernization by adopting and disseminating new technologies; c) technological differentiation from the current specializations towards related fields; d) development of new economic activities through radical technological change (Romanowski 2015, p. 115).

The Europe 2020 Strategy includes three interrelated priorities linked to development as broadly understood (European Commission 2010a, p. 5). They are:

- smart growth – developing an economy based on knowledge and innovation;
- sustainable growth – promoting a more resource efficient, greener and more competitive economy; and
- inclusive growth – fostering a high-employment economy delivering social and territorial cohesion.

The above-mentioned priorities are connected with five guidelines, which are to be achieved by 2020. These are related to employment, education, social exclusion, research and development, as well as climate and energy (Bongardt and Torres 2010, p. 137). As a result seven flagship projects were presented, the monitoring of which will enable assessment of the progress of implementation of the Europe 2020 strategy.

An important element is the emphasis given to cooperation between different levels of activties (national, EU and international). This cooperation should ensure the achievement of its objectives. According to the Europe 2020 Communication of the Commission, all policy areas, instruments and legislative capabilities must be used, including the EU's external economic agenda. It was assumed that under this program all the instruments of foreign policy will be used, which primarily means coordination of trade policy and international policy. On the one hand, an open European Union should be able to use globalization to boost growth and employment, while on the other hand a strong and active position in the international arena will enable the development of global policies favourable for the EU (Necewska-Twardowska 2015, p. 243).

As in the previous strategy, in addition to the communication concerning the Europe 2020 strategy, the communication *Trade, Growth and World Affairs* was prepared by the European Commission in 2010. Trade Policy as a key element of the Europe 2020 strategy and is a response to the challenges that the European Union's trade policy faced within the strategy itself. Thus it is once again an attempt to describe the actions to be taken by the EU in the external dimension, which in the case of trade means the domain of activities of Brussels (Necewska-Twardowska 2015, p. 243).

The 2020 Strategy of the European Union rightly assumes that the EU is faced with three alternative scenarios with respect to the path of its development for the next decade of the twentieth century:

1. The optimistic and desirable scenario called "sustainable recovery", in which the European Union fully recovers its previous development dynamics and can further develop under the new post-crisis world order. In order to achieve this what is necessary is a jointly implemented restructuring of the EU economy towards a KBE (Knowledge-Based Economy) and meeting other challenges, such as globalization, pressure on resources, and an aging society.

Only in this way can the European Union regain international competitiveness and raise its level of socio-economic wellbeing;

2. The stagnation scenario, that is a "sluggish recovery" in which the European Union follows the current model of economic and social development without deep structural changes in the economy. As a result a steady decline in its international competitiveness can be observed and thus its ability to maintain the existing level of socio-economic development decreases.
3. The pessimistic scenario or "lost decade" scenario, in which a pro-innovative reconstruction of the European economy is not realized, its competitiveness is quickly reduced, and social and economic problems grow rapidly, leading to high unemployment, social unrest, and loss of the EU's importance in the international arena. As a consequence, the quality of life of its citizens will decrease (Prusek 2011, p. 20).

It is worth noting that it is not only the amounts spent on R&D that counts, but also their structure and their impact on the development of innovativeness and the improvement of conditions for private R&D in the EU. The distance between the EU and the innovation leaders, i.e. the US and China, results from the smaller number of European firms operating in the high-tech industry, especially as concerns globally competitive large enterprises (Prusek 2011, p. 23). It has been proven that investments in R&D and innovation, education, and technologies that enable efficient use of resources have a positive impact on both the traditional sectors of the economy and the services-based sectors in which high skills are necessary and valued.

Further, smart growth means the increasing role of knowledge and innovation as drivers of the EU's future development. This requires improving the quality of education, strengthening research, fostering the transfer of innovation and knowledge in the European Union, making wide use of information and communication technologies (ICT), ensuring that innovative ideas can be turned into products and services that contribute to economic growth, the creation of new and "better" jobs, and solving social problems in Europe and in the world. But in order to be successful this project has to be supplemented with such necessary elements as entrepreneurship, financial resources, and taking into account user needs and market opportunities. Also it is essential to further develop the digital society in the EU and increase of its share in the global ICT market.

As part of the flagship initiative "Innovation Union" the use of R&D and innovation to address strategic issues such as climate change, energy efficiency and the rational management of resources, and health and demographic change is envisaged (Prusek 2011, p. 24). Thus the "Innovation Union" strategy is a crucial part of the Europe 2020 strategy and aims to boost the whole innovation chain from research (R) to concrete practical implementation (D). As a result, it will

contribute to combining world-class science with a knowledge-based economy and allow the EU to compete with the most developed countries in the world. This project also envisages the introduction of partnerships in the area of innovation, bringing together the main bodies of the European innovation system in key areas and aiming to create a balance between cooperation and competition.

Within the next flagship project – "Youth on the move" – it is necessary to improve the quality and attractiveness of European higher education in the international arena and the quality of all levels of education and training in the EU, combining excellence and equity by promoting the mobility of students and trainees and improvement of the situation of young people in the labour market. These tasks will be realized by both the European Commission and the Member States (Prusek 2011, p. 26).

The objective of the flagship project "European Digital Agenda" is to achieve sustainable economic and social benefits from a single digital market, resulting from fast internet and interoperable applications. It was assumed that all EU citizens would have access to broadband Internet by 2013, access to internet connection lines with much higher data speeds (30 Mbit/s and more) by 2020, and access to internet connections with a speed above 100 Mb/s for at least 50% of European households.

The flagship project "Sustainable growth – for a resource efficient, greener and more competitive economy" is expected to give the EU a leading role in terms of new processes and technologies, including green technologies, accelerating the introduction of ICT-based smart grids using the capabilities of a network covering the entire EU, as well as strengthening the competitive advantage of European businesses. By this approach Europe will prosper in a low-carbon world of limited resources while preventing environmental degradation, biodiversity loss, and an unsustainable use of resources. These actions should also increase economic, social and territorial cohesion (Prusek 2011, p. 28).

The projected improvements of the innovation capacity of the European Union proposed in the Europe 2020 Strategy exposed the need for a comprehensive strengthening of the innovation process, from research to commercialization of results. Particular attention was paid to deepening and intensifying the activities building the European Research Area. The need to strengthen partnerships in the area of knowledge and the development of links between the worlds of science, business, research and innovation was stressed (*inter alia*, with the use of the European Institute of Innovation and Technology). Also exposed was the need to improve the framework conditions for enterprises, which would allow them to innovate (by, *inter alia*, creating a single EU patent and the patent court, improvement of legislation in the sphere of copyright and trademarks, improved access of SMEs to protection of their intellectual property rights and the use of

demand driven by public procurement) in order to strengthen the innovativeness of the European economy. An important pillar of the innovative EU economy is strengthening the European partnership between entities functioning in the Member States in order to speed up the development and deployment of technologies needed to solve specific problems (Nowakowska 2011, p. 134–135).

The strategic instruments financing regional policy objectives for the years 2014–2020 are primarily:

- two structural funds, i.e.: the European Regional Development Fund (ERDF) and European Social Fund (ESF);
- The Cohesion Fund (CF),
- The European Agricultural Fund for Rural Development (EAFRD),
- The European Maritime and Fisheries Fund (EMFF).

The important issues within regional policy in the years 2014–2020 will be the struggle to mitigate the negative effects of the economic crisis and the implementation of the objectives and priorities of the Europe 2020 strategy. These include:

- smart growth, development based on knowledge and innovation,
- sustainable growth, development of a low-carbon economy,
- inclusive growth, development based on fostering a high level of employment and ensuring economic, social and territorial cohesion (Kosztowniak 2016, p. 190).

The main tools for implementing the Europe 2020 strategy should be the ERDF, ESF and CF, which account for 1/3 of the EU budget for the period 2014–2020. The European Commission also highlights the role of regional policy in the implementation of the project "Innovation Union". A new element within the regional policy is the introduction of the possibility of greater involvement of regional and local authorities in the implementation of the thematic objectives of the Europe 2020 strategy.

In the period 2014–2020 Structural Funds will support the following development goals, which are in line with the Europe 2020 strategy:

- Objective 1. Supporting scientific research, technological development and innovation (funded by ERDF).
- Objective 2. Increasing the availability, use and quality of ICT (ERDF).
- Objective 3. Raising the competitiveness of small and medium-sized enterprises, the agricultural sector (EAFRD) and the fisheries and aquaculture sector (EMFF, ERDF).
- Objective 4. Supporting the transition to a low-carbon economy in all sectors (ERDF, CF).

- Objective 5. Promoting adaptation to climate change, preventing risks and risk management (ERDF, CF).
- Objective 6. Protecting the environment and promoting the efficient use of resources (ERDF, ES).
- Objective 7. Promoting sustainable transport and removing bottlenecks in key network infrastructures (ERDF, CF).
- Objective 8. Promoting employment and staff mobility (ERDF, ESF).
- Objective 9. Promoting social inclusion and combating poverty (ERDF, ESF).
- Objective 10. Investing in education, skills and lifelong learning (ERDF, ESF).
- Objective 11. Strengthening institutional capacity and the efficiency of public administration (ERDF, ESF, ES) (Kosztowniak 2016, p. 191).

Since the common trade policy is conducted exclusively at the level of the European Union, it can be expected that the measures taken therein will match the Europe 2020 strategy. However, the impact of internal factors, such as the global economic crisis and the recently ever more unpredictable Russian policy may be important in the context of the commitments made in the Europe 2020 strategy. Also the possible impact of individual countries or industries on trade policy should not be neglected. They can create a powerful lobby to protect their interests, and this is often associated with protection against excessive competition caused by liberalization (Necewska-Twardowska 2015, pp. 245–246).

One possibility for the assessment of implemented actions is an analysis of annual management plans and annual reports on activities, prepared by the Directorate General for Trade of the European Commission. In the management plan for 2011 two main objectives of trade policy from the point of view of a five-year perspective were included:

1. smart, inclusive and sustainable growth, as a result of providing the best trade conditions and opportunities for the European Union's entities;
2. sustainable economic, social and environmental development, particularly in developing countries (European Commission 2011, pp. 5–6).

According to the Commission, the trade policy carried out in accordance with the above objectives should provide the best possible conditions for competition and opportunities for European enterprises, thus contributing to the growth and competitiveness of the EU economy for the benefit of its citizens, workers and consumers. The opening of the economy will induce an acceleration of economic growth and stimulate efficiency and innovation, thus increasing foreign demand for the goods and services from the EU. Trade liberalization will also allow access to a wider range of products at lower prices. Greater openness towards FDI should enable global development, helping to create jobs in the EU.

At the same time the EU trade policy should encourage the creation of a greener and more sustainable global economy, actively helping people around the world out of poverty (Necewska-Twardowska 2015, p. 246).

In order to monitor the changes in trade policies several indicators were selected, which include, *inter alia*, those describing the pace and the volume of trade exchange, foreign direct investment, and in the context of the less developed countries trade with the African, Caribbean and Pacific (ACP) countries. Analysis of these indicators will show the changes that occurred in the EU's trade as a result of its trade policy.

The growth rate of EU trade has been decreasing since 2010, both in terms of import and export (Table 1). In the case of import the change in 2013 was negative and hovered around 5%. This is due to a significant decrease in imports of goods from outside the EU (Figure 1), as imports of services showed growth throughout the analyzed period (although it should be noted that in successive years the growth have been getting smaller). Export volume in the last analyzed year increased by more than 3%, but also in this case the pace of change in trade in services was lower than in the case of trade in goods (Necewska-Twardowska 2015, pp. 246–247).

Table 1. The growth rate of trade between the EU and the rest of the world, 2010–2013

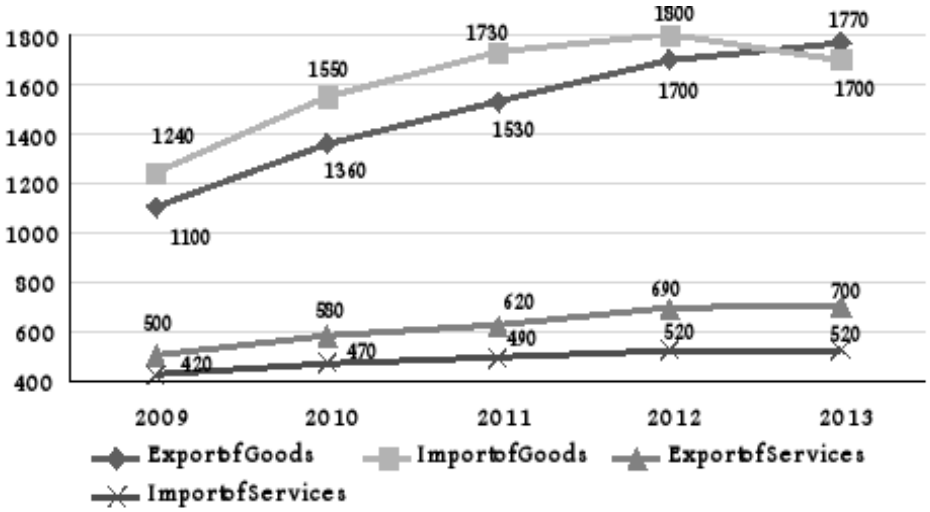
	2010	**2011**	**2012**	**2013**
Export	19.29%	12.77%	8.34%	3.20%
Import	19.71%	11.02%	4.56%	–4.91%

Source: own elaboration based on Eurostat data.

No permanent trend is noticeable in the case of foreign direct investment (Figure 2). The dynamics of its inflow has been changeable, reaching a maximum in 2011 and minimum a year later, i.e. in 2012. At the same time the balance of FDI in subsequent years decreased, leading in 2012 to equalization of the inflow and outflow of direct investment into and out of the European Union.

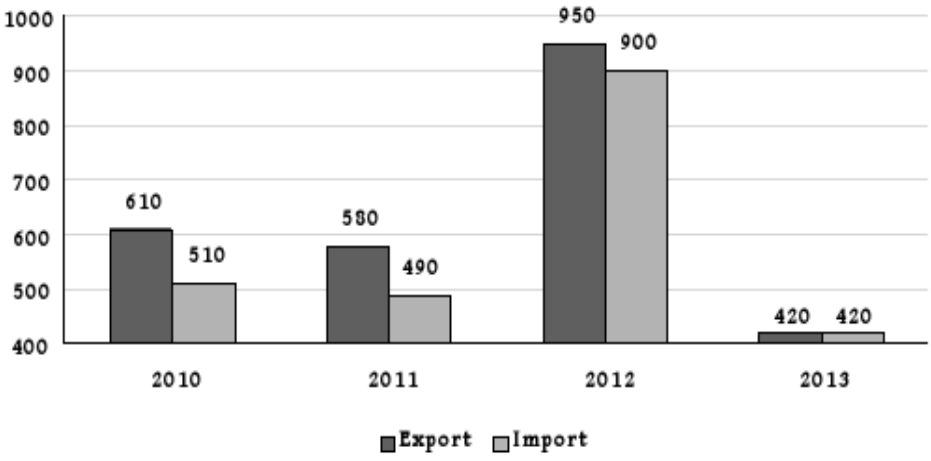
In the same period, although the European Union remained the largest actor in exports and imports, its share in the world trade steadily decreased since 2009 (Table 2). Export decreased by more than 9% in 2009–2012, while import decreased by 13.5% (Necewska-Twardowska 2015, p. 247).

Figure 1. Export and import of goods and services to third countries (outside the EU-27) in billion EUR, 2009–2013



Source: own elaboration based on Eurostat data.

Figure 2. The size of EU investments in third countries and third countries' investments in the EU in billion EUR, EU-27, 2009–2012



Source: own elaboration based on Eurostat data.

Table 2. The EU's share in world trade in goods, 2009–2012

	2009	2010	2011	2012
Export	17.10%	16.00%	15.90%	15.50%
Import	18.50%	17.50%	17.20%	16.00%

Source: own elaboration based on Eurostat data.

The last five years, i.e. since 2010, have also been an unfavourable period in terms of multilateral talks. The Doha Round is still far from completed, and the majority of member states of the World Trade Organization are focusing on the conduct of trade policy in the form of bilateral cooperation. In the years 2010–2014 60[1] regional trade agreements (RTAs) entered into force, including eight in which one of the parties was the European Union. These include, among others, the agreement with South Korea. It covers not only the liberalization of trade but also issues like foreign direct investment, access to public procurement, and cooperation in the area of intellectual property.

The commencement of new negotiations reflects the EU's determination in the pursuit of agreements liberalizing trade, but in some cases the progress of these negotiations is unsatisfactory (Necewska-Twardowska 2015, p. 249).

The observed slow decline in the growth rate of trade may indicate that little progress is being made in terms of achieving the objectives set by the Europe 2020 strategy. Increased access to third markets and reduction of protectionism within the EU are not yet visible. However, it should be borne in mind that the economic situation at the turn of the first and the second decades of the 20th century was rather difficult. The economic crisis was certainly an impulse to facilitate openness of trade exchange. Therefore the bilateral initiatives undertaken have a chance of success if, in addition to the further efforts of the EU, economic stabilization in the world is strengthened and economic growth increases. Poland is currently halfway through the Europe 2020 strategy, so the objectives described therein and the further active measures taken under the common external trade policy still have a chance of effective implementation (Necewska-Twardowska 2015, p. 249).

[1] Data from the World Trade Organisation [http://rtais.wto.org, accessed: 11/21/2016].

4. Innovativeness in the EU – challenges

With the advance of globalization, maintaining the competitiveness of the economies of the member states of the European Union is becoming more and more challenging and requires significant modifications in the strategy of development of the European Economic Area. The economic system of the Union is one of the most open in the world, but competition from developed and emerging economies is increasing. Countries such as China and India are increasing their investments into research. The Regional Innovation Scoreboard published in July 2016 by the European Commission and Innobarometer (Figure 1) shows that in terms of innovation the EU is catching up with Japan and the USA. Sweden, Denmark and Switzerland once again deserved to be called innovation leaders, and Latvia became the member country showing the fastest rate of growth of innovativeness.

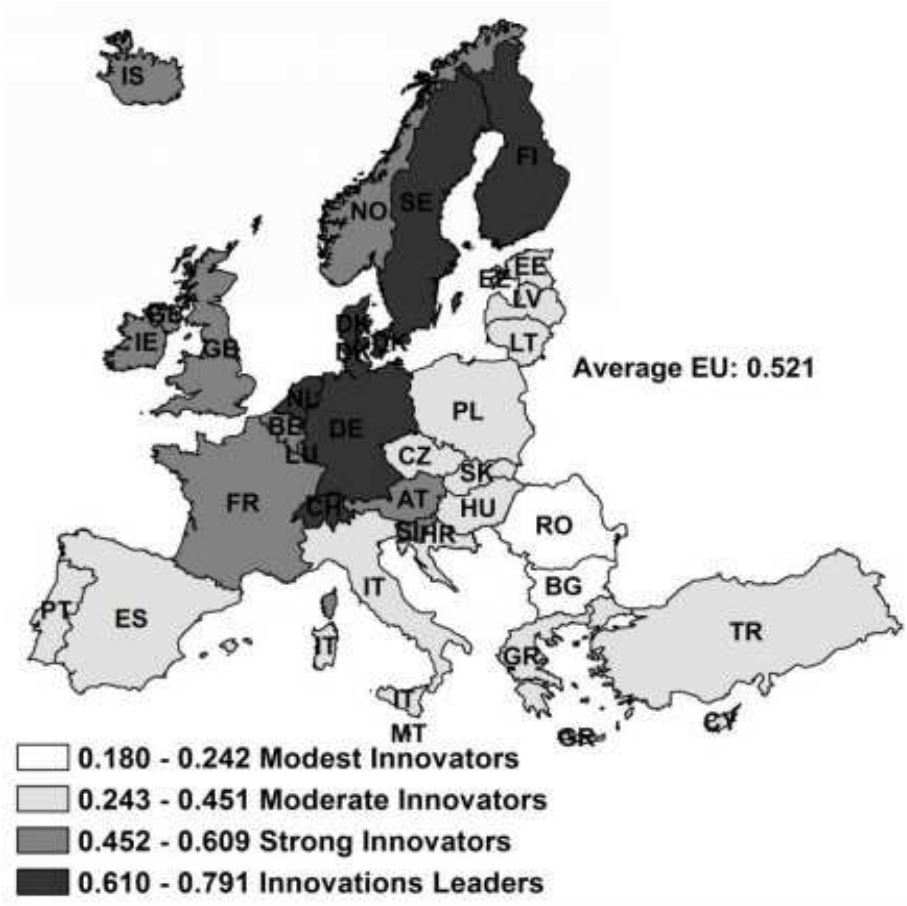
To speed up the modernization of industry in the European Union it is necessary to use innovative products and services, apply innovative production technologies, and introduce new business models. The European Commission has introduced a policy that will contribute to improvement in the commercialization of innovations and will support innovation activities in the EU, mainly under the Horizon 2020 program. Innovation policies in the following areas were introduced:

- social innovations – addressing social needs, creating relationships and areas of cooperation;
- designing for innovation – within which the absorption of design in innovative activities is planned to be increased;
- demand-based innovation policy – support and increased absorption of innovation in society through demand;
- innovations in the public sector – the public sector plays a key economic role as a regulator, services provider, and employer. Employment in the public sector accounts for over 25% of total employment;
- public procurement for innovation – the aim is to improve public procurement procedures and promote innovation;
- workplace innovation – this should lead to changes in business structures, human resources management, relationships with customers and suppliers, and in the workplace.

The European Union is facing a clear-cut set of difficult alternatives. The EU countries can jointly face their strongest challenge, which is to repair the economies affected by the crisis and other long-term challenges (such as increasing globalization, the growing demand for limited natural resources, and the aging of its societies) in order to strengthen competitiveness, increase the level of

innovativeness and direct the European economy to the path of sustainable development. Or it can continue slow and largely uncoordinated reforms, at the risk of slower growth, which causes increased unemployment and leads to social unrest and loss of significance in the international arena (Dworak 2014 pp. 108–109).

Figure 1. Summary innovation index of European countries, 2016



Source: Own elaboration based on data from: http://europa.eu/rapid/press-release_IP-16-2486_pl.htm, accessed 21.11.2016

5. Conclusions

The above considerations make it possible to state that the authorities of the EU have correctly recognized innovation, deepening liberalization, and the promotion of entrepreneurship as the most important factors determining the development and competitiveness of the EU Community. The implementation of programs supporting innovation dates back to the late 1980s, and the currently implemented policy is the third generation innovation policy (RIS3), which was initiated by the Lisbon Strategy. This strategy was based on, alongside liberalization, social cohesion and entrepreneurship, increasing innovative activity. Innovation became the main goal of reforms and structural changes, constituting an essential instrument for the creation of enhanced socio-economic development of the Union. The Lisbon strategy was a bold attempt to revitalize the European economy so that within an given perspective it would manage to catch up with the fastest growing economies and achieve the status of the largest economic power in the world. Innovation appeared in the strategy in the context of two thematic blocks: the European labour market and small and its medium-sized enterprises policy.

The ambitious objectives of the strategy could not be achieved. As the reasons for the failure of its assumptions were considered to be perturbations in the global economy at the beginning of the 20th century – the bursting of the "Internet bubble" in 2001 and the increase in prices of raw materials – as well as too little involvement of the EU and its member states, and a poor approach to strategy management. The successor of the Lisbon strategy – the Europe 2020 strategy – included, inter alia, the implementation of measures promoting the creation of jobs based on knowledge and creating conditions for development and innovation activities, also in less developed locations. As a part of an ongoing program, the strategy's activities and investments are focused on the strengths of each region by examining its economic potential and new trends, as well as taking actions in order to increase its potential for economic development. The emphasis placed on cooperation between different levels of activity (national, EU and international) should also be noted.

Improvement of the innovation capacity of the European Union as proposed in the Europe 2020 Strategy exposes the need for a comprehensive strengthening of innovation processes, starting from research projects and through to commercialization of their results. The main proposed tools for implementation of the strategy "Europe 2020" are the ERDF, ESF and CF, which account for 1/3 of the EU budget for 2014–2020. The European Commission also highlights the role of regional policy in the implementation of the "Innovation Union" project.

This paper has presented three alternative scenarios for the development of the Union, formulated by Andrzej Prusek – optimistic, stagnation, and pessimistic. Given the current conditions associated with Brexit, the migration crisis, the economic slowdown resulting from the recent financial crisis and the emerging decentralist tendencies in the European Union, it can unfortunately be assumed that the most realistic scenarios appear to be either stagnation or the most pessimistic one. This can be observed by the stagnation in FDI inflows to Europe and the declining share of the EU in global trade over the last few years. The status of the negotiations regarding the liberalization of international trade and agreements with Canada and the USA is also unsatisfactory. The consent of all EU member states for opening of the common market can be very difficult to achieve.

The Europe 2020 strategy represents a bold response of the European Union to the challenges faced by the Community. However, its assumptions, as in the case of the Lisbon strategy, may well turn out to have been too ambitious.

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Streszczenie

POLITYKA WSPIERANIA INNOWACJI W UNII EUROPEJSKIEJ W KONTEKŚCIE STRATEGII LIZBOŃSKIEJ I EUROPA 2020

W warunkach postępującej globalizacji, światowej konkurencji, szybko zachodzących zmian, rozwój innowacji oraz ich komercjalizacja są tym, w czym Unia Europejska upatruje skutecznego rozwiązania dla budowy długoterminowej, globalnej przewagi konkurencyjnej. Polityka innowacyjności stanowi łącznik pomiędzy polityką dotyczącą badań i rozwoju technologicznego a polityką przemysłową oraz umożliwia stworzenie warunków sprzyjających wprowadzaniu pomysłów na rynek. Jest ona również ściśle powiązana z innymi politykami UE, np. dotyczącymi zatrudnienia, konkurencyjności, środowiska, przemysłu i energii. W artykule przedstawiono ewolucję, uwarunkowania oraz cele polityki innowacyjnej Unii Europejskiej. Opisano również założenia głównych strategii, tj. Lizbońskiej oraz Europa 2020. Ponadto wskazano możliwości oceny podjętych działań w zakresie ww. polityki.

***Słowa kluczowe**: polityka innowacyjna, strategia, konkurencyjność, Unia Europejska*