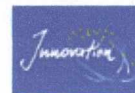


TrendChart
Innovation Policy in Europe 2004





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- Considerably greater involvement of foreign teachers in higher education;
- Development of a national quality assurance system to guarantee the international competitiveness of higher education curricula and teachers;
- Facilitation of employment of certain persons with a higher than average level of competence in Estonia.

The strategy also sets the target of facilitating the return of 1,500 researchers, teachers, and skilled workers who have worked abroad for at least five years.

Strategy and good practices

A more elaborate and better financed innovation policy has operated in Estonia for only three to four years, and it is therefore too early to discuss results in terms of radical product or technology renewal or in terms of significant improvement of the enterprises' innovation activity. However, most of the innovation-related support schemes in use that have been evaluated, were found to be generally successful and improved according to the evaluation results.

Estonia has also made significant use of opportunities for 'transnational policy learning' by involving foreign expertise in developing its innovation policy since 2000. In particular, the Estonian Ministry of Economic Affairs, and its implementing agency Enterprise Estonia, has worked closely with experts and practitioners from both neighbouring countries such as Finland (notably the TEKES agency) as well as drawing on experience and know-how from elsewhere in the EU (Sweden, Austria, the Netherlands, etc.). One example of a scheme which was designed with the use of 'transnational learning' to respond to a specific challenge in the innovation system is the SPINNO programme (EE_17).

In a preliminary phase Enterprise Estonia commissioned a study from an international consulting firm to map and evaluate existing support schemes for hi-tech start-ups (notably spin-offs from universities) and identify the need for improvements and new facilities and activities within the Estonian academic and

research institutes. The first phase of the programme was based on calls for proposals for the SPINNO project and ran from autumn 2001 to the end of 2003.

The programme was subjected to an evaluation that was largely positive and it has now been redesigned to meet the requirements of EU Structural Funds and a second phase has been launched in 2004. The emphasis of the new programme uses a comprehensive approach, including all phases of the commercialisation of an innovative idea, offering a complete package of support and bringing together all actors during the process. Continued support is provided for building up and strengthening universities' capacity to support entrepreneurship and their ability to manage spin-off processes.

2.6 GREECE

Challenges and policies

Greece is the laggard in terms of overall innovation performance among the EU15 and has already been overtaken by a number of the new Member States in terms of innovative performance. Although major changes have taken place in the economic, educational and research landscape in Greece over the last two decades, and several growth indicators outperform the EU average, the Greek innovation system remains insufficient. The relation between innovation performance and per capita GDP clearly demonstrates that economic growth is based on other sources than innovative production and this may imply a considerable danger for future competitiveness.

Given these circumstances, the major general challenge for Greece is to continue and reinforce the slight catching up tendency that it demonstrates in the EIS 2004. Emphasis is increasingly put on innovation policy, partly due to the funding offered by the Community Support Frameworks. However, the concept of innovation still does not receive appropriate attention from the policy makers, neither in the economy and finance area nor in the



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research and technological development sphere.

The public initiatives promoting innovation are a record 20 years old and over. The federations of entrepreneurs now include innovation on their agenda. Under the pressure of the Lisbon targets, the successive governments raised the transition to the knowledge-based economy as a policy priority, linked to the promotion of entrepreneurship and regional development. However, overall innovation policy and governance still need to be consolidated and need to find a prominent position in the public debate in favour of economic and social development

The EIS 2004 confirms the disadvantages of the Greek economy in the areas of human resources, knowledge creation and technological innovation. *The most crucial challenge is lifelong learning*, where Greece lags behind almost all countries considered, taking the 24th position. While a substantial share of the EU structural funds are directed towards education including lifelong learning, the effectiveness of the system is contested and the government struggles to improve the infrastructure and quality standards.

The very low business R&D expenditure is also a challenge that the country has to face. Despite slight signs of catching up, these are clearly insufficient in the pursuit of the Barcelona target. The restructuring of the industrial landscape and business strategies is the major challenge to be faced by innovation policy, since the present structure of the economy does not contribute to the rapid growth of knowledge demand and the delivery of product innovation. Traditional sectors of slow technological development, including small firms addressing local markets with minimal international linkages, and low educational levels of entrepreneurs, still dominate this landscape.

The prime innovation-related concern of entrepreneurs is the modernisation of production equipment and quality improvement. Government actions to countervail these deficiencies include incentives to new private investment leading

to innovations or embodying new technologies [GR_1], the creation of new firms by young people and women [GR_46], [GR_48], the establishment of new firms by researchers to exploit RTD results [GR_39], the establishment of incubators and S&T parks by private investors [GR_45], the reinforcement of VC supply [GR_36], the development of research activities in firms [GR_08], [GR_38], [GR_51]. Some of these measures have been implemented for several years ([GR_1], [GR_46], [GR_08]) and, although there is no formal assessment of their effectiveness, we can claim that they have so far had a certain, although limited, impact. Newer measures need more time to prove their effectiveness and impact, but the reception of their announcement by the business and research communities shows that the time for maturation will be long and will require positive action by the competent authorities for familiarisation.

The EIS data show an *extremely low tendency to protect RTD results through EPO and USPTO patents*. Greece shares the same principles of IPR protection with the other EU Member States and has adopted all European and international conventions and regulations in the sector. Nevertheless, this tradition is very recent and industry, in particular most SMEs, operates on product imitation, while the research system has little interest in patenting.

It is also expected that the familiarisation of the population with the new technological environment [GR_15], [GR_29], [GR_25] will ultimately lead to a higher propensity to patent. The Programmes PRAXE [GR_39] and the Development of the Liaison Offices [GR_10] raise the issue of IPR protection offer information and direct support for patent filing. The Patent Office in Greece offers awards to the most successful inventors [GR_42] in an effort to raise the issue of patenting within the research community.

Employment in high-tech manufacturing and services is also a major challenge, where the country is not catching up due to the slow and limited restructuring of the business sector. Traditional sectors of slow technological development, small firms addressing local



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markets with limited international linkages, entrepreneurs with a low educational level still dominate this landscape. The prime concern of entrepreneurs, relevant to innovation, is here again the modernisation of production equipment and quality improvement.

As mentioned above, Government action to countervail these deficiencies includes incentives to new private investment leading to innovations or embodying new technologies [GR_1], the creation of new firms by young people and women [GR_46], [GR_48], the establishment of new firms by researchers to exploit RTD results [GR_39], the establishment of incubators and S&T parks by private investors [GR_45], the reinforcement of VC supply [GR_36], the development of research activities in firms [GR_08], [GR_38], [GR_51].

It is of major concern that some of these measures were adopted several years ago ([GR_1], [GR_46], [GR_08]) already in the late 1980s or early 1990s when they proved unable to trigger a major impact on the economy. Although there is no formal assessment of their effectiveness, it is claimed that they have so far had some impact on an individual basis. The broad set of more recent measures, decided after the overall thematic evaluations of the first and second Community Support Frameworks, are expected to be more appropriate and effective but more time will be required to prove their effectiveness and impact. The applications and general reaction from the business and research communities following their announcement show that, despite the international competitive pressures and the declining competitiveness of the Greek economy, the time needed to catch up will be long and will require substantial positive action by the competent authorities with regards to awareness-raising. To a large extent the problem goes well beyond innovation policy into the general climate of confidence and business expectations of the Greek economy.

Strategy and good practices

The first initiatives in favour of innovation were taken in the early 1980s in the form of

an assistance project of the OECD. This continues with an increasing emphasis as funding from the CSFs grew. In early 2002-03 new measures were adopted in favour of innovation, which were cleared by the competent Commission DG, for Competition protection. The measures that are expected to have the most direct bearing on innovation are the PRAXE scheme [GR_39], supporting researchers in transforming their ideas into business activities and the ELEFTHO scheme [GR_45], supporting private investors in developing incubating activities. Both are parts of the larger Operational Programme for Competitiveness.

PRAXE addresses precisely the major need for restructuring of the Greek economy. It has already financially supported (amounts around 40,000 EUR per project) around 230 projects of university professors and staff of public research centres in transforming research results and scientific expertise into marketable prototypes and business plans which may attract the financial interest of venture capitalists or other types of investors. In a second phase that is already being implemented, the project teams, together with the entrepreneurs, may apply for funding of the business firm that has resulted from the first phase.

New business firms created for the exploitation of public research that did not apply for funding in the first phase are now eligible for funding. More than half a dozen projects have been selected until now for funding the new venture by the scheme. Funding is offered as a subsidy and may equal the contribution of private investors to the stock capital.

The programme has not been formally evaluated, as it is too early for any results. Nevertheless, the over-subscription suggests that the market was mature enough for such an undertaking. The challenge will of course now lie in the number of new companies ultimately created and in particular their potential to grow over the next five-year period.