
Cooperation between educational institutions and businesses

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Abstract - *the increasingly global economy forces countries and regions all over the world to maximize their own economic benefit. Economic success will depend greatly on production of information and knowledge readily available to the individuals and enterprises, creating the so-called “knowledge based economy”. One of the functions of universities is to provide the national research base. From this base much useful knowledge for society and the economy have derived. They produce expertise, innovative and radical thinking. They are the principal sources of highly trained personnel and they stimulate entrepreneurship and business and can be powerful attractors of investment into a region. University has a key role in educating people but it also has a huge influence on the development of region through interaction with the industry. European universities have enormous potential, 4 000 institutions with over 17 million students and about 1.5 million staff, 435 000 of whom are researchers. In order to make this potential work fully effective, a better cooperation between educational institutions and businesses is need.*

Key words: *education, cooperation, businesses*

Introduction

The Europe 2020 Strategy was launched by the European Commission in March 2010. The Strategy stands for smart, sustainable and inclusive growth in order to recover from the recession and to prepare the EU economy for the next decade. The main three priorities (education is embedded in all) are:

- Smart growth developing.

An economy based on knowledge and innovation. This includes the requirement to improve the quality of education.

- Sustainable growth
This should promote a more resource-efficient, greener and more competitive economy.
- Inclusive growth
Fostering a high-employment economy delivering economic, social and territorial cohesion, including the requirement to modernize, strengthen employment education and training policies.
European platform against poverty

By meeting these ambitions education and training policies should become the major factor to Europe.

Universities and businesses

The universities can be businesses in their own right. For example, in 2003/04, UK universities generated a total direct economic output of £45.1 billion. Generally, this is true for universities with a predominantly regional focus and it is also true for the great research universities. Their greatest economic impact is in their own region.

Universities should be important contributors to national or/and regional economic planning. Unlike most businesses, their location is fixed and they have the capacity to be the leaders. They should be one of the major factors in planning and promoting regional economic development. In order to be effective, they need to recognize the innovation potential of their region, and to be aware of their strengths and capacities in research and education. There is strong evidence that patenting and licensing are not the most effective pathways through which academic activity contributes to innovation (patents are not the way to build up regional innovation as they are realized elsewhere). The role of university should be taken broader: as creators, transmitters and interpreters of ideas and new knowledge, as sources of human capital. Possible types of interaction that contribute to knowledge exchange at university-business level are:

- Education of qualified human resources for business sector

- Providing continuous professional development in order to update the professional and business skills
- Problem solving relation (through cooperative research)
- Providing other knowledge concerning publications, patents, prototypes, technology licensing, faculty consultation, incubation services etc.
- Public space function (interaction between university staff and business community: meetings and conferences, establishing entrepreneurship centers, promoting personnel exchange, etc.).

The dialogue between business and university at local, regional and national level will be the one of the most important issues in the coming years. A recent report on the issue, produced by the European Parliament, identified three main focal areas for University Business cooperation: Lifelong learning (LLL), mobility and partnership and good practice. Lifelong learning fosters growth, jobs and creates a strong learning culture. It helps university to modernize the curricula and to keep them up to date. Mobility and partnership is only possible by strengthening dialogue between university and business. Cooperation between universities and business should be based on transparency and mutual respect. In order to facilitate collaboration, the needs of companies have to be better understood. Good practice should demonstrate the value of university business cooperation and it should be shared. The university business cooperation should bridge the gap between academia and the demands of business to support the knowledge-based economy. The university-business interaction can take many forms including knowledge transfer and collaboration on research, development and innovation (RDI) activities. This interaction can result in the generation of new products and services that allow creation of spin-off companies.

Generally, there is a trend of growing cooperation between universities and industry. In the past years in the UK, for instance, there has been a significant increase in the number of cooperation between universities and industry. In the period between 2002 and 2007, the income of UK universities from businesses increased by a third, knowledge exchange was more than doubled, and staff in a dedicated role towards industry grew from 200 to 3500.

Quality of education

Businesses need quality graduates. Multinational businesses need more excellent graduates and postgraduates. There is also a particular shortage of quality graduates with STEM (Science, Technology, Engineering and Mathematics) skills.

For the employer, it is difficult to employ graduates straight out of university due to the lack of appropriate skills for the work place. This does not mean that students had not been well educated. The point is that there is a gap between what they know and what they are expected to do. The company needs to invest some time and effort to make the graduates become effective employees. This imposes the importance of the work of ready graduates. There is a need to provide a student experience which includes much more in terms of creating a work-ready graduate at the end of the process. The quality of education can be increased through partnerships. In addition, the links to the world of vocational education and training could be strengthened.

Internships have a very important role in supporting the link between university and business. It should provide benefits to both sides and an open pathway for the dialogue. There are enormous variations in the types of internships which exist in Europe, from those embedded throughout the course to short placements. There remains an issue of transparent accreditation of internships.

In the development of education and training for the workforce it is essential to recognize that higher education institutions and business are equal partners. Sometimes, there is a too strong emphasis on the need for universities to serve businesses. Their needs should be in balance. The regional structures can support the dialogue and work between the universities and businesses in order to ensure equal investment and mutual benefit.

There is a need to develop a common language between university business and government for ensuring quality and standards in skills and training delivery: business and universities have different starting and finishing points in these issues but at the same time they agree on the need for quality of delivery. We should know what the best indicators for quality of education are.

It is also important to have an appropriate feedback to the university for course reorientation: through the graduate and through the business.

Innovation

Universities have to accept that research is no longer an isolated activity. The emphasis should be shifted from individual researchers to teams and global research networks. However, many European universities still underestimate the potential benefits of sharing knowledge with the economy and society. At the same time industry has not had sufficient absorption capacity to receive the potential of university-based research. In order to enhance innovation:

- PhDs have to be more practical.
- Internships and projects with businesses.
- The Enterprise Experience Programme of DG Enterprise – senior officials should spend time in businesses and internships should be developed for academia, as well. This could help in breaking down the barriers.

University-Business Cooperation Why and how to collaborate? Deutsche Telekom

Markus Lecke (Head of Education Policy, Deutsche Telekom, Bonn, Germany) in his presentation outlines the following five aspects for good cooperation: Innovation, Talent, Education, Brand and Business.

Innovation (R&D)

- channel to public researchers
- creation of intellectual property rights (e.g. patents...)
- product development, field studies, etc.
- expert opinions / reviews

Talent

- recruiting talented students
- (global) employer branding
- selection of Top – Talents

Education

- cooperation to enrich student education with real-business experience
- collaboration for knowledge transfer (such as leadership programs or further education)

- extra occupational study courses

Brand

- presenting the company as being good
- corporate citizen („local global player“)
- transforming our image positively
- supporting our brand values

Business

- reference implementations
- huge deals in public sector
- sales-strategy

Improve the Competitive Muscle

- attractive, highly innovative products
- magnet for talents
- business-oriented skill-profile
- good image and future decision makers
- growth and prospering business

Standardization

One of the priorities of every economic development is to use internal resources to raise the quality of products and services. Data from the international market show that the largest barriers in trade originate from conflicts among national standards and technical regulations. The introduction of the international systems, primarily HACCP, ISO 9001, ISO 14000 and ISO 22000, defines the quality of products and services under the same principles, uniquely defined characteristics of products and services that are the subject of trade. The Development of integrated quality management system establishes a system of international recognition of quality systems and approves the national institutions for standardization and accreditation to issue a certificate of HACCP, ISO 9001, ISO 14000 and ISO 22000. In this way the limitations of business are removed, and companies receive a label of recognized manufacturers.

The realization of the strategy implementation of international standards creates the conditions for improving the level of product quality due to preventive action. The implementation of standards enables the increase of overall efficiency

and reduces risks to humans and the environment, respecting the principles of sustainable development. The ultimate goal is to increase the extent of exports as well as conservation of natural resources.

Certification of personnel

Besides the demand of standards for certification of products and processes, the certification of staff is also very important. The regulation provides the obligations of certification bodies that for specific tasks related to assessment must engage exclusively professionals with special authorizations and licenses. For example: for checking the quality management systems of the organization whose product or process is certified and the tasks of risk analysis for food safety.

The process of certification/inspection of products and processes crucially depends on the competence of personnel for the certification/inspection. Therefore, the selection of competent staff for certification/inspection and their planned training are very important according to the international standards and regulations relating to the certification/inspection products, as well as in practice of all certification/control bodies for the products.

Principles of certification of competence of persons are based on ISO / IEC 17024th. Certification scheme defines the requirements by which assesses the competence of persons. Competence evaluation of candidates will be evaluated using one or more forms of examination or other forms/ methods of competence assessment. The scheme describes the policies and procedures for granting, maintenance, enlargement, reduction, suspension and revocation of certification for the required area certification.

In the process of certifying schemes development, an active member is industry, through administrative body responsible for the development scheme. This provides a direct link to the university as an institution that organizes the training and the economy which are intended for training.

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Suradnja obrazovnih institucija i gospodarstva

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Sažetak - sve jača globalna ekonomija potiče države i regije diljem svijeta kako bi povećale vlastitu ekonomsku korist. Ekonomski uspjeh ovisit će uvelike o stvaranju informacija i znanja dostupnih pojedincima i tvrtkama, oblikujući time tzv „ekonomiju temeljenu na znanju”. Jedna od funkcija sveučilišta je pružanje nacionalne istraživačke baze. Iz te baze je nastalo mnogo korisnih znanja za društvo i gospodarstvo. Oni stvaraju stručnost, te inovativan i radikalna način razmišljanja. Sveučilišta su glavni izvori visokoobrazovanog osoblja i stimuliraju poduzetništvo i poslovanje, te mogu biti snažan čimbenik u privlačenju ulaganja u regiju. Sveučilište ima ključnu ulogu u edukaciji ljudi, ali također ima i ogroman utjecaj na razvoj regije interakcijom s industrijom. Europska sveučilišta imaju golem potencijal, 4,000 institucija s više od 17 milijuna studenata, a oko 1,5 milijun zaposlenika, od kojih su 435,000 istraživači. Kako bi se ovaj potencijal u potpunosti iskoristio, potrebna je bolja suradnja između obrazovnih institucija i gospodarskih subjekata.

Ključne riječi - obrazovanje, suradnja, gospodarski subjekti