

Research Policy in the European Union



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INTRODUCTION

On Wednesday 25 April 2007 The Bridge Forum Dialogue invited the public to a conference on the topic of research policy in the European Union. In an age of globalization and increasing international competition few questions are of greater importance for the future well-being of European citizens than research. In March 2000, the EU Heads of States and Government agreed to make the EU “the most competitive and dynamic knowledge-driven economy by 2010”. Looking back this target, also known as the Lisbon Agenda, may have been too ambitious for its time limit. Even though some progress has been made, when it comes to making Europe’s economy more innovative, there is growing concern that the reform process is not going fast enough and that the aggressive targets will not be reached. During the Luxembourg Presidency new emphasis was put on the further implementation of the Lisbon goals. Special attention was given to the European area of knowledge. So what would be a more suitable place than Luxembourg to continue the discussion on European research policy?

The discussion was chaired by Lars Heikensten, Member of The Bridge Forum Dialogue and previously Governor of the Swedish Riksbank. Since now, he is Member of the European Court of Auditors.



Lars Heikensten, Member of the Bridge Forum Dialogue, member of the European Court of Auditors

L. Heikensten stressed that today research and development is at least as important for the economy as the traditional production factors, labour and capital. Economic growth has been lagging behind for too long in Europe and the development of productivity has been slow. While productivity depends on the use of capital, knowledge, once gained, will continue to multiply. This underlines the importance of knowledge and research. Thus, increasing research may lead to higher growth rates for European companies and consequently to improved competitiveness in the world market. Nevertheless, all the statistical data on spending on research as a share of GDP put the US and Japan on the top of the lists well ahead of EU-25. Not only do the US score better in channelling and financing R&D but countries like Japan, China and India are rapidly expanding in this area. Thus, Mr. Heikensten asked the participants to give their view of the problems and on how they could be remedied.

The main speech was given by the European Commissioner responsible for Research Policy, Janez Potočnik. Afterwards, Michael Sohlman, Executive Director of the Nobel Foundation, as well as Dr. Rolf Tarrach, Rector of the University of Luxembourg, gave their own point of view on the state and the pace of research in Europe.



Janez Potočnik, European Commissioner responsible for Research Policy

Commissioner Potočnik, a Slovene politician, started his introduction by addressing a major problem in shaping policies for research: the long-term nature of its impact. Research seldom provides directly applicable solutions. The real economic benefits are, at the earliest, felt 10 to 15 years after the research has been conducted. Not only are the results slow, but research projects need huge amounts of financial resources already from the start. In other words, research is an investment consuming enormous sums of money but giving only postponed earnings. In economic theory, investors are extremely reluctant to make such investments unless they are convinced they can obtain a high yield.

More research and development, R&D, means more high quality jobs. The Commissioner did not refer only to the quality of the work itself but also to the quality of the knowledge of the workers. The purpose of getting more and better R&D is thus to enhance the productivity of the European Union and strengthen the continent's competitiveness.

Furthermore Mr. Potočnik stated that R&D is the only solution to one of the biggest challenges of the twenty-first century: global warming. This problem is even greater since emerging economies claim the right to develop their economies in the same way we did in the last century, using as much energy as we did. Reducing the emission of greenhouse gases requires an overhaul of production methods. The answers how to do this can only be provided by cutting-edge R&D.

The Commissioner stated that the amount of investment in R&D coming from business is too low in Europe. 46% of the total funds are public financing whereas in the United States only 1/3 of the R&D programs are financed by the public. The low rate of private investment means difficulties to attract the "best brains".

Mr. Potočnik suggested that R&D could improve European economies by increasing their attractiveness to national and foreign business. A CEO will only invest in Europe when it is attractive for his firm. In other words, he will choose Europe as a location for his business



only if the economic environment is sufficiently attractive. According to the Commissioner, it is essential that every EU Member State follows the necessary steps of the Lisbon Strategy. Therefore every single government, national institution and university has to do its part in the achievement of the strategy's targets. Only then can Europe move away from its current stagnation.

Moreover, the Commissioner believed that R&D has the ability to create an innovative environment which enables companies to create long-term productivity. This means taking steps to push better outcomes. The major challenge in the European research area, which is the heart of the Lisbon Agenda, is to endorse the freedom of movement of knowledge in the European Union. So far this vital part of the establishment of a competitive and dynamic knowledge-driven economy has not been addressed by the European Union. Also there has to be more coordination between the different parties implementing the Lisbon Strategy. Europe has to speak with a single voice if it really wants to develop into the world's most high-performance and competitive region.

Michael Sohlman, Director of the Nobel Foundation

Michael Sohlman, a Swedish economist and Executive Director of the Nobel Foundation, started his intervention by showing that there are still large differences within the European Union. For instance, the Scandinavian countries are better followers of the Lisbon Agenda than the southern part of Europe. Today the Nordic countries have the highest number researchers per 1000 inhabitants and are among the most competitive nations in the world. Unfortunately, the evolution is not the same in most of the other European countries.

Mr. Sohlman pointed out that financial flows of R&D between the United States and Japan are balanced whereas Europe has a major outflow towards both regions. In other words, the European economy invests less in European R&D programs than in foreign ones. This observation should be more than alarming to any politician in the national governments and the European Parliament.

The lack of financial resources is another important drawback for the European research area. At the moment only 1% of total EU GDP is invested in R&D. However, on 6 April 2007 the European Commission adopted a proposal for a new EU program for research. The objective of this new Research Framework Program (FP7) is to increase Europe's growth and competitiveness, recognizing that knowledge is Europe's greatest resource. In particular FP7 proposes to double the budget compared to the last Framework Program, FP6, rising to EUR 67.8 billion. Mr. Sohlman stated that even if it is still not enough, it is a step in the right direction. He outlined three major *raison d'être* for R&D:

- Positive externalities: R&D investments will be beneficial not only for those who financed the programs but also for the whole economy that can benefit from a more innovative and dynamic environment.
- Economies of scale: R&D helps to improve the production mechanisms and therefore increases the volume of products and services that can be produced.
- Oligopolistic markets: R&D can facilitate a firm to acquire sophisticated knowledge not shared with others and therefore to produce differentiated products. The firm retains a dominant position vis-à-vis its competitors and thus can act like an oligopoly.

Mr. Sohlman stated that there is an absolute need to develop new institutions to coordinate research in Europe. According to the theory of the Dutch economist and Nobel Prize winner, Jan Tinbergen, you always need at least one instrument to measure an objective in order to achieve an economic policy decision. So, in order to develop R&D programs in Europe we need at least one institution responsible for the administration and coordination of research. FP7 has actually created such an organization, the so-called European Research Council. Unfortunately, the creation of the Council required more than 25 years of talk before its final establishment in 2007. According to Mr. Sohlman this delayed action of the EU in matters of R&D may produce undesirable effects in the years ahead. Mr. Sohlman claimed that the European Union is often accused of talking too much and acting too slowly.

According to Charles Wyplosz, a Swiss economist and theorist on European integration, emphasis should be on the improvement of competition rather than the coordination within the R&D field. Increasing competition in the R&D sector will push societies within this sector to work harder and more efficiently and thus contribute to improving research in Europe.

In conclusion, Michael Sohlman outlined five future challenges for the European research area:

- The European Commission has to supervise the increase of the share of total EU budget flowing to the R&D programs in Europe.
- There should be more fundamental research and less development. In other words, European universities as well as research institutions should increase the volume of research fields or, within one specific domain, increase the number of studies.
- To reflect on the creation of independent competing agencies in the development area.
- In general, there should be more professionalism in the R&D area.
- Last but not least, in order to transform Europe into the most competitive and dynamic knowledge-driven economy, the European Commission has to endorse free trade in the R&D market and remove all the barriers within this market and thus between the different Member States.



Professor Dr. Rolf Tarrach, Rector of the University of Luxembourg

The intervention of Rolf Tarrach, Rector of the University of Luxembourg and Member of The Bridge Forum Dialogue, was primarily focused on the shortcomings of the European system of universities. This naturally has an impact on EU R&D. According to Mr. Tarrach, Europe is divided into two zones. There are the Scandinavian countries which are well known for their excellent education policy. That's why the Nordic part of Europe is today the most dynamic in research and development. Secondly, the southern part of Europe has problems with the administration of their universities which has a bad influence on R&D. As a result, they have a hard time hiring good professors. Mr. Tarrach thus stated that the whole educational system of this part of Europe has entered a vicious circle. In Europe, professors and the other staff are mostly civil servants, which is not necessary compatible with the logic and dynamics of R&D. Civil servants have to protect the interests of their country independently of the nature of these interests. On the other hand professors and research fellows have to be open to new ideas, even if this goes against the direct national interest at the time. Another problem according to Tarrach is that everyone earns the same salary, the worst professors as well as the good professors. If performance is not rewarded it means that researches get the wrong incentives. Another example of problems in European employment policy is that a rector never gets fired from his post until he commits a major mistake.

In order to expand its R&D area, Europe needs universities which are not afraid to take risks. Mr. Tarrach stated that this was not the case with state-run universities. Risk aversion in the domain of R&D has to be changed because it is not compatible with a dynamic research area. In other words, the best brains follow the money and not the security of their job.

Mr. Tarrach was furthermore concerned that Europe is facing another huge problem connected to the enormous complexity of its structure. Foreigners, coming from other parts of the world, have immense problems in understanding this complex organization. The complexity rises from two distinct sources: the first one being European-based and the second one national-based. In other words, understanding the way of life in Germany does not lead to a better understanding of the French system. Thus, foreigners simply prefer to go elsewhere, turning their back on Europe. But it is not only difficult for foreigners to move freely in Europe. Even the Europeans themselves are confronted with some limits in their mobility due to complex social services and pension systems. Mr. Tarrach insisted that we

need to achieve a European transferability of social services and pension systems in order to enhance the freedom of mobility between the different Member States of the Union.

Another shortcoming of the European Union is according to Mr. Tarrach the lack of a Community patent.

In fact, all the European countries have their own patents which are not harmonized on the European level. This phenomenon slows down the process of Europe becoming one harmonized region.

Europe has the necessary infrastructure as well as the cities to attract people all over the world. But we have to make structural reforms and actively try to convince the best researchers to come to Europe. Mr. Tarrach thought that it was encouraging to see that at least parts of Europe are moving in the right direction. According to him it is the duty of the other member states to take the necessary steps to adopt the system of the Nordic countries.

A lively debate followed the discussion chaired by Mr. Heikensten and after several questions and interventions the main conclusion was that Europe should look at its strengths and weaknesses in its pursuit to tackle global competition. This means giving room to international comparisons. They will sometimes turn out to be in our favour. For example Jeremy Rifkin, a Wharton University economist, speaks about the European Dream. He believes that Europe will be the only region in the world capable of facing the problems of the twenty-first century. This does not mean that there are not still many reforms to be done. In the domain of R&D Europe has to close the gap with other areas in the world. To do this we have to act and act quickly.

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