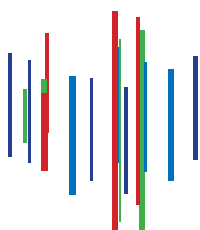
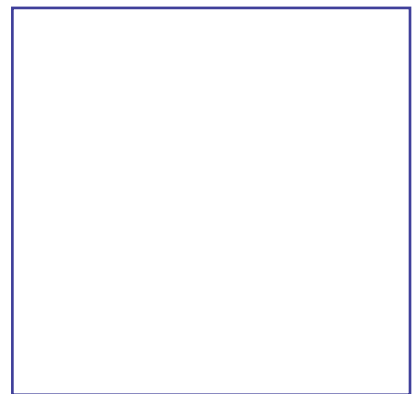




HIGHER EDUCATION IN SOUTH EASTERN EUROPE



University-Economy
Partnerships
for Enhancing
Knowledge
Transfer

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for Enhancing Knowledge Transfer

Imprint

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PREFACE

Education is a most valuable good that is worth protecting, and through support for education, it is possible to secure peace and economic and social stability. World University Service (WUS) Austria has always been committed to the promotion of the human right to education on the basis of academic freedom and university autonomy. Through its continuing efforts in the field of higher education in South Eastern Europe (SEE), WUS Austria has been playing an integral part in the reconstruction and advancement process of higher education in this region. Following the emergency and reconstruction phases in the 1990s, efforts were concentrated on reforming the higher education system in the target countries with particular emphasis on the Bologna Process. In the course of this process, the context of WUS Austria's activities shifted from one of construction to that of medium-term EU-expansion, which now forms the framework of cooperation in the field of higher education in South Eastern Europe. Moreover, an important focus of WUS Austria's work is to promote the enhanced knowledge transfer between universities, the business world and society at large. Nowadays universities are places of knowledge production, and the economy and society are the users of this knowledge. Universities in general are therefore seen as playing an essential role in strengthening the economic competitiveness of the region.

One of the flagship programs of WUS Austria in higher education has been the international case study competition and recruitment event **Balkan Case Challenge (BCC)**. This project strengthens the competitiveness of the universities in SEE in a knowledge-based economy, establishes links between higher education and economy, and consequently improves employability in SEE. The BCC has a strong focus on South Eastern Europe and aims to make available opportunities and new perspectives for excellent students from South Eastern Europe by providing links between higher education and industry, and hence concrete job opportunities. In addition, the BCC contributes to an increased awareness about the potentials of South Eastern Europe, being an integrative part of a joint Europe. In the past ten years it has been implemented by WUS Austria, financed by the Austrian Development Cooperation and supported by numerous higher education institutions, organizations and companies. In 2010 the BCC celebrated its 10th anniversary, and over the years it has established itself as a brand in SEE. The goal has been to use this brand to broaden the activities in the area of linking higher education and the economy, and to contribute significantly to the development of the SEE economies through the development of higher education. Through the regular involvement of partners from the business sector in the competition itself, as well as the engagement of participants in the recruitment events, the BCC has managed to raise awareness of the importance of the cooperation between higher education and economy. Furthermore, the BCC contributed to the popularization of the case study method as an instrument for the practice-oriented way of learning, which brings reality-based problems into the classroom and encourages students to develop their communication skills, team work, and decision-making skills.

From the very beginning the BCC has always aimed to provide a kind of wake-up call to students from South Eastern Europe. Its name was intended to welcome all those who considered themselves part of this geographical region, which has suffered unfortunate events in recent years. The case study method, simulations of real-life engagements,

teamwork, positive challenges, friendship, the exchange of ideas and cultures, and all the other specifics that accompanied the BCC together have constituted its soul.

It was in the framework of the Balkan Case Challenge that the idea for this manual was developed. Through this project it became evident that a stronger connection between universities and economy in SEE is needed, but also that many different types of cooperation between these stakeholders already exist. In order to follow up on the goals of the BCC, first a conference was organized during the BCC finals in Vienna. At the conference the benefits and challenges of partnerships between universities and enterprises as well as current developments and potential new joint projects in this field were discussed. Second, based on these discussions and on the valuable insights from the past ten years, country reports in eight countries have now been compiled in this manual to offer insights on the existing tools and methods as well as on the possibility of developing tailor-made strategies.

The present manual is divided into two parts. The first part contains a detailed description of the higher education systems in SEE, including recommendations on how to continue comprehensive reforms in this sector. An overview of the different instruments for linking higher education and economy, a theoretical approach to the case study method, and examples of best practices from joint seminars to career centers are also contained in this section.

The second part comprises eight country reports of national experts about different aspects of the current higher education sector as well as of the university-enterprise collaboration in each respective country. Each single report offers recommendations on how to improve the future cooperation in this area. It is a regional survey covering not only the establishment of relationships between regional universities and businesses in **Albania**, but also how Brain Drain and youth unemployment in **Bosnia and Herzegovina** could be counteracted. The manual includes an overview on building support systems and infrastructure for knowledge transfer in **Croatia** as well as a report on the active policy of moving to a knowledge-based economy that recognizes the development of human resources and an education system that is more responsive to labor market needs in **Kosovo**. Further topics range from the institutionalization of long-term cooperation between universities and economy (for example through the establishment of career centers and alumni networks) in **Macedonia**, to the increased need for entrepreneurial learning at universities in **Moldova**, to a review of the current situation of research and innovation capabilities in **Montenegro** and the links between universities and industry that are possible in this field. The country report for **Serbia** investigates the critical success factors to improve the relationship between higher education and the business sector.

The analyses and findings of the reports are put forward to encourage discussion of the different approaches to university-economy collaboration and to highlight good practices and recommendations, common problems and some solutions towards solving them. Specifically, the manual addresses good practices of the collaboration between the three stakeholders university, economy and government; the motivations, benefits

and challenges of all stakeholders involved; the valuable position of individuals as a link between university and economy; and the impact of different projects and programs as measured and perceived by stakeholders.

Finally, this collection of diverse articles shows that there are many differences across countries and regions in SEE, but there are also extensive opportunities of university-economy collaboration that have been established in recent years. Since the countries in SEE still have to overcome some difficulties in moving towards Bologna-driven curricula, it is even more important that universities build stronger links with enterprises to ensure their future competitiveness in relation to the countries in the European Union. The manual identifies some of the trends in university-economy collaborations in the European Union and South Eastern Europe. It aims at transferring lessons learned and at reflecting upon the different perspectives from economy, university and government, and thus to encourage future collaborations.

We gratefully acknowledge the kind support of the Austrian Development Cooperation, which financially facilitated the publication of this volume. Our special thanks go to all experts who contributed to this volume and thus made it possible to publish a collection of country-specific reports.

WUS Austria Head Office Graz



HIGHER EDUCATION IN SOUTH EASTERN EUROPE

DIANA WERNISCH



1. Introduction

Turning to Higher Education in South Eastern Europe (SEE) requires directing our attention to at least two areas: the European/international developments and the specifics of the higher education system in SEE. The structure of this article will follow these two lines. First, there will be a brief overview of the common developments in Europe, with special regard to establishing what is called the European Higher Education Area (EHEA) as well as the European Research Area (ERA). This will be followed by the second section highlighting some specific features of the higher education (HE) systems in the region. The third section will turn to recently established cooperation programs and initiatives – mainly bi-regional between the EU and the SEE region – and will map the main bodies and platforms central to education and research development. The fourth section will take a closer look at the status of the Bologna Process in the eight countries covered in this report. Such a status assessment is timely in 2010, the year when the EHEA has officially been launched. Finally, the last section offers some conclusions and recommendations. The countries covered in this report are Albania, Bosnia and Herzegovina (BiH), Croatia, Kosovo, Macedonia, Moldova, Montenegro, and Serbia. This paper frequently refers to “the region” or the “SEE region” and for the purpose of this article these terms shall come to denote all countries afore-mentioned.

2. The Common Framework in Higher Education Across Europe

Higher education systems across Europe are undergoing deep transformations in correspondence with societal trends. Two policy processes – the Lisbon agenda and the Bologna process – can be identified as Europe’s response to challenges posed by increasingly knowledge-led societies, increased participation in higher education (massification), internationalization, and increased competition in the education sector (EUA 2010: 14f).

The **Lisbon strategy** (valid 2000-2010; its successor is “Europe 2020”) is aimed at transforming Europe into the world’s most competitive knowledge economy. Research and innovation as well as participation in education and lifelong learning are seen as key variables to reach these goals. Universities were – like schools – identified to play a central role in achieving these goals. Thus, the **Modernization Agenda for Universities** has been derived from the Lisbon goals in order to enable universities to respond to and support these goals: the reform agenda for Europe’s universities aims to achieve a quality-based development of teaching and learning, research, service and institutional management, and includes increased autonomy and accountability for Higher Education Institutions (HEIs), the ultimate goal being international attractiveness and competitiveness of higher education in Europe (EUA 2010: 15f, 24, 62).

The **Bologna Process** was launched by the Bologna Declaration signed in 1999 by 29 ministers responsible for education. Today there are 46 signatory countries. One of the central objectives was the creation of a globally competitive **European Higher Education Area (EHEA)** by 2010. While the Bologna process was initially oriented towards teaching and learning, a broader and more integrative perspective gradually developed so that the impact of the Bologna Process and the Lisbon Strategy can no longer be separated. Parallel to the EHEA the EU Commission launched the **European Research Area (ERA)**. EHEA and ERA both aim at creating a common area of mobility and space for cooperation for students and academics (EUA 2010: 15, Eurydice 2010: 9f).

The initial aims and intentions of the Bologna Declaration (Eurydice 2010: 10) were:

- Increasing transparency by adopting a system of easily readable and comparable degrees, the implementation of a system based essentially on two main cycles and the establishment of a system of credits (ECTS).
- Supporting the mobility of students, teachers, researchers, and administrative staff.
- Quality-driven development and the promotion of European cooperation in quality assurance.
- Strengthening the European dimensions in higher education (in terms of curricular development and inter-institutional cooperation).

In several communiqués further refinements, details or emphasis have been added to this set of aims, including the inclusion of the third degree (doctoral studies), an additional focus on the social dimension (equal access and participation, funding, monitoring) as well as on lifelong learning (recognition of prior learning, flexible learning pathways), the development of the National Qualifications Frameworks (NQFs) as an overarching tool of reference to understanding and comparing national education systems, and the development and implementation of the European Standards and Guidelines for Quality Assurance (ESGQA) (Eurydice 2010: 14). In the implementation of the Bologna Process there is a frequent reference to the so-called “Bologna tools or instruments” – tools to reach the above-mentioned goals. The European Credit Transfer and Accumulation System (ECTS), the Diploma Supplement and the NQFs are the most important tools to mention (Eurydice 2010: 20).

A further trend relating to the public governance of education has to be noted: new forms of public management have been increasingly applied to the education sector, leading mainly to governance and funding reforms and resulting in an increased institutional autonomy. In many European countries this development has paralleled the changes in the HE sector in the last 10 years and it is intertwined with the reforms initiated through the Lisbon Strategy (especially the Modernization Agenda) and the Bologna Process (Van der Ploeg and Veugelers 2008).

National and international trends and the European-level policy processes¹ have led to an extensive agenda of change for the HE systems in European countries which extends to the change of values and cultures in place. Table 1 presents the results of a recent study that assessed the developments which mainly influenced European higher education institutions.

The Bologna Process	78%
Quality Assurance Reforms	63%
Internationalization	61%
Governance reforms	49%
Funding reforms	45%
European research and innovation policies	43%
Demographic changes	26%
Rankings/league tables	23%

Table 1: Importance of developments for institutional strategies of HEIs over the past three years (EUA 2010: 26; Respondents: higher education management staff).

¹ For a comprehensive overview of the evolution, action lines, impact and status of the Bologna Process in the 46 signatory countries see EUA 2010, Eurydice 2010 and Westerheijden, a.d.

Against this background the countries covered in this report are operating and implementing their national and regional reforms in higher education.

3. Higher Education in South Eastern Europe

All eight countries covered in this report are implementing the Bologna Process with an orientation towards current EU policy, notably the Lisbon strategy and its successor. Countries have started to align their policies towards the strategic EU goals (such as growth, creation of jobs, investments in higher education and research) which are especially pertinent goals for the region (EUA 2006: 1). The Bologna Process is a central driver in the current reform of SEE's higher education systems and the Bologna Process is perceived as "providing a direction that is essential for societal development" (EUA 2007: 9). Croatia joined the Bologna Process in 2001, Albania, BiH, Macedonia, Montenegro, and Serbia in 2003, Moldova in 2005, and Kosovo has an observer status². Another influential factor in SEE's higher education development has been the EU's official integration politics³ in relation to the Western Balkan Countries (WBCs)⁴. Within the politics of the region, education has always been assigned a major role in promoting democratization, socio-economic development, and civil society (EC 2006 and 2008). The Western Balkan countries are eligible to participate in a number of EU programs such as TEMPUS, Erasmus Mundus (under the "WBC Window" and the "External Cooperation Window"), Youth, the framework programs for research (7th Framework Program 2007-13, including a specialized cooperation instrument for the Western Balkans), the activities of the Joint Research Centre (JRC), and the European Training Foundation (ETF) (EC 2008: 9, WBC INCO-NET, n.d.).

3.1 Growth in Higher Education, Private Educational Sector, Access to HE

Higher education systems have been expanding over the past decades in all European countries. The growth rates in the SEE countries within the last 10 years have been especially high and are also among the highest worldwide (UNESCO Report 2009). In some countries student numbers have doubled within a decade. Along with the increase in the number of students, the number of HE institutions has been increasing and quality issues arose in several countries during these times of rapid expansion (Eurydice 2010: 15, Westerheijden, n.d.: 6). The SEE region has also experienced a shift in enrolments between subjects and fields like law, economics, and management which have seen a strong increase (Totomanova 2005: 1f). Another development has been the growing importance of **private (and accredited) HEIs** in the SEE region as legislation has gradually been changed to allow the establishment of private institutions (Totomanova 2005: 3).

Access to HE is mostly regulated by school leaving examination marks and entrance examinations (as in many other European countries). The accent is often put on the entrance examinations which the universities can usually regulate independently. Typical of the region is the so-called paid education in public institutions: students not achieving the necessary criteria for state-funded education can be admitted to public universities on a tuition fee basis. Fee-paying students can represent a significant resource of funds to universities

2 Kosovo is currently not eligible for direct membership to the Bologna Process as it has not ratified the European Cultural Convention (http://eacea.ec.europa.eu/tempus/participating_countries/impact/kosovo.pdf)

3 For further information (Thessaloniki Agenda, Stabilization and Association Process, EU's WBC strategy): http://europa.eu/legislation_summaries/enlargement/western_balkans/index_en.htm

4 Western Balkan Countries (WBCs) are: Croatia and Macedonia which are official EU candidate countries, Albania, Bosnia and Herzegovina, Montenegro, Serbia, and Kosovo.

and the paid education system can pose problems in terms of equal access and quality in education (Totomanova 2005: 4f).

3.2 Autonomy and Accountability of HEIs, Management and Quality

A discussion about the autonomy of HEIs needs some differentiated consideration for the SEE region. European universities have generally gained more institutional autonomy throughout the last 10-20 years, giving them increased financial autonomy (global budgets) and personnel autonomy, and establishing them as independent public legal entities (not public authorities). Along with autonomy comes the increased accountability of the HEIs with their stakeholders. The consequence of an increased **autonomy and accountability** is the necessity of a good institutional management of the university as an organization. This evolution of the university from a state-dependent public authority into a manageable and well-managed organization providing public goods with a strategic orientation represents a fundamental culture change in most European countries (Meister-Scheytt and Scheytt 2006). SEE countries have also started to pass new legislation increasingly aligning their higher education systems with the concept of institutional autonomy outlined above, thereby enabling HEIs to (re)act more flexibly and efficiently to societal needs (Totomanova 2005: 2, RCC 2009: 2).

There is yet another dimension of autonomy within the SEE region: it is the autonomy and self-management of single faculties, schools or departments, which is a legacy of the former Yugoslavian republics. The historically relatively high level of legal, functional, financial and academic autonomy of single faculties hinders the process of modernization and the implementation of coherent reform measures not only within the countries, but even within one institution. One of the central milestones to be achieved in the former Yugoslavian states is to overcome this challenge (Totomanova 2005: 2, Figel 2006: 2, EUA 2006: 6, EUA 2007: 9 and 70, RCC 2009: 2).

A related problem is the **professionalization of staff** and the **improvement of institutional management** (internal governance). Inefficient and ineffective structures and procedures will have to be reduced while competent intermediary bodies for specific tasks, such as funding, research management, student services or quality assurance have to be established and staff at all levels professionalized (EUA 2006: 2 and 6, RCC 2009: 2 and 2010b: 15).

Internal and external quality assurance is relatively new to the region (EUA 2006: 1) and is furthermore complicated by the afore-mentioned peculiarities of the HE system. Quite often external quality assurance bodies have only been recently established by law (see also chapter 5). Internal quality management is an issue as well and as a European study revealed, little change or improvement has been registered regarding internal quality processes. A significant aspect seems to be that “the basic tools for quality assurance are often lacking. University-wide data is rarely available in a coherent form ... [and the] lack of effective central management and administrative systems means that data gathering and analysis is time consuming and unreliable. Feedback and monitoring mechanisms are weak and inconsistent across institutions ...” (EUA 2007: 71). Another factor in both internal and external quality management is that the region lacks professional staff and experts in this area and countries of the region could benefit from increased regional cooperation (EUA 2007: 71).

Funding: Legislation in some countries has been revised to give HEIs more financial and budgetary autonomy and flexibility but in total the systems are still very rigid, relying heavily on input factors and not providing many opportunities to reward successful reform-oriented approaches (Totomanova 2005: 8, EUA 2007: 70, EACEA Tempus Reports 2009).

3.3 Curriculum Development, Teaching and Learning

Curricula in the SEE region share a tradition of theoretical rigor, specialization, and the predominance of theory over practice (Totomanova 2005: 5). While there are also positive aspects to these features, curricula tend furthermore to be overloaded and overspecialized. Teaching is heavily dominated by an *ex cathedra* approach not supporting the development of intrinsic motivation and interest, self-regulated learning or transfer, and application skills of students. A general and urgent need for reform towards a more learning-oriented and student-centered approach has been repeatedly voiced (EUA 2007: 70). While many SEE countries had a two-cycle structure in place before the Bologna Process (Eurydice 2007: 16), the system was not in conformity with the idea of mobility between subject areas. The system often led (and may still lead) to undergraduate and postgraduate studies in the same subject area, which is especially the case when as part of the Bologna reforms the specialization in longer studies have simply been relabelled to become a Master's degree (Totomanova 2005: 5). The Bologna reforms have often been implemented quite quickly. However, it has also been noted that changes have too often been superimposed on a system of teaching and learning left unchanged which is actually working against the Bologna ideas (EUA 2007: 70f).

High drop-out and low graduation rates are sometimes problematic in the region as well as a lack of **labor market relevance** of many curricula. This is partly due to a lack of involvement of stakeholders such as students and employers in curriculum design, educational issues and outcomes (RCC 2009: 2). **Student involvement and participation** is traditionally relatively low (lower than elsewhere in Europe) and there are also cases of formal involvement without impact (EUA 2007: 71).

3.4 Regional Cooperation and Networks

The SEE region does not have strong regional networks in HE. Many international support programs aim at creating these networks in order to increase knowledge exchange and cooperation to advance the modernization of the sector. Another key issue as seen from an external perspective is the need for the region to develop a sense of ownership over the change processes (EUA 2006: 2, Figel 2006, Totomanova 2005: 10). Up until now much of the change has been driven and sustained by externally defined agendas and externally funded programs, mainly from the EU. In fact, the SEE region is now entering into a new stage of regional ownership and taking over responsibility (EC 2008: 3 and 8; see also chapter 4.1). The next section therefore turns to a brief overview of some central current platforms and initiatives for higher education and research in SEE.

4. Cooperation in Education and Research

4.1 Cooperation and Initiatives in Higher Education

Mainly within the framework of the EU's South Eastern European Cooperation Process (SEEC) the following institutions/agencies/platforms are currently operating in SEE playing a central role in the advancement of the HE sector.

Regional Cooperation Council (RCC) – the successor of the Stability Pact for South Eastern Europe launched in 2008 is the highest council of cooperation; the foundation of this council marks a milestone in the repeated call for regional SEE cooperation and the increased ownership and responsibility of the region for its development (TFBHC n.d.: 3).

RCC Task Force Fostering and Building Human Capital (short: TFBHC, launched 2008, member of the ERI SEE) – is entrusted with the promotion of coherency between education, higher education, and research cooperation in SEE (TFBHC 2008).

ERI SEE and ERI SEE Agency – the Education Reform Initiative of South Eastern Europe acting as a regional platform for cooperation in the field of education and training. Members are the SEE countries⁵ and the TFBHC, a consultative body unites international partners such as the OECD or the European University Association (EUA). ERI SEE supports national reforms in education and training through regional capacity-building and transfer of know-how, and links these efforts to European frameworks in the field (Lifelong Learning Program, Bologna and Copenhagen Process). The promotion of cooperation between the education and research sectors in SEE is another priority area (ERI SEE 2008). The platform also supports the increased utilization of funding and support programs such as IPA (Instrument for Pre-Accession Assistance), ENPI (European Neighbors and Partnership Policy Instrument) or the EU programs for external cooperation in education and training, including gradual involvement into the Lifelong Learning Program (ERI SEE 2010). ERI SEE offers an extensive range of seminars and workshops which have led to the recent establishment of locally managed/coordinated networks, for example an expert network in lifelong learning or a peer learning network in Quality Assurance (ERI SEE 2010).

HE Structural Reform Process and the Steering Group on HE Structural Reform. The so-called Novi Sad Initiative addresses what many (outside and inside the region) consider as the most problematic issue in the (region's) modernization process – the structural and institutional reform of higher education. Since 2005 biennial conferences were organized on the topic of higher education in the Western Balkans (Novi Sad 2005, Dubrovnik 2007, and Sarajevo 2009). Structural reforms are not an explicit topic of the Bologna Process. Therefore, despite its major focus on the Western Balkans the initiative has implications for and offers conclusions about the whole of Europe (Novi Sad Initiative n.d.: 1). Structural Reform in Higher Education of the WBCs is now a flagship initiative of the RCC and funded under the TEMPUS program. In 2010 “The International Forum on Higher Education Reform Foresight 2020” was organized as a follow-up of the Novi Sad Initiative's conferences, and the establishment of a “Steering Group on HE Structural Reform” under the RCC umbrella was announced in 2010 (RCC 2010).

4.2 Cooperation and Initiatives in Research and Integration into the ERA

Some important platforms and initiatives in research cooperation, capacity-building in research, and integration of the WBCs into the European Research Area will be outlined below. The RCC is again the highest forum of cooperation.

Steering Platform on Research for the Western Balkan Countries. This is the permanent platform for political dialogue, launched in 2006, linking the EU Member States, the Candidate and Potential Candidate countries, the countries associated to FP7, and the European Commission. The Steering Platform aims at facilitating the integration of the WBCs into the ERA and identifies needs, problems, and means of strengthening the research capacity (EC n.d.).

WBC INCO-Net was launched in 2008 and technically supports the Steering Platform in its aims. It acts as an information office and provider in the region (including e-journals, scholarship database, etc.). Its core objectives are to support the bi-regional dialogue on science and technology (S&T), to identify research, technology and development (RTD) potentials and priorities in order to integrate them into the FP7 and other EU programs,

5 Albania, BiH, Bulgaria, Croatia, Kosovo, Montenegro, Moldova, Macedonia, Romania, and Serbia

and to enhance participation of researchers from the region in European projects (through capacity-building on structural and individual level, networking activities) (IB BMBF 2009: 2f, WBC INCO-NET n.d.).

Research Policy and Funding. The Framework Program for research is central within the ERA activities and policies. All WBCs except Kosovo⁶ are associated to the FP7 2007-13 which makes them eligible for funding under the same conditions as EU member states (EC 2007: 11, EC n.d.). Other activities such as the Joint Research Center are also open to scientists from the Western Balkans. **SEE-ERA.Net Plus** (running 2009-2013) is a model project co-funded by the European Commission that involves the R&D programme owners (ministries or agencies responsible for science, technology and/or research) from 14 involved countries (7 EU member states, 6 WBCs, Turkey). SEE-ERA.NET Plus is supporting cooperation in research by launching Joint European Calls with specific scientific priorities based on regional collaboration needs within the FP7 priorities. Further priorities are executing R&D with the WBCs against strategic EU priorities, supporting the integration of bilateral RTD initiatives into multilateral activities, reducing duplication of effort and parallel solutions, strengthening the research communities, and preparing them for participation in FP7 (Centre for Social Innovation 2010).

5. South Eastern Europe and the Bologna Process

Which developments will affect HEIs across Europe the most in 5 years time? The most frequent answers (as reported by a study published by the EUA in 2010) are quality assurance in 13 countries, internationalization in 12 countries, and the Bologna Process in 7 countries. The influence of the Bologna Process is seen as particularly relevant in the Western Balkan region and its current influence is evaluated positively (EUA 2010: 90). The next section will deal with the developments stemming from or associated with the Bologna Process, based on recent data⁷ which has been published for all Bologna signatory countries in 2010 – the year when the EHEA was officially launched. Tables and comparisons will be used to give a “Bologna Profile” to the eight countries covered in this report.

General Information (Table 2). All countries have passed new laws on higher education, some countries shortly after they had joined the Bologna process. The absolute size of the higher education systems is relatively small but the number of recognized institutions is relatively large (except for Moldova) in international comparison. Hence, the average number of students per higher education institution is relatively small. All countries (except Kosovo) have formally adopted the **Lisbon Recognition Convention** which provides the recognition of foreign qualifications as similar to qualifications offered by the own country’s education system, provided no substantial differences can be proven. ENIC/NARIC centers are established in all countries which support the implementation of the Convention (EUA 2010: 63f). All countries are developing their **National Qualifications Frameworks**, none has yet completed and self-certified (against the European Qualifications Framework) its NQF (which is not a deviation from the Bologna average; NQFs were intended to be finalized by 2010 but the frame was extended to 2012 because of the complexity of the task at hand).

6 Kosovo is eligible to participate as an International Cooperation Partner Country.

7 The information reported in this chapter is based on two reports: An independent assessment of the Bologna Process (Westerheijden, a.d.) published on the occasion of the launch of the EHEA and the 2010 EURYDICE report and based on self-report data from the Bologna signatory countries. Data for Kosovo is not available in those reports; when Kosovo is included in the tables, the information is based on additional sources.

	HE Law	Students registered in HE (2008/09 or 2007/08)	Number of recognized HEIs	Lisbon Recognition Convention	Status National Qualifications Framework
Albania	2007	89.849	27	2002	Under development
BiH	2007 (framework law)	105.358	39	2004	Under development
Croatia	2003	170.500	54	2002	Under development
FYROM	2008	19.082	23	2002 (entry into force 2003)	Under development
Moldova	2005	122.939	30	1999	Under development
Montenegro	2003	25.400	11	2004 (entry into force 2006)	Under development
Serbia	2005	235.940	88	2004	Under development
Kosovo	2003	N/A	16; 2 univ. (Prishtina and Mitrovica) + 14 private institutions	N/A	N/A

Table 2: General information on HE, Lisbon Recognition Convention, NQFs

Study System and Implementation of Bologna Structure (table 3). All countries have a three-cycle structure of studies. Most countries had such a structure in place before but the Bologna Process led to a different frame for the three cycles. First cycles now have a tendency to be shorter than before. There is no dominant or uniform model for the first two cycles for the whole SEE region. Access to HE is mostly regulated at an institutional level.

	General information on study system with relation to Bologna structures	Overall structure in most common programs	Most common length 1st cycle (ECTS); 2nd cycle (ECTS); 3rd cycle (in yrs)	Regulation of admission	% enrolled in two cycle degree programs (2008/09)
Albania	In Albanian public universities (and most private ones) there is a three cycle system following the scheme 3+2+3 (Bachelor = 1st level diploma/Master = 2nd level diploma/PhD). Three formal groups of professional training and education: post-maturity, post-bachelor (Master of 1st level) and post-master levels (Master of 2nd level).	No dominant model	First cycle: 180; Second cycle: 120; Third cycle: 3-4 yrs	no	>96%
BiH	Framework Law on HE 2007 in Bosnia and Herzegovina stipulates that higher education shall be organized in three cycles: first cycle (Bachelor or equivalent) with min. 180 ECTS (3yrs) and max. 240 ECTS (4yrs). Second cycle (Master or equivalent) with min. 60 ECTS (1yr) and max. 120 ECTS (2yrs). Total of first cycle and second cycle must be min. 300 ECTS.	No dominant model	First cycle: 180-240; Second cycle: 60-120; Third cycle: 3 yrs	yes, regulated at institutional level	70%
Croatia	Generally two types of programs: academic and professional. Universities can offer both academic and professional programs (polytechnics and schools of professional higher education only the latter). But: the aim is for universities to offer only academic programs. Transfer from professional to academic programs within and between different cycles is possible (additional exams/courses might have to be taken).	180/120	First cycle: 180-240 (prof. college & polytechnic 120+); Second cycle: (60)-120; Third cycle: 3 yrs	yes, regulated at institutional level	>75%

FYROM	Binary system of academic and professional studies. A three-cycle system was in place before the Bologna Process. The first two cycles have been reformed: the traditional 5+2 model was transformed into a 4+1 or 4+1.5 model for academic studies and 3+2 for professional studies. Some short-cycle studies were introduced/integrated into the framework of the first study cycle.	No dominant model	First cycle: 240 (180); Second cycle: (60) 90-120; Third cycle: 3 yrs (min. 2)	yes, regulated at institutional level	30%
Moldova	Institutions offering higher education are universities (>85% of all students), academies and institutes. Colleges (offering short-term and professional programs of up to 3 yrs) can be affiliated to universities or function autonomously. Programs are based on 2 main cycles: first cycle - Licentiate (3-4 yrs) and second cycle - Master (1 yr).	No dominant model	First cycle: 180-(240); Second cycle: 120 (90); Third cycle: 3(-4) yrs	yes, 1st cycle reg. at national and 2nd cycle at inst. level	>90%
Montenegro	HE programs provided by universities and private faculties which offer academic or professional studies. Transfer from first-cycle professional studies to second-cycle academic studies is possible. The first cycle range is from 180 to 240 credits, second cycle range is from 60 to 120 credits. In total min. 300 credits have to be completed after the two cycles.	Tendency towards 180/120	First cycle: 180 -(240); Second cycle: (60)-120; Third cycle: 3 yrs	yes, regulated at institutional level	>95%
Serbia	HE provided by universities (incl. independent faculties) and profession-oriented non-university sector (vocational post-secondary schools). 3+2 and 4+1 year systems are possible. Universities and faculties can offer both academic and professional programs. Pre-Bologna degrees were 3-cycle structured but longer (4-5 yrs/2yrs/4yrs). Reform 2005 abolished former second cycle degree. Contents and structures of first-degree studies were changed.	No dominant model	First cycle: 240 (180 incl. Profess bachelor); Second cycle: 60(-120); Third cycle: 3 yrs	yes, regulated at national and institutional level	>90%

Table 3: Study system information and implementation of the Bologna structure

All countries have implemented ECTS credits. However, what is important is the practical use of ECTS credits and their links to workload and learning outcomes. Despite the fact that the implementation of ECTS credits, fully linked to workload and learning outcomes, has only been achieved in 12 Bologna countries (Westerheijden n.d.: 7), this is an issue that needs to be addressed in SEE since the dominant model to allocate ECTS credits is still based on teaching/class contact hours only (Moldova and Montenegro receive better assessment for linking credits with workload). Moldova excluded, the **modularization** of studies (as a tool to foster mobility, flexibility, and transferability) seems to have not been implemented at all (although some initiations have to be recognized).

Country (Bologna accession)	Other National QA Agency	Foundation Date of Agency	Membership ENQA	Membership EQAR	Membership INQAAHE	Membership CEE QA Network	Orientation of QA system
Albania (2003)	Public Accreditation Agency for HE (PAAHE); Accreditation Council	1999	(Associate since 2010)	x	Member	Member	Supervisory
BiH (2003)	Agency for Development of Higher Education and QA (ADHEQA)	2007 by legislation (end of 2008 in fact)	(Associate since 2010)	x	Member	Member	Supervisory
Croatia (2001)	Agency for Science and HE (ASHE)	2004	(Associate since 2007); full membership planned	x	Member	Member	Advisory
FYROM (2003)	Board of Accreditation; Evaluation Agency	2000	(Membership planned)	x	x	Member	Supervisory
Moldova (2005)	Department of Accreditation of the HEIs (National Agency for Accreditation)	2008	x	x	x	x	Supervisory
Montenegro (2003)	(QA Centre at University of Montenegro)	(2007-2009)	x	x	x	x	Supervisory
Serbia (2003)	National Council for HE; Commission for Accreditation and QA (CAQA)	2006	(Associate since 2007)	x	Member	(membership planned)	Advisory
Kosovo (observer, 2003)	Kosovo Accreditation Agency (KAA)	2006/2007	x	x	x	Member	N/A

Table 4: Information on Quality Assurance Agencies and their memberships in networks

This may partly be due to a limitation of the concept of modularization as there is hardly any common understanding of it on a European scale (Westerheijden n.d.: 7). The **proportion of electives** (electives are seen as a tool to provide flexible learning pathways, Westerheijden n.d.: 20) within any given study program in the countries covered in this report is relatively low in international comparison and is less than 25% in Albania, Croatia, Moldova, and Montenegro and between 25 and 50% in BiH and Macedonia (no data for Serbia available)⁸. The **Diploma Supplement** is issued free of charge and often automatically to all or at least the vast majority of students who are graduating.

Quality Assurance (QA). All countries have a QA and accreditation system in place. In most countries independent QA agencies are operating as buffer bodies between ministries and HEIs. Very often these agencies have only been recently founded. The countries' QA agencies membership in European and international networks is still limited but the last years have seen a positive development regarding this issue.

Mobility (data not available for Albania and Kosovo). BiH and Macedonia report to have no policy on student mobility and no data collection. Croatia, Moldova, Montenegro, and Serbia report to have a mobility policy and measures in place and to collect data on mobility.

Lifelong Learning and Prior Learning (data not available for Albania and Kosovo). Serbia and Macedonia report that lifelong learning is a mission for all their universities. BiH, Croatia, Moldova, and Montenegro report that it is a mission for some universities. Fostering lifelong learning is related to another Bologna action line, the recognition of prior learning in order to encourage more citizens to (re)enter higher education, to increase diploma mobility, and labor market mobility (Westerheijden n.d.: 48). Most countries covered in this report do not have any specific legislation in place regulating the recognition of prior learning.

Social Equity and Widening Access (especially to under-represented groups) has also been included in the Bologna agenda. Only BiH, Croatia, and Moldova report that there is systematic monitoring of a specific set of societal groups. On the other hand, Macedonia and Montenegro have introduced support measures for under-represented groups but they report to have no systematic monitoring. This could result in measures without effect, just as systematic measuring has no effect if it is not accompanied by actions.

Employer Involvement (data not available for Kosovo). Employability and labor market relevance are key criteria for the quality of education and the involvement of employers is a crucial step towards achieving such quality criteria. Only three countries (Albania, Croatia, Macedonia) have employers represented in their Bologna Follow-up Groups and only one country (Albania) in its Bologna Promoters Group. In the area of curriculum design, work placements, and international experience Macedonia is the only country that reports significant employer involvement. Albania, BiH, Moldova, Montenegro, and Serbia report "some" and Croatia "a little" involvement (scale range: significant-some-a little-none).

Challenges in HE for the Next Years⁹. The full implementation (or further refinement) of the new laws on higher education is an issue in six of the eight countries covered in the report. Related to this is the development and implementation of a strategy for higher education (policy) which three countries mention as a key challenge. Financing and funding reforms in tertiary education are mentioned in connection with six countries. Structural reform and

8 There are some limitations in assessing, comparing, and interpreting elective program parts due to the sometimes unclear treatment of e.g. major/minor models, bound electives, etc.

9 Information is based on the section "Future Challenges" of the Bologna Process National Reports 2009. For Kosovo information of the more general HE Strategy for Kosovo has been included.

institutional governance reform (integration of universities) is seen as a challenge in five countries, just like the full/further establishment of buffer bodies – most importantly the bodies responsible for quality assurance. The finalization and implementation of the National Qualifications Frameworks (in conjunction with further curricular reform and a reassessment of student workload) is seen as a key challenge in four countries. Supporting the mobility of students, academics, and citizens in general appears in five country reports.

6. Conclusions and Recommendations

In this final section some conclusions and recommendations will be derived from an integrated perspective regarding what has been outlined in the chapters above. The SEE countries have entered into a deep reform process which will fundamentally restructure their higher education systems from a public management perspective, from an institutional perspective, and from a functional perspective. The SEE countries have to cope simultaneously with challenges that other countries in Europe could align their HE systems to by a step-by-step approach (mass higher education, globalization, autonomy, Bologna Process, etc.). The SEE countries have joined the Bologna process mainly as latecomers and the Bologna Process has become the main driver and overarching frame of reference for the HE sector's development. The countries are generally doing well in reforming their systems, even if they are latecomers and have had to catch up with other countries, but this does not necessarily mean that they are now the last in the row. The reform agenda and spirit has perhaps been more extensive in SEE than elsewhere in Europe. Furthermore, many problems in SEE are also problems the rest of Europe is dealing with (e.g. deep-level reforms instead of superficial implementations). Considerable progress has been made over the past ten years and considerable progress still needs to be made.

Structural Reform and Institutional Integration. Institutional integration and the autonomy of universities still needs to be heavily enforced to avoid incoherent reform and the inefficient and ineffective use of resources, which is especially important considering the limited financial resources. New institutions and processes (e.g., QA agencies, internal quality management) need to be strengthened to become fully operational and functional. This will need further political and legislative reform as well as a strengthening of evidence-based policy making and consistent and continuous HE policy and strategy. The financing systems are not yet compatible with the concept of the autonomous and accountable university and need to be further reformed. Incentives for strategic policy aims should be part of the financing system. The higher education structural reform process is the basis for other reforms and therefore of uttermost importance.

Professional HE Management. The structural reform process needs professional staff – in HE steering bodies (ministries, etc.), in single higher education institutions, and in HE buffer bodies (QA agencies, etc.). Staff training and capacity-building at the individual level therefore need to be at the heart of further initiatives for the advancement of the sector.

Knowledge Exchange, Regional Networks and International Representation. Professional staff need the opportunity to continuously develop knowledge in accordance with, and in active contribution to, European and international developments. The further establishment of regional cooperation and networks and SEE's representation in international networks is therefore needed. Networking activities do not only build capacity on the individual level but also on a structural level and help to disseminate good practice.

The extensive cooperation model of the Nordic countries¹⁰ may be a long way ahead but considering the intra-regional similarities it might be a worthwhile model to consider. EU regional cooperation with the Western Balkans is changing and more funding systems are available than ever before. The EU operates its cooperation within an integrated structure of agencies, platforms, and funding streams. The knowledge about, the participation in, and the use of these structures should be further disseminated and enforced.

Deep-level Curricular Reform. Further curricular reform is needed below the surface of ECTS. A European-scale problem with some Bologna tools is that they can be implemented leaving deeper levels of the system unchanged. Curricula and studying need to be reformed on a structural and process level (modularization, interdisciplinary structures, flexibility), and educational values and intended outcomes in education need to be thoroughly thought through (lifelong learning skills, competence-orientation in a knowledge society, etc.). TEMPUS has made considerable impact in curricular reform which needs to be continued and which should have a focus on the deep transformations of the curriculum. The SEE educational tradition with its theoretical rigor, extensive factual knowledge, and specialization is at first sight perhaps not the most compatible system to include current concepts of education. It is, however, an asset and the challenge will be not to abolish old traditions but to enrich them with new elements. This places high demand on teachers and curriculum designers, and measures should be implemented to support the development and training of appropriate competencies.

National Qualifications Frameworks. Further study program and curricular reform should be inherently linked to the NQFs. NQFs focus on the outcomes of education and they are the national architectures and bridges to the compatibility (within a country and within Europe) of educational outcomes. NQFs should therefore be developed and implemented thoughtfully rather than rushed in order to aim at deadlines.

Participation of Stakeholders. The tradition of stakeholder participation in educational debates and decisions should be strengthened. Involving stakeholders is a potential for innovation, for effective solutions, and for ensuring sustainable and intended impact of decisions. In particular, the participation of students and employers in educational decisions seems important in the region.

10 The Nordic countries have been extensively cooperating for decades in matters relating to research, education, and culture. This cooperation is channeled through the Nordic Council of Ministers (in education). For a brief overview of the cooperation in higher education: <http://www.bologna-berlin2003.de/pdf/Nordic.pdf>

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**VARIOUS FORMS OF COOPERATION BETWEEN
UNIVERSITIES AND BUSINESS**

JOHANNES LEITNER and REINHARD MILLNER

1. Introduction

The Balkan Case Challenge (BCC) aims at opening up opportunities and new perspectives for excellent students from South Eastern Europe (SEE) through strengthening links between higher education and employment. To raise the effectiveness and the impact of the Balkan Case Challenge, the BCC Accompanying Measures project was initiated. The goal of these accompanying measures was to introduce and to present the case study method as a teaching tool throughout universities in SEE. The widely recognized advantage of the case study method as a teaching tool is that it allows for the application of theoretical knowledge and simultaneously bridges the potential gap between academic theory and corporate practice. Clearly, the case study method has its merits and has entered the classrooms in Business Schools and other academic institutions and disciplines around the globe as a form of methodology based learning.

For the BCC Accompanying Measures project we developed and conducted a workshop series through which we presented and discussed not only the case study method, but also various other forms of bridging theory and practice, respectively universities and businesses. In the years 2008 to 2010 we held multiple workshops in eight countries throughout SEE. This chapter is primarily informed by the intense discussions during the workshops and our work at Vienna University of Economics and Business.

2. Links between Universities and Companies

We characterize the role of universities as research-driven institutions with a “focus on the accumulation of knowledge through dynamic and interactive processes of knowledge production and diffusion” (Schartinger et al. 2001: 255). By this, we recognize academia as an institution that contributes to the production of knowledge and therefore enhances the economic and social development of societies. Similarly important is the university’s role in diffusing the generated knowledge through teaching.

Hence, the academic field can enrich the business sector in three respects: (1) providing highly educated human capital, (2) providing knowledge through research and dissemination via publications, and (3) through joint research projects with companies or consultancy for the business sectors (ibidem).

The output of universities directly affects (positively or negatively) the success of the business sector. As outlined above, various input factors are delivered through the university system. In particular universities train, educate and develop future employees; they create and shape the knowledge base of individuals and the society. The decisive impact of universities on the success of companies and well-being of societies stems from providing frameworks for dealing with increasing complexity in society, the need for innovation in a competitive economic environment and the growing share of knowledge-based production within the economy. In addition, the academic system itself is embedded in, and exposed to, societal changes. Some of these changes have an impact on how universities are expected to interact with the business sector. Public funding has increasingly been suffering constraints over the last years. With less public money available, universities are prone to attracting private funding and to cooperating with business firms. Additionally, students who contribute tuition fees have higher expectations and demand a system that secures job opportunities after graduation. The better the cooperation between universities and business is taken into account, the better these demands can be fulfilled.

To illustrate the potential range of dimensions to be considered within cooperations, we suggest a concept drawing on an intersectoral understanding of collaboration to capture various forms of cooperation between higher education institutions (foremost universities) and the business sector (companies). Collaboration is a two-way process and particularly needs partners that are capable and willing to cooperate with each other. It should not be underestimated that universities need a certain degree of freedom to enter into cooperation. We are aware of the fact that a major share of universities in SEE is bound to the public sector and traditionally has to cope with rules and regulations which also affect day to day operations. Therefore, allowing for some more autonomy could be considered a prerequisite for cooperation, depending on the regulatory national context.

Collaborations can ideally appear at different stages and range from being a charitable donor-beneficiary relationship to a strategic, integrative partnership.

Dimensions of Collaboration	Stage I	Stage II	Stage III
	Philanthropic	Transactional	Integrative
Level of Engagement	Low		High
Importance to Mission	Peripheral		Central
Magnitude of Resources	Small		Big
Type of Resources	Money	Core Competences	
Scope of Activities	Narrow		Broad
Interaction Level	Infrequent		Intensive
Trust	Modest		Deep
Managerial Complexity	Simple		Complex
Strategic Value	Minor		Major

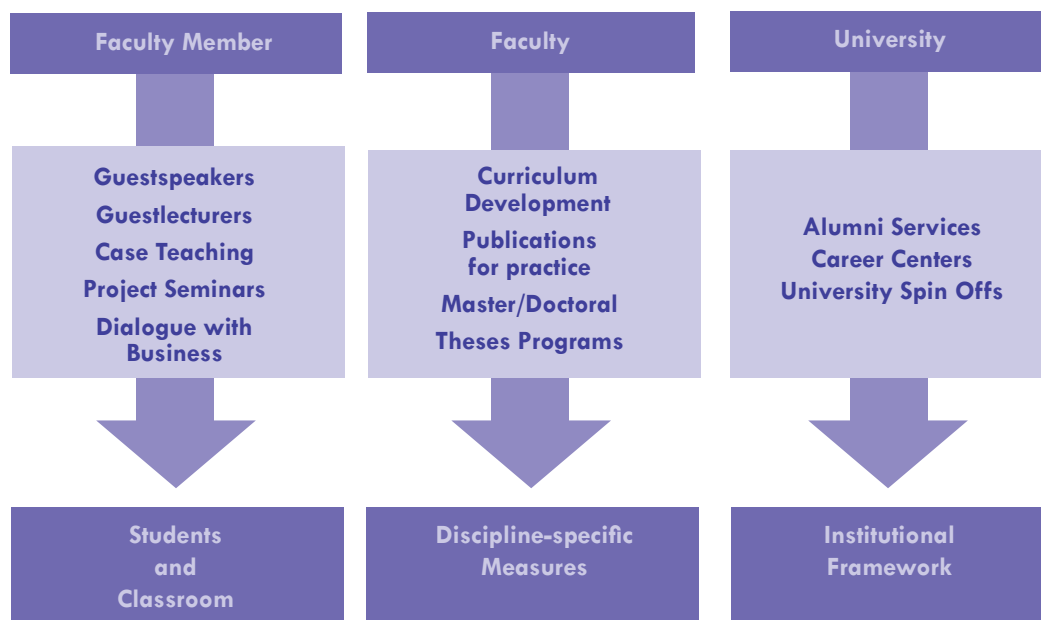
Graph 1: Stages of the Collaboration Continuum (Austin 2003: 51)

As shown in the collaboration continuum model (Graph 1) above, the degree and intensity of the cooperation may vary from a mere philanthropic relation, where the university receives a donation (e.g. money, time, in kind) (philanthropic stage) to a strategic alliance (integrative stage). In the latter case, the cooperation “becomes central to each organization’s mission and integral to their strategies. Both deploy and combine their core competences, joint activities proliferate, personnel and institutional relationships multiply and trust deepens” (Austin 2003: 51). In between (transactional stage), the “relationship is more of two-way value exchange, with each side providing clear benefits to the other. The collaboration is focused around a particular, well-defined activity and the resources deployed often go beyond money alone” (ibidem). Clearly, the more intertwined the collaboration becomes, the more complex the coordination gets. Cooperation between universities and companies does not work without investing resources. But it is not necessarily only money which decides the success of a cooperation, often more important deciding factors are time resources and commitment.

3. Practices of Cooperation from Different Perspectives

Students and graduates of higher education institutions are driven by the learning opportunities and the prospect of a greater employability. Universities are generally guided by their mission to contribute to the educational system of society and the idea of freedom of research to produce new knowledge. Being successful in this respect affects the attraction of well-educated students eager to advance in their personal and professional development but also excellent staff and faculty members, which again drives the reputation of the institution itself. These self-enforcing processes leverage opportunities for cooperation and raising support from either research funds or via cooperations with institutions and companies. The institutions and companies also benefit from this through recruiting graduates and future employees. Beyond this, a mere channel to have access to human capital and in terms of competing successfully in a more and more knowledge- and innovation-driven economy, the access to state of the art scientific knowledge strengthens their competitiveness.

In the quest for forms of cooperation, different levels within the university system can be analyzed. Consequently, instruments can be found on the classroom level, the faculty level and the university level. The classroom is the most obvious prevalent interface with students. Through teaching the transfer but also some form of coproduction of knowledge takes place. The faculty level provides the framework and structure for the various disciplines in the form of curriculum development. The university level is the most prominent linkage to various other subsystems of society (e.g. politics, public sector, business, and media). We argue that all these levels provide opportunities to establish linkages to business respectively the corporate sector.



Graph 2: Examples for Cooperation on various levels (own illustration)

In the following section we present and discuss a diversity of instruments and approaches (for an overview see Graph 2). We specifically want to refer to internships since they are a very important type of facilitating the transfer between university and business. This is because internships enable students to directly carry their knowledge into a business and enrich their own studies through the experience gained during the internship. Nevertheless, we underline that our examples are meant to illustrate our arguments and are for inspiration, but they are by no means exhaustive.

3.1 Faculty Member Perspective

Starting with forms of cooperation in the classroom and teaching, the most basic form of bridging theory and practice, is to *invite representatives* from the business sector. Employing experienced members of the business community as guest speakers or lecturers, particularly in highly specialized areas, offers ways for communication and the exchange of experiences between the university and the business community. In this way, learning from skilled business people can make teaching more applicable to real-life business but also provides insights into the challenges business is facing in the economic environment. We capture this as a two-way process where academia provides the business sector with new ideas from the respective academic field and encourages the transfer of knowledge between academics and the corporate practice. Moreover, it can facilitate closer contact between students, potential employers, and faculty for further cooperative projects and events.

This leads to another type of cooperation in the classroom, namely *project seminars*. Basically, project seminars bring real business cases to the classroom. Student teams structure the task, do research, and develop solutions under the guidance of academics and practitioners. An even more advanced setting would allow for interdisciplinary teams consisting of students from different faculties, bridging for instance economics and technology. Through these seminars, a valuable know-how transfer is enabled. On the one hand students get confronted with up to date business challenges they need to find answers for, and on the other hand the company gets new ideas based on the latest scientific knowledge.

Since students are often expected to plan and coordinate the project themselves, they have to deal with project management practices. The project team has to be set up, coordinated, and group specific challenges such as effective communication and leadership need to be taken into account in order to complete the seminar. During the seminar period, mid-term and end-term presentations of their respective results in front of company executives improve the students' presentation skills. Project seminars are regularly designed as highly interactive events demanding great levels of engagement from students but also offer many rewards through often exclusive experiences and learning opportunities (for a more detailed analysis and presentation of project seminars see also the chapter by Arnold Schuh in this volume).

Another opportunity for collaboration is the *master thesis* or even *doctoral thesis*, a scholarly piece of work, providing a sound theoretical and methodological structure to approach and deliver solutions for real business cases. However, it should be mentioned that the triangle of interests from student (earning an academic degree by demonstrating scholarly excellence), supervisor (demanding and enforcing academic standards) and the principal from the company (applicable and often quick results) can be challenging. Last but not least, the *case study method* is a valuable approach to enrich teaching. Using case studies, but also developing cases in cooperation with companies, can be fruitful instruments to deliver first-hand insights from the business sector (see also the chapter by Lara Jelenc in this volume).

3.2 Faculty Perspective

As compared to individual courses with a business practice orientation, the design and implementation of full *programs* can be another platform for cooperation, though they require more commitment and efforts from both partners. By programs we refer to the process of curriculum development, but also to extra-curricular programs, which are usually organized on a faculty level. Programs can be comprised of a number of courses with an overall topic and objective. Moreover they can have elements such as a mandatory work experience (e.g. internship), the completion of a thesis and others. When developed in close cooperation, these programs feature advantages for the involved companies as well as for the students. While companies have an exclusive opportunity to present themselves and evaluate potential future employees, the students get first-hand insight into the company or industry. An example is the program “Master Class Central and Eastern Europe” at our university which offers a certificate certifying the student’s in-depth knowledge about doing business in Central and Eastern Europe. The two semester program provides additional seminars and courses that focus on the CEE region, but also includes an internship and language training. The curriculum is developed in close cooperation with corporate partners doing business in the region.

High potential programs are extra-curricular offers for select, highly qualified students and aim at motivating students to engage themselves beyond the study requirements. In return, these programs comprise individual support for students, study-relevant and practice-oriented events, offer contacts and network-building with partner firms through company visits and meeting company representatives, as well as contribute to individual career development. Furthermore, they offer studying opportunities in small groups and the acquisition of additional qualifications such as soft skills. They can have a scope of two to six semesters. By this, early links to future graduates can be established by universities and partnering companies.

Internship programs ideally are a carefully monitored job experience in which a student has an intentional learning objective and actively reflects on his/her experience during or after the internship period. The duration ranges from short-term internships lasting about a month up to long-term programs with a duration of two years – but typically they last between three to six months and an internship generally is a one-time experience. Not only is the duration flexible but also its contracting framework can range from part-time to a full-time position, and from a paid to a non-paid or voluntary package. Within the university’s curricula, internships may be part of an academic program, monitored and evaluated for academic credit, or internships can be part of an individual’s learning plan. Specific tools – or learning activities – that support the success of an internship commonly applied include explicit learning objectives, observation, reflection, evaluation, and assessment. A major prerequisite to a meaningful internship experience for both parties is a reasonable balance between the intern’s learning goals and the specific work that needs to be done in an organization. Independent from the concrete design of the internship it is safe to say that internships promote academic, career, and personal developments of an individual. This is because internships convey a number of benefits to students. Through the intensive insights provided through internships, career exploration and decision making is facilitated because the student can verify his/her interests in an actual job situation. Besides, the intern is able to collect relevant work experience in the field of interest and may receive learning experiences beyond the confines of a classroom. However, classroom-learning experiences become more relevant since developing knowledge and competencies directly

related to the students' career objectives is a great asset. Apart from that, an increased match between learning new skills and getting the practical experience employers ask for, enhances the student's career competitive edge and strengthens the resume.

Also, an internship is often a smooth transition into employment when it provides the opportunity for a position at the internship site upon graduation. A not-so-direct form of transition through internship is the set up of networks and professional connections, new contacts, mentors, and key references. Finally, an internship may enhance personal growth, professional identity, attitude, and a stronger sense of responsibility. It is not only students who take advantage of internships. Companies also benefit from internships through a cost-effective screening program for recruiting highly qualified students. Companies can evaluate potential employees while they accomplish useful work and can tap a source of highly motivated, enthusiastic pre-professionals because students provide fresh perspectives, new ideas, and viewpoints for the company. Moreover, interns allow flexibility in staffing needs and are cost-effective work forces that do not require a long-term employer commitment. Since the intern is already well-known to the company, training or orientation costs may be reduced in case of full-time employment after the internship period. It has also been shown that former interns offered full-time jobs tend to stay longer than candidates hired from the outside which dramatically reduces costs.

Internships are a valuable opportunity for companies to build and strengthen business-academia relationships and to influence curriculum development so that skills and knowledge important in the field are part of the education system. Finally, interns returning to campus are effective PR ambassadors who increase the visibility and enhance the image of the hosting organization which leads to creating and maintaining social capital at a price far lower than other forms of outreach. Universities benefit from internship programs as well. They are in a position to broaden their curriculum through utilization of resources of the private sector (expertise, knowledge, funds). Universities have the opportunity of establishing a cooperative working relationship between academia and practice, to improve the interaction with professionals from outside the "ivory tower". Consequently, a well established bond between the university and its business environment also guarantees a better approach to research material and data. Teaching may benefit as well from internship programs with critical students in the classrooms who contribute intellectual growth and practical intelligence, and who raise issues in the courses that are highly relevant. Finally, students with practical experience are better capable of applying academic theories to real-world situations.

Apart from programs, the faculty level can also be the right institutional setting for two further instruments. By *publishing journals* directed towards an audience of business professionals, the dissemination of knowledge can be supported. Especially it can represent a mix of authors from academia and from the business sector, a fruitful knowledge exchange can be established. Bridging the sectors can also be achieved by organizing and hosting a number of *events* carried out regularly and supposed to improve the bond between faculty, students and partnering companies. Often, these events do combine a somewhat informal atmosphere and a knowledge transfer through dialogues, exchange of experiences, and discussions with socializing components (sports events, regular's table or organized talks). Of course, also more formal settings such as conferences and workshops are platforms for organized exchange.

3.3 University Perspective

Usually organized on a university level, *alumni services* are another form to establish linkages to the corporate sector. Since graduates are future employees of companies, it is an opportunity to establish a life-long link. Various instruments can be utilized to maintain this link such as social media, member newspapers or events such as company visits, informal networking opportunities, exhibitions, annual get-togethers of alumni and others. As graduates frequently go international, the establishment of alumni hubs and international alumni get-togethers around the globe can add additional value to all parties involved. Managing these life-long links can facilitate all forms of cooperation.

Career centers are the most direct interface to the business sector as they support the placement of graduates in companies and offer recruiting services. Services can include administration of applications, candidate preselection, conducting personal interviews, introduction of selected candidates, recruiting and the implementation of an applicant pool. For students and recent graduates, career centers can offer CV checks, analysis of application materials, organize company presentations, career fairs and manage constant relations with potential employers (for a more detailed analysis and presentation of career centers see also the chapter by Ursula Axmann in this volume).

Finally, universities themselves can go to business and foster the creation of university *spin-offs*. Thereby universities set up a business, often in cooperation with a company, combining the strengths of the two sectors. For example, “Knowledge Markets” a spin-off of the Vienna University of Economics and Business used its research findings and experiences with e-learning tools providing these insights and technology for companies by offering innovative consulting services in e-learning, knowledge management, and knowledge controlling. There, the latest scientific knowledge concerning learning evaluation, e-learning standards, interoperability, IT-supported human resource development or scalable platforms is applied. Spin-offs also disseminate research findings into business and act as intermediary between university and the business sector.

4. Conclusion

This chapter presents and discusses concrete examples for collaboration opportunities between universities and businesses. We argue that these collaborations are advantageous for both partners, if a clear understanding of their respective needs and missions is provided and a partnering institution can be found which fits these requirements. It is strongly suggested to check each partner’s compatibility and expectations before entering into collaboration. In the case of a major misfit the negative financial and reputation consequences of terminating the collaboration might be enormous.

We also conclude that collaboration, in most instances, does not only depend on money. One of the most crucial resources is social capital, i.e. the network a person has at hand to initiate cooperation. In a university context this means having established contacts to business through alumni organizations, through personal friendships, prior joint projects etc.

The examples of collaboration we have presented can be found along Austin’s (2003) continuum model. Accordingly, we have introduced examples at the *philanthropic stage*. Inviting representatives, for instance, fits into this stage of cooperation. From both parties

involvement is rather limited. The philanthropic stage, being the most common form of cooperation, is also the simplest type. Mostly, transaction is one way which means the business representative shares his/her knowledge and expertise with the students without demanding a return. Neither resource involvement nor the trust relationship between the partnering institutions is high.

At the *transactional stage* the article talks about project seminars. In these cases, involvement of resources and the relationship between the partners is more demanding. Advancing from a one-way transaction at the philanthropic stage, a two-way transaction can be observed here, meaning that each partner gives and receives resources from the other and both parties are supposed to benefit. Typically, the collaboration revolves around a previous well-defined project, e.g. a seminar with a significantly higher resource involvement as compared to the philanthropic stage.

Third, the *integrative stage* is the most advanced form of collaboration. Here, the strategic value of the relation is decisive and management is much more complex than at earlier stages. Resource involvement is not restricted to financial support, but expands to the exchange of core competences. The alliance becomes a central part of the institutions' missions and an integral part of their strategies. University Spin-offs are a great example for the collaboration stage in a university context.

We are aware of the fact that the range of opportunities to establish links between higher education and business depend on the academic disciplines and that not all academic disciplines have the same access to the business sector. However, universities must conceive of themselves as institutions embedded in society, and establish a community with their students and graduates, but also with organizations and institutions outside academia.

Finally, one important player in the game is the student. It is the student who transfers the academic knowledge into actions once he or she enters a business organization. Therefore, universities should provide opportunities where those who are willing to go the extra mile can do so. Because after graduation HR managers will take a close look at identifying the best students. And one indicator is the way they chose to engage in extra-curricular activities.

Moreover, the most important competence of universities and graduates is their scientific and methodological approach to solve challenges ahead. This competence is an asset which can be utilized in all disciplines especially in a complex environment.

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THE CASE STUDY METHOD

LARA JELENC

1. Introduction

The main mission of an educational institution is to help students develop capabilities in order to become a responsible and independent member of society, a member that works and earns money for a decent life. It is unquestionable that the higher your level of education, the more developed your understanding of yourself will be, along with your perception of life and society in general. Gaining knowledge changes people, their habits, values, and their walk of life. One of the criteria for a successful educational system is that a person entering the educational process grows and transforms themselves into a different person throughout the program. The transformation is based on factual knowledge, data, techniques, methods, trainings, and emotions which form a distinctive competence in a specific area. Through the years, the quantity of knowledge has exponentially grown and the main goal of helping a student to acknowledge and acquire capabilities has been blurred with the load of facts and data competing for students' attention. The old Greek method of performing dialogue or debate, finding arguments, examples and exercising rhetoric has evolved into lectures, classifications, theories, written exams, and grading systems in the form of percentage, letters, and numbers. During centuries of education the main point has slightly changed due to the load of information and methods developed to overcome the problem of overload, and not the problem of successfully transforming knowledge, experience, skills and capabilities. The university has always been the place where the individual is enabled and given a boost in order to change the society, while at the same time, universities have resisted in changing themselves.

The future challenge for universities will be to keep pace with the changes in society while focusing on a very traditional goal outlined above: helping students to develop capabilities. The most important is to provide students with methods to develop the ability to think, create new ideas, innovate new products and technology, and resolve old problems while keeping ethical and moral values, cultural heritage and respect for human being. To sum up, we should come back to the methods of Plato and Aristotle, using a laptop in which the books from the world's largest libraries are downloaded.

This initiative can be read in one of the documents supporting the widespread Bologna process, The London Communiqué, Towards the European Higher Education Area: Responding to Challenges in a Globalized World (EC 2007) which reviewed the progress made in the European countries since meeting in Bergen in 2005. Ministers are working for an attractive and competitive labor market in Europe. This goal could be implemented by institutional autonomy, academic freedom, equal opportunities and democratic principles resulting in increased employability and mobility. The European Higher Education Area (EHEA) should respond effectively to the challenges of globalization by recognizing the need for continuous change. The main issues that Higher Education should be confronted with are: preparing students for life as active citizens in a democratic society; preparing students for their future careers and enabling their personal development; creating and maintaining a broad, advanced knowledge base; and stimulating research and innovation. Collaboration between institutions and employers should result in practical implications for curriculum innovation based on learning outcomes (Jelenc, Mikelić Preradović and Mujević 2008: 383). The academic society has detected the need, national ministries have provided an initiative, and the Bologna process seemed to be a great opportunity for universities to change according to the needs of society. Apart from the bottom-up approach, there are a number of different ways that teachers could encourage changes in the curriculum, allowing students to learn from discussions, real time problems from the society and in this way develop the complete competence. The thinking is, and should be, of focal interest for the teaching staff:

Thinking which is not connected to an increase of efficiency in action, and with learning about ourselves and the world in which we live, has something the matter with it just as thought. And skill obtained apart from thinking is not connected with any sense of the purpose for which it is to be used. It consequently leaves a man at the mercy of his routine habits and of the authoritative control of others, who know what they are about and who are not especially scrupulous as to their means of achievement. And information severed from thoughtful action is dead, a mind-crushing load. Since it stimulates knowledge and thereby develops the poison of conceit, it is a most powerful obstacle to further growth in the grace of intelligence. The sole direct path to enduring improvement in the methods of instruction and learning consists in centering upon the conditions which exact, promote and test thinking. Thinking is a method of intelligent learning, of learning that employs and rewards mind (Barnes, Christensen and Hansen 1994: 9).

This article has the aim to introduce the methodology of thinking about the case-study to teachers and offer them practical suggestions and hints for successful implementation in the classroom.

2. The Background of the Case Study Methodology

One of the most emphasized changes the Bologna Process initiated is the interactive teaching and increased attention to student's skills, competences and practical implications of gained knowledge. Students reported in their feedbacks that they look for far more experience and demand practical skills for a real business environment and more help concerning the use for the theoretical knowledge they have learned.

One of the possible methodologies that can be used in the pedagogy of teaching is the case study methodology. It is not a new but, rather, quite an old methodology used mainly at American universities. Although it is a widely spread methodology across the world, the settings in which the case study methodology developed, can explain a lot about the methodology and implementation.

The Harvard Business School was founded in 1908 with the mission statement to give each individual student practical and professional training suitable to the particular business he or she plans to enter. Offering practical and professional knowledge remained the two most important determinants of the Harvard Business education. At that time there was no academic specialized in administration (neither management nor business) and it was still unclear what the teachable subjects would be, as well as the goal they would try to achieve by the end of the study program. There were a number of visiting lecturers from the business world who taught students about their ways to deal with business, the ways they managed, and about practical challenges in everyday life. They did not have an academic background; there were no textbooks, no material and no theories. The perfect solution was the way that would enable transformation via visiting lecturers, making students ready for the next job by offering them practical and professional advice. Their solution was the case

study methodology. The experience from Harvard Law School and Medical School gave them initial ideas for the process of teaching, and their academic freedom gave them the possibility to introduce a new methodology and experiment with the results of the teaching process. Even today the curriculum is based on case study as the main methodology for teaching. Harvard Business School became the synonym for educating teachers on the case study methodology.

3. What is the Case Study Methodology?

The Case study methodology is a process that starts with the preparation of materials, teaching with case studies and evaluating the students' contribution in the learning process. Case study itself is a description of an actual situation, commonly involving a decision, a challenge, an opportunity, a problem or an issue faced by a person or persons in an organization. The description is a combination of fiction and reality, depending upon the special request from the firm or for teaching purposes. Each case-study has also a common footnote (for example: This case portraits neither the effective nor the ineffective handling of an administrative situation. Rather, it is to be used as basis for classroom discussion. Authorized. February 2010). The point of a case is to have a closer look at the person(s) in the case and their issue and to discuss in the search of finding a solution. The result of the case study is never a uniform response, rather, it is a set of discussed theories, explanations of the consequences, discussions *pro* and *contra*, and a suggested direction or advice given as to what to do next if one encounters a situation like the one presented in the material. The Case is written in a way to be interesting, involving everyday problems, different characters of employees, confusing emotions and conflicting dialogues written to sound as real as possible for the student setting in the classroom.

3.1 The Most Important Points of the Case Study Methodology

The case study methodology, as any other pedagogical approach, requires a set of preparations, preconditions and special activities to make sure that the proper time, energy and resources can be used in the most effective and efficient way. The whole approach is meant to happen in a system that is oriented towards the case study. The best way is to describe the interrelated activities during the semester that should form a unique set of behavior and requirements (Figure 1). If lectures are *ex cathedra* it is very difficult to have a fruitful discussion during the seminar according to the case study methodology. Students are confused with a variety of approaches and could behave in an opposite way (trying to be interactive at the lectures and silent at the seminars). Literature should be discussed in the lectures between the case study blocks and should be complimentary. If the obligatory literature is about the strategic alliances, the accompanying case study should deal with a similar issue. It is expected that the students attend the lectures prepared, to actively participate and to write short essays or answer questions concerning the case study. It is not just the teacher that should be prepared but the students as well. The final exam should follow the same case study logic. If the lectures and the literature have been explained with a case study methodology, the final exam should be in the same form. It would be counterproductive to create a multiple choice exam if the students' work during the semester was a team-based analysis of case studies and their oral interpretation and discussion. The combination of methods and approaches would bring confusion, lack of motivation and willingness to participate in the classroom.

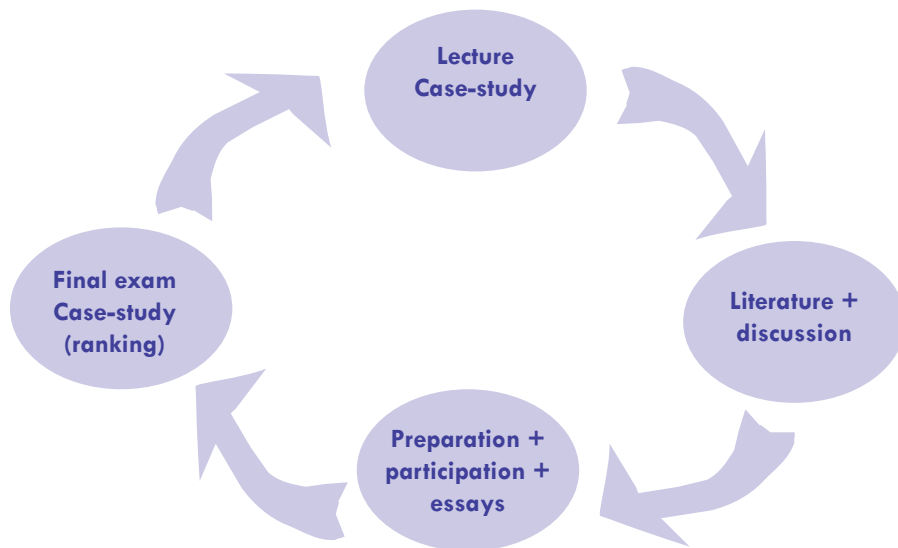


Figure 1: The case study methodology circle (own illustration)

Another goal of the case study methodology is the active participation of students. It is expected that students read the case study, the theoretical background, discuss the questions in the team and actively participate in the classroom. The responsibility for learning is divided between the teacher and the students. If students refuse to participate or come without preparations, it is impossible to expect the teacher to infuse all the necessary knowledge, skills and techniques to the students' brain without their permission or will. The learning process should be two-directional with mutual respect. The teacher's obligation is to adjust the grading system accordingly and to outline a clear set of learning objectives and outcomes, and the student's obligation is to seriously understand his or her duties.

The case study methodology does not exclude *ex cathedra* lectures but during the discussion it is possible to incorporate short lectures (5-15 minutes) about the issues being discussed in the case. Students will establish connections between the theory and the example in the case study and will understand it more profoundly at the first glance.

The discussion of the case study does not have to last for several hours. On the contrary, it should be focused and time-limited in sessions of 15 minutes up to an hour. If there is a longer and more complex case study, it is necessary to organize blocks of discussions with a leading theme/theory/point of discussion. Harvard professors have even detailed training sessions about the organization of data/blocks on the blackboard, but the experience of teaching the same case study several times in a row will just do the same. It is very helpful to have a colleague who is practicing the case study methodology as a source for mentorship advice and discussions about good and bad points of the case study.

The case requires the reader to step figuratively into the position of a particular decision-maker. After a short introduction the students quickly involve themselves personally in the story of the case study and after several minutes they take decisions as top managers of a multinational company. It is interesting for students with no business experience to step in and face the complexity of taking a decision or the number of layers of one particular

problem. During the discussion the teacher needs to focus on two aspects: process and content. The process implies the stream of discussion in the classroom such as active students, constructive arguments, silent students, monologues, misused arguments, foolish comments. The content implies the material being discussed in terms of taking care of time and the points of the case, theoretical background, and covering all the issues in the case. The teacher should find a way to inspire students to actively participate, be in harmony with verbal and non-verbal signs (asking for opinion and strongly respecting the students' input), manage spontaneity (feel when the right moment has come to move to another discussion block, break the silence, warm/cold call, or redirect the discussion to the focal point of the case) and handle unexpected situations (for example a mental passiveness of the whole group or an aggressive student attitude). There are not two case study lectures that look the same. In each of them the students have the ownership of the discussion and the teacher follows only the several critical points (theoretical aspects, point of view, options) while the rest of the discussion depends on the students. Sometimes it looks as if it is more efficient to give a lecture and explain the theoretical background but the connections in their discussions, arguments, and stream of thought brings them to the same results in just a slightly longer time. The results show that the students remember the conclusions they reached more profoundly and longer in comparison to the facts and figures presented in a sophisticated multimedia presentation.

Research about the case study methodology used in the classroom concluded that students can develop an inventory of skills:

- Analytical skills – students use a number of frameworks, methods and techniques both qualitative and quantitative; they analyze the problem (real problem of the case study and not the problem stated in the text); handle a large quality of data; practice critical thinking.
- Decision making skills – students learn how to generate options, set the requirements, alternatives and finally how to decide.
- Application skills – students learn how to implement the theoretical knowledge base with practical examples.
- Oral communication skills – when discussing, students construct arguments and take sides in some point of the discussion.
- Time management skills – students face a number of pages to read to prepare for each of the lecture and have to manage time in a team.
- Interpersonal skills – apart from the teacher, students learn from their colleagues when working and discussing in teams.
- Creative skills – students have to look for a creative solution that overcomes a theoretically suggested solution.
- Written skills – the results of the case study analysis have to be presented in a compressed form with explicit answers and conclusions.

The case study lecture is a set of numerous methods and techniques that the teacher uses in order to accomplish a fruitful discussion in the classroom. The opening question is one of the most crucial elements that set the atmosphere of the whole lecture. Depending on the day, the discussion can be dynamic or a depressing discussion between two students. As everything in life, the teacher and the students using the case study methodology will have their ups and downs. The teacher's role is to make the discussion happen; either to be a devil's advocate or allow the students to learn from each other. The conclusion of the class is one of the elements that give students the sense of purpose and the main points of the case study. It should be used to summarize the case, the theoretical points, the critical points, and the points that are crucial in the real-time situations.

The length and complexity of the case study is a special issue. The combination of three dimensions of the case study will denote the length, complexity, and the level of discussion for each case study material (Figure 2). The analytical dimension denotes the nature of decision making tasks; the conceptual dimension denotes the concepts and theories that should be read and applied; the presentation dimension relates to the organization of information contained in the case. At the beginning of teaching case studies, it is advised to start from the simple, short cases that promote one idea/theory/issue and later throughout the semester the complexity of case studies can be raised.

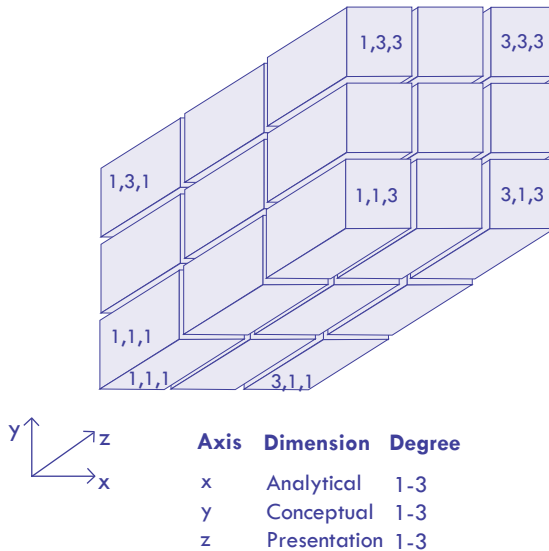


Figure 2: The Case Difficulty Cube (Mauffette-Leenders, Erskine and Leenders 2001b: 121)

The decision concerning complexity depends on the students' level, their background, and the subject. There is an option for case redundancy and use the case for two different issues to teach, and have extra material for senior class or just to use a case study as the set of several parts for different topics (part A, part B, Part C etc.).

3.2 Classroom Experience from the West and East

Experience with the case study methodology as both a teacher and student in the West (USA) and the East (Croatia) resulted in a conclusion that the way case studies are used at Harvard University cannot be the same way as case studies are used at the University of Rijeka (Croatia). The essence of thinking – as the main point of a case study aimed at Harvard should be the underlying idea of each case study approach but the approaches should differ slightly concerning the culture, heritage, experience, and the settings. The point of this chapter is to give hints for a realistic setting of teaching, using the case study and not benchmarking the Harvard way directly to local universities. Table 1 summarizes the main characteristics of both the university life from the West and East and the compromise that could be made in order to implement case study methodology at the local universities.

In the West, the role of the teacher is clearly set as the facilitator that helps and supports the student in his or her learning process. Both of them are partners in the process of mutual learning with a two-way responsibility, each with a distinctive role in the process. The teacher and the student prepare for the class and the student actively participates in the discussion,

asking questions and stopping the teacher if there are confusing explanations. The ownership of the process is in the hands of the student who paid for the class and demands specific knowledge and skills that could be used in a future job to earn more money.

The East has a tradition of classical lectures and seminars and it is extremely hard to break the pattern of the *ex cathedra* approach for transferring ideas and knowledge. The student should be respectful and silent during the lecture and might ask a question at the end of the lecture. The teacher asks a question during the lecture, but it is more a rhetoric than a real question aimed at students. The goal is to present the knowledge with the help of theories, tables, charts, presentations or by stories from a personal life rather than involving students in the discussion. The main point of the lecture is the theoretical topic, rather than the real time problem in the business environment. Teachers present the material from the books, literature or internet and therefore students suffer from a lack of motivation to attend the lecture. Students do not feel that a lecture is a value-added activity and they do not regard it as something obligatory in their studies. Students do not have questions, comments and are mentally passive during the lectures. If any questions asked, the character of the question is more politically intonated rather than a problem-based question.

Areas	West	East	Compromise
The role of teachers	Facilitator - coordinates the process of learning	Expert - the knowledge should be transformed to students	Coordinator - explain the complex theoretical points, help students with the learning process
The role of students	Partner	Subordinate	Mutual respect - set clear relations, obligations and rights
Type of lecture	Discussions	Ex cathedra	Combination of case study analysis and small blocks of theory
The range of responsibility	Two-way responsibility	One-way responsibility	Setting a clear goal, learning outcomes and grading criteria
Studying	Prepare for the classroom, actively participate, set questions	Silent, not interested and motivated, not familiar with the materials, mental passiveness	Set the grading system based on the active participation and preparation for the class
Student Attitude	I paid for the class, I demand knowledge and I will do my best to find a better job after completing this class	The teacher is here to educate me, my parents paid for the faculty, I am not motivated to study	Set the motivation grading system for active participation

Table 1: The main differences between West and East when implementing the case study methodology (own illustration)

The setting in which the case study methodology was created is objectively different from the one at local universities. It would be ill-advised to implement the case study in the form in which it has been developed because that is a totally different setting, but it is advised to find a compromise for the case study methodology entailing effective and efficient results respecting culture, heritage, and the experience of local universities.

Another point in the case study methodology is the usage of the existing case studies on the market. There are a number of case studies complemented with teachers notes (special instructions how to teach a specific case) distributed by international institutions (the list is provided in the annex). The subjects are mainly about the internationally recognized firms and firms that operate on the regional markets (North American, South American, Asian, European market). One of the possible flaws in the beginning of teaching case studies is to use a case study about a small, anonymous firm from a different part of the world. The case maybe implies some cultural issues and details about the local market and students might be faced with an unknown firm that is far away from their own environment. The resistance of using such cases might be huge. The better choice would be to pick a case study that deals with a local firm, local problems, and local issues. The students will have already additional data to add to the data available in the text and will find it interesting to find out more about the products they all consume every day. Moving further away, teachers might find it interesting to write their own case with local firms and use it for classroom purposes. According to experience, students find it more fun and interesting to discuss and participate in the analyses by bringing more data than offered in the material.

4. Conclusion

The Bologna Process seems to be a great opportunity for changes and innovations to enter the lecture rooms and curricula. The new generation of students has different learning habits; modern technology is accessible to the majority of students and the mobility of work-force demands more competitive educational systems that enable students to find a job in the whole world. Teaching is a social art that should be cherished and appreciated in the society. One should develop the art according to the needs of the society, not forgetting about the nature of the human being and their values. According to the experience, the case study journey is fun and challenging, opening a positive atmosphere of learning in the classroom. Although the teacher's effort about teaching and writing case studies is still not recognized in the promotion plans, it is a worthwhile activity in which the teacher feels the joy of being a teacher by looking at the faces of students when they discover new horizons of thinking.

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- The Primis Casebook Database - list of a number of sources where to buy case studies:**
http://www.primisonline.com/cgi-bin/POL_cases.cgi
- The European Case Clearing House (ECCH):** <http://www.ecch.com>
- Centrale de Cas et de Medias Pedagogiques (CCMP):** <http://www.ccmp.fr>
- Harvard Business School (HBS):** <http://www.hbs.edu/learning/case.html>
- North American Case Research Association (NACRA), The Case Journal:** <http://www.caseweb.org>



**CREATING WIN-WIN SITUATIONS IN JOINT
PROJECT SEMINARS BETWEEN UNIVERSITIES
AND ENTERPRISES**

ARNOLD SCHUH



1. Introduction

This paper is about the development of successful joint seminar projects between universities, in particular universities of economics and business administration and business schools, and enterprises. Business schools have a professional and a practice-oriented mission: They have to provide their students with scientific knowledge, that is the theoretical and methodological knowledge of their discipline, but they also have to prepare them for the management practice. This double mission is common to all applied sciences such as the school of medicine or school of technology as it is their task to provide solutions for real life problems. However, this cooperation between business schools and enterprises that seems so natural is not as common in reality as one would expect.

The aim of this paper is threefold:

- First, to outline the context of this type of cooperation in order to understand what factors are promoting or hindering a closer cooperation between these two parties;
- Second, to discuss the major elements and principles of cooperation that will lead to successful joint projects;
- Third, to present two joint seminar projects as case studies of such cooperation.

This paper is based on many years of personal experience in organizing and leading such joint seminar projects. It is divided into three parts. I begin by raising the question as to why this type of cooperation is an issue at all. Then I present the key elements in the design of such a joint project seminar and a charter of cooperation. Finally, I present two project seminars that I and other faculty have conducted successfully for years at WU (Vienna University of Economics and Business) and which can be used as a guideline for the joint project seminar design.

2. Why is the University-Enterprise Cooperation an Issue?

We are faced with the strange situation that the mission of business schools and current developments in the higher education sector are favouring a more intense cooperation between universities and enterprises, but that its realization is lagging behind. As mentioned before, business schools have, in addition to their scientific research mission, a practice-oriented mission as well, namely to advance the body of knowledge and to transfer this newest knowledge to business practice. While there are different channels for knowledge exchange and transfer, the transfer via joint projects and via graduates seems to be the most effective. The advantages of the university-enterprise cooperation are obvious:

- (a) contacts with management practice during the studies enrich the education of the students;
- (b) enterprises get a chance to present themselves to the students as an attractive employer;
- (c) universities learn via these contacts what qualifications are sought after on the job market for graduates and what are pressing challenges in the business world that should be addressed in research.

The trend towards the knowledge-based society, in which knowledge is replacing capital and labour as primary production sources, is a further factor supporting a closer cooperation. The value of knowledge is increasingly determined by its economic value. Higher education systems are seen as focal in contributing to a nation's or a whole region's wealth and

competitiveness (e.g., the Lisbon Strategy for Growth and Jobs of the European Commission¹).

Not surprisingly, today the quality of a university is not just measured by its output of scientific publications and graduates, but also by the way it cooperates with enterprises and other institutions. For instance, EQUIS, the leading European quality improvement and accreditation system for higher education in business and management, evaluates the balance between high academic quality and the professional relevance provided by close interaction with the corporate world². A strong interface with the world of business is, therefore, as much a requirement as a strong research potential.

What are the barriers that hinder stronger cooperation between universities and enterprises? In my opinion, the main reasons are university culture and related incentive systems. Curricula of business schools have a tendency to concentrate on the delivery of the conceptual-theoretical knowledge while often little room is left for the application of this knowledge. This is reflected in the incentive system of the university. The extra effort of faculty who engages in university-enterprise cooperation is not really honored within the system. Focusing on research is more beneficial for an academic career. The findings from a joint seminar project that focuses on finding solutions for the problem of a corporate partner can be rarely published in a top journal. Taking into account further that cooperative projects require more effort and time than preparing a normal course might make it difficult to persuade faculty to get involved in such projects. Therefore, creating a climate that facilitates and honors such initiatives are a precondition for a stronger involvement of faculty.

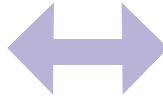
In addition, when discussing the potential areas of cooperation between business schools and enterprises one has to see the whole universe of possibilities. There are various forms of university-enterprise cooperation each with a different purpose, balance of benefits and levels of contributions and involvement: Internships, part-time jobs, diploma/master/doctoral theses written for topics suggested by enterprises, executives as adjunct lecturers, guest speeches, joint seminars or research projects and sponsorships are all possible forms of cooperation that bring together students, faculty and representatives of enterprises. When looking for a common ground both parties should start with their interests and expectations in a cooperation vis-à-vis the other (Figure 1). Business schools know that a close cooperation with enterprises enriches the education of their students and raises their attractiveness in the students' market. Moreover, a strong interface with the business community is perceived today as an indicator of quality. And it is obvious that enterprises are primary targets for fundraising activities. From the enterprise perspective, a good relationship with a business school helps in the recruiting process and in building an image as an attractive employer. Enterprises are interested in the access to state-of-the-art management knowledge and staff training services. Strong relations with universities also help it to be perceived as a good corporate citizen. The list of arguments shows that the business school-enterprise relationship comes close to a symbiotic one as the interests in many points converge.

1 The objective of the Lisbon Strategy is to make the European Union the most competitive and dynamic knowledge-based economy in the world. Promotion of innovation and the development of the knowledge-based society play a major role in these considerations.

2 EQUIS stands for European Quality Improvement System. This accreditation service is offered by EFMD, an international membership organization based in Brussels: www.efmd.org

Business school's interests

- Enrichment of students' education
- Increase of the business school's attractiveness for potential students
- Close cooperation with business community as an indicator of overall quality
- Contacts facilitate research cooperation and knowledge exchange
- Financial contributions



Enterprise's interests

- Recruiting of graduates at the campus
- Possibility for employer branding
- Access to intellectual resources (new know-ledge, methods)
- Providers of staff training
- Concrete solutions for current problems
- Proof of good corporate citizenship

Figure 1: Overview of the interests and expectations of business schools and enterprises (own illustration)

3. Developing Promising Joint Project Seminars

I would like to focus in this paper on joint project seminars between enterprises and universities. The distinctive feature is that the cooperation is happening in the framework of a course which is part of a study program. At WU this is typically a seminar, describing a course at an advanced stage of the study program, with a flexible time and meeting structure. Combining a joint project with a seminar has the advantage that a group of students with a certain level of qualification is available as a resource and that at this stage of the education a project bridging theory and practice can yield the best returns for all parties involved. The disadvantage is that the project has to be carried out within the academic schedule, which limits the flexibility in project design.

When designing a joint project seminar, the following five elements have to be considered: choice of the topic, number and structure of participants, process and organization, expected outcome and funding. The faculty with the lead function in the project can influence the success of the project by carefully planning the seminar along these lines and by considering the interactions between these design elements.

The topic of the seminar can be either more research-oriented or more education-oriented. A typical research-oriented topic is a market, competitor or industry analysis. In this case, the corporate partner uses the students as resources for market research. This approach is of particular attractiveness to the enterprise when the students have certain competencies that qualify them for this job. For instance, this is the case when students have to work on a comparison of different country markets and the class is composed of students from these countries. They speak the local language, know the current economic situation of the country, national industry structures and the major players in the market and, in general, have a better overview of local databases. The advantage for the participating students lies in carrying out an analysis for a particular industry and applying methods and concepts learned during the studies. They also get direct feedback from the management on the possible contribution of their findings, find out that the data collection in practice is more difficult than expected and see how the management makes decisions with often incomplete, sometimes even contradicting, information. While the main beneficiary of this type of project is the enterprise which is provided with a wealth of new data and additional interpretations, students get insights into the difficulties of market research in practice and how management is coping with this situation. I always recommend to my corporate partners that the research-oriented

project should not be limited to the data collection phase but also include management recommendations by the students. Asking the student groups to come up with related decisions such as assessing the market potential, ranking different country and product markets by their attractiveness or formulating marketing and sales strategies for each market forces them to reflect about the quality and relevance of data and to connect the information obtained with managerial decisions. Given the obvious benefit of this type of studies for the enterprise, it is also easier for the involved university institute to ask for an honorarium or donation for its work. However, unlike business consultants, universities cannot guarantee a certain outcome and the same degree of professionalism in the interaction with the client as these projects are still part of an educational process and the academic and individual student's schedule.

In the more education-oriented projects, enterprises provide a real life case study for which the students, often in the form of an inter-group competition, have to develop recommendations. This real life case study often corresponds with a current or recent business case for which the company already has a plan or has just began to implement it. In this seminar type, the recommendations of the students are not always the primary goal of the cooperation although the firms appreciate the external judgment and ideas. The main reason for its involvement is rather to be present at the university, to become (better) known as an attractive employer and to recruit excellent students out of the seminar group. On the other hand, the involved institute enriches its study program by offering this practice-oriented seminar. In general, this seminar format is a great opportunity for the students to learn how an enterprise is approaching a specific business case and to get first-hand insights into the decision-making process ranging from the motives over the concept related decisions to the final implementation. It is obvious that the effort and benefits for both parties are more balanced in this project type and universities cannot expect additional (monetary) benefits when the partner is contributing a lot of preparatory work (case study, presentations) and personnel. The choice of the topic is central to the project seminar design as it determines the whole character of this cooperation.

The number and structure of participants are a further key element in the seminar design. Project seminars can include one or more universities and one or more enterprises. In addition, the number of participating students and their personal and academic background influence the potential outcome too. While in the simplest case one institute cooperates with one enterprise, it can make sense to add partners on the academic and business side. The institute of a business school can team up with an institute at a technical university to work on a business case for a corporate partner in the technology sector where commercial and technical knowledge is needed to find a realistic solution. In international project seminars that are aimed at the market entry or expansion in a foreign market, the university and enterprise from the home country, which initiated the project, may look for a local university partner in the host country. Furthermore, the local subsidiary of this multinational enterprise is typically involved in such a project too. Joint project seminars with multiple corporate partners are rather the exception. This may happen when a consortium of enterprises is supporting a study program and the project seminar is contributing to the overall theme of this program. For example, the core course of the Master Class Central and Eastern Europe at WU, an 8-month education for future managers in the region which is financially supported by several firms, is always devoted to a management topic relevant to doing business in the region. Two semesters long the participants work on a topic such as change management or knowledge transfer within multinational corporations operating in this region. In such a context it is important to find a theme that is of general interest and not only relevant to one of the corporate partners. The supporting enterprises are closely involved in the choice of the

seminar theme as well as via guest speeches, interviews of representatives and case studies of their firms. The final report is then presented to the participating enterprises and discussed with them.

The number and level of participating students is important to consider. The larger the number of students, the more difficult is the handling of the seminar. Although the optimal size can vary depending on the topic a class size of 16 to 24 students is ideal. With an increasing level of education and work experience the task also gets easier for the supervising faculty. Conducting a practice-oriented seminar with undergraduates without any work experience is a greater challenge than with graduate or post-graduate students who study part-time or in an evening program. The potential difficulties may stem from a lack of knowledge and lack of experience in dealing with companies. It is obvious that a seminar structure with multiple parties, namely involved universities, companies and locations, offers the possibility to integrate multiple perspectives but at the same time increases the complexity of the project and, as a consequence, the need for coordination.

While fixing the conceptual part of the seminar may be quite a challenge, fixing the organizational part should not be underestimated. As academic courses project seminars have to be integrated into the academic year format with a given start (at the beginning of the semester) and a fixed ending (before the semester ends). The faculty has to make sure that the assignments can be completed within the typical four month semester format. When two universities from different countries are involved, semester schedules may not be congruent. Either classes start at different times or one loses precious time focussing on the overlapping time period. In addition, the credits awarded for the project seminar may differ between the schools. Since credits (e.g., ECTS points) are related to invested time, the student groups have a different perception of the contributions which are expected from them. In case travelling is involved, an administrative support is necessary for making the arrangements.

Both parties, the university and the corporate partner, have expectations related to the joint project. The success of such a project is measured against the expectations. Two worlds, the corporate and academic world, with different cultures concerning approaches and performance, meet in such a project. Therefore, it is crucial for the faculty to manage expectations and to explain to their partner what is achievable within this context. Corporate partners have to understand that a project with a student group is not the same as a project with a business consultancy. The faculty cannot promise a certain outcome given the educational character of the project seminar. In order to promise a certain outcome you need control over input factors such as time invested, qualification and motivation of students. This is often not the case. Seminars are part of the study program and faculty normally cannot hand pick the students. The faculty can guarantee a minimum level of conceptual-theoretical knowledge and methodological qualification related to the stage in the curriculum. Moreover, the availability of data or access to informants is hard to determine without industry insights at the beginning of such a project. Thus, it is only fair that the faculty addresses this issue at the beginning and informs the partner about the possible variance in the outcome. As the contacts on the enterprise's side are often graduates of universities and colleges, they normally understand these reservations.

Financial issues come in two forms: Expenses associated directly with data collection and analysis and expenses related to travelling and social events. Having adequate funding contributes to the perceived quality of the whole seminar. Direct costs related to data collection and presentations (interviewing, telephone, printing etc.) have to be covered by the enterprise separately. In order to allow budgeting for these expenses the estimated costs could be also part of a fixed donation or honorarium to the institute. In addition, a

budget should be available for social events (e.g., catering for kick-off meeting, farewell dinner, sightseeing tour, gifts), for transportation (e.g., company visit) and for the preparation and administration of the program, especially when foreign student groups are involved. In international programs, students often expect a travel stipend from the university covering part of their accommodation and travel expenses. Making the participation affordable to the students can be a big issue when the seminar is mandatory. In case where the university does not provide a travel stipend, a certain amount should be included in the calculation of the honorarium to the corporate partner.

Increasingly, research-oriented projects are seen as a way to generate income for the institute or the university. When the primary focus of the seminar is market research and data collection for the corporate partner, this claim is mostly justified. Then the educational value is rather small for the students although they learn hands-on about the difficulties of obtaining relevant data in reality. Provided that the outcome has value for the partner, it is only fair to give a donation to the institute or pay a fixed amount. Institutes with a strong (methodological) specialization and experience (e.g., advertising research) may even offer analyses, surveys or laboratory experiments at preset prices. They may be the undisputed leaders in the application of a specific methodology and need the income for investments in equipment, software and personnel. The more the cooperation tends towards the education-oriented format, the lower the chance to get a financial compensation from the corporate partner.

The following principles should be guiding the cooperation between business schools and enterprises:

- Understanding and appreciation of the different worlds;
- Educational purpose as the primary objective of a joint seminar;
- Commitment of all involved parties to the project;
- Fairness in the treatment of the partners.

It should be clear that both parties have different interests in such a joint project but that there is a lot of common ground, in particular giving students insights into management practice and bringing together students and potential employers in a working situation. However, the context of such a joint seminar project remains an academic one: students attend the course because it is part of the curriculum, they are graded for their contributions and they get credits for it. A strong commitment from faculty, students and the corporate partner is a necessary ingredient for success. Dissatisfaction arises when students do not get any feedback on their final presentations from the participating managers or when faculty and students take the task lightly. A fair treatment means that both parties show respect for each other and are interacting on equal footing.

How do you know that the joint project seminar was a success? The best indicator is expressed satisfaction with the results of the project. Corporate partners are satisfied when they want to continue the cooperation with the institute, when they offer jobs to participating students and when they give a donation to the institute. Students show their satisfaction by naming it the best course of their studies. And faculty is convinced that it made the right choice when he/she wins the "Best Course of the Year" Award.

4. Case Studies of Selected International Project Seminars

Now I would like to present two examples of international project seminars – the East West Project Seminar (EWPS) and the seminar on Doing Business in Central and Eastern Europe (DBCCE) – as brief case studies. Both have been offered at the WU since the mid-1990s and both are focusing on business activities in Central and Eastern Europe (CEE).

	East West Project Seminar	Doing Business in CEE
Universities	WU Vienna	WU Vienna + Carlson School of Management (CSOM), University of Minnesota, USA
Corporate partner	Corporate partner of the JOSZEF association	US company
Objectives	Seminar participants shall develop a better understanding of the specific problems that multinational companies face today when they are active in the emerging markets of Central and Eastern Europe.	
Duration	October – January	March - June
Language	German or English	English
Participants	16-28 JOSZEF incoming + outgoing students	20 CSOM + 10 WU students
Faculty	1 WU faculty	1 WU + 1 CSOM faculty
Locations	Vienna	Vienna + city in CEE
Funding	Corporate partner bears all direct costs + costs for social events/transportation	Corporate partner pays a predetermined amount covering administration and social activities

Table 1: Overview of the two seminar types (own illustration)

4.1 The East West Project Seminar

The concept of the East West Project Seminar (EWPS) has a long tradition at WU and has been offered since 1994 as a core course in the JOSZEF Program. This program provides Central and Eastern European students with a special business education, and gives WU students the chance to acquire “CEE competence”. It is a program that was designed in collaboration with corporate partners and is financially supported by them in order to nurture highly qualified students as prospective managers for the CEE region. The gateway function of Vienna to the countries in Central and Eastern Europe, the strong orientation of Austrian business towards this region, and the presence of nearly 300 regional headquarters of multinational firms in the metropolitan area of Vienna provide a fertile ground for this type of university-enterprise cooperation. The EWPS is a joint project seminar between the WU and a multinational firm that is operating in CEE and that is a partner of the JOSZEF association. The corporate partner provides a real life business case that the firm currently faces in the region.

This is a selection of topics covered in the seminar in the past years:

- Analysis of the teenager markets for toiletries and cosmetics in selected countries of CEE (Beiersdorf CEE)
- Developing marketing strategies for Henkel superglues in four selected markets in CEE (Henkel CEE)
- Scenario planning for the automobile trade in CEE for the year 2020 (Porsche Holding)
- Industry analysis and entry strategies for supplies for commercial cooling appliances in four CEE markets (Rehau SEE)

The class size varies from 16-28 participating students. Most of the students are incoming students from partner universities in CEE. But half a dozen WU students are also admitted to the seminar to give them a chance to interact with their colleagues from other countries. The class is divided into groups and the assignments for each group are specified. Normally, the groups have the same assignment questions but for different countries or regions (e.g., South-Eastern Europe). The seminar is held either in German or in English depending on the preference of the partner. The international character of the EWPS stems from two sources: first, from the seminar topic that addresses a business issue in foreign markets, and second, from the high proportion of foreign students, typically students from 10-12 CEE countries. Ideally, local students are assigned to the corresponding target country group. That helps to overcome language barriers in market research. For each group a contact person at headquarters and at the local subsidiary is named. The EWPS starts with a kick-off meeting and ends with the final presentation at the premises of the corporate partner. Internal meetings all three weeks and one to two intermediate presentations together with representatives of the partner help to monitor the progress of the work and to correct the direction of the work if necessary. The outputs of the seminar are presentations (intermediate and final presentation) and a final report. While in the past I asked for a classic 40-50 pages seminar paper, I changed two years ago to the “consulter’s presentation” format, a more detailed PowerPoint presentation with smaller fonts and more text than usual. The seminar findings are delivered in a more concise form and in a format that practitioners often know from their own work practice. In addition, students are forced to tell their story in 15-25 slides which is, for many of them, a new experience and a good training for a job in the future.

The feedback from the partners is in general very good. Firstly, they like to see two dozen students working on an important business issue for them and bringing in their ideas, perspectives and work input. Secondly, they appreciate the mix of nationalities and the opportunity to see how students perform in presentations and discussions. The representatives of the enterprise are asked to give the groups feedback on their work and, in addition, to evaluate the performance of the individual students during the presentations. These evaluations by the practitioners are included in the final grades and the scanned (anonymous) feedback sheets are forwarded to the students.

4.2 Seminar on Doing Business in Central and Eastern Europe

The seminar on Doing Business in CEE (DBCEE) is a joint program that involves three key players: Carlson School of Management of the University of Minnesota, WU Vienna, and a multinational company from the US with operations in CEE. The seminar provides students with an experiential learning opportunity in which they develop an intellectual framework that helps them solve complex business problems that take place in different economic and social environments. By examining a case study, students gain an exposure to the emerging markets of Europe and learn how to manage an international consulting project.

The seminar, which is only held during the summer term, consists of two parts: during the first

part (from early March to mid-May) both university teams work relatively independently, then there are joint sessions in Vienna and a city in CEE from end of May to early June. The reason for this different start dates are semester schedules: the semester begins at WU in early March, the one in Minnesota in mid-April. The time leading up to the joint sessions is used for a general introduction into the subject with lectures by the faculty and guest speakers and reading assignments. At this stage students learn about the current situation of the economies in CEE and the business challenges which enterprises, operating in this region, face. Integration is provided by the course structure, schedule and the academic seminar leaders. The introduction into the real life case provided by the corporate partner happens in late April. Typically, this introduction takes place at CSOM in Minneapolis by representatives of the US headquarters. While in the past only the presentations were sent to the WU group, last year videos of the introduction into the case are recorded and distributed. After the kick-off, the groups begin with their research, mostly with the analysis of the country, industry environment and structure, product markets and competitors, either in their local groups or as mixed WU-CSOM-groups right from the beginning.

The topics of the project were mainly related to business development and growth strategies:

- Business growth strategy for Toro's grounds product line in Poland (Toro Company)
- Impact of the financial and economic crisis on the CEE economies (3M Corp.)
- The demand for 3M goods and services in the Russian coal and iron ore industry (3M Corp.)
- Expanding commercial graphics in Russia (3M Corp.)
- Growth strategy for personal computers in Hungary (IBM CEE)

The second part of the seminar consists of joint sessions. In the first week, the groups meet at WU in Vienna. The groups exchange results of their research and groups are again mixed, now formed according to the assignment questions. In addition, guest speakers such as CEE experts or market researchers are invited to talk about the target country and the industry. At the end of the first week the structure and line of argumentation of the final presentation should be ready. At the beginning of the second week the group travels together to the target country, mostly its capital city. There, the final research is done, customers and retailers are visited and the group has the chance to meet with the subsidiary management. On the last day, the groups present their analyses and recommendations to the local and regional management and discuss the results with them.

Since the start of the DBCEE series in 1996, the main structure of the program has remained relatively stable. The target countries and cities visited in CEE changed every year, but not the corporate partners. The cooperation with them was a long-standing one, which stands as a witness to their satisfaction with the program. Cooperation over several projects has the advantage of reduced preparatory efforts. The format is known, the duties of each party are clear and the partner knows what can be expected as an outcome. What has markedly changed since the start of the program is the increased utilization of modern media. Presentations are recorded on video and shared via the Internet, seminar groups use social media to organize themselves across national borders, and for final presentations telephone or even video conferences are used what allows headquarters management in the US to follow the presentations and to participate in the discussion.

5. Conclusions

Finally I would like to sum up the key lessons from my joint project seminar experience:

- First of all, find a committed corporate partner. Make sure that the partner understands how universities work. Explain the context of such a project and be realistic in describing the outcome that the partner can expect.
- At the university, it has to be clear that joint project seminars mean more work, personal involvement and responsibility for the faculty leading the project. Find ways to show appreciation for his/her work.
- The faculty has to accept the leading role of the project owner, he/she represents the university vis-à-vis the corporate partner and he/she is responsible that the expected outcome is delivered. When professors from two universities are involved, roles have to be clarified as well as the division of work in advance.
- When choosing the topic of the project, a balance between the academic and enterprise perspective has to be found. Ideally, the joint project seminar should be a practice-related learning experience for the students and a substantial and constructive contribution for the corporate partner.
- When two or more universities are involved, attention should be paid to the administrative framework. Differing semester schedules, evaluation standards, credit systems, work load expectations and teaching cultures can lead to frictions in the cooperation between universities. Define an assignment that can be realistically completed in the given time.
- In the interaction with business people, soft skills such as manner, interpersonal skills and presentation techniques become an issue. In addition to content, the conduct of individual students and of the group as a whole vis-à-vis the representatives of the enterprise are shaping the perception of the university. Dress code and code of conduct should be explicitly addressed in an internal meeting to avoid unpleasant surprises. A rehearsal of the final presentation should also be standard in the preparations.
- Finally, having a budget for the joint project seminar facilitates the implementation of the project. No cost or low cost approaches work in academia very well, as we know, but having at least a minimum budget makes the job easier for the coordinator and leads to a higher overall satisfaction of the students with the seminar.

Creating win-win situations for all parties involved in a joint project seminar is not a miracle. All it needs is good preparation of the project, an understanding and appreciation of the two worlds and a clear articulation of the roles and contributions of each party. Then the joint project seminar will be a great learning experience for students, faculty and enterprises.



WU ZBP Career Center – An Example of Best Practice

URSULA AXMANN



1. Introduction

At Anglo-American universities career centers have always been an inherent part of university life, whereas in Europe, these centers only became an important issue over the last few years. Here and there, some universities offered career center services, but it was not until five years ago that the number of career centers increased dramatically in Europe. Private universities and colleges in Europe started to orient themselves towards the American role model early and invested in the foundation development of career centers. At first, public universities were rather conservative concerning the establishment of career centers but now show considerable effort to follow the trend.

In this article a concrete example of a career center at a public university, which has been a successful institution for almost 30 years, is presented. The WU ZBP Career Center even functions as a role model on an international level.

2. Initial Situation – The Beginnings

To some extent the prestige of a university depends upon the placement of their graduates in prominent jobs. Therefore, career centers significantly contribute to a university's profile and reputation. Simply integrating the American model into the European context would be easy, but generally, this adaptation is ill-advised because of the lack of financial resources.

In the United States or United Kingdom, career centers of medium-sized universities consist of approximately 30 employees. The extremely service-oriented focus of comparable institutions in the US allows students to enjoy their studies without larger trials and tribulations. Since students pay high tuition fees, they expect extensive services from the career centers – and universities put a strong emphasis on these services.

The situation at European universities is different because they are rather oriented towards research and teaching than towards their students' careers or preparation for it. This is well-reflected in the average percentage of employees in career centers. Most institutions are staffed with ten or even less employees. In many cases the career centers are even single-person operations only; often this entails that one to three employees are responsible for a few thousand students and graduates. Because of the lack of financial resources many career centers concentrate on helping students in ways that they could help themselves – in contrast to the American role model.

The organizational form of the university itself has a direct influence on the design options of the respective career center. Thus, just copying the American model or structure does not suffice. For instance, the triangle of alumni relations, fundraising, and career center which plays an important role at American universities is almost non-existent and rarely connected at European universities.

In the following, I will present the WU ZBP Career Center on the campus of Vienna University of Business and Economics – Europe's largest University of Business and Economics. This career center has been successful over almost three decades. The framework that is responsible for the environment in which this institution operates is represented by the publicity of the university and depends on third party funds.

3. Best Practice: WU ZBP Career Center

WU ZBP Career Center was founded as Austria's first career center in 1983 with its office on WU's (Vienna University of Economics and Business) campus. Since then, ZBP has grown continually into one of the largest career centers in the German-speaking area and functions nationally and internationally as a best practice model for other career centers.

3.1 Organization

ZBP is a non-profit association with a board of directors composed of the WU rector, four selected professors, two assistant representatives, and representatives of the Austrian Students' Union at WU as well as the chairperson of the advisory board. The advisory board itself consists of selected representatives of ZBP's 150 partner companies.

The formation of these committees was particularly helpful during ZBP's foundation because it guaranteed the university's support and thus, could successfully integrate expectations and requirements of companies within the structure of a career center's extensive range of tasks.

Over 27 years of know-how as professional job providers and consultants for business, the graduates can benefit from the close ties that WU has to companies in an efficient, uncomplicated and cost-effective search for future employers, right at their university. WU and potential employers are equally interested in qualified business graduates. ZBP was well aware that an implementation of the business idea Career Center could only be successful if university and companies work together. ZBP considers itself as a well-functioning interface between WU, the working world, and students/graduates. Therefore, ZBP's every day work involves triangular agreements on behalf of the above-mentioned parties.

Employees

WU ZBP Career Center is managed by two executive directors. In 1983, the organization started with two employees. Today ZBP consists of 20 employees who can be compartmentalized into the following teams: recruitment/counseling, events/employer branding at university, and office management.

3.2 Funding

The Ministry of Education supported ZBP financially only once, namely on the occasion of its formation. Since then, ZBP finances itself with payment for services in graduate recruitment for companies.

150 companies enjoy a partnership with ZBP. They profit from preferred pricing on ZBP's services as well as ZBP's professional job placement abilities, not to mention university marketing of business graduates by paying an annual fee. Additionally, they receive online-presence on ZBP's website such as a high profile in the ZBP's career magazine. Companies who are not yet members can naturally make use of all offered services but have to pay a higher share.

All services related to a job placement are offered for free to students, the majority of counseling services are likewise for free, only some services are charged with a minimal fee to cover costs.

3.3 Standards of Quality

Our know-how as professional job providers and consultants for business graduates ensures that we are a competent partner, not only for job applicants, but also for companies. The basic elements of ZBP's success remain quality and professionalism in its counseling services but also the friendliness and commitment of its staff towards customers. Individual mentoring of applicants and long-standing relationships with over 500 well-known companies are a further part of ZBP's success. The high standards in quality at WU play a major role in ZBP's success.

3.4 WU ZBP Career Center's Tasks

ZBP's services can be split into three major fields of work:

- Recruitment services/vacancies for business students and graduates
- Events and Employer Branding (e. g. career events, employer branding)
- Counseling for students and graduates

- **Recruitment Services/Vacancies for Business Students and Graduates**

Vacancies are published through different channels and can thus reach interested business students and graduates. Companies can publish their vacancies online at www.zbp.at and in ZBP's bi-weekly print magazine JobNews. The latter is distributed for free on the WU campus.

One of the main recruitment services for ZBP's students is the applicant pool, a database which contains the data of business graduates who are about to terminate their studies within the next few months. About 75 percent of WU graduates register for this pool and are then successfully placed in entry-level position of companies. All registered candidates are invited to a personal interview with ZBP's recruitment counselors. In the course of this first job interview applicants have to present their professional qualifications and intended career objectives. As soon as a company announces a vacancy within their business, ZBP gets in contact with the proper applicants.

Another special recruitment event hosted by ZBP is the interview day known as TopJob International. This event sets itself apart from the graduate fair in such that it exclusively revolves around the filling of concrete vacancies. The event provides the opportunity of concrete job interviews between selected applicants and companies on one day only. Selected candidates present themselves in face-to-face job interviews with renowned national and international companies, and thus get a step closer to their dream job.

- **Company Events and Employer Branding**

ZBP's marketing services provide companies with know-how regarding the positioning of a strong employer brand, so they are able to win over the right potentials for their businesses. Students and graduates can inform themselves about different possibilities on the job market at first hand. Company presentations, workshops, the participation in Career Calling, the largest graduate fair in Austria organized by ZBP, and success stories of career paths are suitable ways of attracting qualified employees.

The main event organized by ZBP is Austria's largest career fair Career Calling. Since 1986, the fair is hosted by ZBP once every year. The number of exhibitors has grown over the years from 15 (first graduate fair) to 140. Lately, the fair counts about 5,000 visitors every

year. The cooperation of three universities (Vienna University of Business and Economics, Vienna University of Technology and Vienna University of Natural Resources and Life Sciences) guarantees a mixture of students and graduates with a background in business and economics, and engineering or natural sciences as desired by the companies. Despite the size of the Career Calling, the personal atmosphere provides the opportunity to find a suitable job corresponding to about 500 vacancies. For students the participation in the fair is free of charge.

- **Counseling for Students and Business Graduates**

ZBP organizes seminars enabling students and graduates to get to know themselves and their strengths and abilities better. In this way, they can prepare for a successful start of a career. Ranging from an analysis of one's potential to assessment center trainings to CV Checks, ZBP supplies students and graduates with relevant details and information that ultimately matter in the process of an application and job interview. Students and graduates learn to present themselves properly during an application process.

Publications such as the Applicant Guide and ZBP Career Magazine are valuable reading material for students and graduates to inform themselves about recent career issues. The quarterly published career magazine concentrates on issues concerning the working world, career start and careers in general as well as on continuing education. Furthermore, it presents success stories of WU graduates who have successfully managed a career start.

From the beginning of one's studies onwards, ZBP offers support when it comes to career planning. The term career itself can be defined in various ways; some of them unfortunately come along with negative connotations. This should not be the case. Hence, ZBP tries to refine each single student's individual idea of the term career in interviews and coachings. A pre-established general definition of the term should not exist, on the contrary: each student has to find his/her individual way to live a career. ZBP supports them in the definition-making process.

It is always challenging to adapt to new and different target groups on a daily basis, but this is one task that ZBP carries out with enthusiasm and impetus every single day. Professionalism, trustworthiness and empathy are ZBP's cornerstones and strongest principles.

WU ZBP Career Center Products / Services for students	
Vocational preparation	Covering letter/CV Check
	Free Monday
	Seminars (application hints, AC training, psychometric testing)
	Coachings
	Career counseling
	ZBP applicant pool
	Video analysis
Job postings: Daily job ads in the “ZBP JobNews” magazine and on the website www.zbp.at	Positions for graduates and junior executives
	Internships, part-time jobs for students
Recruiting events	Company presentations / workshops
	Graduate Fair
	Top Job International
Information	ZBP Website www.zbp.at
	„Karrieremagazin“ (career magazine)
	Newsletter
	Fair guide

Table 1: Overview of ZBP's services for students and recent graduates (own illustration)

4. Important Decisions and Questions in the Process of Founding a Career Center

In the past years ZBP has provided ideas and knowledge for a variety of national and international career centers when it comes to their formation process. Pivotal questions which should be answered at the very beginning of founding a career center are:

- Should a career center concentrate on one, more or all faculties and institutions of the respective university?
- To what extent is the career center financially supported by the university and to what extent can the institution cover the costs for itself?
- Is there enough support from the university?
- Should the organization concentrate on career counseling for students or on the placement of students/graduates, or should both services be offered equally?
- To what extent does/will placement for compulsory internships play a role in the career center services?
- What is the best way to present the career center services to students/graduates?
- Where does the professional know-how, required for a successful job placement of students/graduates, come from?

5. Conclusions and Recommendations

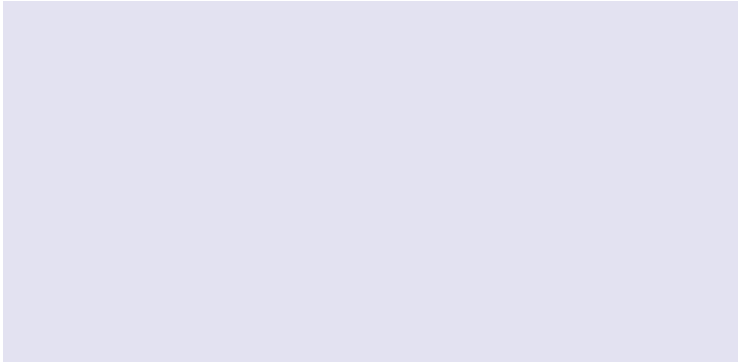
The continually increasing range of study programs at universities and universities of applied sciences results in a fight for the best students. As mentioned previously, a university's reputation also depends on its graduates' career paths. Thus, in the coming years, the significance of the career centers' work will increase. Only a few career centers will be in the position to enjoy the university's financial back-up, thus a significant part of the employees' tasks will be the financial funding of the institution itself. The positive news is: companies are starting to consider remuneration for the career centers' services more and more as appropriate.

Services offered by career centers are generally within their means. It is advisable to test various services and see if they serve the companies' purposes. Despite the necessity of financial coverage, students' interests should never be neglected. With a broad range of services, students should be guided through their academic years and be prepared for a successful career start. However, setting priorities rests with the individual management of the respective career center or university.



**ALBANIAN REGIONAL UNIVERSITIES AND THEIR DIRECT
IMPACT ON REGIONAL DEVELOPMENT**

MANJOLA NACO



1. Introduction

Nowadays there is a very widespread idea that the advancement of society is not measured by how many resources a society has or how much income is made, but by human resources, knowledge and technological skills. Thus, the challenge of any society is an increase of knowledgeable and skilled human resources and in this context higher education institutions play an important role in overcoming this challenge. In developing countries like Albania with a long and turbulent transition, this purpose becomes even more challenging.

Higher education in Albania had a special status in society before the 1990's. During that time, it was almost an obsession for parents to offer their children the opportunity to obtain a university degree. After the 1990's the demand for higher education became even bigger, adding pressure on the government to create opportunities and facilities in this direction. However, due to the financial inability of the state, the supply is far from satisfying the demand for education. Under these conditions the state moved to other mechanisms to meet the needs of education.

The Law On Higher Education in Albania (Ministry of Education 1998) gave the green light for the creation of private institutions of higher education. In 2000 the market quite naturally began to make early efforts in response to the high demand for education. This period was characterized by a significant increase in the number of students admitted to the tertiary level of education, as well as by the rapidly growing number of private institutions that offered this service.

It is clear that the development of Albania's higher education presents quantitative growth. Another development was the geographical expansion; public regional universities were established throughout the country. Besides the public university in Tirana, the following regional universities were established in Albania: Gjirokastra (1991), Elbasan (1991), Korca (1992), Shkoder (1992), Vlora (1994), and Durres (2005). The regional university expansion in Albania aimed at providing additional opportunities throughout a relatively wide area with relatively few providers in order to meet the demand from prospective students who might not otherwise consider participating in higher education. Geographically the goal has been reached. The universities are present and closer to the students. But, still there are some questions: Has the mission of higher education been fulfilled? Is it enough just to be present geographically? This paper will argue this is not the case.

A regional university should provide study programs that are in demand by potential students and that fit the labor market in the region, having a positive impact on it. It should produce graduates that are competitive in the labor market, making specialists that are in demand by potential employers. Like the steel and auto manufacturing industries during the 1990's, the universities will fuel the regional economic engines of the 21st century (Carnoy 2002).

A regional university should promote regional development. Through an analytical overview on the adequacy of study programs in these regions, as well as their labor supply and research centers, this paper examines whether the regional expansion has helped to achieve this mission or if it has just been a production of political decision and conjuncture of that time. Taking into consideration that during the data collection phase we found that there were no previous studies in Albania for regional universities and their impact in the region, this paper aims to give a green light to analytical studies or projects that can clearly identify and evaluate the direct impact of these regional universities for local economic development. The paper also tries to give modest recommendations for the changes needed in connection with the role these regional universities play as promoters of economic development.

2. Methodology

2.1 Delimitations

This paper focuses on regional universities; therefore, the term ‘region’ should be defined. “According to UNESCO classifications it can embrace whole continents if not hemispheres. At the other end of the scale it can be a limited linguistically based area, an administrative unit – of which there are many types – or an historical entity” (Neave 1979).

We will consider regional universities as institutions that belong to a particular administrative separation wider than a city. Albania has six public regional universities but our focus will be only on two of them: “Luigj Gurakuqi” University in Shkoder and “Fan. S. Noli” University in Korca.

The selection of these universities is based on:

- a) History and Experience: they were created at the same time;
- b) Location characteristics: similar demography, historical, and cultural characteristics.

Under these conditions, respective economic developments will be considered to make the difference and will be analyzed in order to test the economic development impact that these institutions have.

2.2 Methods of Data Collection

To accomplish this research, primary and secondary data were used. Primary data were collected from the questionnaire distributed among graduates of regional universities (Annex 1) and short face-to-face interviews with university staff according to a protocol questionnaire (Annex 2). Furthermore, the qualitative primary data include semi-structured interviews with experts of higher education in Albania, representatives of regional universities’ administration, and employees of local municipalities.

Secondary data include statistical numerical information about unemployment and employment possibilities in the regions that are collected by the Public Institute of Statistics Albania (INSTAT). Other sources of data are annual reports prepared by the Ministry of Education and Science in Albania, the Ministry of Finance and other publication data of specific regional universities via the internet.

2.3 Design of the Questionnaire

The questionnaire for graduates of regional universities is presented in Annex 1 and includes structured questions. Structured questions are dichotomous and include the scale method. The questions are designed to get specific information from the respondents and to help answer the research questions proposed in this paper. The contacts for regional university graduates were obtained from university administrators.

In total 64 valid questionnaires were conducted among finance and accounting graduates at regional universities in 2008. The survey was focused on groups of graduates from these two fields because we found that only in these fields was the supply of the graduates equal to the demand in both regions, making thus a valid comparison for the purpose of this paper.

Data was processed from 36 questionnaires completed at Shkoder University and 28 completed at Korca University. The total number of the selected group of students in 2008 at Shkoder University amounted to 102, and at Korca University to 97, thus the sample

represents 36% of the questioned Shkoder University graduates and 37% of Korca University graduates. Similar results concerning the percentage of the response rate shows that the data collected can also be compared between the universities.

3. Theoretical Background

“Knowledge is the most powerful engine of production“, states Adam Marshall states (Salmi 2000). In the center of a knowledgeable economy are talented people.

The basic economic impact of higher education is reached through an increase of knowledge and skills in the labor force but institutions of higher education must also serve as repositories and transmitters of knowledge capital. The main difference between human capital and knowledge capital is the fact that human capital cannot be isolated from the person who possesses it. Human and physical capital consists largely of education (Schultz 1981).

Higher education institutions can offer high quality education and training, thus increasing the human capital of individuals. Human capital is thought to be an important factor for developing markets to increase their development level. Education adds to human capital just as other investments add to physical capital (Becker 1993).

As human capital is important for the development of the economy, it follows that human capital which is better trained and fits better to the labor demand will create even more positive effects on the economy. Thus, every education institution stimulates economic growth.

Since the early 1980s, as a result of major structural changes in modern economies, a new wave of regional economic development policies have begun to emerge (Varga 1998). While traditional approaches were suitable tools for boosting localities in the era of mass production, they are no longer appropriate in the age of technology-led economic growth where economic globalization and the preeminence of knowledge and information in production give rise to a renewed importance of regions (Varga 2003).

Neave (1979) develops the analyses of the regional development and higher education interrelation and states: “The way in which education in general and higher or non-formal education in particular may affect and influence regional development depends on the stage of economic development which the region itself has reached”.

As Fischer and Varga (2003) point out, it is quite plausible that the presence of a research university can make locally specific contributions to the level of commercial innovation in its region. The university provides geographically specific access to resources such as libraries, faculty, and a ready pool of graduates at all levels. Research universities and institutions conduct basic research, i.e. create knowledge with the purpose of diffusing the knowledge they create. New knowledge that spills over most readily into the locality should result in localized private sector innovation.

3.1 Analytical Framework

3.1.1 Universities as Research Centers

A major factor which has to be considered when evaluating the economic impact of higher education institutions is research conducted by these institutions. Research is not an abstract ‘ivory tower’ enterprise. Research is essential to progress and to solving the social, technological and economic problems set by contemporary society. University research provides a vital service to regional and national economies, by developing new ideas, critiquing established positions and views and approaching problems in innovative ways.

Heynemann (2002) also recognizes that the university operates as a magnet that attracts entrepreneurs and increases business activity and one of the ways to attract entrepreneurs is through research. The facts show that universities have developed the area around them with the help of research. Many states are using their innovative universities as economic engines (Mackun 2001). Also Rosan (2002) recognizes that universities serve as fuel for innovation, entrepreneurship and regional synergy. Schultz (1981) emphasizes the role of university research: “education, including university research, has over the years contributed substantially to the productivity of the economy and to welfare”.

3.1.2 Universities as Employers

In many cities nowadays, universities are among the largest employers (Rosan 2002). This speaks to the trend of universities not only providing the knowledge to contribute to knowledge or human capital but also being considerable employers. These particular cases indicate the need to consider higher education institutions as important employers in particular regions and not only as providers of knowledge.

For the purpose of the empirical data analysis, based on human capital theory, knowledge impact on the economy thesis, previous findings about higher education institutions and development trends that they mirror, a simple model (Figure 1) is built which is then used to structure the paper and analyze impacts on regional universities in the Albanian reality.

The main economic impacts on the region are presented with the blue area representing the interaction between the Higher Education Institutions and the Economic Environment.

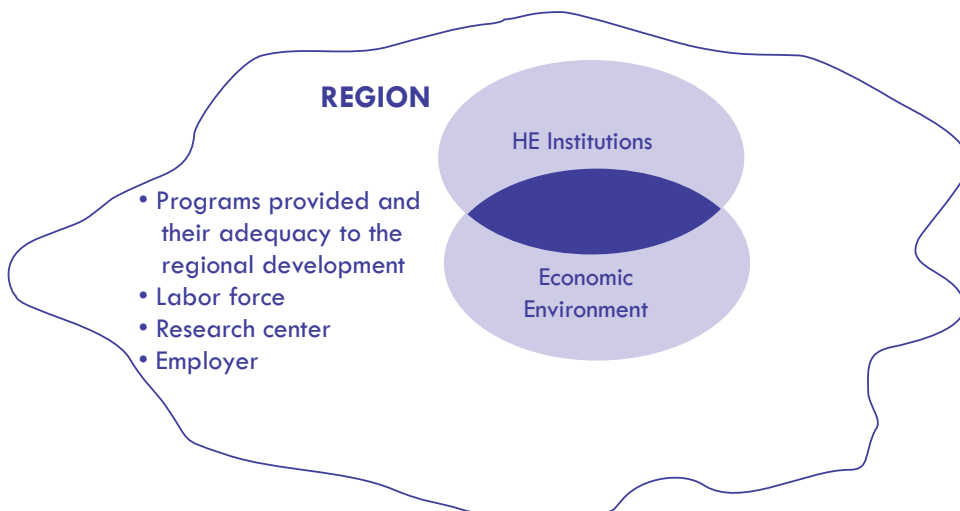


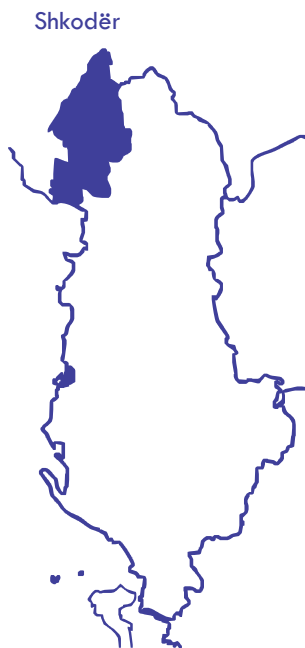
Figure 1: Regional Interaction between Higher Education Institutions and the Economic Environment (own illustration)

The economic aspects that are stated in the form of hypotheses in terms of testing their influence on particular regions are:

- H1:** Study programs provided by regional universities fit the regional needs
 - H1.1:** People with higher education account for a small part of unemployed people in the region
 - H1.2:** Graduates work in specializations obtained at university
- H2:** High percentage of regional university graduates stay in the region
- H3:** Regional universities are important employers in the region
- H4:** Regional universities provide research implemented in the region

4. Collection of Data

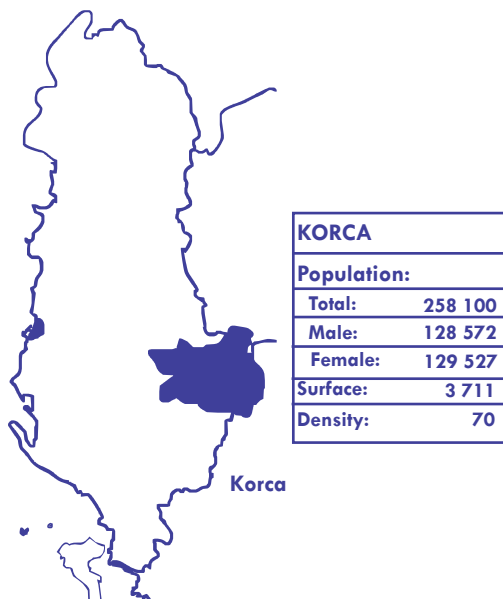
4.1 Shkoder Region versus Korca Region



SHKODRA	
Population:	
Total:	247 394
Male:	124 363
Female:	123 030
Surface:	3 562
Density:	69

Shkoder is the most important region of the northern part of the country with an important role in the national economy (Figure 2). Shkoder region is ranked in first place for the power production, second place for the wood industry, and third place for agriculture. The region's economically active population accounts for 41% of its population and the labor force participation rate is 63.73%. The distribution of employment by sectors is the following: Private non-agricultural sector 47%, private agricultural sector 38%, and public sector 15%. The long-term unemployment rate is 14% and the unemployment rate is 21%. The average monthly wage in the public sector is 34,570 Lek (approx. 250 Euro)

Figure 2: Facts and Figures about Shkoder
(illustration adapted by the author)



Korca is the most important region of the south-eastern part of the country and also plays an important role in the national economy (Figure 3). The region's economically active population accounts for 50% of its population and the labor force participation rate is 69%. The distribution of employment by sectors is private non-agricultural sector 65%, private agricultural sector 22%, and public sector 13%. The long-term unemployment rate amounts to 6.37% and the unemployment rate to 10%. The average monthly wage in the public sector is 33,700 Lek (approx. 244 Euro). The most important sector in this region is the agricultural sector with 32% followed by the clothing industry with 31%, the food sector, construction, tourism and service sectors.

Figure 3: Facts and Figures about Korca
(illustration adapted by the author)

4.2 University of Shkoder “Luigj Gurakuqi”

The High Pedagogical Institute (HPI) in Shkoder was established in 1957. Since then it has been one of the most important institutions and the biggest center of education, scientific research and culture in Northern Albania. The High Pedagogical Institute's status changed to University of Shkoder “Luigj Gurakuqi” in 1991. Since then the university has undergone different changes and developments on several fronts. During this period the following faculties were opened: Law Faculty (1992), Economic Faculty with three branches (Business Administration in 1994, Accounting and Finance in 2000, Marketing and Tourism in 2001), Foreign Languages Faculty with four branches (English studies in 1994, German Studies in 1996, Italian studies in 1998 and French Studies in 2005). Some others branches have opened as follows: Pre-Elementary teacher education (1996), General Nursery (2001), Computer Science (2002), Psychology (2004), Social Work (2005), Physical training and sports (2006), Communication and Mass Media (2006), Midwifery (2007), and Physiotherapy (2007) with a total of 24 branches¹. 7,434 students have graduated under the current system.

¹ The Faculty of Social Sciences provides Diplomas in Albanian Language and Literature, History, Geography, Communication Mass Media.

The Faculty of Natural Sciences provides Diplomas in Mathematics, Informatics, Physics, Biology and Chemistry, General Nursery, Physiotherapy, Midwifery.

The Faculty of Educational Sciences provides Diplomas in Teacher Education of Elementary Schools, Teacher Education of Pre-elementary School, Psychology, Social Work, Physical Training and Sports.

The Faculty of Economics provides Diplomas in Business Administration, Finance and Accounting, Tourism.

The Faculty of Law provides a Diploma in Law.

The Faculty of Foreign Languages provides Diplomas in English and American Studies, German Philology, Italian Language and Culture, French Language and Culture.

During these years we can see the quantity development of this university according to the number of enrolled students and the number of faculties or branches introduced up to the year 2007. Since then the number of admissions has been limited by keeping an optimal number of 6,700 students per academic year.

4.3 University of Korca “Fan S. Noli”

The Institute of Agriculture in Korca started in 1971. The Institute’s status changed to University of Korca “Fan S. Noli” in 1992. At this time the Teacher Education Faculty and Business Faculty (1992) started, the Nursing Faculty was opened in 1994 with two different programs (General Nursery and Midwifery). Nowadays the University of Korca offers 12 diplomas.²

During the years there have not been the same trends in the development as with the University of Shkoder. There is a more controlled increase in number of students enrolled each year. The University of Korca tends to keep the optimum number of admissions per year at 2,990 students for all programs that are offered, in keeping with last year’s numbers.

5. Research findings

The research findings are structured in order to correspond to the structure of the model which is used and the hypotheses stated at the beginning of this paper:

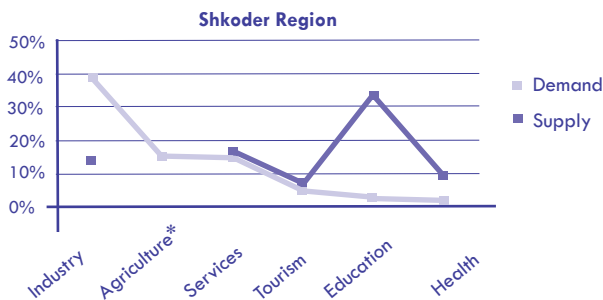
H1: Study programs provided by regional universities fit the regional needs

The region’s changing economy requires workers to attain profound job skills. Leaders in education, workforce development, and economic development recognize the need to help workers meet this challenge, and to help employers find qualified employees. In order to adequately respond to the pressing needs of a shifting economy and to prepare a talented workforce, students should receive relevant education. Becker (1961:11) states “A satisfactory norm of adequacy must have two elements – one positive, by which it can explain why benefits are as large as they are, and one negative, by which it can explain why they are no larger.”

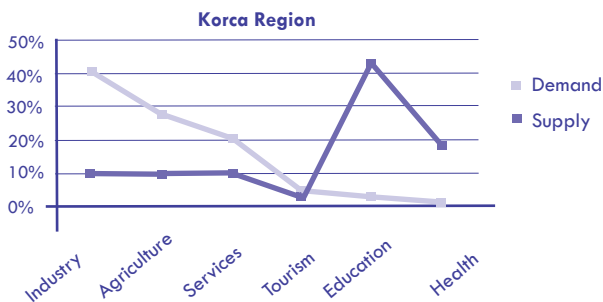
Shkoder University offers 24 graduate programs but the main focus is put on preparing specialists in social sciences, natural sciences, teaching and linguistics which compose the major part in the total number of students at this university. Based on the survey done with Labor Office specialists, these programs produce more specialists than required in the region. Thus, there is a higher number of graduates in teaching and social sciences compared with the demand in these fields. When it comes to finance and accounting specialists as well as law specialists, the trend fulfills the labor market (Graph 1).

Korca University offers 12 masters’ programs such as agriculture, health, education, and economy (Major Finance). A limited increase in the number of new programs offered by this university can be noticed, compared with Shkoder University which has always tended to increase the number of programs. From the interviews, we also found that the focus of Korca University has been more on consolidating existing programs rather than on increasing the number of new programs (Graph 2).

² The Business Faculty provides Diplomas in Administration, Finance, Tourism, Marketing. The Teacher Education Faculty provides Diplomas in Mathematics, Informatics, Language and Literature. The Nursing Faculty provides Diplomas in General Nursery and Midwifery. The Agriculture Faculty provides Diplomas in Agriculture, Horticulture and Agribusiness.



Graph 1: Supply and Demand by profession in Shkoder region (own illustration)
* No figures available for the supply

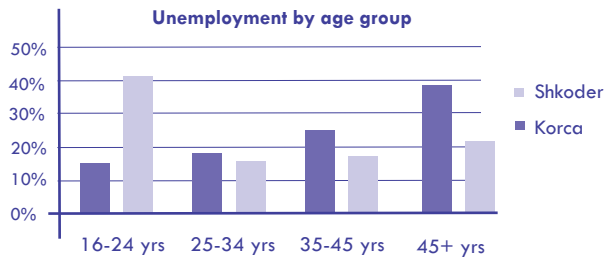


Graph 2: Supply and Demand by profession in Korca region (own illustration)

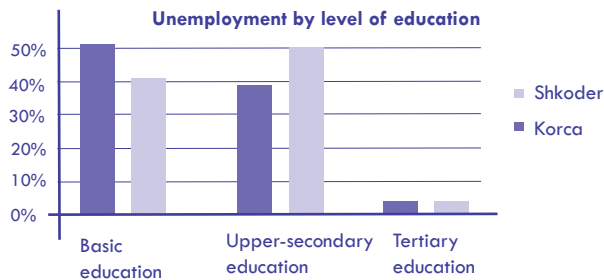
The assumption behind these results, which the graphs above present, is that each diploma or program can be matched with a certain position in the respective regional labor market. This assumption is made by the author for the purpose of this research paper and it cannot be ultimately objective considering the fact that certain diplomas that are obtained also fit into different positions in different industries or economic sectors. Nevertheless, these assumptions help compose a clearer view on the labor market. The graphs can test the first hypothesis and conclude that the programs offered by the universities mostly do not take into consideration the regional economic needs. However, this hypothesis needs to be further developed through the consideration of hypotheses 1.1 and 1.2.

H1.1: People with higher education account for a small part of unemployed people in the region

The data published by the Albanian Institute of Statistics (Nurja 2009) indicates that the highest level of unemployed people are between the ages of 16 – 24 years in the region of Shkoder; in the region of Korca the age group of over 45 years is the group more sensitive to unemployment (Graph 3). While referring to the level of education as it can be seen from the data gathered, people with a university degree have a low level of unemployment which amounts to 3% for the region of Shkoder and indicates that they better fit into the regional labor market. It is important to mention that the number of unemployed people obtaining a university degree has declined during the last three years, while in the region of Korca this level has been increased but still is at the lowest level (of 3.2%) when compared to the other levels of education (Graph 4). Despite this, the hypothesis that people with a high level of education compose the lowest number of unemployed in the region has been proved in both cases.



Graph 3: Unemployment by age group
(own illustration)



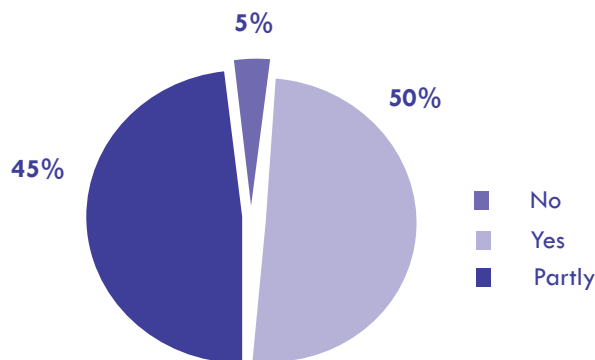
Graph 4: Unemployment by level of education
(own illustration)

H1.2: Graduates work in specializations obtained at university

The problems of unemployment/underemployment have been perceived as a mismatch between the skill requirements of the employer and the skill base of the job seekers. It is, therefore, essential to reorient the educational and training system around improving its capacity to supply the requisite skills and to introduce greater flexibility in the training system in order to respond to labor market changes. To what extent are the graduates integrated into the labor market and do they work in their field of study?

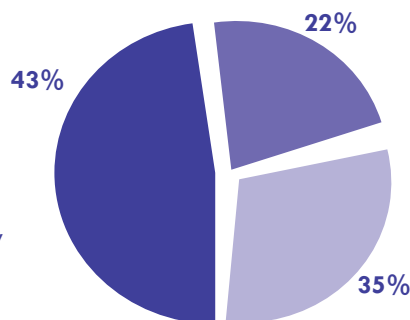
The results of the questionnaire showed that 5% of the graduates of the University of Shkoder did not work in their field of study, 45% of the graduates worked at least partly in the specialization they acquired during their studies, while 50% of them were convinced that they worked exactly in that field they had studied (Graph 5). For Korca the results were not as expected, 22% of the graduates did not work according to the degree they had and only 35% of them had a job that corresponded completely to their education (Graph 6).

**Graduates of Shkoder University
working in their field of study**



*Graph 5: Graduates of Shkoder University
(own illustration)*

**Graduates of Korca University
working in their field of study**



*Graph 6: Graduates of Korca University
(own illustration)*

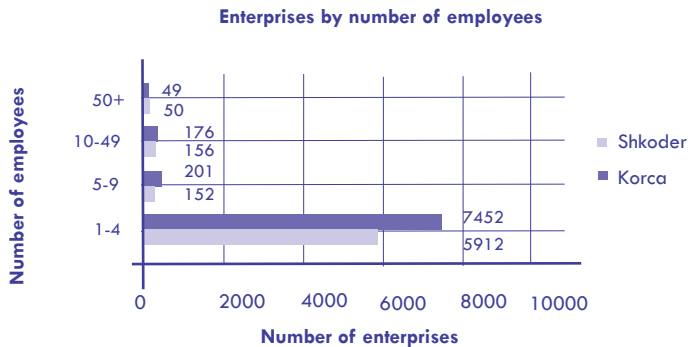
In this case the hypothesis is only partly proven: The results in both regions/universities are confusing if they are analyzed with the results of hypothesis 1. It was expected, especially in the case of Shkoder, that more negative responses would come from graduates who directly face the problem of unemployment in the labor market. However, this could be justified considering the fact that this survey was conducted with Finance graduates, a fact which does not help much in the proving of hypothesis 1 in general.

The answer to the question of how graduates assessed the level of their study programs and if they were appropriate to their future employment, was distressing. At both universities the graduates thought that their studies did not prepare them to the needs of the labor market in the region so that only 10% of the graduates of the University of Shkoder and 15% of the graduates in Korca thought that the study programs in the area of economy had taken into consideration the needs of the region. This finding is in line with the result of hypothesis 1.

H2: High percentage of regional university graduates stay in the region
As human capital is important for the development of regions, more trained and knowledgeable human capital will entail more positive effects in the regional economy. The goal is that graduates stay in the region and thus contribute to its development by returning the investment made for them. The results of the survey seem to prove hypothesis 2 right away. In general the graduates (95% of graduates in Shkoder and 99% of graduates in Korca) responded that they were employed in the same region where they had obtained their diploma but they also brought up another regional problem: they felt that they were underpaid in comparison to a similar position in the capital city and were willing to move to Tirana at their first opportunity. This fact must be taken into account when implementing regional strategies.

H3: Regional universities are important employers in the region
Universities do not only provide the knowledge to contribute to the development of knowledge or human capital but are also considerably important employers. A university operates like an enterprise that produces output (students) and to produce this output it employs academic and administrative staff. Universities are among the largest employers (Rosan 2002). Is this also true for the regional universities in Albania? At the University of

Shkoder the academic staff consists of 169 full-time academic staff, and at the University of Korca 97 full-time academic staff. These numbers can be considered as sufficient to state that the regional universities are among the largest employers in the regions. Graph 7 shows the size of the active companies and their number of employed staff.



Graph 7: Enterprises by number of employees (own illustration), numbers taken from Nurja (2009).

H4: Regional universities provide research implemented in the region

One economic stimulator is research work, carried out by professionals who develop the right methods to deal with existing problems and introduce new visions and solutions. It is a key mission of each university to encourage scientific research and human potential in order to have a direct impact on economic and social development of the country.

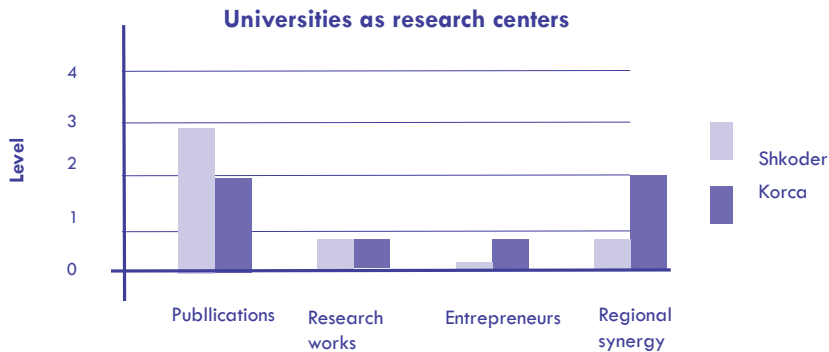
“Just as primary instruction makes the teacher possible, so he renders himself dispensable through schooling at the secondary level. The university teacher is thus no longer a teacher and the student is no longer a pupil. Instead the student conducts research on his own behalf and the professor supervises his research and supports him in it.” (Clark 2006: 333). This is the new model of universities in our century.

At the Universities of Shkoder and Korca, professors and students have given their own valuable contributions to different fields of research by producing many publications. They are authors and co-authors of university texts, monographs and publications with a scientific character. The publications are in different fields such as Albanology, Linguistics, Documentary and Artistic Literature, Folk Culture, History, Philosophy, Pedagogy, Psychology, Sociology, Socio-political Doctrine, Economic Sciences, Natural Science. Every university has a scientific bulletin, and since 2009, all papers and case studies are presented at regional, national, and international conferences.

At the University of Korca, besides different publications made in the context of scientific research that academic staff and post-graduate students are supposed to do, there are two research centers in the field of agriculture and economics respectively which are attached to the university (Center for Research & Methodology Studies). In Korca, a more collaborative area with local municipalities can be found which provides research to local community. The graduates recognize that the university is a significant provider of research implemented in the region.

On the contrary, at the University of Shkoder there is no specialized center of research that would be able to re-direct the scientific and research work to the real needs of the region. Moreover, it seems that a collaboration between the local authorities is missing when it comes to appointing the economic and scientific research priorities in this region (Graph 8).

Respondents were asked to evaluate the importance of the university as research center in the region on a 5-point Likert-type scale with 1 being the lowest value and 5 being the highest one.



Graph 8: Universities as research centers (own illustration)

6. Conclusions and Recommendations

The analysis conducted through the proposed hypotheses can be summarized as follows:

Hypotheses	Korca University	Shkoder University
H1: Study programs provided by regional universities fit the region needs	Partially Accepted	Partially Accepted
H1.1: People with higher education account for a small part of unemployed people in the region	Accepted	Accepted
H1.2: Graduates work in specializations obtained at university	Not accepted	Not accepted
H2: High percentage of regional university graduates stay in the region	Partially Accepted	Partially Accepted
H3: Regional universities are important employers in the region	Partially Accepted	Partially Accepted
H4: Regional universities provide research implemented in the region	Partially Accepted	Not accepted

Table 1: Presentations of results: Accepted (True), Not Accepted (False) (own illustration)

The study shows that despite efforts made over the years, the achievement of regional universities is only in the fact that they are near the students and creating greater opportunities for education within the region. However, so far this is not the mission that these institutions should really have. There is evidence that people with higher education have better employment opportunities but on the other hand they do not always work in positions consistent with their degree earned from the regional universities.

The analysis of these two cases shows that study programs could not adequately fit the needs of the region. It has also been shown that the programs were not determined by taking into account the cultural, geographical, and industrial specifics of these regions nor was there any perception of efforts for improvement found. The study does not really state that hypothesis 4 (regional universities provide research implemented in the region) is proved and in this context the affirmation is clear; their mission in determining economic development priorities of the region has not been accomplished.

It can be concluded in this study that a weak link between the development of regional universities and the economic development of Shkoder and Korca region exists. Surely these institutions help in the population's education process, hence their employment and career, but this is not sufficient evidence to conclude that these institutions accomplished their mission: that is, a direct impact on the advancement of the society. Furthermore, this conclusion forces us to look at the other weak role of regional universities as research centers. Korca University has no focus on solving economic and business development-related problems in the region and Shkoder University has no research center at all.

This paper also identifies the mechanism that weakens the link between regional universities and regional economic development: the quality of the study programs offered by these universities. Introducing new study programs would create substantial difficulties; in this case the recommended solution would be the re-configuration of the existing study programs to suit regional needs better.

In this light, it is strongly recommended that a strategy of regional university development be elaborated. The base of this strategy should be the improvement of the study programs offered, and their adequacy in light of any industrial, cultural and geographical regional specifics. The goal of this strategy should be the protection of human capital, a strategy for keeping a good proportion of graduates in the region after the completion of their studies. The discussion on starting such a strategy could be initiated by raising some questions:

- What can and must be done to bring a particular study program to a standard of quality to meet educational and structural needs? And at what point does a program's lack of quality indicate that it should be replaced?
- Is the establishment of the relationship between university and businesses necessary? Should businesses regard universities not only as human resource centers but as innovation and problem-solving centers?

The result of such improvement will yield a direct impact on the economic development of the region.

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Annex 1

Questionnaire for graduates

1. Your gender:

- Male Female

2. Your age:

- 21 22 23 24

3. Which study program have you graduated?

- Finance Marketing Management

4. Year in which you graduated from University:

- 2008 2009

5. Your place of living before entering University

- Region Not in the Region

6. What is your current occupation?

- Work (answer to questions 7-12)
 Study (answer to questions 11-12)
 Work and study (answer to questions 7-12)
 Staying at home

7. What is your position in your current workplace?

8. Does your position correspond to the qualifications obtained at University?

- Yes
 No
 Partly

9. You are working in:

- Private activity (Family or own activity)
 Limited liability company (Ltd.)
 State enterprise
 Non governmental organization (NGO)
 Other (please specify)

10. What is your salary level (net):

- 30.000 Lek
 30.000 45.000 Lek
 45.000 55.000 Lek
 55.000 60.000 Lek
 >60.000 lekë

11. In which city is your current work/study place located?

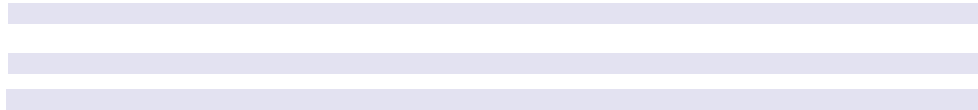
Annex 2

Semi-structured interview questions for university staff

1. How many employees work at the university? What does the university as an employer look like?
2. What is the reasoning behind the choice of study programs offered by the university?
3. What does the cooperation with local enterprises look like; do they provide any scholarships, awards?
4. What is your opinion on whether the graduates are competitive on the labor market and whether they want to stay in the region?
5. How would you characterize the collaboration between the university and municipalities in the region?
6. Is there any research done that is practically used in the region?
7. What are the training/learning services provided by the university? How does the local society gain from different courses, seminars, cultural activities?

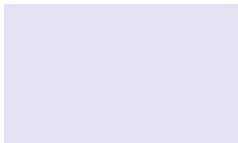
Semi-structured interview questions for the Employment Agency

1. How do graduates of University fit the labor market?
2. What are the references of graduates working in the region?



YOUTH EMPLOYMENT IN BOSNIA AND HERZEGOVINA

SELMA KADIC



1. Introduction

The special focus of this paper is on the situation in Bosnia and Herzegovina, its higher education system, institutions and job market. The education system in Bosnia and Herzegovina (BiH) is based on a constitutional system consisting of three levels of education regulation: state-level, entity-level and cantonal governments.

Through the conducted qualitative research (clinical focus groups and interviews) and secondary literature, it became evident that there are many different types of cooperation between universities and economy in Bosnia and Herzegovina. Unfortunately, that cooperation is deregulated and handled by enthusiasts only who are employed in different organizations, mostly in NGOs. Based on the research's findings positive practice is identified and some useful tools and methods of linking universities with the economy are recommended: external advisory committees, student careers bodies, distance learning systems, student competitions, company cases, job fairs, internships, and scholarships.

The 21st century brings many changes. The economy has shifted to the service sector. In developed nations the composition of the GDP underwent a change from 60 to 70% when it comes to the service sector. At the same time, the demographics in countries are ageing, where the fertility rate has been reduced to 1.3% or less. As a result, the improved life style has more senior citizens and a reduced work force. The link between education and economy has become stronger, resulting in premium quality education. This makes a degree more relevant and the quality of the new learning paradigm creates a new learning paradigm in the education environment.

Barack Obama, President of the United States of America, spoke about the important relationship between education and economy at the University of Texas in August 2010 where he drew a direct connection between education efforts and economic improvement of USA (Fikac 2010).

2. Literature Review

The Organization for Economic Co-operation and Development (OECD) defines a country with a knowledge-based economy as one where the production, diffusion and use of technology and information are keys to the economic activity and sustainable growth (OECD 1999: 7). The most important economic development has been the rise of a new system to create wealth, based no longer on muscle but on mind (Toffler 1990: 9). Toffler was prescient when noting the now well-recognized international trend in employment from blue-collar low-skilled jobs to white-collar highly-skilled employment, and the importance of widely diffused and ever-expanding knowledge that contributes significantly to current economic growth (George 2006). With a strong emphasis on the expansion of primary and secondary education, the World Bank (2002) considers higher education the most important stage of economic development. The "development of individual capacities" in addition to the "education of responsible citizens" and the "preparation for work" constitutes one of the most important objectives to be achieved by education systems and, in this sense, accounts for one of the main planks of the education system (Stoer and Magalhaes 2004).

In an attempt to trace the historical evolution of the relations between education and employment, Alaluf (1993) states that at a certain moment it was the school's task to create "good workers", by combating vagrancy, developing discipline, punctuality and the "honesty" of workers. The aim was to create, above all, workers that should take part in the development of the future knowledge society.

3. Background of the Higher Educational System and Student Employability in Bosnia and Herzegovina

The education system in Bosnia and Herzegovina (BiH) is based on the constitutional system which defines the country as a state consisting of two entities: The Federation of Bosnia and Herzegovina and the Republika Srpska, with the District of Brcko being a separate administrative unit. The entity of the FBH consists of ten cantons, each of them with its own educational system (Cantonal Government and Ministry for Education). In BiH three levels of education regulation exist: state-level, entity-level and cantonal governments.

With an estimated population of 4.3 million inhabitants, BiH has eight public universities (Sarajevo, Sarajevo-East, Tuzla, Zenica, Banja Luka, Bihac, Mostar-East, Mostar-West). In addition, over the last ten years, many private universities/schools have been established. With regard to a degree-based education in the fields of Economics and Management there are currently 32 higher education institutions (HEI) in BiH. This situation is mainly a result of the Constitution (Dayton Peace Agreement, 1995) and inadequate legal regulations governing the quality of these institutions. Such conditions resulted in a proliferation of higher education institutions (from four in pre-war BiH to eight public universities in the post-war period and a large number of private schools and universities). In BiH the number of higher education institutions has grown, mainly as a consequence of the war and fragmented system established in its aftermath. The growth of the university system was actually split into smaller units in some universities. BiH signed the Bologna Declaration in September 2003 and committed itself to join the community of Higher Education institutions by 2010. Thirteen legislative bodies are authorized to adopt relevant regulations. Accordingly, the higher education system is different in the various parts of the country. All institutions must have a license issued by the Ministry of Education in charge of the region in which the higher education institution in question is located (Trivun, Vranic and Kenjic 2009).

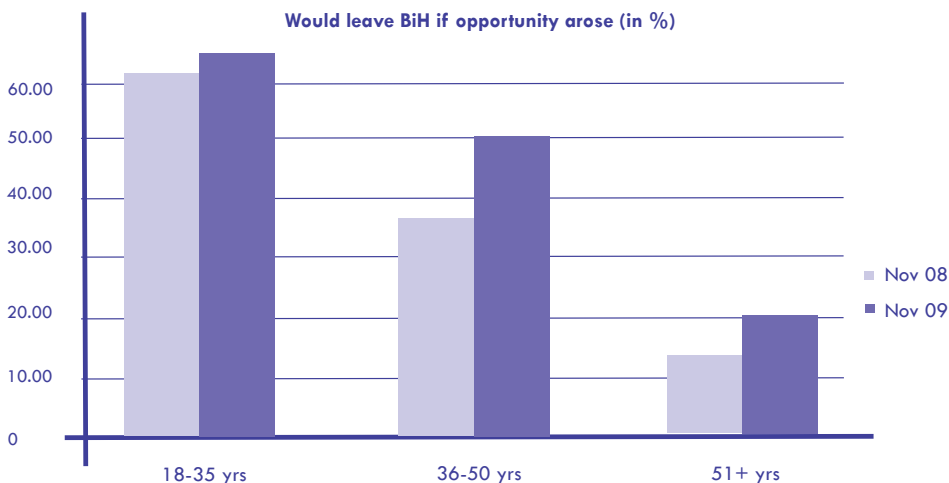
Some facts regarding state investments in higher education are as follows: 1990 – investments in science 1.5% BDP; 2009 – EU countries invest about 1.9% BDP with the final aim of 3% in 2010. Today BiH invests only 0,05% BDP in higher education which means 30 times less than in 1990 and even 60 times less with respect to the planned 3% in EU countries. The average cost per student ranges from 300-500 Euro per student per year (20 times less than in EU countries). At the same time in the winter semester of the academic year 2009/2010 in BiH 109,579 students were enrolled in 43 institutions of higher education, which was 3.9% higher or 4,091 students more than in the previous year. There were 89,306 or 81.5% full-time students, 17,963 or 16.4% part-time students and 2,310 or 2.1% distant learning students (Agency for Statistics of BiH 2010). In the year 2009 an undergraduate diploma was obtained by 16,851 students.

The University of Sarajevo (www.unsa.ba) is the biggest and oldest university in BiH and descends from a century-long tradition of higher education. It was established in 1949 and from that period the university has promoted 122,000 bachelor students, 3,891 master students and 2,284 doctoral students in 43 scientific areas.

In BiH on the national level there is the Agency for employment; each entity has its own employment agency in addition (Federal Employment Institute Sarajevo and Employment Service of the Republika Srpska). At the end of May 2010 there were 512,349 registered unemployed persons in Bosnia and Herzegovina. The unemployment increased in comparison to the same period of the previous year when there were 490,765 registered unemployed people. The qualification structure of the registered unemployed persons in May 2010 was: 26,500 people with an undergraduate degree, 121,495 people with a secondary school diploma, 186,537 qualified workers, and 161,664 people non-qualified workers. It is a very serious concern that 74% of all unemployed people with an undergraduate degree in the

Federation of Bosnia and Herzegovina are aged from 20-29 years.

Young people (especially these with undergraduate diploma degrees) are the most vulnerable in regard to employment, as is evident from the Labor Force Survey data which shows youth unemployment (15 to 25 years) twice as high as the average rate (UNDP 2009a). Naturally, this is a major reason for young people, between 18 to 35 years, to want to leave Bosnia and Herzegovina¹.



Graph 1: Percentages of the people who want to leave Bosnia and Herzegovina (UNDP 2009a)

More than half (54%) of the respondents of UNDP's research, in the age group 18-35 years, would leave BiH if the opportunity arose. This indicator could be explained by high youth unemployment and the young people's inability to find work where they live (UNDP 2009a).

The data above suggests that the economy is not linked well with higher education in BiH. The main aim of this research is to analyze the cause of the issue by giving a broader overview of tools that could make a better link between higher education and economy and consequently improve the employability of the youth in Bosnia and Herzegovina.

4. Research Methodology

The main goal of this paper is to discuss the problems that students experience while trying to connect with the economy and to understand the motives, attitudes and behavior of the people involved in other parts of the chain in the economic sector. To achieve this goal, primary and secondary research was conducted. Through secondary (desk) research, the existence of the different types of cooperation between universities and companies became evident. Unfortunately, this cooperation is sporadic, rare and dependant on inspired enthusiasts and individuals who are running the process.

¹ An additional reason for wanting to leave the country is the authorities' responsibility over visa liberalization, which has yet to materialize. Bosnia and Herzegovina and Albania are the only countries in the Western Balkans whose citizens still require visas for EU countries, as of September 15, 2010.

Based on the knowledge gained from secondary research and the existing theoretical approach, primary research was conducted.

In this paper qualitative research is used as a method to analyze motives, attitudes and processes of linking higher education with the economy. The qualitative approach is based on three basic positions: the tradition of symbolic interactions (concerned with studying subjective and individual meaning making), ethno methodology (interested in routines of everyday life and their production) and structuralized or psychoanalytic positions (which start from process of psychological and social unconsciousness) (Flick 2009).

Four clinical focus groups, each consisting of eight participants, were formed in Sarajevo (as it is the largest university center in Bosnia and Herzegovina). The focus group interviews lasted from 60 – 90 minutes. Participants were students with different educational and demographical backgrounds as shown in table 1.

Group number	Male Participants	Female Participants	Age	Study Field
Group 1	4	4	from 17-22 years	Humanities
Group 2	4	4	from 19-26 years	Applied Sciences
Group 3	3	3	from 18-22 years	Natural Sciences
Group 4	4	5	from 19-23 years	Social Sciences

Table 1: Information on participants of the focus groups (own illustration)

Flick (2009) sees focus groups as a highly efficient way to collect qualitative data that provides quality control on data collection. It is gathered at a low cost and at the same time it is rich in data. Furthermore, three semi-structured interviews were conducted through internet (skype) and with experts in the field in Sarajevo, Mostar and Banja Luka in order to define motives and attitudes of the individuals working on linking students with the economy. All interviewees work in centers linked with the local universities aiming at connecting their students with the economy. All interviews lasted 30 – 45 minutes.

5. Discussion of the Findings

According to the interviews from the focus groups students in the Social Sciences and Humanities are more concerned about their future employment. They tend to be more informed about places where they can improve their competences and skills, and where they can obtain information regarding employment possibilities. There is no significant difference between male and female respondents. Most of them (in total 11) consider employment in a company while six students among them consider self-employment or employment in a family business.

According to their statements the students studying Applied Sciences and Natural Sciences are not as familiar with employment possibilities for their profession because they are not planning to graduate yet. While they are students, they believe that it is impossible to find a job within their profession.

In the following paragraphs the joint conclusions of the focus groups are discussed. Most of the students that took part in the focus groups (19 students) said that if they had the opportunity, they would leave Bosnia and Herzegovina. The most important reason for leaving the country was the lack of employment opportunities. One of the participants

shared his experience that when he was looking for a job people openly asked for money while submitting his job application. This should be understood as a pushing factor for youth migration and something that is likely to be directly contributing to the 'brain drain' in BiH (UNDP research had similar findings in 2009). Another motive for migration of young people is that they think that the quality of education is much higher in other countries, and better education is their only chance of getting a job. On the other hand, just some of the students (9) showed a willingness to move because of a job opportunity to another town in Bosnia and Herzegovina, where maybe another ethnicity is in the majority. This opinion was particularly shared by the younger participants (18-20 years).

Students consider the lack (or small number) of scholarships by companies a major reason for the lack of connection between higher education and the economy. Students are aware of the existence of scholarships by municipalities and cantons but a lack of transparency is noted because the criteria and allocations are often inconsistent, untimely, and contribute negatively to the experience of the end users. Sometimes the financial aid amounts to 100,00 KM only, which is not a good incentive for students to achieve outstanding results because it is not sufficient to cover the monthly expenses. Students of Natural Sciences emphasized the incompatibility of the educational policy, scholarship and employment policies. A weak link between education and labor market, which creates a large number of ill-prepared staff, is evident. A modern and interactive methodology to develop an entrepreneurial spirit and specific skills training for young people (for example soft skills to increase employability) to help them find a job are not sufficiently represented in the curriculum.

The three experts who took part in the interview added that sometimes it was necessary to change the culture of the employment policy in companies in the same way as the attitudes of students' parents. During communism up to 1992, employment in BiH was guaranteed regardless of educational achievement, and citizens received subsidized housing, transportation, social security, health insurance, and education for their children based on their employment record. It was possible for parents to cede their workspace to their children when they retired. Education was free of charge for all levels (from primary school to undergraduate, postgraduate, doctorate level) and all children had the possibility to decide whether they wanted to use it or not, and for how long. All these factors changed after 1996 when BiH became a country in transition, with an immediate effect on the employability of particular categories of students.

In all interviews the experts agreed upon the fact that it was very difficult to connect companies with the best students because most of the universities/schools do not track the best students and do not keep the records of the students with very high grade point averages (GPA). This should be tracked and students listed should get the opportunity to find employment at the Higher Education Institutions (young teaching assistants) or to receive annual awards or be recommended to companies interested in providing scholarships for gifted students. It was highlighted that most educational institutions in BiH did not have graduate placement statistics and that it was difficult to measure how successful a degree program was, in a particular institution. Graduate placement statistics should be compiled annually in order to provide the community with the career status benchmarking and ranking data of graduating classes.

6. Recommendations

The aim of the present research was to find and suggest tools that consequently improve students' employability in Bosnia and Herzegovina. In the following examples, good practice in connecting higher education with the economy will be explained, and suggestions for improvement will be offered.

During the interviews with the experts and the focus groups, all participants agreed that the higher education system in BiH should redefine and reemphasize the meaning of learning and the understanding of theory taught by enhancing methods such as: distant learning systems, video conferencing, multi-media and e-learning. This would bring new strength to the education-knowledge-economy link by:

- Enhancing relevance
- Offering degree and utility oriented education
- Offering two degrees at the end of the last year of studies
- Enhancing quality
- Integrating IT technology in teaching, research, and development
- Offering more intensive and obligatory teachers' trainings

The corporate environment should be involved with the university's governance through the institution of an external advisory committee (Business Advisory Board at the School of Economics and Business Sarajevo) comprised of top managers coming from the most prominent BiH companies. This council should have an advisory status for activities such as curriculum development, master programs, executive education, lifelong learning, research, internships, and conferences.

A Student Career Development Center like the one at the University of Banja Luka should be part of all universities, employing one full-time position at each faculty/school. This type of center should provide various forms of support to the students during their studies. The process of education and professional development of the students should begin when the student comes to inquire personally at the center or when he or she sends an e-mail. The employees should work on making first-year students familiar with the structure and mode of the school's organization; student mentorships should be established to link the students in lower years with the students in higher years to help them by sharing experience, knowledge and contacts; research opportunities; and provision of additional educational support to students (for example preparatory activities for employment, volunteerism, internships, trainings for writing techniques of seminar and diploma papers; data bases search, information sources, methodological framework, the rules of quoting). These types of centers should be the point of connection between the economy and higher education.

The employees of the Center in Banja Luka provided the following forms of support to the students: assistance in the preparation of documents required when applying for a job (Letter of Application, Curriculum Vitae, Cover Letter), preparation for job interviews (defining one's own possibilities, researching the sources of information, building a network of contacts), providing information on internships or on getting one-off jobs during their studies, familiarization with certain job profiles, volunteerism, providing information on the first job/employment, providing information on current programs of assistance to improve students' standard such as scholarships, searching and collecting information on the possible continuation of studies in line with the student's interests (postgraduate studies, international exchanges, etc).

In Mostar, the student competition "Business Plan Contest" is organized with the aim of linking students with contemporary issues and problems in real-life economy. The contest promotes

an entrepreneurial spirit and the ultimate goal is the self-employment. The case study writing in business practice is useful for future generations in education.

In the last five years, job fairs or Career Days have been organized in Sarajevo. These events enable students to get in contact with potential employers. In addition, in Mostar the so-called Company Day takes place once a month where a company gives a presentation at the university.

Internships should be an obligatory part of the degree programs like it is at the School of Economics and Business Sarajevo, where each student has to complete a 30-day internship before graduation. 537 interns finished their one-month internship in BiH in the year 2009.

It is necessary to make volunteerism more popular within the student community. Volunteering in the broadest sense is defined as a non-profit, unpaid activity in which individuals contribute to the welfare of their community or society as a whole. There is an institutionalized form of volunteering in public administration and public enterprises, including private firms and NGOs in Bosnia and Herzegovina, which are useful to gain work experience but they are not popular within the student community.

One respondent from the focus group in Mostar gave an example of an independent non-governmental organization which aims at giving career advice to students. Students are not charged for these services and an extensive range of services is provided:

- A web-based hub providing career information, event details, job vacancies, links, news, and FAQs,
- Services from professionally trained and certified career advisors including drop-in 15-minute advice sessions, longer confidential interviews by appointment, and mock job interviews,
- CV checks and workshops on writing a CV, the application process, interviews and selection tests.

Business incubators could be one way of supporting students in BiH in the context of initiation and continuation of business. Business incubators include a facility/area that is home to new or “immature” and undeveloped small companies. However, the incubator is not just space but overall support that helps the company to survive and succeed in the market.

All participants mentioned the positive example of the Youth Employment Project (YEP Project, <http://yep.mojakarijera.com/en/>) in BiH, which is amongst others also supported by the Austrian Development Agency (ADA), and has employed more than 500 young people since 2008. It has decreased the youth unemployment rate and encouraged positive changes even in a country with an undeveloped economy. Judging by the results achieved in the first two years of this project, it will be easy to achieve the figure of 1,200 employed young people by the end of the project in 2011. The fact that the success of the project is measured by the number of actually employed beneficiaries, and that all the stakeholders in civil society are involved in the project implementation, makes this project unique in the field of solving the problem of youth unemployment.

All the activities mentioned by the respondents are positive practice examples in BiH which can be used on a broader scale at all universities, striving to provide the best students with an opportunity to sign a scholarship agreement with companies from BiH, and to link higher education with the economy.

7. Conclusion

Bosnia and Herzegovina is a country that faces a great brain drain problem within the student population. Its constant growth created the need to better understand the basic characteristics of difficulties that students are dealing with. The research confirmed that the brain drain problem could be reduced by linking higher education institutions with the economy more efficiently and by establishing a labor market that transcends ethnic and entity boundaries and brings the younger population to an environment closer to business and economic cooperation.

All activities that were mentioned by the respondents are examples of positive practice run sporadically in BiH. There is evidence that these tools and methods help to create better networks and to fulfill the needs of both segments (students and employers). These activities can be used on a broader scale at all universities in Bosnia and Herzegovina as part of the national policy of linking higher education with the economy. In addition, the best students should be provided with an opportunity to sign a scholarship agreement with companies in BiH.

Previous research in this area in Bosnia and Herzegovina is very limited. Therefore this paper tried to establish recommendations to create a policy of youth employment in Bosnia and Herzegovina based on the cooperation between universities and the economy. As for the research limitations, larger sample is needed for better validity as well as quantitative research to support these findings.

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**BUILDING UNIVERSITY-BUSINESS COOPERATION IN
CROATIA: DIRECTIONS AND DEVELOPMENTS**

VLATKA PETROVIC



1. Introduction

Universities nowadays are seen as important drivers of economic growth, a role that is recognized and reinforced in European policies stemming from the Lisbon Agenda. Recognizing the responsibility they have in the knowledge-based economy, universities across Europe are exploring and refining the meaning of the so-called Innovation Mission. These explorations, performed in partnership with other stakeholders in society, have revealed that the ways of engaging with the outside world and particularly the business sector should encompass both research and learning.

The recent EC Communication “A new partnership for the modernisation of universities: the EU Forum for University Business Dialogue” (EC 2009) identifies the following aspects of the university-business cooperation: 1) Curricula for employability, 2) Entrepreneurship, 3) Knowledge transfer, 4) Mobility across borders and between business and academia, 5) Lifelong Learning, and 6) University Governance.

This report explores the current situation in linking universities and the business sector in Croatia. It examines how policy-makers have sought to improve those links and examines the recent developments with the intent of identifying improvements and isolating those areas that would benefit from additional attention.

2. Methodology

The analysis of the status quo will address primarily government policies, legislation and strategies relevant to the university-business cooperation, the state of different forms of cooperation, and recent projects that support the link between higher education and economy. The analysis is based on secondary data including: strategic documents related to higher education and research in Croatia; Croatian legislation; reports and other communications published by Croatian Government bodies, European Commission and various international organizations; publications by Croatian funding agencies and programs; and statistical information (for source and notes related to statistical data, please see specific references).

3. Results

3.1 Overview of Government Policies and Legislation

3.1.1 Policy Documents

The Education Sector Development Plan 2005-2010 (MSES 2005) addresses the educational system in its entirety, from pre-school through elementary, secondary and higher education to adult education. It reinforces the importance of flexibility in higher education that will ensure better opportunities in the dynamic labor market, and it calls for participation of industry stakeholders in the development of higher education policies. It also stresses the importance of developing greater awareness about lifelong learning.

The Science and Technology Policy of the Republic of Croatia 2006-2010 (MSES 2006) sets the key objectives and measures needed for strengthening the national innovation system as a whole. These include the improved cooperation between public R&D institutions and businesses, and the reform of doctoral studies according to the need of the labor market. The subsequent **Action Plan 2007-2010 for Science and Technology Policy of the Republic of**

Croatia (MSES 2007a) defines the implementation priorities.

The elements supporting academia-business cooperation are: improvement of financing science and research, improvement of legislative framework (including tax and intellectual property), awareness raising within the research community, facilitating the creation of innovation based companies, intensification of R&D in industrial environment, and stimulation of demand for R&D services.

The Action Plan to Encourage Investment in Science and Research (MSES 2008) reinforces the orientation towards the Lisbon goals of 3% GDP allocation for R&D and the 2:1 ratio of private and public investment. The set tasks and measures that will enable reaching these goals are: increasing the number and quality of researchers (which includes the reform of doctoral studies and attracting researchers from abroad), measures for financing research and innovation from state budget (including the role of specific agencies and programs), increasing investment in R&D through tax measures and subsidies, improving management of intellectual property in public R&D institutions, stimulating partnership with industry as well as technology transfer (including licensing and *spin out* formation).

The Joint Assessment of Employment Policy Priorities (JAP) (Ministry of Economy 2008) calls for greater investment in human capital through education and training. Specific goals include the alignment of the needs of the labor market and the education policy on all levels, increase in quality and accessibility of vocational education, and creation of lifelong learning strategies.

3.1.2 Legislation

The Act on Scientific Activity and Higher Education¹ is the principal regulatory document providing a framework for research and higher education. It has transformed old higher education programs into three-cycle programs and ushered in the implementation of the Bologna reform. It also addressed the allocation of funds to research organizations. The 2007 amendments are especially significant for stimulating the industry-academia collaboration through extending the availability of state research funding to more organizations and introducing a system of tax reductions to invest in research and development.

The Act on Academic and Professional Titles and Academic Degrees² defined the system of new titles for Bologna program graduates. This enabled the comparison pre-Bologna and Bologna titles, which was a necessary prerequisite for acceptance of Bologna graduates within the labor market.

Croatian regulations, related to **management of intellectual property**, do not afford special treatment, such as the professor's privilege, to academic researchers. Relationships with respect to ownership of intellectual property are defined through the Labor Act and different Acts covering specific intellectual property rights (for example: patents, author's rights and related rights, industrial design rights). These, together with the Civil Obligations Act (including contracts) provide the framework for management of intellectual of property in R&D activities and collaborations.

1 Official Gazette 123/03, 198/03, 105/04, 174/04, 46/07 and 45/09, retrieved from <http://narodne-novine.nn.hr/> (in Croatian), September 2010.

2 Official Gazette 107/2007, retrieved from <http://narodne-novine.nn.hr/> (in Croatian), September 2010.

At the time of writing this report, the Ministry of Science Education and Sports (MSES) is publicly releasing drafts of three new acts covering, respectively, **research, higher education and universities**. The drafts introduce significant changes including those related to financing of public research and governance of higher education institutions.³ It remains to be seen what changes they will introduce in their final and adopted form.

3.2 Context for University – Business Collaboration

Institutions that provide higher education in Croatia are universities, polytechnics, and public and private schools of professional higher education. According to the implementation of the Bologna reform, higher education is organized into three-cycle programs, with a differentiation between university and professional studies. Polytechnics and schools of professional higher education provide professional studies, the aim of which is to prepare students for the direct entry into the labor market. Universities are charged with the implementation of university studies that prepare students for jobs in science and higher education, as well as the private and public sectors. Faculties and art academies are university constituents that may also implement professional studies.⁴

For an overview of higher education programs and institutions in Croatia please see the annex. Overall, in the academic year 2008/2009, a total of 139,069 students were enrolled in all higher education institutions. In the same year, the number of graduates was reported at 25,573, while 494 individuals were awarded a doctoral degree.⁵

Despite the increase in the number of graduates observed over the last decade (UNESCO 2010), the number of highly educated people remains an issue. In 2009, 16.7% of the population aged 25-74 years attained tertiary education (ISCED 5-6 levels), compared with 23.6% in the EU-27. The participation of adults (aged 25-64 years) in lifelong learning stood at 2.3%, compared to 9.3% in the EU-27.⁶ The education system in Croatia is still not perceived by businesses as being suited to address the needs of a competitive economy, while the employers themselves remain particularly unwilling to invest in training their staff.⁷

Croatia has struggled to maintain the investment in R&D at around 1% of GDP over the last decade (UNESCO 2010). In 2008, it stood at 3,074 million Croatian Kuna (approx. 425 million Euro) or 0.9% of the GDP, with under half of the R&D expenditure being invested in the business sector.⁸ According to MSES data, the total number of researchers in the same year was 10,767 (5,723 PhDs). The R&D personnel represented 1.1% of the total employment in 2008, while the overall estimate for 2003-2008 is that 85% of researchers are employed in public and 15% in the private sector (Tempus OPUS 2010). While the brain drain remains another serious concern⁹, Croatian policymakers have sought both to stimulate the return of scientists and to utilize the potential of Croatian scientists

3 MSES: <http://public.mzos.hr/Default.aspx?art=10219&sec=1933> (in Croatian), retrieved in September 2010.

4 MSES: <http://public.mzos.hr/Default.aspx?art=5864&sec=2510>, retrieved in September 2010.

5 Croatian Bureau of Statistics: http://www.dzs.hr/default_e.htm

6 Eurostat: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

7 In answering the question „How well does the educational system in your country meet the needs of a competitive economy?“ Croatia ranks 89th out of 139 countries, and in answering the question „To what extent do companies in your country invest in training and employee development?“ it ranks only 128th out of 139 countries (WEF 2010).

8 Eurostat: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

9 On answering the question „Does your country retain and attract talented people?“ Croatia ranks 122nd out of 139 countries in (WEF 2010)

still abroad. The National Foundation for Science, Higher Education and Technological Development (NFS) has run programs since 2004 that support both brief visits and employment of scientists returning from abroad, as well as setting up laboratories and independent research projects.¹⁰ The MSES Unity through Knowledge Fund (UKF) runs programs that aim at connecting Croatian scientists in the country and abroad through research projects. In 2009, UKF was recognized as an example of good practice by the International Labor Organization.¹¹

3.3 Status of University – Industry Cooperation

3.3.1 Linking Education with Employability

Following the implementation of the three-cycle system under the Bologna process, Croatia has now moved towards the implementation of the Croatian Qualifications Framework (CRQF), with the completion planned for 2012. A recent stocktaking sees the introduction of meaningful learning outcomes as a tool for increased recognition of bachelors and masters in the labor market. It also calls for greater involvement of university stakeholders in CRQF implementation and especially in building closer links with labor market representatives in the development of learning outcomes.¹²

An important example of successful and longstanding university-industry partnership in education and supporting young talents is the Ericson Nikola Tesla Summer Camp, which has been running since 2001. Organized in partnership with the Electrical Engineering and Computing Faculties at the University of Zagreb and, more recently, at the University of Split, it allows student teams to work on current practical problems. The Camps give students valuable practical experience of working in an industrial setting, while Ericsson Nikola Tesla has the opportunity to recruit the best candidates and to resolve R&D issues.¹³

Entrepreneurship is being increasingly introduced into higher education in Croatia. The Tempus project “Fostering Entrepreneurship in Higher Education – FoSentHE” has developed entrepreneurship e-learning modules, and envisages establishing entrepreneurship centers at the universities in Zagreb and Split.¹⁴ The Education, Audiovisual and Culture Executive Agency (EACEA) has recently recognized the Tempus project “FoSentHE” as an example of good practice.¹⁵

10 Overview of NSF programs: http://www.nzz.hr/index.php?option=com_content&task=view&id=212&Itemid=144&lang=en

11 International Labor Organization: http://www.ilo.org/dyn/migpractice/migmmain.showPractice?p_lang=en&p_practice_id=33

12 Conclusions of the Conference „Reform of Higher Education: Inventory 2010“, Varazdin April 9-10, 2010, retrieved from <http://www.azvo.hr/hr/novosti/327-objavljeni-zakljuci-konferencije-u-varadinu> (in Croatian), September 2010.

13 For further information on the summer camp: http://www.ericsson.com/hr/vijesti/2010/ljetni_kamp.shtml (in Croatian) and http://www.fer.hr/_download/repository/SummerCamp2010_Introduction-zaWeb.pdf.

14 Tempus project FoSentHE (ETF-JP-00208-2008): <http://www.efzg.hr/default.aspx?id=10290>

15 Web announcement retrieved from <http://www.azvo.hr/en/news/295-tempus-projekt-fosenthe-repoznat-kao-primjer-dobre-prakse->, September 2010.

Another Tempus project, “Opening University towards Society: Linking Education-Research-Innovation (OPUS)”, seeks to improve doctoral studies by introducing the content on intellectual property management, innovation, knowledge transfer, and entrepreneurship.¹⁶

3.3.2 Linking Research to Knowledge Transfer

A good start has been made in developing the infrastructure to support knowledge transfer in Croatia. A significant boost to these developments is being provided through the Science and Technology Project, the EU Tempus Program, and, most recently, the Instrument of Pre-accession Assistance (IPA) III component.

The Science and Technology Project (STP) is a comprehensive government project, implemented by MSES and supported by the World Bank. It has the dual aim of strengthening both the ability of public research organizations to respond to market needs, and the technology capabilities of businesses.¹⁷ The implementation of STP begun in 2006, and will continue until mid 2011.

STP financing has supported the development of knowledge and technology transfer functions at the two largest universities (Zagreb and Rijeka) and at the largest research institute (Ruder Boskovic Institute) in Croatia. At the University of Zagreb, for example, it has enabled services for the protection of intellectual property rights and the commercialization of research results, building connections between researchers and industry, and supporting academic entrepreneurship.¹⁸ As a necessary prerequisite to the normal functioning of technology and knowledge transfer services, these three institutions have adopted intellectual property policies that provide a transparent framework for commercialization of R&D results (Tempus OPUS 2010). At the universities of Zagreb and Rijeka, technology transfer services operate at the university level, thus representing a functional integration facet for those organizations.

Other universities are also affording greater care to technology and knowledge transfer. The University of J.J. Strossmayer Osijek was one the founders of the Technology Development Center Ltd (TERA) which now serves as its Technology Transfer Office (Tempus OPUS 2010). Within the University of Split, the Technology Transfer Office was established through the Tempus project CREATE, and is now participating in the Enterprise Europe Network Croatia.¹⁹

Within STP, the improvement in business innovation capacity is supported primarily through programs at the Business Innovation Center of Croatia (BICRO).²⁰ The TEHCRO program is dedicated to further improving the knowledge transfer infrastructure. For example, the Science and Technology Park affiliated with the University of Rijeka, and TERA in Osijek are both among recipients of this funding. The program RAZUM supports the development and growth of knowledge-based companies. The Proof of Concept (PoC) program supports the high risk in initial stages of new technology development. The IRCRO program is dedicated specifically to R&D collaboration between businesses and academia. IRCRO funding alone has supported 18 academia-business collaborations in development of new products, and the other programs also serve as vehicles for collaboration. Within MSES, the Unity through Knowledge Fund additionally supports mobility between academia and industry through

16 Tempus project OPUS (ETF-SM-00016-2008): <http://opus.unizg.hr/>

17 For further information on STP: <http://public.mzos.hr/Default.aspx?art=7044&sec=2493>

18 For further information on technology transfer: <http://technology.unizg.hr/>

19 Technology Transfer Office: <http://www.utt.hr/>

20 Business Innovation Center of Croatia: <http://www.bicro.hr/>

funding engagements of young researchers from academia in industry and vice versa (UKF n.d.).

Innovation in Croatia is further supported through the Croatian Institute of Technology which funds applied research (TEST program), promotes technology foresight and business intelligence, and supports FP7 participation and development of technology platforms.²¹ Higher education institutions have also recognized that pre-accession funding has become an important factor in increasing their ability to engage with businesses (Tempus OPUS 2010).

In this dynamic environment, the Tempus project OPUS aims to identify best practices, needs and challenges in order to define future necessary measures at the local, national and regional levels. Through establishment of the Center for Research, Development and Technology Transfer at the University of Zagreb, it also seeks to provide a regional model for closer integration of R&D management and knowledge transfer functions.

4. Conclusions and Recommendations

The Review of Tertiary Education (MSES 2007b) published three years ago, commented on low levels of academia-industry interactions and identified several groups of obstacles to knowledge transfer, namely: 1) a culture gap exacerbated by the lack of inter-sectorial mobility of researchers, 2) the organizational structure, specifically the operational autonomy of university departments (Faculties) and a lack of unified university level infrastructure for knowledge transfer support (technology transfer offices, incubators, etc), and 3) the structure of industry in the region – small number of large firms with R&D activities, poor technology capability of new SMEs, and low demand for university R&D services.

Since the time of that review, progress has certainly been made in building support systems and infrastructure for knowledge transfer, both at university and at national levels. Nonetheless, it must be stressed that the development of such support is still at a very early stage (Tempus OPUS 2010), and that the level of activity needs to be increased in order to bridge the still present boundaries between academia and industry and for such interactions to gain momentum.

This year, leading into the next, is a time when many policy instruments supporting innovation and industry-academia collaboration reach an end of their cycle. This provides a good opportunity for policymakers to evaluate the results and impact of previous measures and incorporate those in future designs and programs.

Unfortunately, as the next year also brings an end to the one of the more comprehensive innovation oriented projects (STP), it raises some uncertainty about the continuation of many support programs. Institutions and government both should take care that the successful initiatives are not abandoned and the confidence of both industry and researchers lost in the process.

Universities and industry also would benefit from jointly exploring and expanding other aspects of cooperation, especially in education of new talent and in lifelong learning. This could then lead to a more inclusive approach that seeks to connect all areas of university-academia cooperation into a unified partnership strategy.

21 Croatian Institute of Technology: <http://www.hit.hr/web/>

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Annex

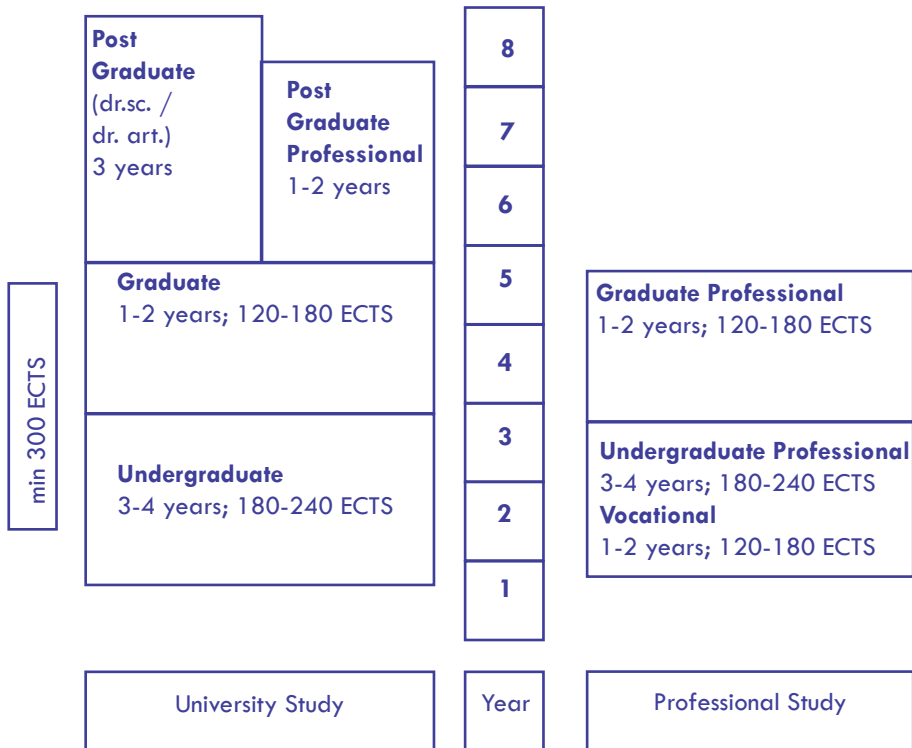


Figure 1: Types of Higher Education Studies (MSES website <http://public.mzos.hr>)

7 universities: University of Dubrovnik, University of Josip Juraj Strossmayer in Osijek, University of Juraj Dobrila in Pula, University of Rijeka, University of Split, University of Zadar, and University of Zagreb

13 public polytechnics

3 public schools of professional higher education

3 private polytechnics

25 private schools of professional higher education

Figure 2: Higher education institutions in Croatia (MSES website <http://public.mzos.hr>)

**HIGHER EDUCATION AND THE ECONOMIC
DEVELOPMENT OF KOSOVO**

AVDULLA ALIJA

1. Background

The Republic of Kosovo is the newest country in Europe (having declared its independence on February 17, 2008) and has the youngest population in Europe (50% of the population is under the age of 25 and more than 75% is younger than 35 years). As a post-war society, Kosovo has one of the highest unemployment rates in South-Eastern Europe (approximately 42% are unemployed and among these two thirds are considered to be un-skilled for local market needs and the future requirements of the economy).

The Strategy for the Development of Higher Education in Kosovo 2005-2015 (MEST 2004) was developed with the aim of facilitating the integration of Kosovo into European higher education (HE) by aligning the national higher education system with the principles of the Bologna Declaration. Many of the measures identified in the Strategy have been implemented.

Within the broader context of social, political and economic development aimed at reaching a level comparable with European and international standards, the Government of the Republic of Kosovo recognized the importance of quality assurance and accreditation as the most significant elements in contemporary higher education and the main pillars of the Bologna Process.

Although it had been anticipated that the Kosovo Accreditation Agency (KAA) would be established and functional in 2004, this did not happen until 2008. By then, not only had the accreditation process not been established but many higher educational licences had been issued through criteria and procedures which were not transparent and did not accord with existing laws, especially the Law on Higher Education 2002/03 (Bristow 2010).

The accreditation process started in 2008 by contracting a foreign agency, the British Accreditation Council (BAC) (BAC 2008). BAC undertook this process until the KAA's National Quality Council had drawn up accreditation criteria later in 2008. KAA staff participated as observers in the process of inspection conducted by the British Accreditation Council whilst consolidating KAA's own procedures. Since October 2008, KAA has been fully operational and has carried out a second round of accreditation, applying European standards. For a long period, higher education in Kosovo meant almost exclusively the education at the University of Prishtina. Now, the sector is richer and more diverse in the number and profile of its higher education institutions. In 2010, ten private colleges, three institutes and five professional colleges have been both accredited and re-accredited by the KAA. In 2010 it completed the process of accreditation of the University of Prishtina (at both institutional and program level) and has accredited the newly established public University of Prizren to offer six programs. However, the University of Mitrovica is still not fully integrated in the Kosovar higher education system as it considers itself beholden to the Serbian Law on Higher Education.

Based on recommendations from the BAC accreditation process in 2008, the Ministry of Education, Science and Technology (MEST) encouraged the development of private higher professional schools (BAC 2008). There are now five such institutions which focus on higher professional education. Given the great importance of the labor market, some private colleges offer professional study programs which actively seek to build cooperation between the academic world and business enterprises. Other steps to promote partnerships with businesses include the establishment of the Business Start-Up Center of the University of Prishtina, the Office for Research and Development at the University of Prishtina and the Center for Innovation and Technology Transfer in MEST.

Examples of partnership building between private higher education institutions in Kosovo and business enterprises can be seen in their offer of programs that would develop skills to link economy, business, management and information technology as well as communication

focused on software engineering, as the main disciplines that interact in the global economy, and which play a crucial role in developing essential skills for business and other organizations. These institutions use a variety of teaching methods, which contribute not only to the preparation of students for specific professions, but also to their preparation for future studies or employment. Their intended focus is on developing writing skills, critical thinking, group work and practice. Besides its contribution to achieving specific competencies for the program, this approach also develops overall competencies, such as team work, ability to discuss different issues with a professional audience and writing abilities through different methods of learning and evaluation whereas the applied research work is conducted through research centers.

Its applied research work is conducted through six research centers, which together completed eighteen projects by the end of 2009 in areas including the Kosovo Industry Strategy 2009 – 2013, Corporate Governance in Kosovo, Privatization of Public Enterprises, Municipal Strategies for several Municipalities, organizing Focus Groups with Small and Medium-Sized Enterprises, providing Management Skills Trainings for Regional NGOs and high school teachers respectively, and reporting on Violence in Sports, Fighting Corruption in Kosovo and the Milk Market in Kosovo.

In order to develop and implement a contemporary educational policy, MEST initiated a review of legislation and strategic planning in the field of higher education. After extensive consultation with all stakeholders in the Republic of Kosovo, including representatives of the University of Mitrovica, a revised Law on Higher Education was drafted in 2010, containing provisions designed, *inter alia*, to guarantee the autonomy of higher education and to develop dynamic and competitive higher education institutions which are responsive to the social and economic needs of Kosovo.

Limited access to European-oriented higher education programs has characterized higher education in Kosovo. In order to improve the situation, MEST established the Center for International Cooperation in Higher Education, Science and Technology. This is intended to facilitate the connection between individuals, institutions, programs and scientific research institutions in the country with similar programs in Europe and beyond. The Center also supports research capacity-building, networking of Kosovar institutions in the relevant regional and European associations, and the integration of institutions, initiatives and research activities in Kosovo in the European Space Scientific Research.

Kosovo has suffered from Brain Drain whereas the need for Brain Gain and Brain Circulation remains high. For a long period, recognition procedures for degrees and diplomas of higher education have been quite complex, time-consuming and de-motivating. Through the establishment of the National Center for Academic Recognition and Information (NARIC) in 2008, these procedures have become shorter and more efficient. The issue of academic and professional recognition is also addressed within the revised Law on Higher Education, which includes provisions for regulated professions that further articulate academic and professional recognition.

MEST recognized the fact that academic freedom and institutional autonomy are prerequisites for strong academic performance and has given the University of Prishtina broader autonomy in order to create mechanisms for ensuring the effective management of resources and funds for the development of higher education, to improve teachers' position and their access stimulating material, and to establish schemes for financial support for different categories of students.

Given the demographic character of the Republic of Kosovo, MEST has consistently sought to create comprehensive policies and an enabling environment that promotes increased access for higher education institutions.

The Strategy drafted in 2005 envisaged that the involvement of young people (aged 18-24 years) in higher education should reach 25% by 2015 (MEST 2004). In fact, this objective was achieved in 2010, and the new strategic plan aims at increasing participation to 35% by 2016. Furthermore, the number of students from Kosovo's minorities was increased by offering study places for everyone holding a high school graduation certificate. Study places are also reserved for all students of the Albanian territory outside the boundaries of the Republic of Kosovo who wish to study in Kosovo. The Government of Kosovo has taken the decision to establish the public University of Prizren which has enrolled approximately 2,000 students in six programs in the academic year 2010/2011.

Within this framework of commitment to more countries, institutions and study programs that are closer to the requirements of the job market, a feasibility study on the establishment of new universities in Peja and Gjilan has been undertaken. Government decisions are expected shortly.

For a long time science, technology and innovation have been marginal and have not taken a central place in the activities of MEST. In 2008 the Center for Innovation and Transfer of Technology was established and became operational. This center was charged with the responsibility to promote innovation, cooperation and interconnection between science and economics/technology transfer. On the other hand, the lack of a National Science Council (which had been planned for 2006) has caused the development of research activities to be fragmented, individualized and not based on the immediate needs of the country.

In 2010 the Council drafted a National Program of Science defining scientific and technological development priorities for Kosovo in the period 2010-2015 (MEST 2010a). This document, which includes development priorities for research, was approved by the Assembly of Kosovo and a budget for science in the amount prescribed by the National Science Program was allocated. This has led to the first call for proposals to be funded in six categories.

2. Methodology

The study is based on information available to MEST. It includes a review of all available studies and publications relating to higher education as well as an analysis of the laws and regulations on higher education and other relevant laws in Kosovo.

The information obtained and collected was used to draw a picture of the current situation relative to higher education and economic development in the Republic of Kosovo, finally leading to recommendations for improvement, which take into account the current economic situation of Kosovo and which aim to strengthen the link between higher education and the economy.

3. Current Situation of Higher Education in Kosovo

The Law on Higher Education in Kosovo from 2002 was one of the first laws in the region to incorporate the principles which underpin the Bologna Process, and took full account of the developments in international and European higher education in general, and in the areas of quality assurance and financing in particular (Assembly of Kosovo 2003). Being committed to integration into the European Higher Education Area (EHEA), MEST paid special attention to ensuring the autonomy of higher education institutions and academic freedom, improving the leadership and management of processes of higher education institutions.

Based on the new constitutional situation in Kosovo after the Declaration of Independence in February 2008, as well as the developments in the EHEA, and the more pluralistic and increasingly mature nature of Kosovo's higher education landscape in 2010 – (that is, the existence of more public universities alongside a fully-licensed yet diverse private sector, the establishment and full operation of the Kosovo Accreditation Agency, and changes to the system of education made by the Law on Education in the Municipalities (Assembly of Kosovo 2008), enacted in June 2008, MEST decided to develop a new legal framework for Higher Education in Kosovo which would reflect and be appropriate for these changing circumstances. Following a major consultation process with all stakeholders in the Republic of Kosovo, including representatives of the University of Mitrovica, the draft law contains provisions designed, *inter alia*, to guarantee the autonomy of higher education and develop institutions which could be more dynamic and competitive. The major changes from the previous law include a stronger focus on European concepts and instruments, a recognition of the position of the University of Mitrovica, parity of treatment for the public and private sectors within an inclusive framework, devolution of powers to higher education institutions within a strong framework of public accountability and the firm location of higher education in Kosovo within the European Qualifications Framework.

Special attention was paid to financing. A feasibility study was carried out in order to redefine the principles of higher education financing and to establish the best forms and mechanisms of financing of higher education institutions in the Republic of Kosovo as well as to serve as a handbook for the provision of new financing in the Republic of Kosovo (MEST 2010b).

The draft law is fully in accordance with EU and Kosovar legislation and aims to facilitate the development of the new, legitimate and accountable provision of higher education by robust and dynamic institutions, operating within the protocols of the European Higher Education Area.

The Law on Scientific Research Activity specifies the key role of the National Research Council (appointed by the Kosovar Parliament) in preparing the National Research Program, whilst the responsibility for the implementation of the Program falls on a scientific council established by MEST (Assembly of Kosovo 2005). However, the Law does not anticipate the establishment of a specialized agency to implement the R&D program(s). Beside public scientific-research entities which are categorized as Independent Scientific Research Institutes and research institutes within higher education institutions, the Law requires private scientific organizations to register with the Register of Scientific-Research Institutes. MEST has the competence to give the licence. The law clearly states the importance of using scientific research activities for the development of economic prosperity, the correlation of scientific research with higher education and the possibility of running schemes with a more structural orientation or with international dimensions.

Since its approval in 2008, the Law on National Qualifications (NQF) in November has given an important boost to the development of a National Qualifications Framework in Kosovo (Assembly of Kosovo 2008b). The Law on National Qualifications also provides a legal foundation for the National Qualifications Authority (NQA) which is responsible for a) defining the levels of the Framework as well as the types and levels of certificates and diplomas to be included within it; and b) establishing criteria and processes for the approval of qualifications proposed for inclusion in the NQF.

The Law on Final Examinations and State Matura Examination regulates admission to higher education and obliges all higher education institutions to accept students' achieved results at secondary school (internal evaluation) and their achieved results from the State Matura Exam (external evaluation) (Assembly of Kosovo 2008c). Other important laws adopted in recent years which are considered appropriate for linking higher education and the economy include: the Law on Copyrights and Related Rights; the Patent Law; the Law on Support to

Small and Medium Enterprises; the Law on Publishing Activities and Books; and the Law on Environmental Impact Assessment.

The Strategy for the Development of Higher Education 2005-2015 (MEST 2004) has entered its second phase of implementation (2010-2015). Realization of the vision for Kosovo - a democratic society, integrated in the European Higher Education Area, where knowledge and scientific research are of particular importance for enduring and long-term cultural, social and economic development - began in 2005 within the framework of the Strategy for the Development of Higher Education (MEST 2004). This strategy was designed in accordance with the Law on Higher Education (Assembly of Kosovo 2003), reiterated the continued aspiration for integration into the EHEA, aimed at developing an efficient system of higher education that would contribute to the increasing well-being of the Kosovar society by offering high quality education and research, with equal opportunities for all, in accordance with the values of freedom, democracy and diversity. It set six strategic objectives: 1) Elaborating and implementing a contemporary and all-inclusive education policy and finalizing the higher education legislation; 2) Advancing management and coordination in higher education; 3) Developing the management system for quality in higher education; 4) Increasing the capacity for research and scientific work; 5) Establishing mechanisms for the provision and efficient management of financial resources for higher education development; 6) Developing a comprehensive and functional infrastructure for higher education. So far, many of these strategic objectives have been achieved, including the implementation of an all-inclusive education policy and the establishment of a higher education quality assurance system. The strategy was reviewed in 2010 and the goals for the period 2011-2016 are summarized under a principal objective: to develop effective, inclusive and sustainable higher education policies and legislation which will support improved equitable access through the operation of a highly efficient and effective management approach to modern high quality higher education (MEST 2010c). The government is planning to further develop its inclusive policies to ensure that at least 35% of the relevant age group (from 18 to 24 years of age) have access to higher education by 2015 and is committed to safeguarding and improving the quality of their education. In line with this commitment, the Government of the Republic of Kosovo has established the new public University of Prizren in which 2,000 students were enrolled in the academic year 2010/2011 and has commissioned a feasibility study for the establishment of new universities in Peja and Gjilan.

In a situation when research and technological development (RTD) is still a marginal undertaking in Kosovo, the Kosovo Assembly approved the National Research Program in 2010. Developed by the National Research Council (NRC), this Program sets the main priorities for the social and economic development of Kosovo. The Program aims to establish provisions for infrastructural investment, to enhance participation in international scientific research projects and to develop a systematic education program for researchers. Until recently, general expenditure on R&D in Kosovo has amounted to only approximately 0.1% of GDP and the objective is to allocate up to 0.7% from the budget of Kosovo in order to meet the needs for scientific research and to provide the means to undertake scientific research (MEST 2010a). The National Research Program 2010-2015 aims to improve the situation in the field of research and its link to higher education by building the capacity of research institutions, by undertaking research in sectors of importance such as environment, health, food safety, social science, ICT and by participating in collaborative regional and Europe-wide research activities. The program set the following objectives: Development of human capacity for research activities; Development of research infrastructure; Internationalization of scientific research activity; Strengthening the links between science, society and economy for enhancing economic and social development; and Excellence in research and scientific activity.

The higher education system in Kosovo includes public and private universities and other

higher education institutions (colleges, institutes, higher professional schools). The University of Prishtina has around 40,000 students and consists of 17 academic units located in the seven major towns of Kosovo: Prishtina, Gjiilan, Ferizaj, Prizren, Gjakova, Peja and Mitrovica. The University of Mitrovica has around 9,000 students (not fully integrated in the Kosovar higher education system). The University of Prizren (Universiteti i Prizrenit) started operating in October 2010. Beside the American University of Kosovo located in Prishtina, where the language of instruction is English, there are also 18 private higher education institutions (colleges, institutes and higher professional schools) with around 20,000 students. An international college of business studies and public administration (supported by Spark, The Netherlands) has been established in Mitrovica and offers Danish diplomas taught through the medium of English to encourage inclusiveness. The Faculty of Economics of the University of Ljubljana has also been approved to offer a Masters' program in Prishtina. Joint degree programs are also offered through franchise arrangements. The majority of the higher education institutions (except the American University) have already implemented the Bologna three-cycle structure with Bachelor's programs usually lasting between three and four years (180 - 240 ECTS credits), with some exceptions in medicine, veterinary science or in education and Masters' programs lasting two years (120 ECTS credits) or one year (60 credits) if the previous Bachelor's program lasted four years. Universities offer programs at the Bachelor's, Masters' and Doctorate levels. Some institutions (Higher Professional Schools) offer two- to three-year long vocational diplomas.

In the past, higher education in Kosovo was characterized by academic isolation, under-developed physical infrastructure and a poor economic situation. As a consequence, many young people and academics have left their country to study, teach, and conduct research abroad, leading to a serious problem of brain drain. Some of them finished their studies and specializations, and work all over the world at universities or similar institutions, or are experts in different areas. Through grant aid from the Austrian Development Cooperation, WUS Austria is providing funding to enable universities to invite qualified academics originating from the region to give lectures, which are not otherwise offered at the University of Prishtina.

The policy on Curriculum Development in Higher Education in the Republic of Kosovo (MEST 2007) is the first among four policies of MEST for the integration into the EHEA. MEST has already prepared a conceptual project which envisages the preparation of a document which will make proposals and assessments on how higher education institutions should respond to labor market needs. There have been some interventions designed to bridge the gaps between the worlds of higher education and work/society by reducing the mismatch between learning outcomes and the requirements of the labor market. Furthermore, active steps have been taken to institutionalize partnership and improved cooperation between universities and the business sector in order to contribute to the creation of R&D capacities. Higher education institutions are seen as the most important players in national innovation systems and as the main drivers of social and economic development by increasing the level of knowledge, producing a highly-qualified workforce and developing technological innovations. Some internships were organized by Ministry of Trade and Industry (MTI) in cooperation with MEST and the private sector, some by WUS Austria and United States Agency for International Development (USAID).

4. Conclusions and Recommendations

MEST aspires constantly to reform and develop an effective system of higher education and research in order to increase the welfare of Kosovar society with equal opportunities for all, in accordance with the values of freedom, democracy and diversity. The reform of higher education and its relationship with the economy in Kosovo is occurring in the context of a transition and state-building period. Having the youngest population in Europe and aiming at the development of a modern society, Kosovo considers its human capital as the most important asset for its development.

Recognizing the importance of human capital development, education is a key priority for the Kosovar government. Investing in quality in HE, removing barriers to student and teacher mobility, promoting lifelong learning and guidance, and improving research capacity are central to this. In this regard, the last three years have seen numerous successes in investing in education and training and conducting an active policy to move to a knowledge-based economy which recognizes that economic growth depends on the effective use of human resources.

Based on the need for the higher education system to be more responsive to labor market demands, and the recognition that research and development should be better integrated as a part of the higher education system to the benefit of the overall social and economic development of Kosovo, the following recommendations are made:

- Prioritize the development of human resources by providing and implementing a legal framework where participation in higher education is increased in an environment which ensures that quality standards are met.
- Increase the budget for higher education, improve the management of financial resources, and implement the new higher education financing system aiming to support higher education institutions in creating additional funds which would be reinvested in higher education.
- Institutionalize internships and maintain continuous dialogue with employers to ensure that study programs reflect labor market needs, priorities and employment strategies of the country and improve employability of graduates.
- Promote lifelong learning and development of continuous training programs through providing opportunities for individuals to enhance their work skills and foster personal development goals.
- Promote public private partnership in higher education and support the private sector by providing a regulated environment and further consolidation of quality assurance mechanisms.
- Increase investment in a modern environment for teaching, learning and research and in information systems to improve the efficiency of administration.
- Establish research institutes within universities and strengthen research activities both in private and public institutions in terms of funds allocated.
- Promote and support staff and student mobility, joint study programs and international cooperation for all higher education providers with the aim of producing benefits to research and teaching.

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Annex

Sub-sector and target	2011-2016 development cost	2011-2016 recurrent costs	2011-2016 total cost	Annual recurrent costs beyond 2016
Legislation	158,000	0	158,000	0
Participation	550,000	54,712,120	55,262,120	16,126,960
Equity	7,000	1,077,000	1,084,000	247,400
Labour Market	17,000	0	17,000	0
Income generation	60,700	112,800	173,500	37,600
Quality Assurance	7,600	138,780	146,380	34,400
Research, Innovation and Technology transfer	157,000	110,000	267,000	30,000
Internationalization	47,000	3,560,000	3,607,000	872,500
Infrastructure	39,607,000	13,115,500	52,722,500	3,901,000
Total	40,611,300	72,826,200	113,437,500	21,249,860

Table 1: Planned investment in Higher Education in period 2011-2016 (in Euros) (MEST)

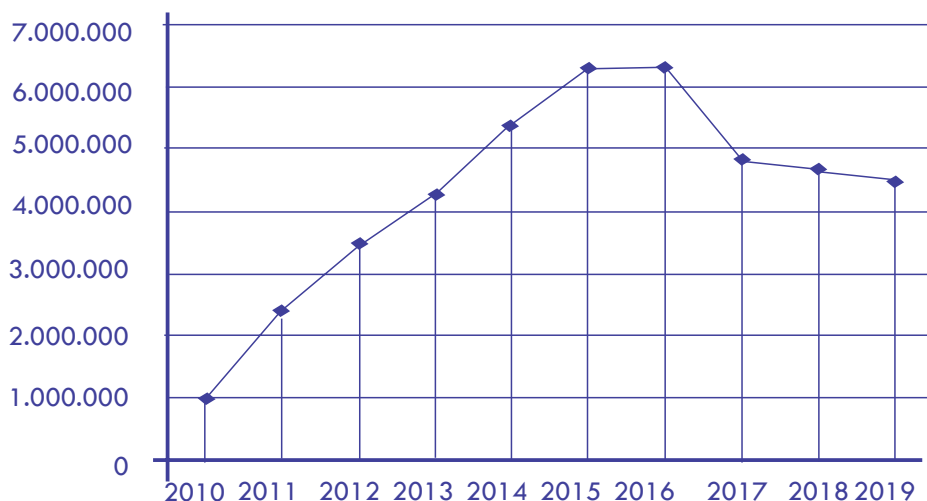


Figure 1: Planned investment in research in Kosovo (National Research Program)

Funding Organization/ Agency	Title of project/ field of support	Approved End date (MM/DD/YYYY)
Austrian Development Cooperation	Technical Assistance to MEST in Higher Education Reform	12/31/2010
Austrian Development Cooperation	Building Quality, Knowledge and Skills for Social and Economic Development - Support to Reformed Higher Education in Kosovo 2008-2011	01/31/2011
Austrian Development Cooperation	Balkan Case Challenge 2008 –2010 – Sub-competition for Kosovo	09/30/2010
Austrian Development Cooperation	Multidimensional Project for the Implementation of an Institutionalized Partnership between Austria and Kosovo in the field of Higher Education, Research and Innovation - Consolidation	12/31/2010 (phase I) 12/31/2013 (phase II)
Embassy of France	Scholarship for Studying in France	06/30/2010
Embassy of France	Support to French Department of the University of Prishtina	05/29/2010
European Commission	Entrepreneurship and Local Economic Development in Albania, Kosovo and Macedonia	08/31/2012
European Commission	Supporting and Developing Structures for QA at the Private Higher Education Institutions in Kosovo	01/15/2012
European Commission	Fostering and Developing the Quality Culture at the University of Prishtina	08/31/2012
European Commission	International Joint Master Degree in Plant Medicine	01/15/2013

European Commission	Development of Master Study Programs in Education	08/31/2011
European Commission	Using Local Resources for Micro-regional Development -Sustainable Agribusiness and Tourism in the Southern Balkans	01/15/2013
European Commission	Creation of the Third Cycle Studies/ Doctoral Studies in Meteorology	01/15/2013
European Commission	Kosovo Interdisciplinary Knowledge Triangle Centre –PhD based Education Research and Training for Medical and Natural Sciences	01/15/2013
European Commission	Creating R&D Capacities and Instruments for Boosting Higher Education-Economy Cooperations	08/31/2012
European Commission	Development of Regional Interdisciplinary Mechatronic Studies	01/15/2013
European Commission	Harmonizing Sport Science Curricula in the Balkans in the EU Perspective	08/31/2012
European Commission	Improvement and Establishment of Biotechnology in Higher Education	08/31/2010
Norway	Translation of Books for University-level Education	12/31/2009
Norway	Kosovo Institute of Journalism and Mass Communication	12/31/2010
Norway	Scholarship Program for Kosovar Students in Norway	12/31/2010
OSCE	Further Institutional Development and Capacity-Building for Teacher Education in Bosnian Language	01/02/2010

OSCE	Establishment of a Student Support Centre at the Gračanica/Gračanicë University Campus	12/31/2010
OSCE	Establishment of a Career Centre at the University in Mitrovicë / Mitrovica	12/31/2010
OSCE	Supporting the Development of an In-Service Teacher Training Centre at the Prizren Branch of the Faculty of Education/University of Prishtinë/Priština, Phase 1	01/12/2010
OSCE	Further Development of Research Capacity and Collaboration at the Universities in Mitrovicë/Mitrovica and Prishtinë/Priština	08/21/2010
Sida	European College Business Studies & Public Administration Mitrovica	03/30/2011
The Netherlands	Regional NGO Development	12/12/2010
The Netherlands	NEWEN	05/31/2010
The Netherlands	Mitrovica Summer University	03/31/2011
USAID	Focus on Results and Enhancing Capacity through Sectors in Transition	09/30/2010
USAID	HED Partnerships	12/31/2010
USAID	Higher Education Partnership Program with the University of Prishtina, Faculty of Engineering and Computer Sciences	06/30/2011
USAID	Higher Education Partnership Program with the University of Prishtina, Faculty of Economics	09/30/2010


Table 2: Ongoing donor support in the Higher Education sector in Kosovo (MEST)

Euro Zone	22,600
Albania	5,400
Bosnia and Herzegovina	5,900
Bulgaria	4,400
Hungary	9,000
Kosovo	2,500
Montenegro	8.400
Romania	5,500
Serbia	10,500
Slovenia	16,900

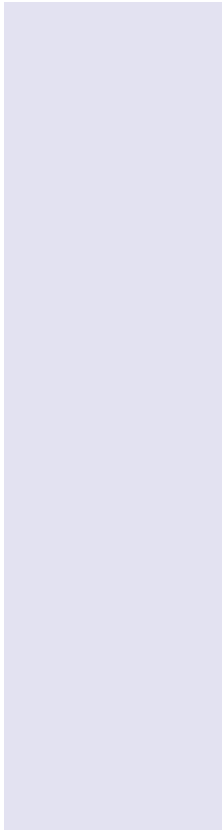
Table 3: GDP per capita 2008, 2009 (in US dollars) (UNESCO Kosovo: administrative documents)

OECD country mean	1.30%
Croatia	0.73%
Kosovo	0.60%
Montenegro	1.10%
Serbia	0.90%
Slovenia	1.26%

Table 4: Percentage of GDP spent on Higher Education 2008 (UNESCO Kosovo: administrative documents)



**HOW TO ADVANCE COOPERATION BETWEEN PUBLIC
UNIVERSITIES AND ECONOMY IN MACEDONIA?
DEFINING A ROADMAP FOR THE FUTURE**
MISO DOKMANOVIC and NENA CVETKOVSKA



1. Summary

In the last two decades the system of higher education of Macedonia has been in the process of continuous reforms which were provoked by several factors in the Bologna Process about integration in the European Union. For Higher Education institutions these reforms meant the actual starting point for a serious discussion: assuring the comparability and transparency of curricula in terms of structures, program and actual teaching, and development of innovative curricula.

The current research is an effort to assess the use of tools and instruments creating the relationship between the educational and the business/public sector.

This paper will explore the link between higher education and economy in the country, the *status quo* as well as the main trends and challenges. In-depth analysis of the country's policies and actual situation at the public universities in Macedonia will be the foundation for the development of propositions and recommendations to all parties involved, starting from decision-makers for policy-making in the field of education policies and other correlated policies, universities, business and public sector as well as organizations willing to support improvement in this field.

2. Methodology

In order to explore the issues related to the establishment of a link between higher education and economy in Macedonia, research begins with the analysis of the national legislation concerning the system of higher education (laws, strategies, reports, national programs). Besides that, the research examines the size and environment of higher education in that country.

The research conducted at the public universities is based on the case-study methodology. All accredited public universities in Macedonia are included in the research. The research team visited all target universities, conducted in-depth interviews with academic staff at the university and department level and career center representatives, and collected relevant documents such as university regulations, reports, strategies, surveys, etc.

There are five public universities in the country and consequently all of them are included in the case study analysis and site-visits:

- 1) **Ss. Cyril and Methodius University** – Skopje, established in 1949, consists of 23 faculties and 9 research institutes (<http://www.ukim.edu.mk>);
- 2) **St. Kliment Ohridski University** – Bitola, established in 1979, consists of 10 faculties, 1 university high school and 1 research institute (<http://www.uklo.edu.mk>);
- 3) **State University of Tetovo** – Tetovo, established in 2004¹, organized in 11 faculties (<http://www.unite.edu.mk>);
- 4) **Goce Delcev University** – Stip, established in 2007, composed of 13 faculties, 1 university high school and 3 research institutes (<http://www.ugd.edu.mk>); and
- 5) **University for Information Science and Technology** – Ohrid, established in 2008, organized in 5 faculties (<http://www.uist.edu.mk>).

Furthermore, the report incorporates the recommendations of three workshops aimed at university staff members organized by World University Service (WUS) Austria and the Institute for Strategic Research and Education (ISIE) in 2009-2010. The workshop “How to Integrate Internships in the University Curriculum?” was organized at the Faculty of Economics, St. Kliment Ohridski University on October 30, 2009; the workshop “Use of Case Study Method in the Teaching Process” was held at the Faculty of Law, Ss. Cyril and Methodius University in

¹ The University of Tetovo was founded in 1994 but it was recognized by authorities and established as state university only in 2004 (Official Gazette 2004).

Skopje on February 10, 2010; and the workshop “Linking Higher Education and Economy. Various Forms of Cooperation between Universities and Business: Best Practices, Experiences and Cases from Macedonia and Austria” took place at the Faculty of Administration and Management of Information Systems in Bitola on May 28, 2010. Besides that, the conclusions and recommendations of the Regional Conference “Linking Higher Education and Economy” held in Vienna on July 6, 2010 are included in the report.

3. Introduction

In the last decade Macedonian authorities have undertaken continuous reforms in order to transform the system of higher education. The signing of the Bologna declaration in September 2003 as well as the perspective of EU membership had an immense impact on the transformations undertaken in the Macedonian system of higher education.

However, the political and economic situation in the country remained a serious challenge for the reform of the system of higher education. The dissolution of Yugoslavia and the military conflict in 2001, the deep recession of the early 1990s and slow economic recovery, increasing unemployment due to industrial restructuring and other accompanying aspects of the transition have had dramatic consequences for the economy. In that area, the basic economic parameters of the country have not improved in the last decade. According to the National Bank of Macedonia, in the last two decades the unemployment rate has remained very high – over 30%. In 2009 the unemployment rate was 32, 2% (National Bank 2009). At the same time, the poverty rate has increased in the last three years – from 29.4% in 2007 to 31.1% in 2009 (State Statistical Office 2010a).

Among other consequences, this has resulted in a massive and continuous brain drain, frequently of the best experts, who have left their country to seek employment opportunities abroad. The data provided by the World Bank (2005) points to the fact that the emigration rate of tertiary educated people is 20.9% (World Bank 2008).

4. Government Policies, Legislation and Strategies Relevant for Linking Higher Education and Economy

In order to address the need of developing new standards in the system of higher education and the implementation of the European credit transfer system, the Macedonian authorities have adopted several documents that tackled the issue of linking higher education and the economy. The higher education system of Macedonia has been regulated with the Law on Higher Education adopted in 2000. After joining the Bologna declaration, the Macedonian Parliament made several changes in the Law on Higher Education in 2003, 2005 and 2007 in order to start the implementation of the accepted obligations (Official Gazettes 2003, 2005 and 2007).

Besides that, in 2006 the Parliament of the Republic of Macedonia adopted the National Program for Development of Education in the Republic of Macedonia 2005-2015. A separate chapter of the National Program was dedicated to the establishment of the link between education and the economy. The National Program underlined that the “dynamics of the transformations of the educational system should follow the dynamics of the changes in the necessary competences dictated by the market” (Official Gazette 2006).

After a long period of political debates and preparation process in which weak points of the previous legislation in the field of higher education were identified, a new Law on Higher Education was adopted by the Parliament on March 14, 2008 (Official Gazette 2008a). The main areas of intervention relevant for the establishment and development of the link between higher education and economy were:

- Transformation of the structure of the university from a loose association of legal entities into an integrated university.² As a result of that, the role of the universities was strengthened by the new forms of their organization and management.
- Taking into consideration the weak points of the national quality assurance system identified during the stocktaking process for the conference of the European ministers responsible for higher education, the Law introduced wider student participation as well as participation of employer representatives (from the economy and from the public sector). Consequently, a new university body, the University Council, was created. According to Article 58 of the Law, the University council is composed of 11 members including one representative of the Organization of Employers of Macedonia.

On August 19, 2008 the Parliament of Macedonia adopted the Law on Changes and Supplement of the Law on Higher Education (Official Gazette 2008c). The new provisions regulated the role and status of clinical programs at the universities, participation of experts in the teaching process and envisaged the practical placement of students. According to Article 14 of this Law, the student was obliged to attend practical work of a duration of no less than 30 days each academic year. At the same time 10% of the compulsory and elective courses of the academic programs should be taught through clinical programs.

Finally, in May 2009 a new regulation concerning the practical education of students was enacted. The Rulebook on the Methods and the Conditions for Organization of Practical Education of the Students (Official Gazette 2009) instructed higher education institutions to transform their curriculum in order to meet provisions of the Law on higher education concerning the practical education of the students. In particular, this regulation called for evaluation of students' performance during practical education and provision of ECTS credits. According to Article 4 of the Rulebook, during practical education in the institution or organization the student should be under the supervision of a member of the academic staff – a so-called supervisor.

Turning to another issue, several authors have stressed the problem of the Brain Drain phenomena in Macedonia and the wider CEE region. As Horvat (2004) illustrated: "Macedonia is a good example of a country where brain drain is significant, where there is little awareness that a problem exists, and where almost no research has been carried out in order to examine what impact political instability has on highly skilled labor migration out of the country." Moreover, the data available on high-skilled labor emigration has been very poor and cannot be taken into account when estimating the real situation. In addition, Macedonia has been lagging behind in introducing policies and strategies to reverse the process of high potentials emigration (Vangeli et al. 2010). In that direction there was only one significant policy brought by the Government of the Republic of Macedonia, the National Resolution on Migration Policy, which vaguely deals with this problem.

2 Taking into consideration the complexity of this demanding task, the transitional period for transformation of the Ss. Cyril and Methodius University and the St. Kliment Ohridski University had been postponed until January 2009.

5. Size and Scope of the Higher Education Sector and its Environment

Apart from the transformations and modifications in the legislative framework of the Macedonian system of higher education, the number of universities, both private and public, has been increased. In addition to the three existing public universities (Ss. Cyril and Methodius University, St. Kliment Ohridski University, and the State University of Tetovo) the Parliament established two new public universities: the Goce Delcev University in 2007 (Official Gazette 2007) and the University for Information Science and Technology in 2008 (Official Gazette 2008b). Furthermore, the number of private institutions for higher education has increased. According to the Ministry of Education and Science of the Republic of Macedonia, there are 18 accredited private institutions for higher education (Ministry of Education 2010). Besides that, the number of departments and academic programs within the universities has increased. At the same time, the Bologna Process National Report on Macedonia (EACEA 2009) emphasized that the most significant reform was the implementation of the country's strategy for opening higher education units of dispersed studies in almost every town in the country with the ultimate aim of increasing the number of graduates in the country and bringing the universities closer to the rural areas.

The ongoing processes of reforms of the system of higher education have had an impact on the number of students. The number of first year students enrolled in university programs has increased from 12,921 in 2005/06 to 18,335 in 2008/09. Over 81% of the first year students were enrolled in programs at public universities (State Statistical Office 2010b). According to the statement of the Minister of Education and Science of Macedonia, the percentage of high school graduates enrolled in a first cycle university program in the academic year 2009/10 reached the fascinating number of 96,5% (Time.mk 2010). This represents a clear increase compared to 2002 when the total number of students in the country was 44,710 (Morgan n.d.).

As stated in the Bologna Process National Report on Macedonia (EACEA 2009), the universities pay "special attention to the employability of their graduates and cooperation with employers". This report underlined that there was a significant dialogue between higher education institutions and employers on curriculum design, work placements, and international experience.

6. Current State and Forms of Cooperation between Universities and the Business Sector

In the section below, findings from the research conducted among the five state universities in Macedonia will be presented. Based on personal interviews with and questionnaires by staff members, as well as the previously organized workshops, some general conclusions can be drawn.

It is evident that at all target universities, no general practice or consistent long-term strategy about the inclusion of practical ways of learning in the subjects' curricula exists. The workshop in Skopje, organized by WUS Austria, has demonstrated that there is great interest among the academic staff for the use of case study method in the teaching process. Even though some of the participants encountered the case study method for the first time, the workshop represented a valuable experience in particular in respect to raising awareness (ISIE 2010a). The case study method and real life examples have been already used in rare cases by some of the professors. Interviewed university staff at the Faculty of Economics in Prilep as well as the Faculty of Economics, the Faculty of Mechanical Engineering and the Faculty of Electrical

Engineering and Information Technologies in Skopje pointed out some examples where the professors had been organizing a real life project at a certain company with the opportunity for students to present their results in front of the management of the company.

Moreover, the same could be pointed out for the involvement of the business/public sector in the educational process. The questionnaires showed examples of lecturers from the business environment, companies offering scholarships and company mentorships for diploma and master theses; however these have been more one-time cases than everyday practices. Often successful partnerships are linked to a professor's relationship with companies rather than a systematic, effective and institutionalized cooperation with the business sector. In a personal interview with the authors, Katerina Klimoska, administrator at the newly opened State University for Information Science and Technology in Ohrid, emphasized that plans had been put forward for the implementation of practice-oriented curricula and learning by doing with a direct involvement of the students in projects for the business sector.

On the other hand, according to the statements of some teaching assistants who are interested in implementing interactive and practically-oriented curricula, they are faced with an overload of teaching hours holding them back from prioritizing the development of practical and innovative teaching methods. Given the number of students and classes that they teach, this could represent a serious obstacle for establishing links between higher education and economy.

With regard to the easier transition of young graduates from education to the labor market, the need and importance of career centers has been highlighted by all relevant stakeholders. The workshops in Bitola and Prilep, organized by WUS Austria, also showed that there has been a growing interest among academic staff for continuous training with regard to how approaching companies, the evaluation of student performance during the internship, the organization of internships abroad, etc. (ISIE 2010b). Even though, some efforts in this direction have been made at almost all universities, the form and function of the career centers still remains a challenge. At the Goce Delcev University in Stip and the State University in Tetovo, career centers at university level have been established, mostly working in the area of providing internships and organizing workshops, whereas at the St. Kliment Ohridski University in Bitola there is an existent office for cooperation with the business sector. In addition, some departments of the Ss. Cyril and Methodius University in Skopje are organizing career days on a regular basis and provide their students with information regarding internships and job opportunities. However, at the universities in Skopje and Ohrid there has been no official career center established. According to the representatives from the existing career centers that were visited, a vast amount of problems arises from the legal status of these entities. As they are part of the universities, a lot of bureaucratic procedures have to be dealt with for every action or project initiated at the career center.

Furthermore, the establishment of Alumni networks has been identified as a possible way of connecting higher education institutions with the economy. Currently, all contacted universities are aware of the needs and benefits of Alumni networks; however, they are still in the initial phase of their development.

In the direction of inclusion of more practical education at the universities, the Ministry for Higher Education made internships for all students compulsory by law. The initial feedback from the universities, regardless of the existence of a career center, was that they do not have the resources to provide or even monitor the internship program designed by the government. As pointed out by several interviewed members of the academic staff, the main problem arises from the small size and capacity of the Macedonian economy to absorb such a number of interns annually, as well as the capacity and resources of the career centers. According to our interviewees, the students are highly valuing the opportunity to gain practical

experiences from working on real life cases at the faculties besides the theoretical knowledge. At the same time, they show great interest in spending time as interns at companies while studying and acquiring experience from the real business world. The initial feedback from the students about the practical learning and internships was that “they are developing skills for applying the theory in practice, acquiring applicable skills and techniques and becoming aware of the opportunity to assess their appropriateness for a certain kind of job”, as underlined in a personal interview with Marika Baseska-Gjorgjieska from the Faculty of Economics in Prilep.

7. Institutions Linking Higher Education and Economy

There have been several international initiatives in the country aimed at developing and improving the instruments for cooperation between higher education and economy. With the help of foreign donors and supporters, business start-up centers were established with the aim of helping young graduates to find their place in the business world and to initiate entrepreneurial activities. Such business start-up centers (BSC) have been established in Skopje and Bitola which work closely together with the universities Ss. Cyril and Methodius in Skopje and St. Kliment Ohridski in Bitola, but they are not organizational units of the respective universities.

These institutions have had success in executing their mission and goals. According to a personal interview with Radmil Polenakovik, the manager of the BSC in Skopje, these centers provide a lot of young people with the needed knowledge, skills and competences for an easier transition from the universities to the labor market. The core work of these institutions is mainly concentrated on supporting innovations and entrepreneurial spirit of young individuals by professional mentoring or financial aid. Furthermore, the BSCs have been continuously engaged in organizing trainings and workshops on various topics for the improvement of the participants’ soft skills. Rozita Talevska – Hristovska, the director of BSC in Bitola, emphasized that more than 100 trainings in entrepreneurship, with approximately 2,000 participants, were organized between 2007 and 2010.

Through their core activity, the BSCs have the role of intermediaries between the business sector, the students and the universities. Besides their core work, the BSCs often act as career centers, usually approached by companies looking for employees. However, as this is not their main purpose they address little effort and time to accomplishing it. Even though, there is a capacity for better involvement of these centers in the establishment of stronger links between universities and the economy, there exists an unclear relationship between the BSC and the universities, in particular concerning their organizational status and funding which could seriously jeopardize their sustainability.

In the framework of the USAID Competitiveness project (USAID 2008), some steps for the establishment of career centers have been made at some state and private universities in Macedonia. However, no significant progress has been made in that direction so far. As part of the same project, the National Internship and Job Placement Program was launched. As a result the online portal for careers - My Career (www.mycareer.com.mk) has been developed. Through this portal students and companies have the opportunity to complete an online match for their needs of internships or job placements. Besides that, it serves as a platform for online career coaching, and for organizing E-career fairs and similar events. The My Career initiative is also supported by efforts to strengthen the availability and quality of professional career development services, by introducing Global Career Development Facilitators (GCDF) trainings and certifications for career counselors working in the private sector or within educational and training institutions. The initial feedback from this program has been very positive from both

job seekers and employers. Future steps are planned to spin-off the initiative into a self-sustained organization to continue operations beyond the scope of the project and USAID funding (USAID 2010).

Although private universities were not a target group for this research, a good practice example of a private university which has been successful in its attempt to realize the linkage between higher education and the economy will be mentioned. The South East European University (SEEU) in Tetovo was established in 2001 and since then has succeeded in implementing practice-oriented and modern curricula, engaging private and public companies or institutions in the academic process, and most importantly offering its students the opportunity to advance their knowledge with practical experiences at partner companies. SEEU has had remarkable success in the development and functioning of its career center and offers a variety of services to students.³ According to the center administrator Burbuqe Kaprolli, the career center has already successfully organized job fairs for its students, attended by a large number of well-known Macedonian companies offering concrete job opportunities. As a result of their activities the SEEU students showed a high level of employability. The last survey compiled as of February 2009 showed that 65% of SEEU graduates find jobs within a year and 12.44% are employed before their graduation (SEEU 2009).

8. Conclusions

As it can be concluded from the above findings of the current situation at the Macedonian state universities, the establishment of the link between higher education and economy is in an initial phase. Some of the reasons, considered to be a hinderance in the development of such successful links, can be identified at both the companies and the higher education institutions. For instance, it has been more than evident that the economic development of the country as well as the exceptionally high unemployment rate enables companies to find sufficient number of employees without investing time or money in it. Moreover, because of the traditional mind-set of the employers, they are still unaware of the benefits of cooperation with universities in different fields. Apart from few good practice examples of certain faculties or departments, it can be concluded that the cooperation between economy and higher education lacks institutionalization.

However, when looking at the problem from another perspective, a lot of barriers for improvement within the higher education institutions can be found. As previously mentioned, there has been a vague strategy for development in the field of linking higher education with economy as well as a disrupted flow of information at all levels. Although, initiative for improvement exists, no constructive actions have been taken to tackle current problems. In addition actions were neither harmonized nor institutionalized within a given framework. It seems that the support of the top university management will play a decisive role in establishing an efficient cooperation with the economy.

On the other hand, even though the establishment and development of career centers at each university appears to be an evident need, the universities have been facing lack of resources to accomplish it. Primary financial means and qualified staff members are the key resources needed. As there is yet only one example of good practice regarding career centers, namely the SEEU, the universities also lack the knowledge and experience in leading such career centers. In addition, no clear and consistent strategy has been developed for the implementation of this initiative.

3 For further information: <http://www.seeu.edu.mk/en/students/student-services/career-center>. Retrieved on September 20, 2010.

At the same time, the currently existent and future career centers would have to take on the burden of organizing, managing, mentoring and monitoring the compulsory internships. This would consume most of their time and resources, and diminish their role as centers for career guidance and development.

9. Recommendations

For the purpose of improving the relationship between higher education and economy and consequently utilizing the benefits of this linkage, some actions will have to be taken. For this, joint projects with more experienced countries/universities could be of great importance. With the aim of changing the mind-set at both companies and universities, continuous training for university and professional staff, focusing on the benefits of the inclusion of economy in higher education, should be organized. Through these workshops, company representatives as well as university staff should have the opportunity to pick and chose from various best practice examples and experiences from other countries, the most suitable for their area of work. Moreover, these workshops should be attended by local companies, university and government representatives as well as foreign experts in these fields. In addition, university staff should have the opportunity to have study visits at more advanced universities and to see how it functions in practice. It is essential that university staff at each level of the organizational hierarchy should be included in the trainings.

To this end, universities should be able to develop strategies/programs for long-term cooperation with the economy. As underlined by Marika Baseska-Gjorgjieska from the Faculty of Economics in Prilep, the process of cooperation should be formalized and built on grounds of fair relationships between companies and universities trough a variety of activities.

In order to solve the problems regarding the foundation and the development of career centers, direct support from a donor, willing to financially and conceptually prop up the establishment of such centers, would be needed. With regard to their proper institutionalization and performance, it is essential to appoint a suitable mentor at each university, who would be able to provide guidance, expertise and staff trainings. In the interest of satisfying the need of all students and disciplines, one main center should be established at each university with offices equipped with field workers in each faculty. In the direction of achieving the best results the project should last for 3-5 years and be divided into 3 phases:

- Phase I – Establishment of the career centers, main offices and training of the staff
- Phase II – Establishment of faculty offices and implementation of suitable IT solutions
- Phase III – Preparation of the centers for self-sustainability

Furthermore, attention should be paid to the issue of the legal status and separate accounts of the career centers. In order to ensure their effective operations, the idea of establishing career centers as independent entities with separate accounts, but tightly connected to the respective university and faculties, should be thoroughly reexamined.

In addition to the career centers, Alumni networks should be established. In accordance with each faculty's needs, the size and the scope of Alumni activities should be decided. The starting point for this project should be the development of an updated data base of faculty Alumni as well as an efficient system for collecting data from future generations. Moreover, annual reports addressing employability of graduates should be prepared by the universities and used as input for career services and curricula development.

Furthermore, based on the feedback received from all stakeholders, the Ministry of Education and Science should urgently revise the regulation for compulsory internships for each student

and every year of studies. Even though the introduction of compulsory internships is a positive action, it has to be taken into account that it would be impossible for the Macedonian economy to absorb such a quantity of students each year. A modification of the regulation to achieve a more acceptable solution should be considered. The suggestion goes in the direction of limiting the compulsory internship to one month per student for the whole duration of studies. This would also assure more quality internships, better and easier monitoring as well as the possibility of the introduction of mentorship programs.

Regarding the capacity of the Macedonian economy, international or regional placement of interns should be encouraged and supported, as well as the development of regional networks for the interns' mobility. By creating partnerships with neighboring countries, Macedonian students would have more opportunities for quality internships, while at the same time having an international experience.

In order to deal with the Brain Drain issue, extensive research of the current situation should be conducted. Moreover, the main "push factors" have to be identified and concrete actions suggested. There are two priorities to be considered in order to reverse the adverse effects. First, extensive data and information about highly skilled Macedonian nationality labor force living and working abroad has to be compiled. Secondly, "push factors" in the home country have to be diminished. Moreover, in the next phase, more attention should be paid to the creation of "pull factors" and the development and implementation of Brain Gain strategies.

From the above-mentioned facts it can be concluded that there is need, space and interest for taking actions to improve the area of linking higher education and economy in Macedonia. However, these actions need to be supported by foreign experts and donors to ensure the best possible results.

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**ADDRESSING POST-SOVIET CHALLENGES IN THE HIGHER
EDUCATION SYSTEM IN REPUBLIC OF MOLDOVA**

DANIELA MUNCA



The transition from the former Soviet system into a market economy has severely affected the Republic of Moldova socially and economically, especially weakening the link between higher education and labor market needs. The newly independent country is struggling to become a member of the European Union, which has added even more pressure on the local educational reform aiming to reduce unemployment that is severely affecting the country's development. Various independent national and international studies since 2000, mentioned later on in this paper, clearly show that despite some progress in the area, the higher education system in Moldova is still facing a number of challenges in addressing the issue of linking education and modern economy. In addition to education policy and curricula, there are labor market, administrative, social and financial aspects that are crucial to address if Moldova is planning to prepare well-qualified and motivated students to develop into successful entrepreneurs capable of meeting the needs of a competitive European market.

1. Higher Education and Employability in Moldova – A Student Perspective

In order to examine Moldovan students' attitude towards the higher education system offered in their country, I conducted an opinion poll in September 2010. The poll collected a representative sample of 250 students from three major Moldovan universities: Academy of Economic Studies of Moldova (ASEM), State University of Moldova and „Ion Creanga” State Pedagogical University. The poll was conducted in collaboration with local student organizations, such as the ASEM Student Senate, AIESEC Moldova¹, as well as teaching associations, such as ETRC² and APLE³ using the free web-based survey tool Survey Monkey⁴. 51.9% of the respondents admitted that they were not very satisfied with the quality of higher education in Moldova, with only 35.2% being partially content. 49.1% answered that the degrees obtained in their country offered only a partial preparation to enter the labor market, while 7.5% responded that they felt they were unprepared to start a career. Regarding the teaching materials and methodology present at institutions of higher education, 83% stated that they were partially satisfied with the quality and approach, 3.8% answered “No, not at all” and only 17% “Yes, at some extent”. 53.8% of the respondents claimed that Moldovan universities do not offer relevant information regarding the existing labor market, 40.4% answered “only partially” and only 1.9% of the respondents were completely satisfied. The respondents mentioned that higher education in Moldova is too academic with very limited resources regarding labor market needs, and that teachers are not professionally prepared to respond to the changes in the economic fields. High corruption and lack of appropriate standardized tests heavily affected their trust in Moldovan education. Very limited internship opportunities, and a lack of collaboration of local universities with national and international businesses in providing practical training were also stated as impediments for a successful integration in the labor market.

The results of this opinion poll pointed to the fact that higher education in Moldova is facing serious challenges in its attempt to produce highly qualified workers ready to enter the labor

1 The French Association Internationale des Étudiants en Sciences Économiques et Commerciales, present in over 107 countries and territories and with over 50,000 members, is the world's largest student-run organization: <http://mc.aiesec.md/?lang=en>.

2 The English Teaching Resource Center (ETRC), created by the U.S. Embassy, and “I. Creanga” State Pedagogical University in collaboration with the British Embassy to Moldova: <http://www.etr.md/>.

3 Moldova's Association of English Teachers: <http://moldova.usembassy.gov/etp.html>.

4 Survey tool: <http://www.surveymonkey.com/>

market. In order to fully understand and address these challenges, it is necessary to start from a thorough analysis of the historical background of the Republic of Moldova as well as its current political aspirations.

2. Joining EU - A Priority for Moldova

Ever since Moldova signed The Partnership and Cooperation Agreement (PCA), which represents the legal framework for the Republic of Moldova - European Union relationship on 28 November 1994, which began to apply on 1 July 1998 for the following 10 years, EU integration has become one of the priorities of the newly independent democratic country. On March 2010 during the Consultative Group Meeting in Brussels at the Moldova Partnership Forum co-hosted by European Commission and World Bank, the Moldovan authorities, represented by Vlad Filat, Prime Minister of Moldova, reaffirmed their view that European integration was a key priority and that the most efficient way to achieve political, economic and social modernization of the country was to implement reforms leading the country on the path toward European integration (Worldbank n.d.). At the Lisbon European Council on 23 and 24 March 2000, the European Union set the goal for itself to become the most competitive and dynamic knowledge-based economy in the world over the next decade, capable of developing sustainable economic growth with more and better jobs and greater social cohesion. In this context, Moldovan higher education has been seriously challenged to produce highly skilled individuals capable of competing in this environment.

3. Discrepancy between Economic Needs and Education - A Historical Perspective

Despite the fact that according to the 2009 Report published by the United Nations Development Program, Moldova boasts with a 99.0% literacy rate, which puts it at 19th in the world⁵, confirmed by the 99.7% rate published by UNESCO Institute for Statistics, the former Soviet Republic is still struggling with a serious discrepancy between what the higher education has to offer to Moldovan graduates and what the current labor market requires. The most recent report on the link between education and labor in Moldova was published in January 2009 as an outcome of the Black Sea Labor Market Reviews project, which was initiated and funded by the European Training Foundation (ETF) to collect information on and analyze selected labor market and related human capital issues in six countries of the Black Sea region.⁶ The analysis conducted showed that the Moldovan education sector was unable to keep pace with the changing needs of the economy. Despite the fact that the more advanced a person's educational background, the more likely they are to be employed and that the share of higher education graduates increased between 2000 and 2006, in contrast to that of vocational education and post-secondary non-tertiary graduates, distribution of preferred fields of study does not match what the real economy needs. Moreover, the review concluded that the increasing number of higher education graduates in Moldova has not contributed to the advancement of the country's competitiveness and the development of a knowledge-based economy.

5 The World Factbook, also known as the CIA World Factbook, which is a reference resource produced by the Central Intelligence Agency of the United States with almanac-style information about the countries of the world, states that 99.1% of the total population in Moldova is literate.

6 Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine

In the Soviet Union higher education was well funded by the State, while admissions were reserved for the brightest secondary school graduates. University professors were secured with one of the best-paid jobs in society, graduates of higher education enjoyed powerful status and privileges, while a university degree guaranteed positions in public and state organizations that provided stable salaries along with other privileges. In this context, unemployment was extremely low in Moldova during this era (Valentino 2007). After the dissolution of the Soviet Union, a general contraction of the economy and a collapse of control mechanisms led to a serious gap between the newly established labor market and the quality and relevance of higher education. The Moldovan economy suffered mostly from the destruction of its input distribution channels and the loss of its output markets. GDP fell by 70% between 1991 and 1997 and the economy only recently recovered to half of its 1990 level. As a result, Moldovan universities experienced a large fall in the demand for scientific and technological research, which was previously commissioned by contracts from state enterprises throughout the Soviet Union. The independence cost Moldova a considerable reduction of total demand for labor and the value of higher education and the accompanying knowledge and skills declined as well. This has had a negative impact on youth employment.

4. Youth Unemployment in Moldova

Moldova is going through an extremely challenging political and economic period. In the spring of 2010 the Parliament failed for the second time to elect a president to succeed the long-time communist leader Vladimir Voronin.⁷ The situation did not improve in September 2010 when the deadlocked legislature was disbanded and presidential referendum failed to stabilize the political situation in the country (BBC 2010). The political instability has worsened the current economic crisis which combined have adversely affected youth unemployment.

According to *Youth Unemployment and Poverty in Moldova: Current Situation and Possible Response* published by UNDP in the first quarter of 2009, youth unemployment (i.e. involving those in the 15-24 age group) rose to 16% (compared to previous trends where youth unemployment fell from 17% in 2006 to 14% in 2007). The unemployment rate amongst young males (nearly 18%) is higher than for women (14%) although the employment rate for young males is also higher (17% men, 15% women). In view of this, it is not surprising that migration from Moldova substantially involves young people. Thus, while the average age of migrants in 2006 was nearly 35 years, over 37% were below 30. Also, of those who were planning to migrate in 2006, over 44% were below 30 years, suggesting that the young still have strong aspirations to migrate. The UNDP study states that although Moldova's current youth unemployment rate is comparable to the average of the countries of the European Union (which in October 2008 was also 16%), young people in Moldova suffer clear labor market disadvantage. There is a negative correlation between age and the risk of being unemployed and those in the 15-24 age group face more than twice the risk of being unemployed than the next age segment (25-34). According to the National Bureau of Statistics of Moldova⁸ the unemployment rate rose from 4.0% in 2008 to 6.4% in 2009, which was especially hard on young people. 15.4% of all unemployed Moldovan citizens in

7 Vladimir Voronin was the third President of Moldova from 2001 until 2009 and has been the First Secretary of the Party of Communists of the Republic of Moldova (PCRM) since 1994. He was Europe's first democratically elected Communist Party head of state after the dissolution of the Eastern Bloc.

8 National Bureau of Statistics, Republic of Moldova: <http://www.statistica.md/>.

2009 were 15-25 years old as compared to 5.4% aged 35-49 years (National Bureau of Statistics 2010).

Not surprisingly, education plays a key role in determining the unemployment rate in Moldova. The same report states that in the first quarter of 2009 most of the young unemployed had only secondary education or less, which placed them at a disadvantage in the country where there are pay-offs to education in terms of labor market outcomes. However, having finished a university degree still did not facilitate the job search. In 2009, 15.5% of unemployed people had a higher education degree as compared to 11.8% with a secondary specialized education degree. Students had neither adapted to the new economic conditions and necessities nor was the economy capable of fully absorbing graduates with a university diploma.

5. Higher Education in the Republic of Moldova: General Overview

The higher education in the Republic of Moldova has been regulated by the Conceptual Framework for the Development of the Education System adopted by the Parliament on 15 September 1994 and the Law on Education in 1995.⁹ In February 2005 the President of the Republic approved the Strategic Directions concerning the Modernization of the Education System. By the amendments to the Law on Education in 2005¹⁰, a new two-cycle structure of the higher education system was adopted in line with the Bologna process: first cycle - Licentiate (the duration of studies being 3 - 4 years) and the second cycle - Master (with the duration of 1 - 2 years).¹¹

The Ministry of Education and Youth (formerly the Ministry of Education and Science) is responsible for the administration of the education system at national level. The Ministry develops strategies, promotes educational policies and supervises the educational process at all levels. The National Council for Curriculum and Evaluation which was established in 1997 designs, implements, and evaluates curriculum policies and processes. It co-ordinates the educational reform with a view to adjusting actions in horizontal and vertical directions and improving curriculum reform, teacher training, evaluation methods, and financial mechanisms. The Institute of Educational Sciences is a research and postgraduate education institution that has autonomous status under the Ministry of Education. The Institute coordinates in-service training and professional development of teachers at the national level and collaborates with other in-service teacher training centers across the country. Students are involved in the quality improvement process. There is a National Interuniversity Students' Council which discusses problems dealing with the social status of the students, quality assurance of education, the implementation of the Bologna Process, quality of the study programs, etc. In addition to the Ministry of Education five other ministries supervise several specialized higher education institutions: Agriculture and Food Industry, Culture and Tourism, Health and Social Protection, Internal Affairs, and Defence. Private higher education institutions are authorized by the Licensing Chamber, a central public authority that issues licences and coordinates with the Ministry of Education.

9 Law on Education of the Republic of Moldova no. 547 from 21.07.1995

10 Amendments to Law on Education No. 71 from May 2005

11 Ministry of Education, Republic of Moldova: <http://www.edu.md/>.

According to the National Bureau of Statistics of the Republic of Moldova in 2009, there were 31 higher education institutions (as compared to 47 in 2002); 17 public and 12 private institutions (as compared to 16 state and 27 private institutions in 2002). 114,865 students were enrolled (as compared to 86,414 in 2002). 74.4% of these students were enrolled on a contract basis, as compared to 68.7% in 2002.

There were 322 students per 10,000 inhabitants in 2009, as compared to 238 in 2002. 29,614 students graduated in 2009, as compared to 12,496 in 2002. The most popular majors in the academic year 2009/2010 were business studies, legal studies and social studies (28.6%), the least favourable being agriculture (2.9%) and health (4.1%).

Despite the various challenges the higher education in the Republic of Moldova is facing at the moment, it still pays to have a higher degree. An additional year of education in Moldova increases the wage by 9.5% when other factors are constant (ETF 2009:39). Education offers a higher salary and decreases the probability of becoming poor. As a result, the proportion of higher education graduates is increasing, in contrast to those of vocational education and post-secondary non-tertiary graduates. In 2007 the number of students enrolled in higher education institutions was five times higher than the number of students enrolled in vocational schools and four times higher than the number of students in colleges. The number of students continuing their studies in higher education institutions increased significantly until 2006, when the government imposed limits on fee-based enrolment in order to channel the inflow of potential students from traditional specializations (such as economics, law, political science, and foreign languages) to a number of technical specializations. It is appropriate to mention that despite the growing number of students in universities, the gross higher education enrolment ratio in Moldova is still lower than that in other countries (StateUniversity.Com n.d.).

6. The Mismatch between Higher Education and the Labor Market in Moldova

According to a study on the labor market in Moldova conducted by economic analysts of the analytical center “Expert-Group” (2007), the labor market lacks highly qualified specialists due to poor quality training offered by the local universities. The economic analyst Alexander Gamanjii claims that university curricula do not meet the requirements local companies have when hiring young specialists. He argues that Moldova lacks an appropriate collaboration between companies and academic institutions which has created a mismatch between the knowledge of young specialists and requirements of companies seeking employees. Gamanjii states that the government should highlight the need for collaboration between companies and universities to adapt curricula to the requirements of companies.

One of the clearest impediments to an overall improvement of the quality of education in Moldova and its alignment to the European standards is the lack of proper funding. In their “Annual Evaluation Report on the Economic Growth and Poverty Reduction Strategy” the International Development Association (IDA) and the International Monetary Fund (IMF) argue that “while spending on education has been growing, [...] available resources have been insufficient to maintain the quality of education in Moldova. Expenditures on education are still ‘very low’ when compared with spending levels that existed in the mid-1990s (10% of GDP)” (IDA, IMF 2006).

Brain drain and labor force migration in general is another issue seriously affecting the labor market in Moldova. According to the Black Sea Labor Market Reviews (ETF 2009: 9-10), employment rates have worsened in Moldova for the entire period during which

observations have taken place (1999–2007) and the speed of their decline has been the highest in Europe. The employment rate of 47.1% of the working-age population is currently also the lowest in Europe. The total number of economically inactive people increased by 34% during the period 1999–2007, and its share increased from 38.7% to 55.2% of the total population aged over 15 years. To a large extent the increased share of the inactive population was determined by a 15% expansion in the number of university students and a 17% rise in the number of pensioners. The report concludes that the younger the population, the higher its specific unemployment rate.

The weak link between higher education and the labor market is also confirmed by the fact that only 20% of university graduates find jobs related to their specialty or academic qualifications. Moldovan students are often indifferent towards their studies because of the lack of correspondence between the needs of employers and the skills and knowledge obtained at the university. For some of them, the choice of major did not matter as long as they obtained a diploma. Moreover, even when knowledge and skills have a strong correspondence with employer needs, this link can be weakened through improper hiring practices. A report by the National Bureau of Statistics (2006) states that 41.7% of employed youths found their jobs through friends and family, rather than by a transparent hiring procedure.

Since job prospects are uncertain and the value of knowledge acquired in university is low, Moldovan students focus on opportunities of getting a degree from abroad. The same report by the National Bureau of Statistics reports that 70.3% of respondents in the 2006 youth labor market study would go abroad if they were offered the opportunity. The studies mentioned above concluded that students expressed a sense of optimism that if economic changes, including future EU integration, resulted in diversification and expansion of the labor market, there would be increased overall employability.

7. Government Response to the Transitional Problems

Labor market policies in the Republic of Moldova give high priority to the prevention and reduction of unemployment among young people while attempting to regulate the mismatch between labor supply and labor demand created in the transition period. To respond to the transitional problems, the new Law on Education from 1995 initiated important changes in the education system. The state intervened by setting limits for fee-based enrolment with took effect beginning in 2006. The main goal of the imposed limits on fee-based enrolment was to channel the flow of potential students from traditional specializations (economics, law, political science, foreign languages) to a number of technical specializations and to stimulate enrolment in vocational education. However, the number of students admitted in 2006 and 2007 to vocational schools and colleges did not change, while the number of students admitted to universities in 2007 decreased by 31% as compared to 2005 (ETF 2009: 39). The same policy is reflected in the Regulation nr.1224 regarding the National Council of Continuous Training in 2004, the National Development Strategy for 2008-2011, the National Employment Strategy 2007-2015, the draft Strategy for Vocational Education and Training 2008-2015, the Labor Code, the National Youth Strategy 2009-2015, and the Law on Youth (adopted in 1999).

In November 2004 the Government of the Republic of Moldova signed the Regulation Nr. 1224 regarding the National Council of Continuous Training in order to carry out the provisions of Article 35 of the Law on Education from 1995, Labor Code¹², and Moldova

12 Law on Labor Code of the Republic of Moldova no. 154 from 28.03.2003

Government Decision¹³ “on approval of the employment strategy in Moldova”. The Council is an advisory body which aims to develop proposals on strategy development of the national system of continuous training, promotion and improvement of state policy on teacher retraining economy in accordance with national requirements of market economy, and development trends of continuing vocational training in Europe in the context of the European Commission Memorandum on Lifelong Learning (EC 2000). The Council is responsible to the Prime Minister of Moldova and is composed of representatives of the Ministry of Education, Ministry of Labor and Social Protection, Ministry of Economy, Ministry of Industry, Ministry of Transport and Communications, Ministry of Energy, Ministry of Finance, other ministries and state departments, trade unions, employer representatives and local government, higher education institutions and specialized training institutions. The basic directions of the Council’s work include investigating and analyzing the needs for continuous training regarding the industries, professions, occupations and specialties in the whole country, endorsing the draft legislation covering the continuous training, collaborating with governments, autonomous administrative authorities and national and international non governmental organizations, operating in continuous training and developing design proposals for the Government on continuing vocational training.

In order to improve the function of the labor market, in June 2007 the government of Moldova has adopted the country’s first-ever National Employment Strategy (NES) covering the period 2007–2015¹⁴. Developed by the Ministry of Economy and Trade together with a group of national experts and with the support of the International Labor Office (ILO), the strategy plan is aligned to the principles of the EU Employment Strategy (EES) and the International ILO’s Global Employment Agenda and centers on four long-term objectives: (1) To achieve sustainable economic growth and reduce poverty by strengthening social cohesion and equity in the labor market; (2) To improve Moldova’s competitiveness by enhancing human capital and the workers’ adaptability to the changing requirements of the labor market; (3) To align Moldova’s human and economic development standards to European benchmarks and provide minimum living standards in line with the principles enshrined in ratified international conventions; and (4) To adjust the national regulatory framework to the objectives and targets set forth by the EU Employment Strategy.

8. Rethinking the Higher Education Curricula

In Moldova higher education suffers mainly from insufficient funds, low professor salaries and the inability to attract qualified candidates into the teaching profession. Public expenditure on education is very low and the structure of expenditure within the sector is far from optimal. According to the “Consolidated Strategy for the Education Sector (2006-2008)”, despite improvements in the economy and an increase in public spending on education from 16.4% of the consolidated budget in 1999 to 23.4% in 2004, financing continues to be significantly lower than in the early 1990s. UNESCO Institute for Statistics (2008) records 8.2% of the country’s GDP and 19% of the total government expenditure in 2008.

One of the most serious consequences of poor funding is the large exodus of qualified teachers at all levels of education. Between 1998 and 2000 nearly 4,200 teachers left the profession with an additional 2,497 teachers leaving in 2001. The World Bank also estimates that a third of migrants are former public employees, particularly from the

13 Moldova Government Decision no. 611 from 15.05.2002

14 Official Bulletin of the Republic of Moldova (Monitorul Oficial) n. 82-85/660 from 15.06.2007.

education sector. Meanwhile, the increase from 180 students per 10,000 inhabitants in 1998 to 351 students in 2006 and as result a higher student teacher ratio in itself may have caused lower teaching quality.

Since Moldovan universities were among the first in the former Soviet Union which attempted to compensate for the lack of state funds by introducing fee-based education in 1995, this has made education services a lucrative business. This rapid transformation of higher education into a mass phenomenon has resulted in lower selectivity of student admissions, poor quality of pedagogical staff, inadequate curricula approach and consequently in a poor quality of education in general. According to the “Expert-Group” study among managers of international companies, investment attractiveness of Moldova will increase by about 40 percent over three years. The “Expert-Group” analyst Alexander Gamanjii noted that estimates of expected economic development would increase the demand for skilled professionals while the crisis of highly qualified specialists would get worse if curricula did not provide knowledge that can be applied in practice in the companies.

The Black Sea Labor Market Reviews (ETF 2009) claims that the decrease of confidence in the quality of higher education has had the most significant negative impact on the labor market. According to a 2006 draft proposal for the “Medium-term State Policy on Preparing Specialists for the National Economy” by the Ministry of Economy and Commerce, 80% of professors surveyed indicated that the current curricula did not correspond to the needs of the labor market. An additional 10% of professors answered that the curricula only partly corresponded to labor market demands. In the 2007 draft, the authors concluded that vocational, secondary special, and higher education did not “perform the fundamental function of training a labor force which is adaptable, mobile, and capable of finding a job and [providing students] with skills required on the local and national labor market.” Focus groups conducted in 2006 by The National Centre for Transparency and Human Rights (2006) also found that university students were equally sceptical about the relevance of their education. The National Bureau of Statistics (2006) youth labor market report indicated that 73.9% of youths employed in finance felt they needed better qualifications to meet the challenges of their job. The share of employed youths who felt similarly in the fields of public administration, real estate, and commerce ranged from 59% to 67%. This reinforces the statement by the Ministry of Economy and Commerce about the inability of the education system to adequately prepare graduates. To deal with this issue the higher education system needs to readdress the relevance of university curricula, return to the knowledge in the job market, and on a broader level, to the labor market conditions faced by university graduates.

9. Entrepreneurial Learning - Increasing the Entrepreneurial Output from Universities

The Republic of Moldova inherited a higher education system which has largely ignored entrepreneurial know-how.¹⁵ In the Soviet times the partnership among the Soviet Republics would assure a continuous, mutually beneficial business network.

15 The entrepreneurial learning is defined as “the process by which entrepreneurs acquire the knowledge needed for identifying, creating and exploiting new business opportunities”. Entrepreneurs refer to “economic actors, working on a market for a profit, developing and exploiting innovations, something new and valuable on the market that was not there before.” (Entrepreneurial learning & academic spin-offs – Project report to Nordic Innovation Centre, Gothenburg in January 2005).

The break up of that union and the necessity to find new markets, particularly in Europe, not to mention the dramatically increased international competition combined with rising costs for a larger public sector that have led to low economic growth in Europe, have seriously challenged the Moldovan higher education system, chronically lacking the proper training for the future entrepreneurs.

The Report on Entrepreneurship Education in Europe (EC 2006) highlights the importance of education in the promotion of more entrepreneurial attitudes and behaviours and refers to the challenge of stimulating entrepreneurial mindsets in young people. The report emphasises the need to use experience-based teaching methods in order to develop entrepreneurial thinking and states explicitly that “traditional educational methods (like lectures) do not correlate well with the development of entrepreneurial thinking”. It follows then that traditional modes of assessment (like exams) do not facilitate the development of entrepreneurial attitudes and behaviours. Since higher education in Moldova remains heavily academic, not attempting to fill a series of gaps with a more practical dimension by equipping future professionals with hands-on skills and expertise, a call for creating an appropriate entrepreneurial learning framework is absolutely necessary. Moldovan universities would have to play a crucial role in implementing the new innovative entrepreneurial policies while addressing a number of political, organizational and societal capacities is characteristic to a developing nation. The report offers Moldovan universities an alternative to the widely accepted US business schools model. The American entrepreneurial approach of corporate business schools is almost exclusively business management focused. This model may not meet the challenges Moldova is facing in its struggle to become an EU member. Gibb (2002) suggests that entrepreneurship that exists solely in the dimension of business schools is too narrow, and hinders its ability to address major issues in society, particularly in developing countries. The alternative model of entrepreneurship education which he promotes, also supported by the EU report, focuses on a broader societal model of entrepreneurship which places emphasis on the values of entrepreneurship and developing entrepreneurial behaviours, attributes and skills encompassing concepts such as emotional intelligence, vision, holistic management, and the ability to build trusting relationships. This scenario translates into a need to equip individuals with personal entrepreneurial capacities and to design organizations of all kinds, public, private and NGO (non-governmental organizations) to support effective entrepreneurial behaviour. In this context Moldovan universities should encourage projects which would require students to attend workshops or seminars led by professionals working in various economic fields and domains to acquire a more realistic, up-to-date vision of what a real enterprise is based on and which skills they need to acquire to successfully integrate in the labor market after graduation.

The first steps in this area have already been taken. To name a few, in 2003 the Technical University of Moldova piloted an ambitious entrepreneurship program for a group of its students, consisting of formal instruction and an internship with a successful Moldovan entrepreneur. That project received funding for the design and implementation of a pilot entrepreneurship course at the Technical University of Moldova to be offered as an extra-curricular program. In the spring of 2003 another proposal was submitted to the Eurasia Foundation which obtained funds for the creation of the International Center for Entrepreneurship in Moldova (Tiginyanu, Oberst and Jones 2005). On September 11, 2009 the American Chamber of Commerce in Moldova (AmCham) signed a Convention of Collaboration with the Academy of Economic Studies from Moldova (ASEM) considering their common willingness to facilitate the transfer of students from the university seats into the real business world. The Convention was signed within the Internship Program launched by the American Chamber of Commerce in Moldova. Through this agreement, signed by both parties, it was aimed at establishing a mutually beneficial cooperation in which the internship

partner AmCham will provide the students of ASEM, the organizer of internships, with various internship offers.¹⁶

While these initiatives remain decentralized and rely on the individual initiatives of various universities or student organizations, the next step in narrowing the gap between higher education and employment in Moldova would be to standardize this type of project by making them an integral part of the curriculum at state level. All Moldovan universities should offer students opportunities for internships in local and international organizations while courses in entrepreneurial learning should be compulsory.

10. Key Conclusions and Recommendations for Action

After examining in detail the challenges Moldovan universities face in their struggle to link higher education and employment in the post-soviet era, the following recommendations can be put forward:

1. Clarifying the outcomes the Republic of Moldova seeks from higher education in terms of employability and designing a unique entrepreneurial model to meet the expectations.

Higher education should design and implement an entrepreneurship education model which would develop attitudes, behaviours and capacities at the individual level as required by the local labor-force market in Moldova. A graduate should be expected to successfully apply these skills and attitudes, which can take many forms during an individual's career, creating a range of long-term benefits to Moldovan society and its economy in general.

2. Building effective action-based entrepreneurship curricula

In Moldova the vast majority of entrepreneurship courses are offered by business-related majors. Pilot projects offering internships to students are not an integral part of curricula and depend on individual initiatives, most of the time undertaken by independent international student organizations. Opportunities should be made available to students studying various subjects, particularly in technology and science departments where many innovative ideas and companies originate. In terms of delivery, a greater emphasis is needed on more active, experiential, and action-oriented learning. Pedagogies including case studies, team projects, and activities with entrepreneurs should be integrated at all levels and subject areas in all major universities of Moldova, public and private institutions alike.

3. Training effective educators

The right learning experiences for students can be created only after having trained entrepreneurship educators not only by providing the necessary training and education to the university professors and lecturers but also by encouraging non-educators such as entrepreneurs, highly qualified and successful professionals, alumni and even students in the active process of learning. The Republic of Moldova needs to increase and enhance mobility and exchange of experience, not only between universities but also between academia and the business world. Opportunities need to be created that would allow educators to spend more time in the private entrepreneurial sector to truly engage, learn and develop. Entrepreneurs should be encouraged to participate in curricula design and delivery while focusing on more active and learning-by-doing teaching methods.

¹⁶ American Chamber of Commerce in Moldova, retrieved from http://www.amcham.md/index.php/library_upld/library_upld/docs/Bart_CSR%20and%20SMEs_plenary.ppt?go=news&n=44, September 2010.

4. Reformulating the institutional attitudes towards education and labor market

The post-soviet culture, practice and policies of a continuously struggling young democratic country often get in the way of developing an entrepreneurial spirit and environment within Moldovan universities. Traditionally they have been focused on ensuring students a secure future employment. Today, Moldovan universities must prepare students to work in a dynamic, rapidly changing, and at times unpredictable entrepreneurial environment in Europe and in the world.

5. Securing governmental support

Since the field of entrepreneurship education is still young in Europe and especially in Moldova, it is therefore important and necessary that Moldovan Ministries support its development in a sustainable manner. Efforts to communicate with policy makers about the needs, benefits and possible actions to take, and to encourage and support entrepreneurship education should be increased.

Recommendations for Action

It is the responsibility for both Higher Education Institutions in Moldova and the Government to be committed to a continuous process of enhancing the link between academia and employment by:

- 1. Supporting training programs for educators (professors, practitioners, students) in entrepreneurial teaching and learning;*
- 2. Improving the curricula with action-based methodology;*
- 3. Integrating European/local entrepreneurship case studies in the curricula;*
- 4. Recognizing the teaching by practitioners and other qualified non-educators;*
- 5. Developing opportunities at all faculties/disciplines for students at all levels to experience entrepreneurship;*
- 6. Engaging and exchanging with the local, national and international business community in various forms – agreements of collaboration, internship programs, and practical trainings.*

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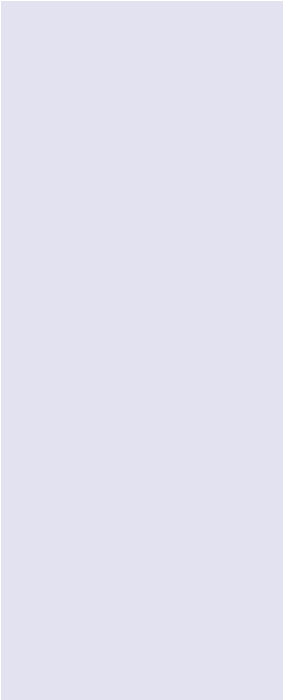
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Annex

Online Opinion Poll Profile: „The Link between Higher Education and Labor Market in Moldova”, July-October 2010

1. Are you generally satisfied with the quality of higher education in the Republic of Moldova?
2. Does higher education in Moldova provide adequate training for the future specialists to successfully integrate into the labour market after graduation?
3. Does the academic curriculum and teaching materials used in the Moldovan universities provide an adequate preparation for integration into the labor market?
4. Do the topics studied in your university reflect the labour market reality in Moldova?
5. In your opinion, are you going to be ready to face the current requirements of the labor market in Moldova or abroad after graduation ? Explain why.
6. What changes should be introduced in the higher education system in Moldova in order to provide better training for future employees (subjects taught, teaching methodology, textbooks, curriculum, practice, etc.)?



**THE PRESENT STATE AND POSSIBLE LINKS BETWEEN
HIGHER EDUCATION, RESEARCH, INNOVATION AND
ECONOMY IN MONTENEGRO**

MIRA VUKCEVIC



1. Introduction

Innovative activity and capabilities are essential for economic growth as well as public development. Competitiveness is based on the capacity for innovation. Research and Development (R&D) is the main component of innovation activities and for R&D-intensive companies, large or small, internationalization is of utmost importance. It has been demonstrated that many firms are able to increase their innovative capabilities by the use of strategic innovative alliances like partnerships with the universities, customers and suppliers, joint ventures and other research organizations that perform their activities on a commercial basis.

This paper examines the premises for a triple innovative link (universities-industry-government) in Montenegro. Although at this stage such an innovation model seems extremely challenging, given the area's weak academic research capabilities, low company research and development potential, weak demand for domestic R&D and the early stage of the promotion of innovation policy by the Government, this might not be a "mission impossible". The basic elements exist and are already active, though to varying extents, and have been strengthened over recent years.

The realignment and reconfiguration of resources and institutions from this "triangle" prospective can generate a creative reconstruction of organizations and stimulate the development of an innovative country. The specific objective is to encourage the universities to promote broader development by bringing together relevant stakeholders, thereby acting as a country innovation organizer, especially in advanced services, creative industries and innovative manufacturing sectors. Academic development thus becomes a key human and social capital development strategy, paving the way for the emergence of clusters of high technology firms from competitive research fields and the infusion of advanced technology into older firms.

Background and Statement of Research

This thematic report reviews the situation of innovation capabilities in Montenegro. The report is based upon desk research, interviews and questionnaires with main stakeholders of the future promotion of innovation. The objective of this study is to enhance understanding about the national innovation system in Montenegro and to plan future links between academia and economy accordingly. An overview of the situation regarding potentials, existing infrastructure as well as further prospective is given. The general environment as well as important strategic documents and the main programs and instruments for support are analyzed.

2. Methodology

2.1 Research Purpose

With the purpose of mapping the national situation concerning the academia-innovation environment, a specific methodology was used including the development of questionnaires distributed to the researchers, interested innovation-oriented companies and research institutions as well as "field work", that is, face-to-face meetings with selected researchers and potential stakeholders and donors. What is of vital importance at this stage is to comprehend the current state of research in the country as a whole, setting the goals as

realistically as possible. First of all, it is evident that the academic community is currently lacking good research groups, often within one field/university unit, not to mention the prospect of interdisciplinary ones. It also might be necessary to review the academic curricula in the future. Connections with industry have decreased over years, and the joint activities that exist are more focused on provision of different types of services than on “real” research. A set of the activities has to be imposed to promote the pro active attitude of academia from one side and stakeholders from the other side. Building research orientation at universities is of utmost importance. Problems such as defining the program’s mission, investing in human capital, infrastructure, finding incentives for research, looking at intellectual property rights issues as well as conducting regular evaluation of research have to be addressed. Some examples of good practice, e.g. already existing projects that link academia and economy, are analyzed. As for the international scientific cooperation, the activities will focus on contacting management and researchers of the engineering faculties and faculties/institutes of natural and life sciences. These units exist only at the University of Montenegro which is a public university and have been chosen based on several facts – the current intensity of their research activities, their collaboration with industry/governmental agencies/foreign donors, their international cooperation level, and the place of these fields in societal development of the country.

In order to make the best out of these meetings, a questionnaire was developed and distributed. The inter-project coaching experience (FP7 project EVOLUNIMONT FP7-REGPOT-2008-2, and several TEMPUS projects) was used. In addition, part of the plan was to contact potential industry partners as well as foreign and domestic agencies that could be partners. Also, some governmental agencies and institutions were included but only those which do not offer specific programs for financing research. They were included into this group since they also take part in research projects (national and international) on their own. Existing key innovation infrastructure in Montenegro (clusters, technology and innovation centers, technological parks, business start-ups, technology incubators and further related organizations) as well as the potential for further development is analyzed.

2.2 Study Design, Population and Sampling

What is of vital importance at this stage is to comprehend the current state of research, not only at the University of Montenegro (UoM) which is the only public university in the country, but in the country as a whole and to act accordingly, setting the goals as realistically as possible. First of all, it is evident that UoM is currently lacking **good research groups**. Also, as previously mentioned, the connections with **industry** have decreased. It is a consequence of the general situation in the region over the past two decades (which include conflicts, transition, and privatization). As for **international scientific cooperation**, its intensity was also reduced due to past isolation of the country.

Taking this into account, activities were based on the questionnaires developed and distributed to the researchers as well as on face-to-face meetings with selected researchers (cf. three questionnaires in the annex: **Annex 1 – Self-evaluation form for research capacities evaluation** distributed to the departments and researchers; **Annex 2 – Questionnaire on external environment** distributed to the representatives of academic community, business sector and potential donors, University’s management as well as stakeholder companies and employers; **Annex 3 – Questionnaire on the future program portfolio of the University of Montenegro** distributed to high management and referent research groups at different departments).

In the initial phase the activities were focused on the following:

Contact management and researchers of the **engineering faculties and faculties/institutes**

of natural and life sciences (Faculties of Mechanical Engineering, Electrical Engineering, Civil Engineering, Natural Sciences and Mathematics, Metallurgy, Medicine, Biotechnology; Marine Biology Institute). These units have been chosen based on the aforementioned reasons.

The aim of making contacts is to define the following:

- Interest, need and concrete proposals for **interdisciplinary cooperation** at the university level,
- Interest, need and concrete proposals for exploring new possibilities to deepen the ongoing cooperation/establish new connections with **industry**,
- Interest, need and concrete proposals for exploring new possibilities to deepen the ongoing cooperation/establish new contacts with **foreign partners**.

2.3 Procedure for Data Collection, Methods and Instruments

First, in order to make the best out of the meetings, the aforementioned questionnaires were distributed. One of the “meeting points” was also the experience collected through the FP7 project EVOLUNIMONT dealing with the evaluation of research capacities and strategic planning of research at the University of Montenegro. The other “source” was the experience collected through the first operational phase of the Research, Technology and Development (RTD) Service Center at UoM (through the TEMPUS project “Creating R&D Capacities and Instruments for Boosting Higher Education – Economy Cooperation, 145180-TEMPUS-2008-AT-SMHES). This kind of inter-project coaching was very useful for the data collection and processing within the academic environment.

In the second phase it was planned to contact potential industry partners as well as foreign and domestic agencies that can be reliable partners in innovation since they take part in research projects (national or international) of their own.

Some of the companies were recognized as potential donors because of their very strong development departments and active presence in the country such as TELEKOM, T-Com, M:Tel, Port of Bar, Plantaze, foreign organizations like UNDP, UNIDO, GTZ. Governmental institutions involved are: the Ministry of Information Society (in charge of the implementation of the National IT strategy), Directorate for the Development of Small and Medium-sized Enterprises (SMEDA) (in charge of CIP on national level, future contact institution for EUREKA), Center for Eco-toxicological Research, and Agency for Environmental Protection.

What was obtained from the questionnaires is the basis for the estimation of willingness and possibilities of cooperation.

2.4 Analysis of the Obtained Answers and Development of Analysis Plan

All questions were analyzed to identify potential research groups as well as research fields for the interdisciplinary cooperation with the industry. In accordance with the expressed interest and ideas (questionnaire), suitable recommendations are identified.

3. Government Policies, Legislation and Strategies Relevant for Linking Higher Education and Economy

3.1 The General Environment for the Setting of Innovation Infrastructure

The business environment in Montenegro has significantly improved over the past few years. Ninety-one laws have been adopted and harmonized with the EU standards in their greatest part and have therefore created a solid institutional set-up for encouraging investments and implementing the economic policy embodied in the strategic document of the Government of the Republic of Montenegro – **Economic Reform Agenda**. The most notable laws adopted in the past period are: **Law on Business Organizations, Law on Business Organization Insolvency, Law on Amendments to the Law on Company Insolvency, Law on Fiduciary Transfer of Property Right, Law on Value Added Tax, Law on Accounting, Foreign Trade Law, Customs Law (and Law on Amendments to the Law on Customs), Law on Free Zones, Competition Protection Law**. Also, over the past few years Montenegro has implemented substantial institutional reforms in key sectors such as the fiscal system, financial sectors, payment system, pension system, privatization and restructuring of enterprises. In February 2007 the Government started to adopt the Annual Work Program which is based on strategic documents for certain sector policies, measures of economic policy for the current year and the European Partnership Implementation Action Plan. The program defines the commitment to draft and adopt 143 laws, out of which 31 relate to the area of the political system, internal and foreign policy, 61 to the area of economic policy, and 51 relate to the area of the financial system and public expenditures (Machacova and Dall 2007). Even though the business environment in Montenegro has significantly improved recently, the environment in which entrepreneurs are operating is still a challenging one, given the rather complicated legal and regulatory framework, the large and insufficiently transparent system of public administration and the poor judiciary structure in Montenegro. Therefore, some of the basic challenges Montenegro faces in the creation of an entrepreneurial society are the harmonization of the legal and regulatory framework for business operation, simplification and reform of the procedures in all aspects of business operation, consistent implementation of positive legal solutions and the establishment of a predictable business environment. Montenegro has made appreciable progress on company registration, exports and tax policy (Machacova and Dall 2007, WBC 2007). The introduction of the **Statistical Business Register** is very important since it serves as a framework for the samples of all statistical surveys and provides the basis containing updated data necessary for statistical surveys. This register has been applied since the beginning of 2007. Harmonization of surveys with EU standards in the area of short-term business statistics and structural business statistics has been initiated.

Montenegro has established a well-structured and well-funded SME agency (**Directorate for Development of Small and Medium-sized Enterprises - SMEDA**) but lags behind on improving the regulatory environment, particularly in relation to the role of local administrations and human resource development dimensions (SMEDA 2007, Belada 2007). Human capacity building is carried out following an analysis of realization of the public administration reform. The recently established **Human Resource Management Administration** and the Project **“Strengthening capacities for human resources management - PARiM CB”** organizes trainings for civil servants and employees who work in the public administration.

Cooperation with representatives of more international institutions is intensified: **European Agency for Reconstruction (EAR), Organization for European Security and Cooperation (OESC), World Bank, Foundation Institute for Open Society (office in Podgorica), United**

Nations Development Program (UNDP), Konrad-Adenauer Stiftung.

The Directorate for the Development of Small and Medium-sized Enterprises (SMEDA) has prepared, in cooperation with **Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)**, the **Strategy for the opening of business incubators, technology parks and innovation centers** with which Montenegro is not well endowed. The Strategy was adopted in December 2005 and the short-term objectives included the development of at least one business incubator and at least one technology park. However, a lack of funds prohibits the implementation of this strategy and the short-term objectives.

Concerning innovation and technology (I&T) centers and co-operation, Montenegro is still in the policy elaboration phase but has started to implement pilot projects. At the moment two **Operational start-up business centers** are established in Bar and Podgorica.

3.2 International Donor Initiatives to be Used

There is a number of international donor initiatives: **IPA (CARDS), European Bank for Reconstruction and Development, USAID (Firm Level Assistance Group), World Bank, European Agency for Reconstruction (EAR), Urban Institute, Center for Entrepreneurship and Economic Development, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).**

To establish transfer and application of scientific and technological achievements, especially from the point of view of greater valorization of natural and man-made resources of the country, the **Ministry of Education and Science (MoES)** created the **Strategy for Scientific-Research Activities** and thus established a base for further development of knowledge and creativity (MoES 2008). This strategy takes into account the results and problems of science and technology application, the effects of public investments into scientific and technological development, and the quality and use of research infrastructure. It closely monitors status, problems and trends in the development of the national research system, especially within the priority areas as well as speed, range and depth of diffusion of new technologies in the national economy and the obstacles faced in the process.

3.3 Key Innovation Infrastructure in Montenegro

The SMEDA is responsible for SME policy elaboration and prepared the **Strategy for Development of Small and Medium-sized Enterprises** which was adopted in 2007 (SMEDA 2007).

The tasks of the SMEDA, envisaged by this strategy, are the following:

- Defining and renewing the strategy for SME development,
- Preparing the implementation of SME support programs and projects,
- Coordinating the programs, measures and activities related to SME development,
- Observing realization of financial support programs for SME development including financial support from abroad,
- Examining the impact of legal and other acts on SME development,
- Preparing educational programs for entrepreneurs,
- Making projects and caring about organization of regional and local centers for SME development,
- Proposing and providing realization of special programs for stimulation of SME development (franchising, leasing, venture capital, technological parks, incubators, etc.).

Some of the other Directorate's activities are to provide institutional support to SMEs and entrepreneurship development, to elaborate and improve the systematic preconditions, to

create development and research projects which will enable recognition of further strategic directions for SMEs and entrepreneurship development, as well as to support education and knowledge acquirement as one of the main factors in economy development. The SMEDA plans to implement the following Institutional support projects:

- Establishing local/regional business centers,
- Forming business incubators and clusters.

In Montenegro only a detailed analysis of the meat processing sector has been carried out so far as a basis for developing a cluster program (Machacova and Dall 2007, SMEDA 2007). A development plan for activities is in place to achieve all the necessary preconditions for establishing clusters with the two-fold objective of raising the stakeholders' level of confidence and bettering co-operation by presenting common problems and improving overall competitiveness. The **Chamber of Commerce of Montenegro** is making an effort to establish clusters within certain industries. According to the Business Policy (WBC 2007), there are activities planned in order to involve the **Development Fund of Republic of Montenegro** in the process of forming the entrepreneurial incubators and clusters on the territory of Montenegro in cooperation with other relevant domestic and foreign institutions. The clusters to be formatted in the future will mainly focus on the food processing industry and wood industry.

There are no **Technology/Innovation Centers** operating within the country, nor Technology parks, science or business parks. **Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)** was working on a survey in order to identify the levels of knowledge among the SME stakeholders about technology parks and similar institutions. A proper strategy covering this type of infrastructure is still lacking.

Development Fund of the Republic of Montenegro has provided an active support to the incubators development idea in Montenegro. The **Business Start-Up Center Bar** (BSC Bar) rose up from this support and has been fully operational for a few years. It actively participates in the Southeast European Network of Business Start-up Centers and Incubators (SENSI). The network was set up under the auspices of SPARK in Tuzla (Bosnia and Herzegovina) on October 20, 2006 and is a regional network of business start-up centers and incubators with more than 20 members through the whole region of South-Eastern Europe (from Slovenia to Macedonia).

4. Higher Education Sector and its Environment

The University of Montenegro (UoM) was established about 45 years ago on the basis of existing schools and institutes. It is a rather large university (nearly 20,000 students) for a small nation. There are also two private universities (**University Mediteran and University Donja Gorica**) as well as nine other independent institutions of higher education.

Does the higher education contribute in a significant way to the Montenegrin society? Is there a co-linearity between the wishes of its students' and teachers' body and the needs of the country for a prosperous future – economically and otherwise? A great deal depends on the variety, the extent and the quality of the academic research that will be carried out within its walls.

80% of the students are undergraduates, almost 20% study for higher degrees, of which 1% are doctoral students.

On top of the direct support to the UoM as well as other universities, the Montenegrin government also offers access (on a competitive basis) to a research fund. According to the **Law on Scientific-Research Activities** (2005) all the scientific-research institutions have an equal position in terms of research funding on a competitive basis. The size of the fund is about one million Euros/year. The extend of the research activity of a department is subject

to the number of teaching hours which in turn is dependant on the number of students. In some cases some very promising research students are not accepted for a research track because there is no teaching opportunity for them.

4.1 Process of Curricula Development and Specific Requirements

In the process of self-evaluation of research (FP7 project EVOLUNIMONT), performed at the UoM in 2009 (other universities have not conducted such an evaluation except for accreditation and reaccreditation purposes), data obtained from the self-evaluation forms, interviews and visits was processed to make the SWOT analysis. Some of the weaknesses in producing better results were the lack of strong economy to support and use scientific results, the lack of stimulating measures for research, and a weak research cooperation with the industry. What is missing in higher education in Montenegro is the initiative for setting-up the university-economy link and collaborative doctoral programs. University-driven initiatives can be developed by the faculties, research units, and departments. In these cases the universities make use of their autonomy to establish areas of research priority. They may formulate their plans within or without a larger policy framework depending on the funding opportunities and strategic choices. Funding sources are usually a mixture of support from the corporate world, competitive public funding schemes and mobilization of government resources. The other opportunity is found in industry-driven initiatives where companies seek university teams to develop specific projects in order to gain access to scientific knowledge and human resources which can help them to maintain and enhance their competitiveness in the market. What is needed to create initiatives like the aforementioned is a new curricula which contributes to the creation of research oriented University. In order to develop this research orientation, the driving force to build research capacity should be focused on helping universities, especially the biggest one with a broad variety of scientific fields, in order to conduct research that can advance the knowledge base of the profession. Some major challenges to be met in order to increase research activities are, first the need to improve the physical environment such as research facilities and equipment, secondly the need to improve time for research by relaxing the high teaching loads and the unfavorable balance between research and teaching, and thirdly the need to address the problem of insufficient funding as well as the change in the research conditions. On their own side, faculties within the universities organized more competitive allocation, targeting via priorities, performance based funding. Interdisciplinarity is one of the conditions that must be seen as a high priority. For example, by defining the research strategy in the next three years UoM has decided to move towards entrepreneurship by diversifying the funding sources, by performing the strategy to improve capacity (people and infrastructure) in order to attract competitive funding and to develop new curricula with a lot of internships, joint programs, and new internal structures.

5. Current State and Forms of Business Sector and Other Existing Projects of Relevance

There are several existing projects and different forms of cooperation with the aim of fostering the links between the academia and business sector as well as the initiatives for the establishment of regional cooperation with neighboring countries in order to exchange experiences and realize regional comparative advantages for entrepreneurship.

The University of Montenegro cooperates with some enterprises in Montenegro. It can be said that cooperation is more represented on the personal as well as departmental basis, than at the university level. For example, the on-going and most important cooperation is the

cooperation with the **Union of Employers of Montenegro (UEM)** and the cooperation with the **Institute for the Black Metallurgy AD Niksic, T-COM, Telenor etc.**

The University of Montenegro and the UEM adopted the agreement that regulates their cooperation with the recognition and respect of statutory and program assignments. The main task of the business-technical cooperation is adequate and timely exchange of information on requirements and possibilities of profiling and employment of young professionals who are studying at the university. The university and UEM agree to mutually exchange information about the needs of service delivery for the development of projects, use of laboratories, workshops, office space for seminars and other occasional needs.

A cooperation has also been established with other relevant institutions such as **Agency for Small and Medium Enterprises, Agency for Economic Restructuring and Foreign Investment of the Government of Montenegro, Secretariat for Development of Economy, Employment Agency, Fund of the Pension and Disability Insurance, Association of Independent Trade Unions of Montenegro, Union of Employers of Montenegro, Chamber of Commerce of Montenegro, Montenegrin Association of Management and Entrepreneurship, Development Fund of Montenegro.**

The University of Montenegro, directly or through its units cooperates with many scientific and educational institutions in the country and abroad. Cooperation with foreign countries is realized within the framework of international university associations and networks as well as through bilateral agreements (WBC 2010).

5.1 Perceived Problems, Needs and Offers

Based on the comprehensive analysis of the national situation, **problems and needs** have been perceived in the areas of educational background, research and innovation as well as SME potential and their needs:

5.1.1 University-Enterprise Cooperation

- There is a lack of effective links between knowledge institutions (HE and R&D) and industry. Although universities and enterprises have policies in their mission statements that mention the need to cooperate, efficient legal and policy arrangements that provide a sound and supportive environment for university–enterprise cooperation do not yet seem to have been established (SMEDA 2007, WBC 2010, Dall 2008),
- Universities find it difficult to attract social partners (Chambers of Commerce, Regional Development Agencies, etc.) who do not consider university–enterprise cooperation as part of their portfolio,
- There is little awareness of the mutual benefits of cooperation with industry,
- Actual cooperation between university and industry takes place with large companies, often branches of multinationals, because they have a critical mass of qualified staff who can find a common language with teachers and researchers, as well as better equipment and infrastructure, long-term strategies and more money,
- Despite the fact that universities consider SMEs to be the most relevant and interested partners for cooperation (98,9% of regional enterprises are SME), cooperation with them is not so optimal since they do not tend to have the same long-term perspective, and are usually looking for immediate practical solutions providing low financial rewards.

5.1.2 Higher Education and Training for SMEs

Universities are focused on academic knowledge since curricula are very much theoretical and insufficiently oriented towards the entrepreneurship.

Elsewhere in the world enterprises need graduates who can combine good professional knowledge with the social skills that are required in a professional environment. Companies often complain that university curricula are too theoretical, too academic and insufficiently oriented towards professional practice and experience. They look for graduates with good social skills such as communication skills, team-working abilities, leadership skills, reliability, creativity, commitment, problem-solving skills, negotiation and decision-making skills, independent learning skills, and flexibility. Closer cooperation between universities and enterprises can help students to develop these skills.

Enterprises want short-term success on the market and are open to cooperation with universities in order to have access to potential future employees. They are also interested in know-how and expert knowledge on innovative products and processes. Universities are much more oriented towards long-term perspectives and are interested in innovative teaching and research in general. They have little entrepreneurial spirit as their institutional environment does not require it.

Major drivers for university–enterprise cooperation in Montenegro include the need to transfer knowledge and technology and the need to recruit adequate human resources to be competitive and innovative in a global economy. The joint development of education and training for the labor market – promoting employability – is of common interest but still there is not enough awareness about it in practice.

Despite efforts to formalize relationships, personal contacts rather than institutional policies seem to have been the best guarantee for success and sustainability of projects up to now. Cooperation has had little impact on the institution as a whole. There are few support structures and platforms and little dissemination of good practice for cooperation between universities and enterprises, professional practice and experience. There is a lack of IT skills, entrepreneurial culture and customer focus which are needed to help the students translate ideas into products that are commercially viable:

- Employers are generally not involved in the definition of higher education programs; jointly developed programs can improve the employability of students and ensure their relevance to the needs of the labor market,
- State support for small business trainings is still limited to business start-up, management and administration. There is little in-house or self-funded training effort within enterprises. There is a need for significant additional promotional and training effort but this will require improving in-house capacities of the innovation support organizations first,
- Small business training needs analysis does not exist or is based on ‘ad hoc’ surveys only, without systematic collection of data on the training needs or training consumption in SMEs, thus the offered training is not sufficient to meet enterprise requirements,
- Quality assurance mechanisms for the training sector are significantly underdeveloped.

5.1.3 Innovation and Competitiveness of Enterprises

- There is a low level of awareness of the concept of innovation and its role in economic growth and competitiveness among general public, policy-makers and many enterprises,
- The main barrier to the provision of services and trainings to enterprises and to more intense knowledge and technology transfer is a lack of finance.

This problem can only be seen in a wider context since it is the result of other developments and factors such as devastation of RTD infrastructure, international isolation, low level of public funding, the gap to international developments (Bologna process), the traditional role of universities etc.

Still, also Montenegro's higher education faces the requirements set by the Bologna process. In order to accomplish these objectives, universities need to undergo the transition process. Here, the renewal of university curricula and adoption of international standards is a core objective.

5.2 Other Existing Projects of Relevance

1. Creating R&D capacities and instruments for boosting HE-Economy cooperation
145180-TEMPUS-2008-AT-SMHES
2. Opening University toward Society, Linking Education-Research-Innovation
145132-TEMPUS-2008-HR-SMHES
3. Network of users of virtual production in Western Balkans – Support to knowledge triangle (TEMPUS 2008), Publication “WBC Regional model of University-Enterprise cooperation, www.wbc-vmnet.rs
4. VMnet (144684-TEMPUS-2008-RS-JPHES) was the development of methodology and the implementation of a comprehensive Training & Service Needs Analysis (TSNA).

6. Conclusions and Recommendations

6.1 Discussion

According to the self-evaluation form analysis (distributed to almost all the faculties to map their research potential and willingness) the following conclusions can be drawn:

- No totally reliable recording system for the research achievements is available,
- Although some differences among the Faculties exist, the total budget for research is very low for all of them,
- There is a direct connection between the quality of the equipment and the quality of the research which justifies a higher investment in research hardware,
- There is a very small number of PhD students, EU research projects and long-term secondments which indicates that research and education leave some areas underdeveloped,
- Research activity on another strategic issue, namely health, seems insufficient in spite of the availability of the Hospital Infrastructure,
- Energy Saving and Renewable Energy Research activities are a priority sector for the European Union. But these areas have not been given sufficient attention notwithstanding the comparative advantages Montenegro has in renewable energy.

Concerning the cooperation with the business sector it is at a very low level, mostly oriented

towards personal engagement, not institutional. The necessary prerequisites for cooperation were defined in terms of incentives from the industry through the clear commitment to development (and departments for development) not only to profit-oriented activities. From the business sector's perspective, the academic community is defined as an environment without institutional incentives and without any dissemination activities. Both parties agreed that the academic community needed a set of consultative and expert advisory activities, a kind of RTD service center which at the first time would focus its activities to project management, project proposal writing, support and development in contracting the new projects coordination of bigger multidisciplinary groups within the universities, dissemination of information about the available funds, organization of various training and partner search. According to the representatives in academia as well as the business community, such a center could turn into the technology transfer office in the future with a set of new activities like new contracts and research projects with industry partners, participation in establishment and the running of spin-off companies, consultancy in intellectual property legislative, possible formation of small incubators with start-up companies with the support in business plan development.

The biggest companies with innovation capacities (**T-COM, Telenor, M:Tel, Plantaze, Center for Eco-toxicological Research, Agency for Environmental Protection, Directorate for Small and Medium-sized Enterprises**), despite their opinion of the academic community, still consider it as the most reliable partner.

T-Com prepares itself for the launching of a new initiative called **INNOVATORIUM** dealing with the innovative business ideas in the field of information technologies and telecommunications. The program will be opened to a wider group that consists of students, business community, and researchers. Participation in **Innovatorium** will be free of charge with the sharing of income from sold products or services. Researchers will use this initiative to have assistance in all of the project phases free of charge, as well as access to all advanced technological and telecommunication platforms of the company.

Potential donors such as the European Agency for Reconstruction, the Organization for European Security and Cooperation (OESC), and IPA have already financed the projects with some topics related to innovation. UNDP is actually performing a three-year project "Concept of Cleaner Production in Montenegro" together with the **Ministry for Environmental Protection, the Ministry of Economical Development, the Chamber of Commerce, and the University of Montenegro**. The Organization for Economical Cooperation and Development (OECD) is going to establish a new three-year project "**Regional Competitiveness Initiative for the WBC**" (OECD 2010). The project is going to be established through two main pillars: **Human Capacities Development and Innovation**.

According to communication with potential donors, the most important possible fields of innovation implementation are:

- Governance structures in terms of national committees or councils that coordinate innovation policies, involvement of public agencies and policy makers in innovative policy design, key strategy documents or relevant laws;
- A monitoring system for institutions that focus on innovation activities and indicators;
- Business to business and university to business linkages in terms of mechanisms to support networking, mechanism to support cooperation between the interdisciplinary research groups and business;
- Infrastructure and support services favoring the emergence of new clusters in terms of business and technology incubators and science parks;
- Government source for financial support in terms of publicly funded schemes to

support technological innovation like credits, vouchers, organizational design or marketing;

- Access to finance in terms of policies or agencies aimed at fostering seed financing and start-up financing;
- Incentive frameworks for innovation in terms of policies for providing the right incentives, policies aimed at lowering the risks for entrepreneurial ventures.

6.2 Recommendations

From the previously suggested and described mechanisms and possible structures of new WBC models of university-enterprise cooperation, I would like to summarize the following recommendations:

- The Government of Montenegro should accelerate the transition of researchers from the academic sphere to enterprises through a greater emphasis on the mobility aspects of the best young researchers;
- The Government of Montenegro should also introduce tax incentives for projects which involve knowledge transfer from universities to enterprises in order to encourage innovation in SMEs;
- The establishment of Science and Technology parks should be encouraged with activities to promote networking between their tenants;
- Industrial clusters should be encouraged to move to internationalization so that they develop an outward exporting orientation and link up with international systems of innovation;
- Universities should boost their incubation centers to provide more support to researchers to commercialize their application oriented research results through the creation of new spin-off enterprises;
- Universities in Montenegro should establish Technology Transfer Centers to handle property rights issues and the licensing of inventions and innovations created in university laboratories and to encourage patenting and licensing of technologies to enterprises;
- Universities should focus on applied research activities. A record of collaboration with enterprises and participation in joint research projects should be included in academic staff promotion criteria.

7. Future Steps

To improve **innovative capacity in Montenegro** in particular, simply increasing resources for science and R&D will not be enough. The focus needs to shift to:

- Microeconomic capacity,
- Quality of enterprise strategies and entrepreneurship,
- Presence and depth of clusters.

Universities in Montenegro should be important elements of their local systems of innovation as:

- Drivers of regional technology-based development and the source of a major proportion of local innovations and local companies,
- Good contributors to local knowledge and to the development of local technology clusters,
- Major sources of knowledge in emerging and establishing clusters.

An important future step needs to be the involvement of a proposed model of university-

enterprise cooperation in corresponding **strategic documents** such as the **Regional Development Plans or Scientific and Technological development Strategies or University Memoranda, etc.** Innovation policy should be seen as the cumulative result of interaction among governments at various levels, business people, academics, and social partners comprising membership from all of these spheres, especially at the regional level.

Furthermore, it is necessary to establish **new institutional arrangements of university–enterprise–government relations**. The next step will be generating a knowledge infrastructure in terms of overlapping institutional spheres with hybrid organizations emerging at the interfaces.

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Annex 1

RTD Self-evaluation form for the departments/units of University of Montenegro (Project Evolunimont FP7-REGPOT-2008-2) The document is part of the **Evolunimont** – Project No: 229958 of the Comission of the European Communities

Evaluation of Research Activities and Strategic Planning of Research at the University of Montenegro

Intermediate Delivery

Self-Evaluation Form

Author(s):	Prof. Dr. Mira Vukcevic
Identifier:	Support document for the deliverable D1.4 Self-evaluation document
Work package:	WP1 Evaluation of research quality and capability

Questionnaire for Evaluating the Research Performance of the University of Montenegro

I Introduction

In order to strengthen its research function and align itself with the efforts of Montenegrin government and the European Union to enhance knowledge base through intensified international cooperation in research, the University of Montenegro is developing a strategic plan of research as a part of Evolunimont project funded by the European Commission within the 7th Framework (Evolunimont, Project number: FP7-REGPOT-2008-2) that will help the University of Montenegro position itself as a key driver of research activities in Montenegro. By engaging in this project, the University expects to achieve the following:

- Set up a framework for stimulating its research by identifying obstacles (institutional, policy, material and human) for research that need to be removed;
- Learning about good practices in research management of Universities that have achieved intensive development in research
- Defining the University Research Strategy that will facilitate research and research management within the University
- Providing a standard for following its progress and comparing its research quality with European counterparts.

The specific focus of the project is placed on strengthening the position and quality of research. To this end, the University of Montenegro has decided for the first time, to subject its research to external assessment and undertake the in-depth evaluation of the current status and scientific quality of research in compliance with more general rules for evaluation

of research as applied at developed European research institutions. The internal evaluation will be divided into two sets of activities: filling in the questionnaires and production of SWOT analyses for the individual University units. Self-evaluation will be used as the main source of evaluation material and will include information on each University's unit, its organization, resources (human resources, infrastructure data, RTD budget), data on scientific output, students' participation in research, collaboration with business community and SWOT analysis.

1. General data

1.1 University of Montenegro - Name of the Department

1.2 Foundation date

1.3 Research fields

1.4 Research concept

- Please describe the Department's main research objectives? What is the primary focus in research? How did the focus evolve during the last 5 years?

- Please describe type of research practiced at the Department

1.5 Address, Contact

2. Organization of the Department

2.1 Management structure

2.2 Research/development centers, laboratories, spin-off companies

2.3 Libraries

2.4 Services (internal and external)

2.5 Administration - Principles of accounting - % of Departments' budget allocated to overheads (administration costs)

2.6 Other units

3. Resources

3.1. Human resources (No.)

	Occupation	2006	2007	2008	2009	2010
1	Full Professors - Research counselors ¹					
2	Associate Professors - Senior research associates ²					
3	Assistant Professors (Docent) - Research assistants ³					
4	Assistants - young researchers					
5	Average age of academic staff (points 1,2,3)					
6	% of women in research staff (points 1,2,3)					
7	Part-time research and academic staff					
8	Ratio between full time and part time researchers and academic staff (points 1+2+3 /7)					
9	Total number of students (first – second - third cycle)					
10	Ratio between female and male students (first – second - third cycle)					
11	Ratio between teachers and students					
12	Number of graduate students for the current year					
13	Ratio academic staff to graduates (1+2+3)/12					
14	Number of PhD students who defended their PhD in the current year					
15	Ratio academic staff to PhD graduates (1+2+3)/14					
16	Number of foreign students					
17	Number of technical staff in research and level of qualification					
18	Number of administrative staff in research					
19	Ratio between research and non-research staff					

1 Full-time employed

2 Full-time employed

3 Full-time employed

3.2. Infrastructure data

3.2.1. Total area (in m²) and distribution by units from points 2.2 to 2.6

3.2.2. Data about research equipment in the units and total value at the Department (taking into account equipment worth more than 20,000 €)

Equipment	Supply year	Purchasing value	Source of financing	Unit

Please, fill the following table for each Unit for the past 5 years:

Name of the Unit:			
Equipment	no. of work hours / month (average)	no. of researchers working on it	no. of completed and running projects

- Are the appropriate consumables available (e.g. raw materials, chemical substances, instruments, etc.)
- How is maintenance of the equipment financed? (total amount - covered by the University - covered by outside sources)
- Do other research institutions use your equipment? If YES, please list them.
- Do you charge use of your equipment? (if yes, please indicate the price)

3.2.3. Number of computers per unit (age, sources of software, types)

3.2.4. Basic data about certificated and reference laboratories or laboratories with excellent research output

3.2.5. Basic data about spin-offs

3.3. RTD Budget (in thousand €)

	2006	2007	2008	2009	2010
Total amount (public funds + tuition fees + third-party funds + other sources)					
Total amount for research					
Ministry of Education and Science					
University funds					
Other Ministries and public bodies or local governance					
International projects					
-FP programs					
-Other international programs or funds, quote the name					
- bilateral cooperation					
Contracted research with business sector and expertise in the country (worth more than 20,000.00 €)					
Contracted research with business sector and expertise abroad (worth more than 20,000.00€)					
Maintenance costs of research infrastructure					
Investment in libraries					
Salaries and honoraria for research not covered by institution's budget					
Other (please indicate)					

4. Scientific output

4.1. Short review of the most important scientific achievements in the past five years

4.2. The list of ongoing projects and programs

Project / program title (fundamental/applied)	Project leader	Research team: number of researchers and number of technicians

4.3. Future plans of the Department in research activity

Does your Department have any special future plan in respect of the role of fundamental (basic) and applied research? If yes, please describe (wish list; list of impediments; what does it cost to overcome the impediments)

4.4. Scientific articles published in publications of special interest for the Department's activities

List up to 10 most important scientific journals in your field and the number of published articles	2007	2008	2009	Total

4.5. Scientific papers published in CC/SCI-expanded data base publications

	2006	2007	2008	2009	2010	Total
Number of scientific articles published in CC data base publications						
Number of scientific articles published in SCI-expanded data base publications not listed above						
Number of scientific articles published in 10 highest ranked journals for your particular fields						
Average number of citations per article *.*.*						
Average number of citations per researcher *.*.*						

4.6. Scientific papers published in other publications which are not included in above data base (number)

	2006	2007	2008	2009	2010	Total
Scientific monograph with international peer-review						
Articles in international journal						
Authorship of text books published abroad						
Scientific articles in domestic journals with international peer-review						
Scientific articles in domestic journals with domestic peer-review						
Other articles in publications that are recognized for academic promotion						
Scientific monograph with national peer-review						

4.7. Participation in scientific conferences (number)

	2006	2007	2008	2009	2010	Total
Chairman and president of conference						
Plenary speakers at international conferences						
Plenary speakers at domestic conferences						
Key note speakers at international conferences						
Key note speakers at domestic conferences						
Presentations at international conferences						
Presentations at domestic conferences						

4.8. Awards and merits *

	2006	2007	2008	2009	2010	Total
National awards for scientific work						
International awards for scientific work						
Memberships in Academies of Science (list the number and the Academy's name)						
Memberships in international scientific committees and associations						
Memberships in editorial staff of domestic journals						
Memberships in editorial staff of international journals						
Other awards or merits with similar ranking						

* Please write the number, the name of award or merit, and the name of researcher.

4.9. Intellectual property rights and knowledge commercialization

	2006	2007	2008	2009	2010	Total
Patents protected in the country (MNE)						
Patents protected abroad						
Patents already applied in the country						
Patents already applied abroad						
Expert and consulting services in state projects						
Contracted elaborates and studies						
Prototypes and other products						
Software earmarked to the market						

4.10. International cooperation

	2006	2007	2008	2009	2010	Total
Number of bilateral projects						
Number of FP projects						
International projects with other aid agencies or programs						
Number of researchers included in international projects						
Number of foreign researchers included in domestic projects						
Mobility						
- Number of visits of the members of research active staff to another university or research institute during 2004-2008 with duration between 1 week and 3 months						
- Number of visits of members of the UoM's research active staff's to another university or research institute, with duration <u>more</u> than 3 months						
- Number of young researchers (MSc and PhD students) (only those staying abroad longer than 1 month)						
- Number of visits of foreign professors and researchers to your Department (longer than 15 days)						

5. Students' Participation in Research

- How are students involved in research (especially in cooperative projects with industry)? Do they have the opportunity to participate in a "real case study" (research project)?
- How are students involved in using the technical equipment (e.g. practice course, practical training, etc.)?
- In which way are the students motivated in taking part? Are they rewarded for participation in the research (monetary incentive, extra credit, awards, etc.)?
- How is their participation organized?

Describe the interaction between Research at the Unit and Education/Teaching. Describe teaching aims, courses that stem or related from the research interests of teachers, MSs/PhDs theses relation with research, who is supervising it. Would you say that every researcher takes part in teaching and/or supervision and if most teachers have active interest in research?

5.1 Doctoral theses (2004-2008)

List of Doctoral Theses awarded at the UoM in your field of science, during 2004-2008 (year, author, title)

Title of the Dissertation	Author	Year/Length of time

6. Collaboration with Business Community

6.1 How would you describe the co-operation with the business sector? What are the main obstacles to work together? What are necessary prerequisites or incentives for successful co-operation?

6.2 Does the Department know about potential national/ international partners for possible future national / international alliances? If yes, how is the knowledge stored (databases, papers...)?

6.3 In order to exchange experiences, are there any consultative and expert advisory activities established between scientific staff and representatives of business sector? If yes, how do they look like?

6.4 Do any activities concerning the establishment of enterprises or participation (e. g. spin-off companies) exist?

6.5 Do you have a unit that writes and edits project proposals?

6.6 How do you see your Department in the next 3, 5 and 10 years?

- How do you prepare for that in terms of manpower, budget and otherwise?

- If University of Montenegro would like to specialize, what would it be in next 3, 5 and 10 years?

7. Self-Assessment exercise for the Department (SWOT)

Self-assessment of the activity of the Department during the period 2004-2008

Evaluation of Strengths, Weaknesses, Opportunities and Threats within the Department

Summary:

Strengths:

Weaknesses:

Opportunities:

Threats:

Elaborate on the SWOT Analysis for the Department

Podgorica,2010

Annex 2

EXTERNAL ENVIRONMENT QUESTIONNAIRE (done within the project Creating R&D Capacities and instruments for boosting Higher education-Economy Cooperation 145180-TEMPUS-2008-AT-SMHES)

Questionnaire on external environment

Name of respondent:

Function of respondent:

University:

GENERAL DATA

1. Please estimate the general research rate (% of GDP) of your country.
2. Please estimate the contribution of research performed at your university to the overall research activities in your country.
3. Who performs relevant research activities **ASIDE FROM YOUR UNIVERSITY** in your country? Please estimate the number of institutions within the following groups.

	0 institutions	1-5 institutions	6-10 institutions	10-50 institutions	50-100 institutions	>100 institutions
Other national universities						
Non-university research institutions						
Business companies						

- 3.1. IF EXISTENT, please indicate the names of the top 5 institutions for each category.**

Top 5 (other) national universities:

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)

Top 5 non-university research institutions:

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)

Top 5 business companies:

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)

4. Please estimate the contribution of the above-mentioned groups to the overall research activities in your country. Please check the appropriate boxes.

	0-2%	2-5%	5-10%	10-25%	25-50%	50-75%	>75%
Universities (incl. your university)							
Non-university research institutions							
Business companies							

5. Are there INTERNATIONAL UNIVERSITIES that currently realize more than 5 research projects in cooperation with local partner institutions in your country?

5.1. IF YES, please indicate the names of the international universities that currently realize more than 5 research projects in cooperation with local partner institutions.

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)

6. Who SUPPORTS research activities in your country? Please check the appropriate boxes.

	FINANCIAL support	NON-FINANCIAL support
Central government		
Ministry of education and/or research		
Ministry of industry and economy		
Ministry of technology and/or research		
Ministry for small and medium companies		
Other (please specify):		
National and regional agencies		
Name of agency:		
Name of agency:		
Name of agency:		
Name of agency:		
Name of agency:		
International agencies with a permanent establishment in your country		
Name of international agency:		
Name of international agency:		
Name of international agency:		
Name of international agency:		
Name of international agency:		

6.1. IF APPLICABLE, please specify the relevant support services.

STRATEGIC ORIENTATION

7. What general importance is attached to research activities at STATE LEVEL?

8. Is there a national research strategy at state level?

8.1. IF YES, how is this national research strategy communicated to the general public as well as to scientific stakeholders? Please check the appropriate boxes!

Through strategy/position papers	
Through official statements of ministries or other authorities	
Through press releases	
By specifically addressing research institutions	
Others (please specify):	
Others (please specify):	

8.2. Which ministry or ministry related institution is mainly responsible for the implementation of the national research strategy at state level?

8.3. Does this national research strategy consist of precise targets to be met (e.g. achievement of percentage of GDP)?

8.3.1. IF YES, please specify the main targets of the national research strategy.

HUMAN RESOURCE MANAGEMENT

9. Do the following groups make use of qualified research staff? Please estimate the average LEVEL OF QUALIFICATION.

	Very high qualified research staff	Rather high qualified research staff	Rather low qualified research staff	Very low qualified research staff
Other national universities				
Non-university research institutions				
Business companies				

FINANCE

10. Are there existing FUNDING PROGRAMS for research activities?

10.1. IF YES, please specify relevant funding program titles and further details.

Program title	Funding institution	Type of program	Applicable to	Usage rate

11. Has the budget for public funding of research activities increased since the year 2000? Please check the appropriate boxes.

Budget increase for regional funding programs	
Budget increase for national funding programs	
Budget increase for international funding programs	
NO budget increase	

12. Please estimate the average research budget of the TOP 10 R&D companies in your country.

13. Is research unequally positioned within small/medium and large sized companies in your country? Please estimate for the following criteria.

	National small/ medium sized companies	National large sized companies	International large sized companies
Strategic relevance of research			
Existence of research strategy			
Trend to intensify research			
Budget for research			
Existence of qualified research staff			
Existence of research managers			
Investment for advanced training			

14. Which of the following conditions have the potential to increase research activities in your country? Please check the appropriate boxes.

	National small & medium sized companies	National large sized companies	International large sized companies
Regional research activities			
Increase in research budget			
Increased availability of experienced research experts			
Optimized organizational structure			
Higher focus on external communication and visibility			
National research activities			
Increase in research budget			
Increased availability of experienced research experts			
Optimized organizational structure			
Higher focus on external communication and visibility			
International research activities			
Increase in research budget			
Increased availability of experienced research experts			
Optimized organizational structure			
Higher focus on external communication and visibility			

IMPLEMENTATION

**15. What are the MAIN SECTORS that perform research in your country?
Please select the 5 most important topics.**

Please select topic number 1:

- Natural sciences:
- Engineering and technology:
- Medical and health sciences:
- Agricultural sciences:
- Social sciences:
- Humanities:

Please select topic number 2:

- Natural sciences:
- Engineering and technology:
- Medical and health sciences:
- Agricultural sciences:
- Social sciences:
- Humanities:

Please select topic number 3:

- Natural sciences:
- Engineering and technology:
- Medical and health sciences:
- Agricultural sciences:
- Social sciences:
- Humanities:

Please select topic number 4:

- Natural sciences:
- Engineering and technology:
- Medical and health sciences:
- Agricultural sciences:
- Social sciences:
- Humanities:

Please select topic number 5:

Natural sciences:

Engineering and technology:

Medical and health sciences:

Agricultural sciences:

Social sciences:

Humanities:

16. What are the MAIN ECONOMIC/INDUSTRIAL PROBLEM FIELDS in your country that need large co-operational research projects to be solved and where can you imagine that your university could contribute?

17. Have there ever been activities to EVALUATE the research situation (e.g. evaluation studies) in your country at state level?

For activities to evaluate national research activities

For activities to evaluate regional research activities

17.1. IF YES, please specify the respective evaluation studies and sources.

18. Who is responsible for public evaluation of research in your country?

Annex 3

Questionnaire for future program portfolio at the University of Montenegro (UoM)

Planned Activities:

Activity 1: Fill in the Questionnaire

Who should fill in the questionnaire? Each Faculty/Institute of the UoM

Please take a few moments to fill this questionnaire, copy table with the answers into your email message and return it to Prof. Mira Vukcevic at mirav@ac.me. Thank you very much for your time and cooperation.

Questionnaire

Please answer the following questions and summarize your future Program Portfolio 2010/13. If you are planning to propose additional research programs, please copy the table below and continue with filling the new table.

Faculty / Institute Name: Didactic Centrum, Faculty of Mechanical Engineering, University of Montenegro Podgorica.

For each of your proposed research future programs or services determine:

Questions	Program A	Program B	Program C
Research Program/Service Name			
Potential benefits for the National research priority areas (Please select the relevant national research priorities areas that proposed program can impact: Science and Education, Ecology, Health, Tourism, Agriculture and Energy research.)			
What is the research program's current level of activity? (This question applies only to existing programs. New programs will not yet have a current level of activity.)			

Questions	Program A	Program B	Program C
Is there a potential for interdisciplinary research? If yes, please name other faculties/institutes that may be included in the program?			
What is proposed growth strategy for the program (expand, maintain, decrease, eliminate, start new program, modify existing program)? – this question apply to current research program			
What is the program's projected future level of activity?			
1. Estimated Future Costs			
1. 1. Desired future scope and scale in the next 3-5 years			
1.2 Estimated number of Full Time Equivalent required (see the explanation below)			
1.3 Estimated salaries and benefits costs			
1.4 Other significant direct costs to operate at the desired scope and scale: - Materials and supplies - Rent - Travel - Equipment (used exclusively by program)			
Part 2. Estimated Future Revenues			
2.1 Estimated Government Contracts			
2.2 Estimated Earned fees/revenues			
2.3 International Funds			
2.4 Others Estimate Future Revenue			

*Full-time equivalent (FTE) is a way to measure a worker's involvement in a project/program. An FTE of 1.0 means that the person is equivalent to a full-time worker, while an FTE of 0.5 signals that the worker is only half-time.

**HIGHER EDUCATION IN SERBIA: IMPROVING THE
INVOLVEMENT WITH THE BUSINESS COMMUNITY**
VESNA DAMNJANOVIC

1. Introduction

1.1 Introductory Paragraphs

The dynamic changes in the business environment and the labor market in Serbia require better educational preparation from academia regarding applicable knowledge and skills which should help students to become competitive in their future profession. Higher education in Serbia relies on internal (teaching processes, new educational programs and study requirements) and external environmental background (Law on Higher Education, 2005, changes in 2010, standards and procedures for quality assurance of higher education institutions and programs, European Higher Education Area documents, Ministry for Education, National Council for Higher Education, Commission for Accreditation and Quality Assurance). It has changed to include two mainstreams: academic studies and applied studies. Also the law included three levels of education: first level – basic academic and applied; second level – masters and specialization; and third level – doctorate (figure 1).

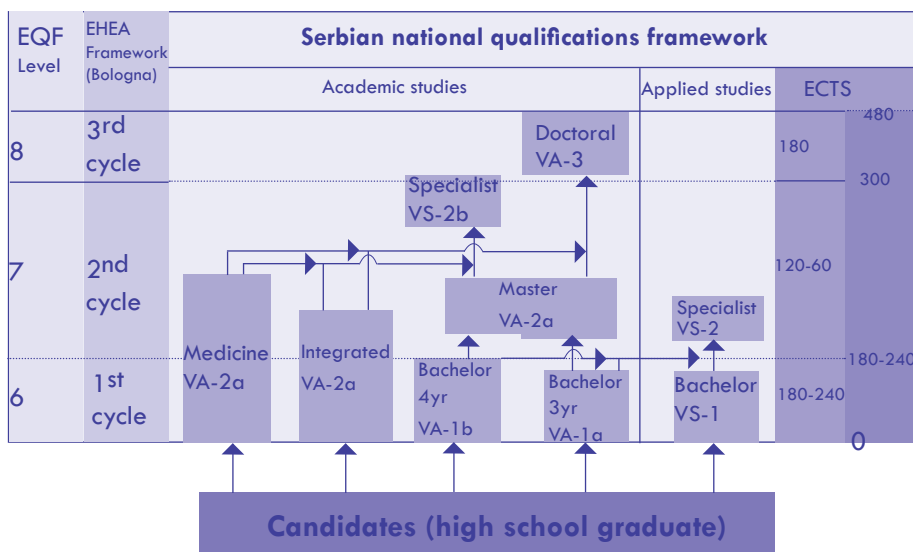


Figure 1: Serbian National Qualifications Framework for Higher Education (Dordevic 2010)

1.2 Background and Statement of the Research Subject

This paper focuses on the relationship between higher education and the business sector in Serbia. In order to understand this relationship better, the paper will first provide a brief history of higher education structures and investigate existing joint activities through different projects. The research objective of this study is to better connect higher education to the labor market in Serbia. It is crucial to establish joint international projects for promoting cooperation and partnership between universities, companies and potential donors.

1.3 Purpose and Research Questions

The aims of this study are:

- To explore employer needs in terms of joint activities with Serbian universities.
- To identify partners and critical success factors for the implementation of joint projects related to the cooperation between higher education and the business sector.

To identify gaps in terms of knowledge and skills which students have after higher level study and to meet employer needs.

2. Methodology

2.1 Aims and Objectives

In this paper three research questions and techniques are defined to provide results. I have used both qualitative and quantitative research methods - face to face interviews and an online survey. **Research Question 1:** Identify the current situation of joint activities (between higher education and business sector) with different target groups. What is the priority regarding joint projects which could be developed in the future? Current analysis of joint activities from the perspective of different target groups: internships, student participation in real projects, scholarships, guest lecturers at the faculty, Case Study Competition, company visits, joint projects, Summer School, use of exploratory approach – motivating students to base their final works and master theses on their own findings from the business sector, Alumni organization, CEE network, joint development of teaching programs with employers from local markets, application of interactive teaching methods in the class based on the example of Serbian companies, research projects for scientific and economy development, career advising for students after graduation, linked institutions participating in student employment after graduation. **Research Question 2:** Investigation of implementation phase: What are the critical success factors for improvement of linking higher education and the business sector in Serbia? **Research Question 3:** What kind of knowledge and skills students get in Serbia after they have finished the higher educational level?

2.2 Study Design, Population and Sampling

A combination of several sampling techniques has been applied. For the internet survey I have used online random intercept sampling. For the field survey, I have used judgmental sampling. Target groups included the Ministry of Education of the Republic of Serbia, Ministry of Sciences and Technological Development of the Republic of Serbia, Serbian Chamber of Commerce, National Employment Service of the Republic of Serbia, Rector and Vice Rector of the University of Belgrade, Center for Career Development at the University of Belgrade, Center for Educational Policy, Companies from the Serbian market, Teaching staff: professors and assistants, and students in Serbia.

2.3 Data Collection Methods and Instruments, Data Analysis Methods

I have used secondary data from official Serbian organizations and previous research studies related to this topic to summarize the input for research data collection. For primary data source I have decided to use face to face interviews for the qualitative analysis, and to get opinions and identify the attitude of people who are directly responsible for building a future cooperation between faculties and company representatives.

For the purpose of online surveying I created an online survey¹ and sent this link by e-mail to different target groups in Serbia, regarding the students' population I used a special students' portal.²

In the period from June to July 2010 I investigated the external and internal secondary data sources and identified key studies related to the local Serbian market which would be valuable for research purposes. After that, I started with the qualitative research in August and September and applied the online quantitative research in October 2010. Each research question requires its own analysis. Decision-making criteria should also be stated as well as SPSS 17, the computer software, which has been used for the statistical analysis. Pre-testing the survey was a way to increase the likelihood of face validity. Expert opinions, literature reviews, and pre-test open-ended questions in qualitative analysis were used to establish content validity of the study. The scale was then checked for reliability. The sample represents the population in Serbia which is familiar with research questions and topics. Limitations of this study are related to the different motivation of respondents in research of key decision makers in higher education in Serbia, lack of time and previous relevant data about stakeholders which participated in linking higher education and the business sector in Serbia.

3. Results

3.1 Government Policies, Legislation and Strategies Relevant for Linking Higher Education and Economy

The Parliament of the Republic of Serbia adopted the Law on Higher Education which is harmonized with the Bologna Declaration in 2005.³ Also, the Lisbon Convention was ratified by the Assembly of the State Union of Serbia and Montenegro in 2003 (Bologna Secretariat 2008). The leading role in higher education quality assurance belongs to the National Council for Higher Education, as a high-expertise body (Tempus Office of Serbia n.d.). According to the data from the report on the Poverty Reduction Strategy (August 2007) and the Strategy for Poverty Reduction, the public expenditure in education in % GDP has increased from 2.7% in 2001 to 3.5% in 2006, though the strategic plan forecasts further increase in GDP to 3.9% in 2009. UNESCO recommends that the public expenditures in education should be 6% which is the average of the countries belonging to OECD (CEP 2009).

The presentation of the Education Minister Zarka Obradovica at a joint meeting of the University of Belgrade Council and Senate (Ministry of Education 2010) points to the strategic objectives of the Ministry of Education of the Republic of Serbia to increase the number of highly educated people and to increase the quality of their knowledge. This is one of the key conditions for the further development of Serbia and its European integration. At the same time, amendments to the Law on Higher Education of measures and solutions were adopted which puts students and their needs, the number of exams, and a reduced number of ECTS points for entering the next academic year in the center of the educational process. Currently about 192,000 students are studying at the colleges and universities in Serbia. In the future the plan is to adopt the Strategy of Education in Serbia while the National Council for Higher Education has prepared the necessary elements of the strategy.

1 Survey tool: www.kwiksurveys.com

2 Students' portal: <http://www.studentskismet.com>

3 Law on Higher Education from 30.08.2005: <http://www.parlament.rs/>

3.2 Size and Scope of the Higher Education Sector and its Environment (Macroeconomic Overview)

Higher education in Serbia includes high schools, faculties and art academies. By rendering the Law on Higher Education in 2005 where decisions of the Bologna Convention were applied and conducted, the Statistical Office of the Republic of Serbia⁴ adapted the monitoring of enrolled and graduated students to these modifications. Since the academic year 2007/2008 both enrolled and graduated students have been monitored for the type of studying (academic and professional) and the degree of studying (first, second and third degree, respectively basic academic, basic professional, specialized master studies and PhD studies).

Serbia is the only country in Europe where during the last 15 years the number of the highly educated population has decreased and almost half the population has only completed primary school or not even this. At the debate "Education and Human Resources Development of Serbia" in Belgrade's Sava Center, Deputy Prime Minister Bozidar Delic said that 7% of the population have a university degree.⁵ In Slovenia, as it is pointed out, more than 22% of the population have higher education, in Croatia there are about 15% while Macedonia has 7.3% college graduates.⁶

According to research in the Republic of Serbia 39% of households have Internet access, which is an increase of 2.3% compared to 2009, 5.8% compared to 2008 and 12.7% compared to 2007. The proportion of the Internet connection is the biggest in Belgrade and is 51.3%. In Vojvodina it amounts to 41.8%, in central Serbia to 31.7% (Vukmirovic, Pavlovic and Sutic 2010). In order to find information on education, trainings or courses, 21.8% of the population in Serbia uses the Internet while company representatives in Serbia use the Internet in 25.3% for training and education. These results suggest the possibility of applying distant learning programs and online education in higher education which would be available to students who live outside the major cities in Serbia in order to further their education and find work in local communities.

3.3 Employment Policies

The results of labor market research work in Belgrade and Banat region in December 2008 from the National Employment Service in Serbia demonstrate that the sectors which, according to most indicators, show the greatest growth are: section of modern services (real estate, finance, consulting and IT), construction, trade and catering, transport, storage and communication. Sectors that show the smallest growth are agriculture and fisheries as well as the traditional service sector such as health protection, education, and utilities. The greatest employment potential of new labor force was evident with small (10-49) and medium (50-249) private enterprises. When it comes to regions the greatest employment potential was recorded in Belgrade, North Banat and Middle Banat, while the lowest economic development was observed in South Banat. The most sought business areas are economics, law and administration, culture and public information, trade, catering and tourism, as well as mechanical engineering and metal processing (Tempus project CONCUR 2009).

4 Statistical Office of the Republic of Serbia: <http://webrzs.stat.gov.rs/axd/en/index.php>

5 <http://vesti.krstarica.com/?rubrika=aktuelno&lang=0&sifra=d0970be1af6c9fdb576cef11771ec976&dan=17&mesec=04&godina=2008>, retrieved on September 10, 2010.

6 <http://www.poslovnih.hr/vijesti/blic-srbija-na-regionalnom-dnu-po-broju-visokoobrazovanih-158353.aspx>, retrieved on September 20, 2010.

3.4 Process of Curricula Development

The current situation of applying and developing new curricula is characterized by problems in the external environment: poor socio-economic status of students, problems carried over from previous education such as high school, the accreditation process of higher education institutions, and an uncertain economic situation in the country. In addition, there is the harmonization of the Bologna Declaration (ECTS credits are not all assigned in the curricula according to students' workload, and outcomes are not adequately defined). Numerous internal problems that influence the efficiency of curricula are also present in higher education. Some of those problems are the organization of studies, mode of study, insufficient compliance of curricula with the test criteria, the number and volume of courses, the mutual compatibility of courses within the same study program, failure to recognize the real workload of students, technical and material equipment of higher education institutions, the number of students and their preparedness for monitoring teaching, and the number of teachers and their qualifications for teaching (Vukasovic 2006). Therefore, the proposed methodology is to precisely define the curriculum for individual courses which takes into account the formulation of competencies, learning outcomes, developing of teaching methods, assessment, and evaluation process results.

3.5 Specific Requirements

Smirnov (2008) states that knowledge and skills developed through higher education in Serbia focus on old skills and knowledge; skills such as applying knowledge acquired by rote, using invariant sources of information, working as a solo practitioner and operating in routine, unchanging ways.

According to the research study results, when students finish their undergraduate studies, they possess some of the new knowledge and skills. In other words, they know how to: apply problem-solving strategies, acquire and evaluate information from diverse courses, work as a collaborator or member of a team, operate in a flexible and self-correcting way (Smirnov 2008: 444). Companies require different knowledge and skills related to internship program and project work with students.

3.6 Current State and Forms of Cooperation between Universities and the Business Sector

3.6.1 Strategic Partnership between Faculty and Company

Coca-Cola Hellenic Bottling Company in Serbia has developed a strategic partnership with the Faculty of Organizational Sciences in order to have a better connection with its potential future employees. These partnerships include joint activities such as students' participation in real-life projects (Ultra energy drink: brand communication project design targeting at student population; Market Impact Team project: visiting retail outlets in Serbia and coaching by successful managers), internships, research and thesis development, visiting managers at the faculty, company visits, and public relations campaigns.

Results of previous studies showed that 35.5% of students identified "students' participation in real-life projects" as being the best thing a company can offer. Students from the University of Belgrade also identified coaching as an important connection between higher education and business sector (26.5%) as well as internships (16.5%), scholarships (15%) and lectures at faculties (6.5%) (Pjevic Prodanovic, Saric and Pajevic 2010).

3.6.2 Local Competition: the Best Technological Innovation

Since 2005 this project has been successfully implemented and presents a good example of cooperation between higher education and the business sector.

The aim of the competition is to select the best technological innovations and to promote entrepreneurial spirit in Serbia. The competition is organized by the Ministry of Science and Technological Development, Faculty of Technical Sciences in Novi Sad, Serbian Chamber of Commerce, Technological innovation committee, and the public media service RTS.⁷

3.6.3 Students' International Project: Case Study Show

The Case Study Show is an innovative way of interaction between students, teachers and companies at the Faculty of Organizational Sciences (table1). It is an event where company representatives provide real data about business problems, teachers prepare students and write case studies, and students (working in teams) present their solutions in front of jury members from the companies. Many global and local companies take part in this event: Coca Cola Hellenic bottling company, L'Oreal Balkan, Microsoft Serbia, Japan American Tobacco, British American Tobacco, Holcim Ltd, Maxi, Telekom Serbia, and Kontiki Travel Agency.

The Case Study Show is a special event that was held in May 2007 for the first time. The local student's organization ESTIEM (European Students of Industrial Engineering and Management) and the Faculty of Organizational Sciences at the University of Belgrade are founders and organizers of this event (ESTIEM LG Belgrade, 2007).⁸

BENEFITS		
COMPANIES	STUDENTS	FACULTY
<ul style="list-style-type: none"> - Recruitment of the best students as potential future employees - Direct contact with students - Media promotion of companies - Achieving positive reputation among students - Recruitment of foreign students - Connection with Faculty and students organization ESTIEM 	<ul style="list-style-type: none"> - Possibility to solve real-life business problems of companies from the Serbian market - Evaluation of knowledge - Gaining experience in multinational teams - Employment Internships 	<ul style="list-style-type: none"> - Media promotion - Competitive teachers and students (case study skills) - Connection with other faculties abroad - Connection with companies – theory and practice integration - Long-term cooperation of the faculty with company representatives

Table 1: Emphasizing the classified research results - benefits from participation of all parties involved in the Case Study Show. Results displayed are the foundation for the research presented in this paper (Damjanovic and Novcic 2010a).

The Case Study Show is an event with international character in which students who are ESTIEM members have the opportunity to work in teams and to solve business case studies. A

7 <http://www.inovacija.org/>, retrieved on September 5, 2010.

8 <http://www.casestudyshow.org.rs>, retrieved on July 16, 2010.

local group from the Technical Faculty of Novi Sad took part actively in this project. Leading business companies from the Serbian market present their business problems through case studies while the students are faced with real business problems and situations that need to be resolved. By implementing this approach the participating students gain more than needed practical experience and have the chance to make valuable contacts with leading business experts.

Table 2 presents a modified communication strategy platform implemented for the Case Study Show on the one hand and the benefits for participants on the other hand. The different target groups (students, companies, graduates, and faculties and academic institutions) are identified as potential direct and indirect participants of the Case Study Show. Due to the diversity between identified target groups for this special event, specific communication objectives are created. Based on the set communication objectives, communication channels were depicted for each target group. The unique message regarding the Case Study Show was broadcasted through all media channels of communication: Show what you know! (Damnjanovic and Novcic 2010b).

Target Group	Objective	Media Channel
Students	Informing and interesting students in participating in this event	Teaching staff Posters ESTIEM's website Case study Show website Facebook group Media Billboards Presentations
Companies	Networking between students/faculties and companies to establish long-term cooperation.	Presentation in a company TV Radio Print media Billboards
Graduates	Interesting graduates in attending the event and presenting a new, interactive teaching approach so that they would like to enter the Faculty.	Presentations in high schools TV Radio Print media Billboards
Faculties (Academic institutions)	Strengthening the reputation as the leading faculty for implementing the case study method in the region.	Faculty's website Presentations Print media Brochures

Table 2: Communication strategy platform with activities for the Case Study Show aiming at different target groups (Damnjanovic and Novcic 2010a).

3.6.4 Company visit and online career advisor

The Center for Career Development at the University of Belgrade successfully organizes internships for students, and educates through workshops as well as online because there is a guide on the website (virtual advisor) illustrating how to help students to get jobs easily and to prepare for job applications and interviews. Apart from these activities the Career Center also organizes trips to visit companies under the program “Learn from first-hand” (e.g. visits to Hemofarm in Vrsac and Philip Morris in Nis). In this way, the work of companies is presented that are successful outside of Belgrade (Career Development Center Belgrade 2010).

4. Conclusions and Recommendations

4.1 Summary

The current situation of connecting higher education and the business sector in Serbia is not at a satisfactory level. Table 3 shows the activities that have been recognized by respondents as those activities which were the poorest implemented and at least successful, sorted by decreasing frequency.

Activities	Percent
The joint development of program in accordance with the labor market	77%
Student’s participation in real projects (in a company)	76%
Active involvement of a company in defining the topics for seminar papers and master thesis at faculties	73%
Linking of the institutions that participate in job hiring of students after graduation	71%
Student’s career advising after graduation	69%
Joint project of faculties and companies – Summer/winter schools	68%
Company visits for insights into the specific operation mode of the company	61%
Alumni groups of higher education institutions	60%
Research projects for the purpose of the economic and scientific development	55%
Internship	53%
Application of interactive teaching methods in the class based on example of Serbian companies	45%
Scholarships	42%
Student’s competitions in the area where the knowledge is gained (solving case studies, debates, quizzes)	26%
Inviting guest lecturers to teach at faculties	24%

Table 3: Activities regarding the cooperation between higher education and the business sector in Serbia, graded by the poorest implementation level (own illustration)

This research study summarized current joint projects and the different perception of target groups, identified the joint development of programs in accordance with the labor market, explored students' participation in real-life projects (in a company) and the active involvement of companies in defining topics for seminar papers and master theses at faculties, and linked institutions that hire students after graduation.

The following critical success factors were outlined in this study: factors regarding higher education (lack of relevant information about the employment needs of the labor market, teaching staff education for more interactive ways of cooperation with industry, providing additional funding in order to run specific projects from EU funds); factors regarding Government influence: increasing the budget for higher education, Legislation in Higher Education; business sector factors (lack of interest in the business sector to cooperate with higher education institutions). Regional cooperation, online education programs and higher competition between private and state universities are identified as factors with some relevance (Table 4).

In your opinion what are the important success factors for linking higher education and the business sector?	Of great importance
Educating teaching staff in more interactive ways of cooperation with the industry	52%
The influence of government on higher education (increasing the budget for higher education)	45%
Legislation in Higher Education	45%
Lack of interest from the business sector to cooperate with higher education institutions	45%
Lack of relevant information about the employment needs of the labor market	45%
Providing additional funding to run specific projects from EU funds	44%
Lack of interest of representatives of higher education in cooperation with the business sector	42%
International cooperation between higher education and the economy with countries in the region - Conference	37%
The possibility of using online training programs with the help of information technology	29%
Increased competition between state and private faculties	19%

Table 4: Critical success factors for linking higher education and the business sector in Serbia (own illustration)

The results of my research show that students mostly gain theoretical knowledge (43%) and minimal practical knowledge (5%) until they graduate, with problem-solving found in practical work at a low rate as well (9%) (Table 5).

Theoretical knowledge inside the field	43%
Practical knowledge inside the field	5%
Advanced knowledge of the field of work or study including a critical understanding of theories and principles	10%
Problem solving found in practical work	9%
Acquiring and evaluating information from different fields	15%
Adequate knowledge to work in flexible environment	18%

Table 5: Which knowledge do students acquire until graduation from Serbian universities? (own illustration)

Students mostly gain written communication skills (40%) while they are the worst regarding specialized skills for problem solving in a research and/or innovation with purpose of development of new knowledge and procedures and integration of knowledge from different areas (13%) (Table 6).

Written communicational skills	40%
Presentational skills	29%
Team work skills	18%
Specialized skills for problem solving in a research and/or innovation with purpose of development of new knowledge and procedures and integration of knowledge from different areas	9%
Acquiring and evaluating information from different fields	15%
Adequate knowledge to work in flexible environment	18%

Table 6: Which skills do students acquire after graduation from faculties in Serbia? (own illustration)

4.2 Discussion

The research study included 313 participants: 120 students, 70 graduates with a Bachelors degree, 4 counselors each from the Career Development Center at the University of Belgrade, the Belgrade Chamber of Commerce, and the Serbian Chamber of Commerce, 40 company representatives, 35 professors, 35 teaching assistants, and the Vice Rector for Finance and Organization at the University of Belgrade.

The Vice Rector for Finance and Organization at the University of Belgrade graded with the lowest mark the success of already implemented activities of students in real-life projects in companies, common projects between companies and industry regarding summer and winter schools, active participation of companies in projects and master thesis work with students, and research projects for industry development. The key factors for successful improvement of cooperation between higher education and the business sector were identified as the education of teaching staff and company representatives.

The Career Development Center representatives at the University of Belgrade, representatives of the Belgrade Chamber of Commerce, the Serbian Chamber of Commerce, company representatives in Serbia, professors, teaching assistants and students graded the participation of students in real-life projects in companies with the lowest possible mark. This is due to the low number of existing alumni groups and their poor performance as well as to the fact that the current development of programs is not in accordance with the need of the employment market.

The Career Development Center also identified a bad situation regarding student competitions, joint projects with companies and faculties, and application of interactive methods in higher education. Crucial factors of significant importance for improvement of higher education and business sector are identified: the Government impact on higher education (higher budgeting), international cooperation within the region, the lack of relevant information about needs of employment market and education of teaching staff and company representatives. Students gain their skills in written communication, theoretical and advanced knowledge in work and science after their graduation.

The Serbian Chamber of Commerce identified a bad situation currently regarding connection between institutions that participate in student employment after their graduation, student counseling after their graduation, company visits and student internships. Critical success factors for connecting higher education with business sectors are: the impact of government on higher education (through budget increase), the provision of additional financial assets, international cooperation within countries in the region and possibilities of online education programs. Students gain their skills in written communication, theoretical and advanced knowledge in work after their graduation.

The Belgrade Chamber of Commerce identified a bad situation currently regarding connection between institutions that participate in student employment after their graduation, student competitions and company visits. The Critical success factors are: legislative regulation in higher education, international cooperation within the region and providing additional assets from EU funds. Students gain their skills in written communication, theoretical and advanced knowledge in work after their graduation.

The company representatives outlined the least successful implemented activities regarding joint program development in accordance with the need of the employment market, student counseling after their graduation and connection between institutions, participation of companies in writing master and graduate thesis, company visits and alumni groups. The Critical success factors that they point out are: law regulation in higher education, lack of interest of teaching staff to cooperate with the business sector and information evaluation in various fields, while the written communication skills and partially team work skills are being adopted.

The majority of students gain their written communication skills; half of the students think that they are also gaining presentation skills after their studies, while the majority of them think that they do not gain any teamwork skills or specialized skills for problem solving in research. Theoretical knowledge is something that the vast majority of students gain during their studies. This conclusion was also reached by teaching assistants and professors. Teaching assistants identified a lack of interest by the business sector to cooperate with higher education as the crucial problem while professors point out that scholarships and joint programs with companies according to the needs of employment market are crucial problems.

4.3 Recommendations

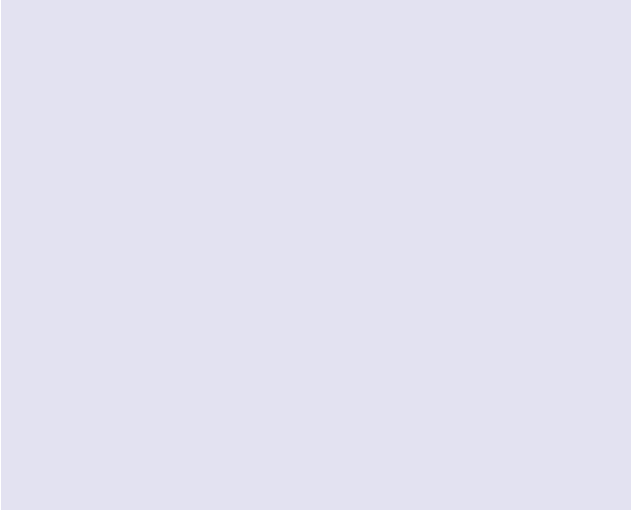
Based on these findings I recommend the development of the following projects:

- Case Study Writing Competition supported by Emerald on the regional level (which should include students, teaching staff and company representatives). Students would participate in real projects and would develop the case study together with professors or assistants with data from a company. All of these cases would be available for teachers from higher education institutions to use in class and it would provide good practical examples from the local market.
- Online EDUBIZ portal – Educational program for the business sector and faculties: Develop strong research support of higher education with the business sector (using real data from companies in seminar papers and master theses and develop exchange of papers and theses).
- Organized joint conferences and coaching programs “Peer education” for all stakeholders regarding the link between higher education and the business sector on the regional level
- Develop an alumni network and define the role of all stakeholders in the cooperation process

These proposals for joint projects should improve cooperation between higher education and the business sector in Serbia.

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ABOUT WUS Austria

Who we are...

World University Service (WUS) Austria is a politically independent, non-governmental organization committed to the promotion of the human right to education on the basis of academic freedom and university autonomy. Since its establishment in Graz in 1983, WUS Austria has been working on the promotion of this aim in various countries all over the world. Today the organization has a strong regional focus on the countries of South-Eastern Europe. While this area remains at the center of WUS Austria's work, the organization is also transferring its knowledge and experiences to projects in other regions of the world.

What we believe in...

Our vision is to be a competent partner for the development of higher education, which we believe is a key factor in the socio-economic and political advancement of every society. Therefore we aim at increasing the quality of higher education in accordance with European and international standards. Our mission is to establish solid and sustainable structures for a strong role of universities in society.

How we work...

We ensure a high level of sustainability by applying both a top-down as well as a bottom-up approach from the policy level to the individual level. We cooperate with many different partners such as higher education institutions, companies and individual experts on a national, regional, European and international level. The main principles guiding all our activities are:

- Ensuring sustainability and local ownership
- Ensuring a high level of cooperation and partnership
- Fostering sustainable development through capacity and institution building
- Promoting academic solidarity, human rights as well as peace and stability

The services we provide...

Sustainable development of higher education goes beyond the university level. Responding to this, we at WUS Austria work together with the public sector and the economy, as well as with civil society. Our activities mainly lie in: Higher Education Development, Linking Higher Education & Economy, Arts & Culture and Higher Education & Human Rights.

Within these areas we provide essential services including:

- Development of new and innovative project ideas
- Professional management of projects
- Fostering knowledge and technology transfer
- Networking activities, and
- A broad range of consulting services

Universities are places of knowledge production, and the economy and society are the users of this knowledge. Universities in general are seen as playing an essential role in strengthening the economic competitiveness of the region. World University Service (WUS) Austria has always put an important focus on the promotion of the enhanced knowledge transfer between universities, the business world and society at large. The present manual deals with the need for a stronger connection between universities and industry in South Eastern Europe, but also shows that many different types of cooperation between these stakeholders already exist. Eight country reports of national experts about different aspects of the current higher education sector and about the university-economy collaboration in each respective country were compiled. Each single report offers recommendations on how to improve the future cooperation in this area and provides insights into the existing tools and methods as well as the possibility of developing tailor-made strategies.

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