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From Fragmentation to Cooperation: Tertiary Education, Research and Development in South Eastern Europe

by

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with Kirill Vasiliev

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Acronyms

CEE	Central and Eastern Europe
ERI-SEE	Education Reform Initiative of South East Europe
EU	European Union
EUA	European University Association
LFS	Labor Force Survey
QA	quality assurance
RCC	Regional Co-operation Council (formerly the Stability Pact)
R&D	research and development
SEE	South Eastern Europe

Executive Summary

Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, and Serbia increasingly define themselves in relationship to an expanding European Union (EU). This point of reference provides a realistic but ambitious perspective on their future political and economic development. In this regard, they follow in the footsteps of other South Eastern Europe (SEE) countries, namely, Bulgaria, Romania, and Slovenia, which have already become members of the EU. A core condition of being an EU member is having a market economy that is competitive within the EU. Tertiary education and research and development contribute to economic growth and competitiveness by providing highly skilled graduates prepared to take up their role in an open economy and democratic society, as well as by the creation, transfer, and adaptation of knowledge.

The objective of this paper is to analyze the situation in Balkan countries, outline the directions for policy reform in tertiary education and research and development, and identify options for World Bank support to these countries, both through national projects and different types of regional collaboration.

The State of Play

The region's economies are already rewarding individuals for their level of educational attainment. The gap in labor market outcomes between those with and without tertiary education is substantial. There are signs that the more successful companies in the region are seeking stronger skills among employees—in particular, higher education skills—as a part of their competitive strategy.

The supply of a highly skilled labor force with tertiary qualifications to meet this rising demand is, however, weak in Balkan countries. In higher education, dropout rates are high and graduation rates are low. These countries also report stagnating or even decreasing numbers of graduates with an advanced degree at the master's or doctoral level. Talented people from these countries are more likely than residents of other European countries to leave their country to pursue opportunities elsewhere.

Balkan countries face major hurdles in increasing the number of tertiary graduates over the medium term. First, enrollment rates in secondary and, in some South Eastern Europe (SEE)

countries, tertiary education are relatively low. Yet even these enrollment rates are misleading, as they hide very low university graduation rates. Second, substantial growth in enrollment at private institutions has not compensated for the weak supply of high-level graduates from public higher education institutions—in contrast to many Central and Eastern European countries. Third, SEE countries are expected to experience a significant decline in the size of the age cohorts attending all phases of education.

Balkan countries thus face significant problems with the quality of higher education. While good comparative data do not exist, studies of institutions consistently report the prevalence of old-fashioned teaching methodologies and examinations. Procedures for internal and external quality assurance are to a large extent inefficient and out of line with recent European developments.

Underlying all these problems is an institutional structure of powerful, legally autonomous faculties within public universities. There are a few success stories, where universities have been legally integrated, such as Tuzla University in Bosnia and Herzegovina. But laws intended to integrate institutions are, in general, rather recent in the countries of SEE and, like such laws in other countries, have not always been effective.

In comparison to other European countries, public expenditure on tertiary institutions as a share of GDP is low. Moreover, neither public nor private sources of funding give faculties an incentive to improve efficiency and graduation rates. Public institutions have been able to raise resources from tuition fees; but this has merely provided an incentive for institutions to keep students in the system and has hence reduced efficiency.

Tertiary education systems in SEE not only do not provide sufficient numbers of highly skilled graduates, they are also ill-prepared to contribute to the competitiveness of their respective countries through knowledge absorption and innovation. There are, moreover, also major constraints on the demand from private companies for research and development (R&D). The input side of existing R&D systems reveals a similar story, with relatively few researchers and abysmally low spending.

What is to be Done?

An essential condition for addressing the above-described issues is the organizational restructuring of public universities. In addition, public funding systems need to provide incentives for these institutions to fulfill their respective missions of enhancing competitiveness and social cohesion. These goals will require moving increasingly towards performance-based funding systems. Public subsidies for university fees, for example, should be targeted to students from poorer backgrounds and, over the longer term, linked to student loan systems. Such changes will require political determination from governments and significant enhancement of the management capacity of public universities.

The countries of SEE have unbalanced higher education systems. A single university (typically in the capital city) dominates the entire system in terms of enrollments and resources. The challenge in the medium term is to develop a sufficient number of effective, comprehensive universities. Over the longer term, more balanced higher education systems that cater to diverse needs (including diverse subnational needs) need to be developed, including a strengthened polytechnic sector and specialized higher education institutions.

The participation of individual countries in the Bologna Process, which aims to make higher education degrees more compatible across Europe and foster mobility,[1] gives them a major opportunity to improve the quality of teaching and learning at universities, an opportunity that has not yet been sufficiently seized. Too much attention has been given to bureaucratic changes within universities and not enough to redesigning curricula and teaching practice. The quality assurance system in each country in the region also needs urgent attention to ensure an appropriate balance between accountability and autonomy.

There is no single recipe for the role of private institutions. Perhaps the biggest contribution of the private sector will be to promote a diversity of higher education institutions. This outcome will require that national quality assurance systems, and accreditation in particular, support institutional diversity. When creating such systems, however, governments will need to address the problem that most teaching staff at private institutions already have contracts with public institutions.

[1] The Bologna Process is a comprehensive European higher education reform process the currently involves 46 countries. The Bologna Process aims, among other things, to establish a three-cycle structure (i.e., bachelor, master, and doctorate), compatibility of degrees, and academic mobility. See the Web site of the Bologna Process, http://www.ond.vlaanderen.be/hogeronderwijs/bologna/about (accessed May 2008).

The countries of SEE face multiple challenges in improving their R&D systems, but the foundations for their longer-term effectiveness need to be established now. In the short term, adaptation of existing knowledge should be emphasized, rather than innovation and the creation of new knowledge. To achieve this initial goal, the highest priority with regard to R&D should be to strengthen links between public universities and private enterprises, as the biggest contribution that a research sector can make to a country is to help companies adopt and adapt new ideas and technologies from elsewhere. At the same time, private funding for R&D needs to increase dramatically, as does the employment of researchers in the private sector. Finally, public R&D funding needs to be more effectively targeted, preferably through private-public partnerships. Fortunately, many countries around the world have successful experience in implementing such public-private partnerships, which take a variety of forms.

Focusing on applied research in the short run will help improve basic research over the long run. However, in order to reduce the priority that public funding now places on basic research, new approaches to the appointment and promotion of faculty in universities are needed. For the foreseeable future, the countries of SEE will be unable to excel in research in more than a few specific areas each, so it will be a major challenge for governments to decide the areas that justify investment. There are two ways for governments to spread the investment risk and increase R&D opportunities: involve the private sector in these decisions, since they are better able to identify areas that can add value to their operations; or cooperate with other countries and institutions to share resources (e.g., people, equipment, and ideas). Special attention should be devoted to future support for young researchers and their status within the R&D system.

Implementing Change through Regional Collaboration

The realization of the reform agenda outlined above will take time and require considerable additional resources, which argues for a well-designed implementation strategy and cost sharing through regional collaboration. The World Bank can play a role in encouraging this reform agenda in collaboration with other regional actors. The prerequisite for any regional collaboration is that it be as simple and focused as possible, meaning that the number of different types of activities and the work attempted under each be strictly limited. Such a determination can, of course, only be made through dialogue with the countries involved. However, based on its experience, the World Bank has expectations about how to leverage lending operations to bring about important changes in university systems.

The Bank could propose two kinds of activities that correspond to two different kinds of collaboration among countries in SEE. Coordinated activities are essentially national in character, but address issues faced by all countries in the region, and therefore could be addressed in a collaborative manner, with multiple countries working together and learning from each other. Integrated activities *require* a regional approach in order to be effective and could be addressed by countries in the region working in full cooperation with each other.

The World Bank intends to use this analytical paper as the basis for discussions on this topic with countries in SEE. These discussions will seek to verify the evidence and arguments presented and to identify ways to assist the countries in moving forward on reform of tertiary education and research and development.

Introduction

Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, and Serbia (i.e., all countries in SEE) increasingly define themselves in relationship to an expanding European Union (EU). This point of reference provides a realistic but ambitious perspective on their future political and economic development. In this regard, they follow in the footsteps of other SEE countries, namely, Bulgaria, Romania, and Slovenia, which have already become members of the EU. The Lisbon Agenda, through which the countries of the EU aim to become the world's most competitive region, also provides a framework for the economic development of all Western Balkan countries.

A core condition of accession to the European Union is having a market economy that is competitive within the EU.[2] On many measures, however, the economies of countries in SEE do not perform well. The EU has defined 16 indicators, including five benchmarks, to monitor the contribution of education and training to the achievement of the Lisbon Agenda (see annex 1). Unfortunately for the purposes of this study, there are few indicators for tertiary education and there is no comparable data for many SEE countries. A more valuable tool for comparing countries is the *Global Competitiveness Report* of the World Economic Forum. Of the 131 countries rated in 2007, Slovenia and Croatia were the most successful SEE countries, ranked at 39 and 57 respectively, but the other SEE countries fell below 70 (WEF 2007, table 1).

[2] The Copenhagen Criteria define the principles that countries must meet to accede to the European Union. The economic test is the "existence of a functioning market economy and the capacity to cope with competitive pressure and market forces within the Union." The political criterion is "stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities." Finally, countries must also accept the Community *acquis* (ability to take on the obligations of membership, including adherence to the aims of political, economic and monetary union). European Council in Copenhagen, June 21–22, 1993, Conclusions of the Presidency, June 22, 1993.

Table 1. Performance of countries in SEE and CEE
Global Competitiveness Report 2007—2008 (N=131)

Country	*Overall ranking*	*Higher education and training ranking*	*Innovation ranking*
Albania	109	103	131
Bosnia and Herzegovina	106	98	121
Croatia	57	46	50
Macedonia, FYR	94	75	92
Montenegro	82	79	104
Serbia	91	82	78
Bulgaria	79	66	88
Romania	74	54	76
Slovenia	39	24	30

Source: WEF (2007).

To create a competitive economy—one that is growing and generating future-oriented jobs—requires policy measures across many sectors, including education, particular tertiary education. Research done by the World Bank since the early 1990s shows that the development of higher education is correlated with economic development (World Bank 1994). These findings have been reinforced by more recent research on the construction of knowledge societies. This research shows that the ability of a society to produce, select, adapt, commercialize, and use knowledge is critical for sustained economic growth and improved living standards. It thus highlights the fact that knowledge has become the most important factor in economic growth (World Bank 2002; Yusuf and Nabeshima 2007). Human capital in general, but especially in tertiary education, has been shown to be crucial for supporting innovation and competitiveness.

Tertiary education and research and development contribute to economic growth in a variety of ways. First, tertiary education provides economies with qualified, highly skilled graduates. Second, tertiary education creates new knowledge via research and innovation and, finally, education contributes to the transfer and absorption of existing knowledge, which is of particular importance to countries in SEE.

In addition, higher education can play a crucial role in establishing modern, democratic societies. A number of the skills and knowledge that graduates need to be successful in the labor market, such as analysis, critical judgment, and good communication skills, are also necessary

for democratic citizenship. Higher education can transmit the values on which democratic societies are established.

The objectives of this paper are to outline the directions for policy reform in tertiary education and research in the countries of the Balkans and to identify ways in which the World Bank can help these countries pursue this reform agenda, especially through regional collaboration. Section I discusses the performance of tertiary education and research systems in the SEE region and how well they help countries and individuals become more competitive. Section II discusses some key policy directions that the countries in question might consider adopting, based on international experience. Section III discusses options for how the World Bank can support these changes in the countries of South Eastern Europe through regional collaboration.

I. The State of Play

The economies of SEE are already rewarding individuals for their level of educational attainment. The gap between those with and without tertiary education is substantial. For example, individuals with tertiary degrees have wages at least 50 percent higher than workers with only basic education (this premium is lower in Bosnia and Herzegovina, but still a very respectable 35 percent) and at least 38 percent higher than workers with secondary education (again, Bosnia trails with 25 percent). (See table 2 and figure 1 below). Tertiary education graduates also participate in the labor market at much higher levels than do individuals with lower educational qualifications and when employed, are significantly more likely to work in the formal sector, where job prospects are more secure and individuals more likely to have access to further education and training opportunities (Betcherman et al. 2007). These findings are consistent with the evidence for countries worldwide.[3]

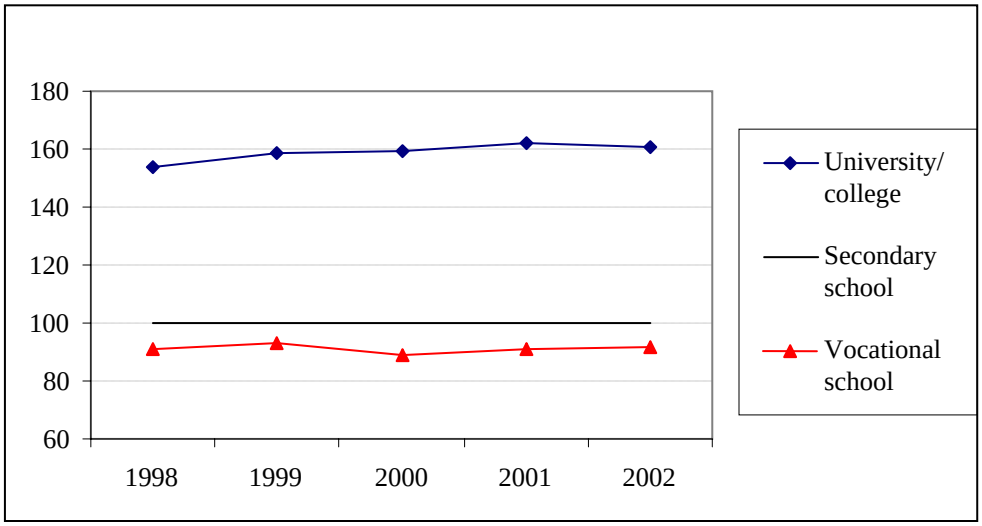
Table 2. Wage premia of university education over basic education, 2005

	Albania	*Bosnia and Herzegovina*	*Macedonia*	*Serbia*
All people of working age				
1–3 years of secondary school	19.2	-1.2	5.3	13.3
4–5 years of secondary school	11.5	7.4	19.2	31.0
Post-secondary education	62.2	32.6	57.4	70.5
Young people (less than 35 yrs)				
1–3 years of secondary school	15.9	-1.3	-4.1	12.7
4–5 years of secondary school	21.2	9.9	7.6	27.6
Post-secondary education	70.2	45.6	49.2	66.1

Source: Betcherman et al. 2007.
Notes: 1. For Bosnia, data is from 2004.
2. For Albania and Bosnia, figures are for vocational secondary versus general secondary schools, rather than for different lengths of secondary education programs.
3. Although Croatia is not included in the table, workers in that country with two years of post-secondary education and those with university education or higher have wage premia of 91.2 percent and 132.8 percent, respectively (World Bank 2007b).

[3] For general labor market outcomes in the countries in Eastern Europe and Central Asia, see Rutkowski and Scarpetta (2005); for rates of return across the world, see Patrinos et al. (2006).

Figure 1. Wage structure according to education in Croatia, 1998–2002



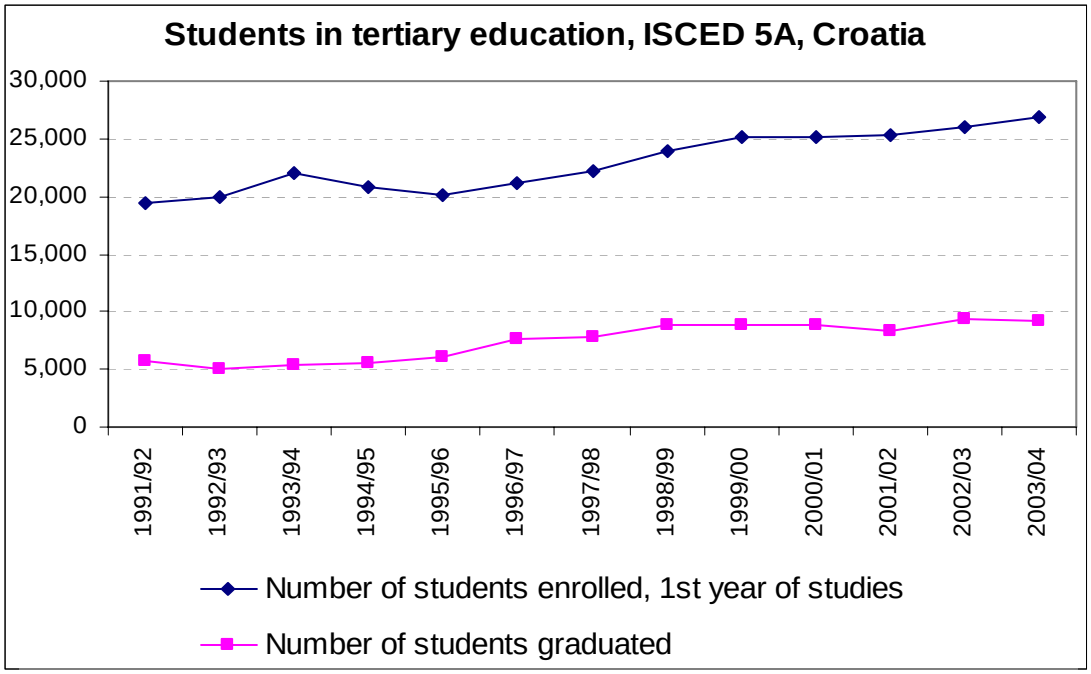
Source: Republic of Croatia (2007).

There are signs that the more successful companies in the region are seeking more advanced skill profiles among their employees—particularly higher education skills—as a part of their competitive strategy. The skills and education of workers is not identified as the major economic constraint of firms in SEE countries, but about one-quarter of firms identify it as a problem for their operations and growth (compared to, for example, regulatory policies, which 60 percent of firms identified as problematic). Firms in Albania (about one-third) were slightly more likely to emphasize the skills constraint than other countries in SEE. Skills–related constraints are more frequently reported by firms that are more dynamic and competitive. Medium-size companies (50–249 employees), those in more dynamic sectors, those experiencing growth in sales and exports, young firms (less than 10 years old), and those that have invested in research and development also emphasize this constraint more than do other firms (Betcherman et al. 2007).

However, the supply of a highly skilled labor force with tertiary qualifications to meet this rising demand is weak in the countries of SEE. Low levels of efficiency in higher education are reflected in high dropout and low university graduation rates (see figures 2a and 2b). In addition, countries in the region report stagnating or even decreasing numbers of highly skilled graduates, that is, graduates with a master's or doctoral degree (see figure 3). This problem is likely to persist unless strong corrective action is taken due to the declining size of

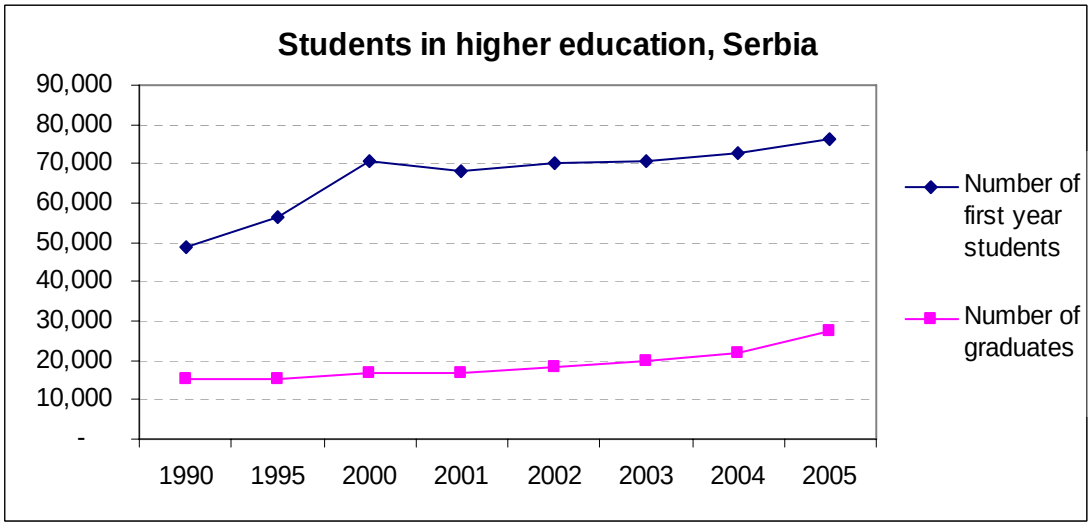
young cohorts. At the same time the bachelor's degree has not been firmly established as a standalone degree in the labor market.

Figure 2a. Students in tertiary education (ISCED 5A) in Croatia, 1991–2004



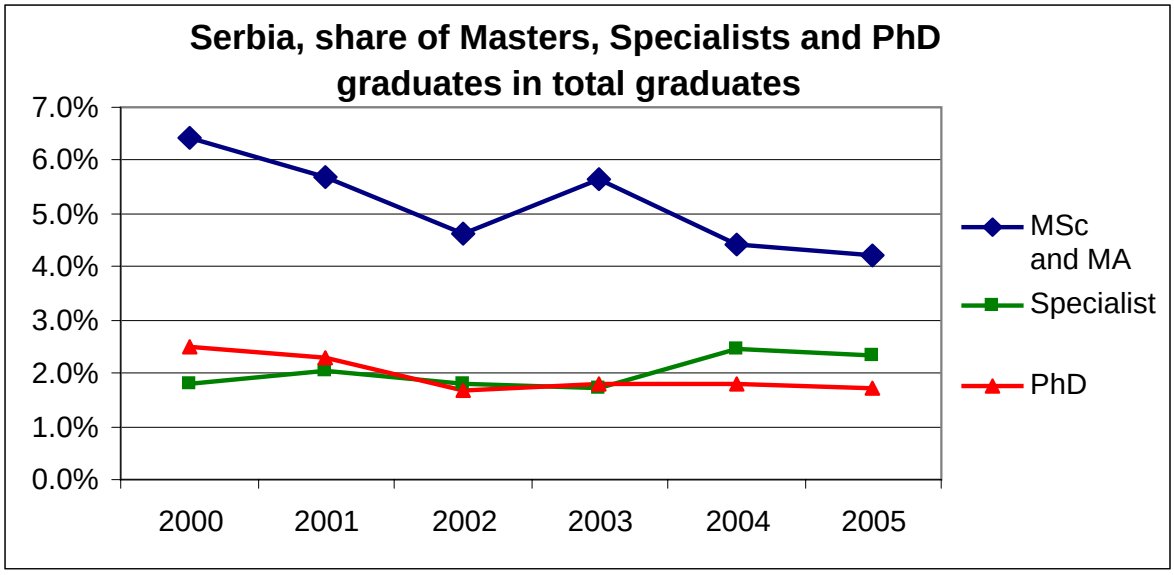
Source: Republic of Croatia (2007).
Note: First-year students in given year would expect to graduate five years later.

Figure 2b. Students in Higher Education in Serbia, 1990–2005



Source: Serbian Statistics Service, http://webrzs.statserb.sr.gov.yu (accessed January 2008).
Note: First year students in given year would expect to graduate five years later.

Figure 3. Higher education degrees in Serbia, 2000–2005



Source: Serbian Statistics Service, http://webrzs.statserb.sr.gov.yu (accessed January 2008).

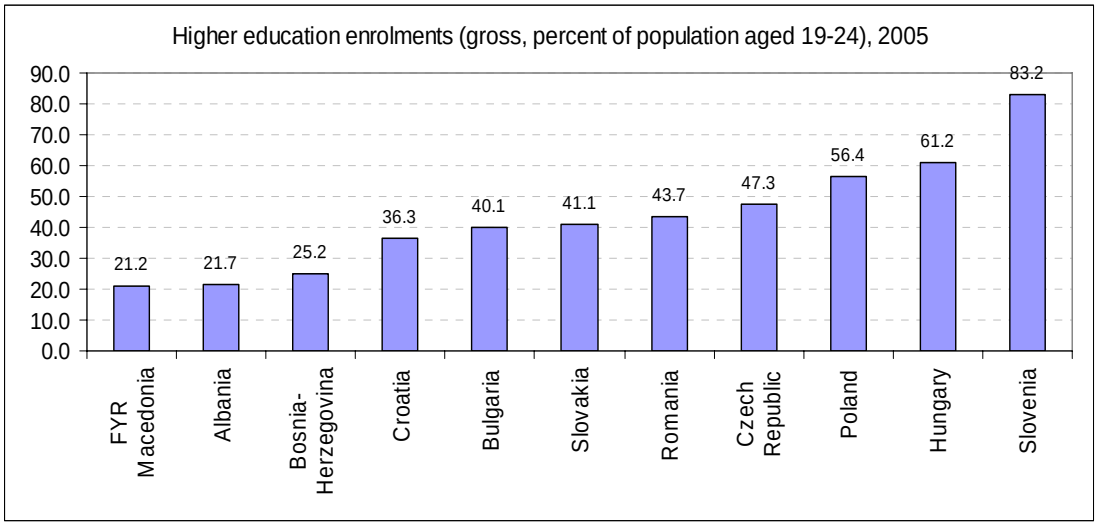
The stock of highly skilled people is insufficient in the region. For young people below the age of 35, who are more highly qualified overall, the proportion of the population with tertiary degrees ranges from only six percent in Bosnia and Herzegovina to 20 percent in Montenegro (Betcherman et al. 2007). For the overall adult population in each country, the proportion is even lower. In Croatia, 11.4 percent of the population had a tertiary education degree in 2001 (Adamović and Mežnarić 2003). Directly comparable data for Bulgaria, Romania. and Slovenia are not available, but these countries are ranked as having 99 percent, 48 percent, and 87 percent, respectively, of the EU average of residents with tertiary education (21.2 percent) (EC 2006). While this is good news for people with tertiary education, who can expect increasing returns, it is not good news for their national economies. The evidence from OECD countries shows that even with rising numbers of tertiary graduates, the returns to this level of education continue to increase (OECD 2007).

Talented and well-educated people in SEE countries are more likely to leave the country to pursue opportunities elsewhere. While this is a problem facing almost all countries, the countries of the Balkans rank 110th *and below* in the world on this measure (the two exceptions are Croatia, ranked 67th, and Slovenia, ranked 37th) (WEF 2007). It seems likely that the reforms aimed at increased mobility within Europe, such as those being undertaken as part of the Bologna Process, together with more general visa reforms, will make this problem worse.

Again, while mobility is good for individuals, it will only be good for supplying countries if they are able to capture the gains through returnees, remittances of money, or knowledge. However, if significant numbers of people are to return to their countries of origin, an economic and research infrastructure that the SEE countries do not yet have is needed. It is well-known, for example, that Ireland was able to reverse decades of massive outward migration using a national strategy that focused on comprehensive investment in human capital.

Countries in SEE face major hurdles in increasing the number of tertiary graduates in the medium term. First, enrollment rates in secondary education and, in some countries, also in tertiary education, are relatively low. The latest available gross tertiary enrollment rates in those SEE countries which are not members of the EU show them to be 15 or more percentage points behind the countries of Central and Eastern Europe (CEE). Romania and Bulgaria, for example, have tertiary enrollments of 40 percent and 43 percent, respectively. Croatia is, however, the exception, at 36 percent overall (see figure 4). These rates have risen significantly over the last five years, but so too have the rates of other countries. Similarly, gross enrollment rates in secondary education for Bosnia (45.0 percent) and Albania (58.7 percent) are significantly behind those of countries in CEE (all of which have enrollment rates above 92 percent). At 86.1 percent, Croatia is quite close to the CEE average; Macedonia, at 73.4 percent, is in the middle (UNICEF 2007). No reliable contemporary data exist for Serbia, but in 2001 it had a rate close to that of Bosnia (i.e., less than 50 percent).

Figure 4. Higher education enrollments in South Eastern Europe, 2005



Source: TransMONEE database, 2006.

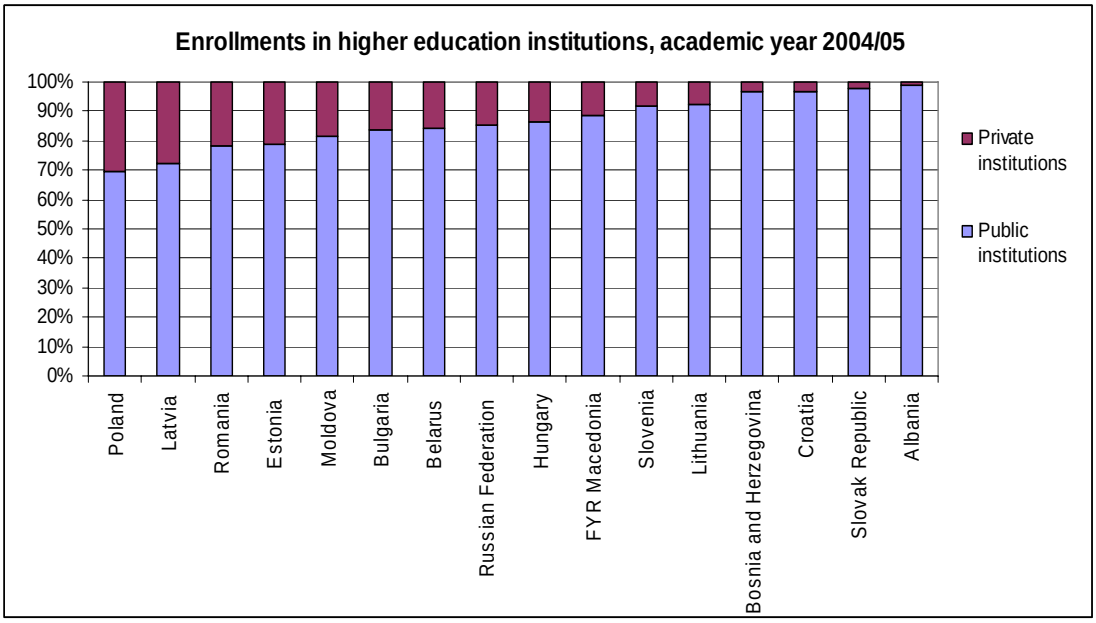
Enrollment rates in secondary and higher education provide a misleading picture of the supply of graduates to the labor market, however, due to high dropout rates and very low graduation rates. There is evidence that transition rates from secondary to tertiary education are quite high in some SEE countries. For example, it is reported that 70 percent of the relevant age cohort in Montenegro entered tertiary education; the latest figure from Macedonia indicates more than 60 percent of upper-secondary graduates entered higher education.[4] However, university graduation rates continue to be low. For example, less than 20 percent of students graduate on time in Serbia[5] and only 10–15 percent do so in Croatia (Republic of Croatia 2007). These rates go hand-in-hand with dropout rates that are significantly higher than the OECD average of 30 percent (OECD 2007). In order to address transition rates to higher education, then, policy makers also need to address the provision of secondary education, together with the overall design and pathways of their education systems.

Substantial enrollment growth at private institutions has not compensated for the poor supply of high-level graduates from public higher education institutions in South Eastern Europe. Countries in SEE fall into two categories (see figures 4 and 5): those that have been receptive to rising private sector enrollments and those that have not. In the first category, enrollments in Macedonia rose sharply once private higher education was legalized and seem likely to rise further. Access to higher education for ethnic Albanians, through the university in Tetevo, has increased so substantially in Macedonia over the last five years that virtually all ethnic Albanians in the country that graduate from secondary education can now be accommodated. Although overall numbers for tertiary enrollment in Albania are still very low, it potentially also belongs to this category, as do Bulgaria and Romania. The second category of countries—where private higher education is not so welcomed, such as Bosnia and Croatia—seem (on the basis of the enrollment trends) to be more resistant to the expansion of private tertiary education and likely to have much smaller enrollments over the longer term (closer to those of Slovenia). It is not clear why enrollments differ so greatly between these two sets of countries. They appear to have similar legal and regulatory frameworks and similar competition from fee-paying students in public institutions.[6] The difficulties facing Bosnia and Croatia

[4] Private communication to authors from university rectors, October 2007.
[5] Serbian Statistics Service.
[6] This conundrum deserves further study, but was unfortunately outside the scope of this report.

primarily relate to their need to catch up in terms of overall enrollment in the tertiary sector, which is where they depart significantly from Slovenia. The latest figures show that Slovenia enrolls 5,618 students per 100,000 inhabitants; the corresponding figures for Bosnia and Croatia are 2,166 and 3,632, respectively (European Centre for Higher Education 2007).

Figure 5. Breakdown of higher education enrollment in Central and Eastern Europe, 2004–2005



Source: European Centre for Higher Education (2007), except FYR Macedonia (figures provided to authors by Ministry of Education and Science, November 2007).

Countries in SEE also face a significant decline in the size of the age cohorts attending all phases of education, a trend that is likely to further reduce the number of highly skilled graduates entering the labor market in future. By 2025, the population of young people entering higher education for the first time is projected to decline by more than 30 percent in all countries of SEE (in Albania and Serbia, however, it is estimated at 15 percent and 26 percent, respectively) (World Bank 2007). Bulgaria and Romania face even steeper declines. The declining size of the age cohort would, all other things being equal, enable enrollment rates to increase without increasing resources, but it also means that the absolute numbers of graduates will decline unless these countries are able to increase the rates of transition to and graduation from tertiary education. Bulgaria has already seen a decline in the absolute numbers of students

entering higher education (World Bank 2007a). In addition, these countries will in the future need to provide more opportunities for those already in the labor market to continue their education and training.

Beyond the question of numbers of students, Balkan countries also face significant problems with the quality of higher education. While good comparative data do not exist, studies of higher education institutions in SEE consistently report the prevalence of old-fashioned teaching methodologies, as well as examinations that test rote learning and factual recall (see, for example, EUA 2003). These factors are an important part of the explanation for the high repetition and dropout rates in tertiary education in the region. A proxy measure of educational quality is whether a country is able to enroll students from other countries. However, despite the desirability of academic mobility, it is also interesting to see if the students of a given country are encouraged to attend university in their home country due to the quality of domestic institutions. Table 3 shows that all countries in SEE have low foreign student enrollment rates and send a high proportion of their own students to other countries. It should also be noted that most foreign students studying in the countries of SEE are from neighboring countries, for example, in Croatia, students from Bosnia and Herzegovina, Slovenia, and Serbia and Montenegro account for 59 percent of foreign students.

Table 3. Foreign students enrolled in SEE countries and citizens of SEE countries enrolled outside their country of origin

	Foreign tertiary students as % of all tertiary students			*Percentage of all tertiary students (ISCED Levels 5 and 6) enrolled outside their country of origin*		
	2000	2003	2004	2000	2004	2005
Bulgaria	3.11	3.48	3.63	3.2	8.6	8.7
Croatia	--	0.55	0.63	--	6.9	6.3
FYR Macedonia	0.66	0.25	0.33	6.2	10.4	12.1
Romania	2.78	1.51	1.53	1.5	2.4	2.3
Slovenia	0.93	1.05	1.06	2.2	2.1	2.0
EU 27	4.95	6.16	6.32	2.1	2.2	2.2

Source: EC (2007).

In the countries of CEE, as elsewhere in the world, the rapid rise in the number of private institutions has been accompanied by concerns about their quality. These concerns have often spurred the introduction of quality assurance and accreditation mechanisms. However,

the lack of reliable data and mechanisms for measuring quality makes it impossible to draw robust conclusions, allowing for multiple interpretations of the data that exists. For example, in Georgia, a policy change in 2003 that led to a strict implementation of outcomes of accreditations resulted in 110 of the 227 institutions losing their permission to enroll new students in the following academic year (Pachuashvili 2007). While this outcome seems to indicate that 110 institutions were of poor quality, it also means that 117 private institutions were determined to be of (at least) sufficient quality.

Procedures for internal and external quality assurance of higher education in SEE are to a large extent inefficient and out of line with recent European developments. External quality assurance linked to recognition of degrees and programs became both a requirement of the EU Bologna Process and a necessity, given the expansion of higher education, especially in the private sector. In response, countries in the SEE region often established rigid external quality assurance mechanisms that focused on evaluation and accreditation of institutions, as well as evaluation and accreditation of individual programs. These mechanisms did not, however, lead to high-quality institutions. Rather, the result was the creation of highly bureaucratic quality assurance bodies that were insufficiently anchored in the European and international quality assurance community.

There are different approaches to quality assurance, most notably, between the United States and the countries of Europea (which can differ among themselves). While some countries once focused on accreditation at the program level (e.g., Germany, where there is an ongoing discussion of the problems of this approach, including over-bureaucratic procedures), other countries have moved towards institutional accreditations (e.g., the United Kingdom and the United States). In Ireland, a major reform resulted in external quality assurance being to some extent self-organized by higher education institutions. Ireland has adopted a “fitness of purpose approach” in which control is mainly focused on internal quality assurance mechanisms within the institutions themselves. These changes are based on years of experience with external quality assurance systems and therefore should be taken into account when quality assurance in SEE is discussed.

The countries in SEE, in fact, face a major challenge in establishing effective external quality assurance systems at the national level. Because of their small size, they are unable to address a number of questions of external quality assurance, including the organization of

independent peer reviews at the national level. The European University Association (EUA) has pointed out that these issues should be addressed at a regional level (EUA 2007). Moreover, the Berlin Communiqué, which resulted from the ministerial meeting of the Bologna signatory countries in 2003, stresses that universities themselves bear the major responsibility for quality assurance. To date, however, countries in SEE have paid insufficient attention to the development of sound internal quality assurance mechanisms at higher education institutions. Such mechanisms would need to be centrally located, appropriately staffed, and anchored in the universities. Neither has there been informed debate in SEE about balancing internal and external quality assurance mechanisms.

Current European developments could pose particular quality assurance problems for countries in SEE. A register of European quality assurance agencies has recently been established and countries will be increasingly under pressure to use agencies from this list. (The European Commission supports the idea that a country could use any quality assurance (QA) body on the register to fulfill its national QA obligations.) The mere size of countries in SEE, and thus the potential pool of peer reviewers at the national level, raises concerns about whether SEE countries will be able to register their own national agencies. These agencies would possibly also find it difficult to compete in the emerging quality assurance "market" in Europe.

The institutional structure of powerful, legally autonomous faculties within universities underlies many of the problems identified above and therefore hampers the development of public universities in SEE. This structure has several drawbacks. It is inefficient, since each separate faculty offers a comprehensive set of courses (duplicating courses and programs offered by other faculties of the same university) and has its own administration. It is ineffective because good practices cannot spread across the institution, for example, with respect to quality assurance mechanisms, good teaching, or multidisciplinary courses. It is nontransparent because individual faculties (or their deans) lobby national parliaments to provide earmarked or additional revenues.[7] The structure also creates opportunities for corrupt practices in the allocation of resources and student assessments. Finally and most importantly, the institutional structure prevents universities from creating a core identity and mission, through which their development

[7] There is an even broader governance issue in these countries: many elected politicians (and, indeed, many senior civil servants within ministries of education) continue to hold teaching and/or research positions at universities in SEE.

can be mapped, comparative advantage pursued, and resources assigned. As a consequence, there is a high level of uniformity in the types of universities found in SEE: universities that fail to offer flexible, innovative, and student-centered courses. Universities also fail to focus their scarce resources on research activities in which they have a comparative advantage, including strategic alliances with other institutions in the SEE region and beyond. In addition, lack of effective public accountability mechanisms means there is no framework for improving the quality and efficiency of these institutions. Clearly, a highly decentralized organizational structure is not a binding constraint to being a world class university, as the examples of the Universities of Oxford and Cambridge demonstrate. However, given the latter institutions' generous state funding, especially for research, and their healthy endowments, the level of resources available to them is obviously quite different than that which can be mobilized by institutions in SEE. These two universities, moreover, have maintained a range of uniting features while creating strong brands under which departments and colleges market their services.

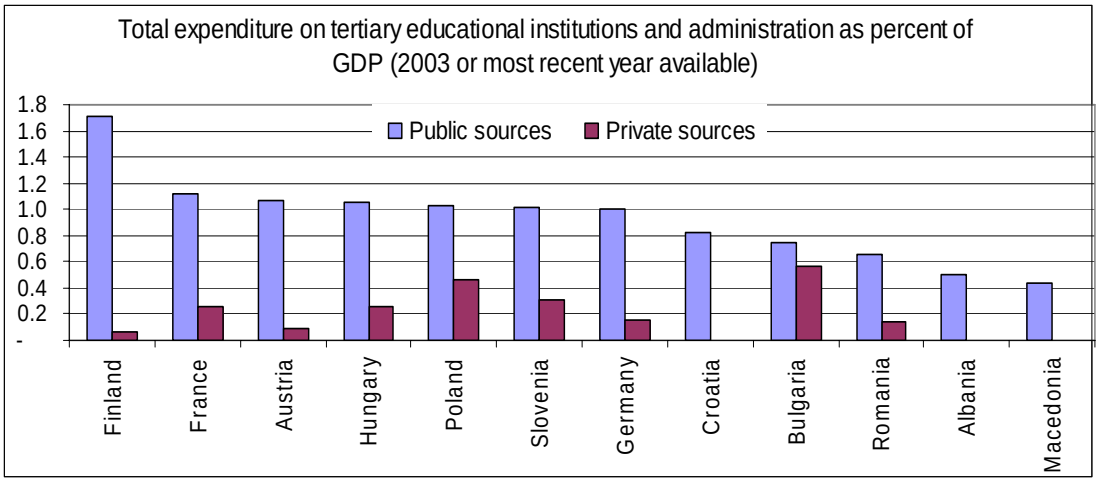
There are a few success stories, such as Tuzla University in Bosnia and Herzegovina and the University of Montenegro, in which universities have improved their performance by becoming legally integrated. The South East Europe University in Tetovo, Macedonia—a private university—was integrated from its establishment in 2005**.** At Tuzla, a study of the university following its first five years of unified management found that it had reduced total government budget costs by 20 percent, while doubling staff, tripling enrollments, improving laboratory and library facilities, and diversifying financing (World Bank 2003). In the process, the university also offered more student choice and flexibility across programs and better access to professors by eliminating over-programming of teaching staff.

But laws intended to integrate institutions have not always been effective. In Slovakia, for example, it appears that the compromises made during the passage of relevant legislation fundamentally undermined the reform effort and significant changes have not been forthcoming. The reform process was envisaged as a step-by-step approach, but only the initial steps were taken. In Slovenia, on the other hand, the relevant law never intended to produce fully integrated institutions (Kwiek 2007). These examples offer a salutary lesson to the countries of SEE, all of which have now passed legislation to change the institutional structure of their universities. Croatia has already experienced a long and difficult process of implementing its law on this issue.

In comparison to other European countries, public expenditure on tertiary institutions as share of GDP is low across countries of SEE. For example, Albania, Bulgaria, Croatia, Macedonia, and Romania spent much less than one percent of GDP for this purpose in 2003, as opposed to the EU-19 average of 1.1 percent (see figure 6). Slovenia is close to the EU average.

Neither public nor private sources of funding give faculties an incentive to improve efficiency and graduation rates. Public funding is allocated to universities on the basis of input indicators, such as numbers of students and professors. Universities in general only receive enough money to cover salaries, leaving them little space for activities beyond teaching. In Montenegro, for example, research grants are provided separately and only on the basis of individual project applications (Ziegele 2007). However, even where budgets are provided as a block grant, these monies cannot be used for research activities or services as long as the budget is only sufficient to cover salaries.

Figure 6. Expenditure on educational institutions as a percentage of GDP, selected countries



Source: UNESCO Institute for Statistics, Beyond 20/20 Web Data Server, Version 7.4.

While state funding continues to be comparatively low, public tertiary education institutions have been able to raise resources from tuition fees. However, fees and current public funding together provide incentives to keep students in the system and hence reduce efficiency. Public institutions are allowed to enroll as many additional students as they can

beyond the number receiving a public subsidy (subject to certain spatial requirements).[8] The fees paid by these enrollees are, moreover, usually much larger than the public subsidy.[9] In fact, the amount of money that public institutions charge fee-paying students can be quite large. In Croatia, annual tuition fees at public universities are between €680 and €1,150. The University of Montenegro charges a €1,000 annual fee, compared to €1,300 in the private higher education sector.[10] This fee level has been prevalent in SEE countries from the beginning of their transition and in part explains the lack of significant private enrollments. Any revenues that are lost from public sources, for example, when students reach the end of their public funding period, can quickly be made up by transferring these students to a tuition-paying basis. This change creates incentives for keeping students in the system beyond the envisaged study period. There is also plenty of anecdotal evidence that professors charge students to retake examinations.

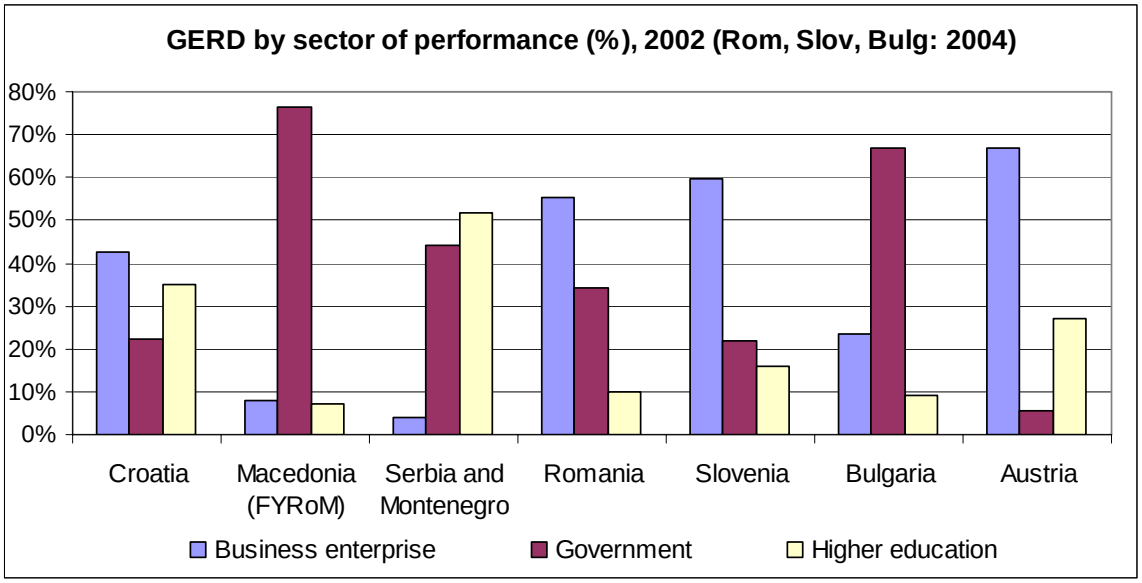
Private resources are concentrated in a few faculties and are not utilized for the benefit of institutions as a whole. The faculties of law and economics generate the overwhelming majority of private resources in public universities in SEE, while other faculties are starved of funds. Given the legal independence of the faculties, they are under no obligation to share revenues from fee-paying students, even for facilities (which would be in their own interest), such as centralized technology transfer offices, libraries, or special facilities for handicapped students.

The tertiary education systems in SEE are also ill-prepared for two other major tasks associated with contributing to the competitiveness of their respective countries: knowledge absorption and innovation. These shortcomings reflect major constraints on the demand for R&D by private companies. The overwhelming majority of R&D personnel are in the public sector. They are either directly employed by the national government or work in higher education (very little R&D is conducted by private universities). As shown in figure 7, in some countries like Croatia, Slovenia, and Romania, over 40 percent of national R&D spending comes from the business sector. In other countries of SEE, however, private sector spending on R&D is negligible. The EU target for such spending is 3 percent of GDP, with two-thirds of this amount

[8] In Macedonia, however, the government sets quotas for the number of students paying full fees.
[9] However, no analysis of the relationship between the fees charged by universities and either the unit or marginal costs of fee-paying students has yet been conducted.
[10] Private communication to authors by rectors of universities, June 2007

sought from the private sector (the two levels are 1.8 percent and 55 percent, respectively).[11] Overall it appears that weak demand for R&D in SEE is a more serious problem than its supply, at least as viewed by the business sector (Radosevic 2007).

Figure 7. General expenditures on research and development (GERD), selected countries, 2004



Source: World Bank (2005); United Nations Population Division (2004); UNESCO Institute of Statistics, Science and Technology Database.

The research and development systems in SEE contribute little to respective countries' competitiveness via innovations. Croatia is by far the strongest performer in the region. Cluster analysis suggests that it is more similar to new EU members, whereas the remaining SEE countries form a separate grouping. Within the latter grouping, Albania and Bosnia and Herzegovina are the weakest in terms of innovation (Radosevic 2007). This finding is reflected in the limited number of patents which SEE countries have been able to secure (see table 4). Western Balkan countries are far behind other European countries in terms of patent applications. Croatia's rate of patent application is the highest in the region, but is still an order of magnitude behind Slovenia which, in turn, is only one-quarter as active as the EU average. Further, SEE countries seem to attract very little foreign direct investment in research and innovation.

[11] EUROSTAT, "Statistics in Focus: Science and Technology," 23 (2007). Unfortunately, figures for the EU are not directly comparable to those for SEE countries in figure 7.

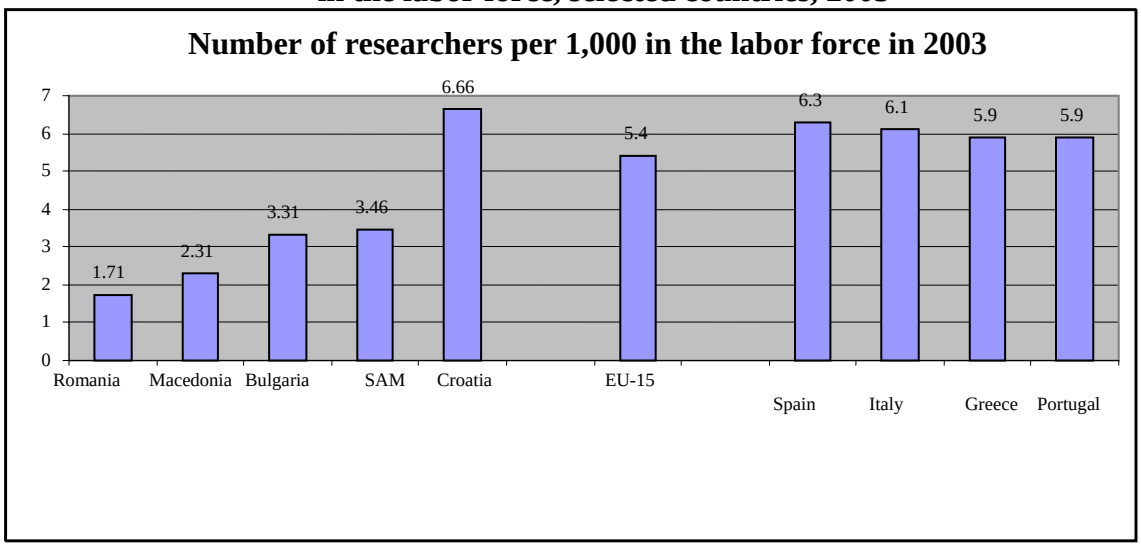
Table 4. Average annual patent applications with the European Patent Office per 100,000 inhabitants in countries of SEE, 1997–2003

Croatia	0.42	Austria	12.92
Bulgaria	0.12	Slovenia	1.98
Serbia and Montenegro	0.06	Hungary	0.84
Romania	0.03	Greece	0.51
Bosnia and Herzegovina	0.02	Turkey	0.05
FYR of Macedonia	0.01	EU 15	11.96
Albania	0.01	EU 25	10.39

Source: European Patent Office, http://www.epo.org (accessed December 2007).

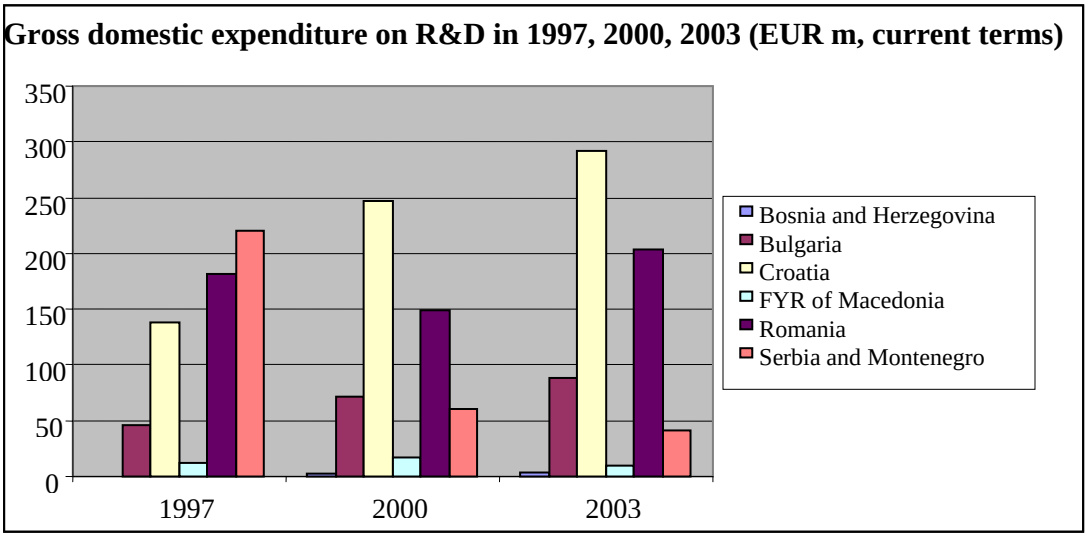
The input side of R&D systems in SEE is similar to the output side: relatively few researchers and abysmally low spending. Again, Croatia is ahead of other countries in the region, with R&D funding representing 1.22 percent of GDP. Indeed, Croatia has 6.66 researchers per 1,000 people in the labor force, a higher number than the EU-15 average of 5.4 (see figure 8). Other Western Balkan countries have less than half this ratio, which has gradually but continuously declined in Serbia, Montenegro, and Macedonia since the mid-1990s. Total R&D funding for countries other than Croatia is generally below one percent; funding in Serbia has declined rapidly since the year 2000, when it reached a high of over two percent (see table 9). Given the size of the economies of these nations, this translates into very low levels of spending (e.g., €23 million in Macedonia in 2003). In terms of spending volume, Croatia is actually a significant outlier in the region (spending €300 million in 2003)—higher than even Romania or Bulgaria.

Figure 8. Ratio of researchers per 1,000 workers in the labor force, selected countries, 2003



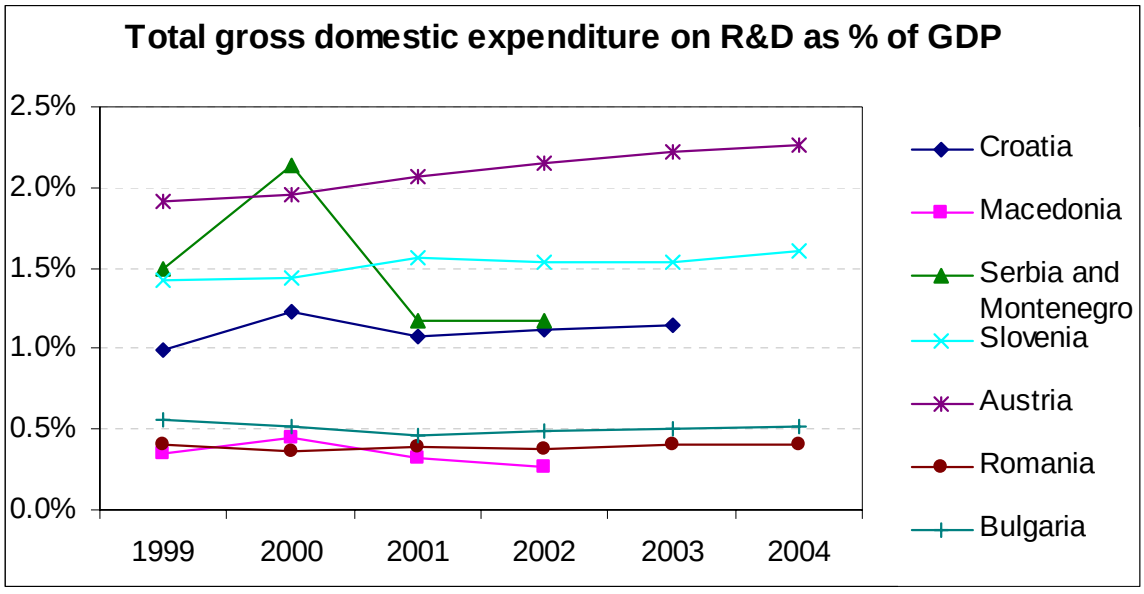
Source: Gesellschaft zur Foerderung der Forschung (2006).

Figure 9. Gross domestic expenditure in R&D, selected countries, various years (€ millions)



Source: Gesellschaft zur Foerderung der Forschung (2006).
Note: Data for Serbia and Montenegro 1997, 2000, 2001; for Bosnia and Herzegovina, 2000 and 2003.

Figure10. R&D expenditure in SEE as a percentage of GDP, 1999–2004



Source: World Bank (2005); United Nations Population Database (2004); UNESCO Institute for Statistics Science and Technology Database.

II. What is to be Done?

The range and magnitude of the problems facing the higher education and research systems of countries in SEE require a wide-ranging response, carried out over an extended period of time. This section describes possible appropriate responses to these challenges and then considers how countries might sequence reforms. The following section outlines how regional collaboration could help countries in the region move forward.

Provided an appropriate legal framework is in place, the first condition for well-functioning higher education systems in the region is a public funding system that provides incentives for institutions to fulfill their respective missions. Over the medium term, this goal can only be achieved by developing performance-based funding mechanisms. Such mechanisms come in a wide variety of models, but the administrative and regulatory requirements are significant. However, the experience of other countries worldwide is that relatively small amounts of money (i.e., less than 10 percent of total university budgets) can have a significant impact on the behavior of institutions. This is especially the case if a performance-based funding mechanism is used to distribute investment, as opposed to recurrent spending (Salmi and Hauptman 2005). To be effective, such mechanisms need to enable institutions to develop and respond to well-defined higher education strategies and provide incentives for efficient, effective tertiary education and research. In the context of SEE, these goals require a reconceptualization—and renegotiation—of what it means for an educational institution to be autonomous. Currently, tertiary education institutions in SEE argue that autonomy means the absence of the influence of the state and is the only way they can defend the core value of academic freedom. In the rest of Europe, the notion of academic freedom of universities is twinned with accountability to the state for their performance.

Another essential condition of well-functioning higher education systems is the organizational restructuring of universities. This task requires the elimination of the separate legal status enjoyed by individual faculties and establishing the university as the main legal unit. Key functions that need to be assigned to a central management structure include:

- overall steering and strategic planning of the institution;
- receipt of public funding for diverse (i.e., not project-related) activities of the institution in a central university account;

- management of the university's funding streams in accordance with strategic priorities;
- preparation of an overall university budget, including revenues raised by individual departments;
- employment of all teaching and non-teaching staff;
- management of university property and other assets;
- provision of central facilities and functions (this function might include a central quality assurance office, data collection and provision, etc.);
- responsibility for accountability to government and the public for university performance;
- a key role in reward schemes for academics; and
- overall representation of the institution.

Universities should also consider establishing an external governing body (i.e., a university board) that includes representation of such stakeholders as the business community and local administration. The governing body plays a crucial role in establishing the strategic direction of an institution of higher education and provides the first line of oversight (in place of the state). Most laws in the countries of SEE now provide for university governing bodies, but they cannot play an effective role in current fragmented institutions.

These changes will require political determination from governments. Restructuring state universities will require profound changes in the distribution of power and money within these institutions, reduce the scope of corrupt practices, and, if implemented fully, lead to staff redundancies. Not surprisingly, such reforms are therefore resisted. The full implementation of these reforms will require prolonged attention to a large number of details over a number of years. The experience of Slovenia and Slovakia shows that getting the details wrong can undermine the whole reform (see above). Governments, ministries of higher education in particular, therefore need to engage actively at each stage of the reform process.

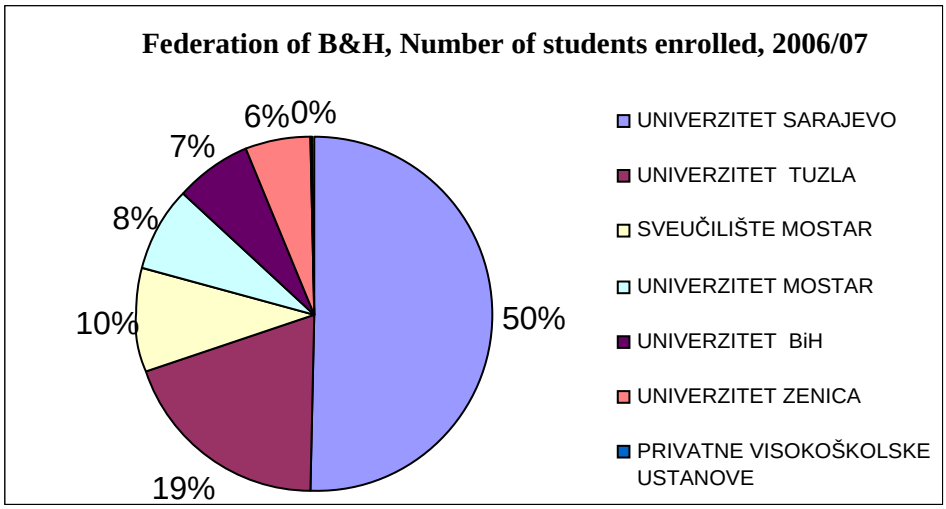
In order to make universities more efficient and performance oriented, their management capacity needs to be significantly enhanced. Governments need to provide support for this work, which should be spread over several years. In addition to building the capacity of individual managers (such as the rector), overall capacity in data and information systems needs to be strengthened (for the purposes of payroll, accounting, and admissions). These systems enable the rector's office to manage a university and play a vital role in establishing an internal quality assurance system. Governments may also want to consider

whether a common information system might be developed for all universities in a given country in order to facilitate public accountability and government reporting. As described below, the central administration of a university will have the primary role in establishing effective internal quality assurance mechanisms. To be fully functional, central management should be able to raise the university overhead that enable them to carry out their duties. Again, such strategies have been pursued with some success in very few institutions (e.g., the University of Montenegro, where overhead is 20 percent, which conforms with the practice of many Western European universities). In contrast, central management level today at most nonintegrated institutions has difficulty raising overhead as little as three percent (currently the situation at the University of Zagreb).[12]

The countries of the SEE region have unbalanced higher education systems. In each country, one, or at most, two major universities dominate the higher education landscape in each country. These universities accommodate 40,000 to 70,000 students and enroll about half (sometimes more) of all students in the sector. Large institutions, such as the Universities of Belgrade, Ljubljana, Sarajevo, and Zagreb, have the greatest political prestige in their respective higher education systems. Reform setbacks at these institutions will therefore have a major impact on these systems. It is important to note that size of universities should go hand in hand with their mission. Thus there is no one-size-fits-all model in higher education. Well-managed, large institutions have potential advantages in terms of economies of scale in teaching and research. However, it is interesting to note that many universities that perform well in international rankings—including Harvard, Stanford, MIT, Oxford, and Cambridge—are of comparable size, namely, between 10,000 and 20,000 students (World Bank 2007).

[12] Private communication to authors from university rector, October 2007.

Figure 11. Unbalanced higher education systems: The case of Bosnia and Herzegovina



Source: The Federation of Bosnia and Herzegovina Federal Office of Statistics, *Monthly Statistical Review*, http://www.fzs.ba/Eng/mjeng.htm (accessed December 2007).

More balanced higher education systems that cater to diverse needs—including diverse subnational needs—may include a strengthened polytechnic sector and specialized higher education institutions. European universities have developed in different ways in this respect. In the UK and Germany, universities that offer a full range of programs and that combine teaching and research are seen as the gold standard. These institutions, which are mainly centrally managed,[13] are able to capture economies of scale and achieve the critical mass needed for good-quality research. Poland and a number of other Eastern European countries, on the other hand, have seen the expansion of specialized universities that focus, for example, on economics or medical subjects.

[13] As noted above, this is not the case with Oxford and Cambridge Universities nor, to a lesser extent, with Durham University.

The challenge for SEE countries is developing a sufficient number of effective, comprehensive universities in the medium term. Currently, the largest institutions are often the most conservative with respect to organizational structure, curriculum innovation, and pedagogy. They are also the most politically powerful in their respective countries and have resisted legal integration. One option to consider, therefore, is whether these large institutions should be split up. The short-term agenda would thus be to develop a more effective institutional model. Arguments **for breaking up existing institutional structure** will have to be carefully counterbalanced against the possible negative consequences on income structure, interdisciplinary work, and graduate and undergraduate education that goes beyond the training of higher technicians. If this option is pursued, however, it would be important to ensure that a split encompasses two or three complete institutions, not simply constituent faculties. Either reform route offers challenging political economy hurdles, given the political influence of these institutions. Nevertheless, making these institutions more effective is perhaps the central challenge for SEE countries.

In the longer term, countries in SEE need to consider policies that encourage a diversity of institutions that both offer more occupationally oriented programs and more flexible terms regarding length of study, location, and modalities of teaching. Conceptually, it is possible to convert an existing institution into one with a different mission and purpose. In practice, however, countries worldwide have found the need to create new institutions to provide these new forms and types of programs. Such institutions can take different forms. Relatively unitary institutions focus on providing occupational education (e.g., the state colleges in Norway and the Finnish polytechnic institutes). Binary institutions provide occupational programs for transition to the labor market and academic programs that can be transferred to a university. Community colleges in the United States and Canada, the IUTs (*Instituts universitaires de technologie*) in France, the *Fachhochschulen* (Universities of Applied Science) in Germany, and the Further Education colleges in the United Kingdom are examples of this type of institutions. The ambiguous nature of these institutions causes them to be categorized as ISCED 5B or 5A (the same designation as bachelor's degrees), or even ISCED 6, as in the case of German *Fachhochschulen* (which can confer master's degrees).[14] In any case, developing such institutions is for the medium term, given the current structure of the higher education sector in

[14] See Grubb (2003).

SEE, the costs and barriers to the establishment of new institutions, the associated regulatory framework, and the urgency of other priorities.

Improving Funding Mechanisms

Reforms are needed for both the funding mechanisms that allocate resources between governments and institutions of higher education and those that allocate resources between the constituent units of these institutions. Consistent with the move toward an integrated institution, allocations for teaching should be given to the central administration of a university rather than its individual faculties or departments. The principles underlying these allocations are relatively easy to state. Funding should be:

- based on the most recent data;
- transparent (driven mainly by the number of students);
- based on objective criteria;
- designed to provide incentives for universities to pursue socially important goals (e.g., equity) and objectives that have been agreed between the provider and the recipients of funds (e.g., within the framework of performance contracts); and,
- formulated to encourage efficiency and effectiveness.

There is considerable experience around the world with tertiary education funding arrangements that are consistent with these principles (Salmi and Hauptman 2006). Once an institution receives a state grant, it should have considerable flexibility in how it spends these resources to meet its agreed objectives.

Allocations within institutions should assign responsibility for budget preparation and execution to the central administration. Moreover, the metric used by the government to calculate the allocation for individual institutions (for example, numbers of students in different programs) should not automatically be used by the institution to allocate the total budget between programs and subunits. Although institutional goals have to be located within a broader (national) higher education strategy, universities will need to have specific missions and should thus allocate funds internally in accordance with them. Revenues raised by subunits (e.g., departments and faculties), moreover, should be included in an institution's budget and some agreed proportion utilized for broader institutional goals.

In order to increase access to higher education and counteract inequality, public subsidies for tuition fees should be targeted to students from poorer backgrounds. At present, students who receive public funding to cover student fees are those who perform best on higher education entrance examinations. Although there are no robust comparative data for the region, evidence suggests that these students are overwhelmingly from more affluent backgrounds. In addition to the advantages of parental educational attainment and income, these students have been able to attend better primary schools, go to gymnasia, and receive private tutoring to prepare for the entrance exam.[15] Targeting public resources to students from more disadvantaged backgrounds (and who fulfill the defined requirements for admission to higher education), with a particular emphasis on providing equal chances to minorities, would offer the advantages of expanding access and promoting equity. Clearly this task requires the ability to collect and verify data on the incomes of students and their families. Unfortunately, this function is currently not possible in most SEE countries.

The most effective way to reduce the cost of higher education for individuals from poorer backgrounds is to provide grants. A student loan scheme can also help poorer students overcome financial constraints.[16] However, such schemes require a fairly robust administrative infrastructure. At a minimum there needs to be:

- mechanisms to evaluate whether or not a student is eligible for a loan (e.g., verifiable parent or family income, confidentiality, the ability to meet high peaks of demand at the beginning of each school year);
- the capacity to collect repayments over an extended period of time after a student graduates (a particular challenge for SEE countries, where a significant proportion of young people are either unemployed in the early stages of their careers or choose to migrate); and,
- a legal framework and administrative capacity to enforce contracts reliably to collect bad debts.

[15] There is plenty of consistent, if anecdotal, evidence of corrupt practices in the entrance procedures for higher education, which also favor more affluent families. This type of corruption is an important reason driving all countries in SEE (with the exception of Serbia) to introduce an external Matura examination at the end of secondary education, an exam that will also facilitate entrance to higher education. It is interesting to note that the faculties which are resisting the introduction of the Matura as the basis for access to higher education are the same faculties that accrue disproportionate income from entrance examination fees (i.e., income that goes far beyond the costs of such exams).

[16] Of course, loan schemes need not be targeted only to poorer students. However, the amount of subsidies allocated for poorer students needs to be higher than the amount of loans. It should be noted that poorer students have less interaction with the banking system and so are more reticent about taking out loans.

Some of these functions can be performed by private banks. All student loan schemes require some public funding, either through lower interest rates, provision of grace periods, retention of a certain portion of the loan risk by the government rather than entirely by private banks, and writing off defaults. Should the scheme be poorly designed and/or administered inefficiently—for example, by having defaults that are higher than expected, losing track of graduates, or using highly subsidized interest rates—costs can be so high that a simple grant scheme would cost the government less money and achieve higher coverage of the target population (Ziderman 2005). In addition, the state should provide an overall framework for student loan systems to ensure that they meet the priorities of the state rather than those of the banks. Such a system would have to be checked carefully if the conditions for introducing an effective loan scheme are met in the countries of SEE.

Diversification of university income streams does not mean simply raising tuition fees. Universities in SEE need to prove the added value they can provide the private sector, as well as society in general, by making research results accessible, providing technology transfer, and offering a variety of consulting services.[17] These activities can all be provided in exchange for fees, based on transparent costs and a well-designed pricing policy. All these activities have to be professionally managed, that is, via special central units of the university, such as research and technology transfer centers and centralized service units. If such units prove useful for the activities of a given faculty and departmental level, they will be able to demonstrate why overheads are beneficial for decentralized university units and thus become catalysts for their integration.

The European Commission, via its framework programs for research, encourages institutions to develop full economic cost models.[18] In order for universities in SEE to compete for research funds at the European level, and to price their activities on transparent costs in general, they will need to catch up with these full-cost models, a step for which most are currently unprepared.

[17] Universities are also commonly expected to have a community service function.
[18] See the EU Web site on this topic, http://ec.europa.eu/research/fp7/index_en.cfm (accessed February 2008).

Improving Quality

Countries' participation in the Bologna Process, which aims to make higher education degrees more compatible across Europe and foster mobility (see box 1)**, gives them a major opportunity to improve the quality of teaching and learning—an opportunity that has not yet been sufficiently seized**. This opportunity would come from several related developments. In revising curricula, universities should focus on:

- developing clear learning outcomes for courses, with an emphasis on skills, the applicability of knowledge, and a significant reduction in the demands for factual recall;
- giving teachers flexibility in how they meet learning outcome goals while developing a common understanding among them of how different institutions and countries have addressed required learning outcomes (e.g., within the framework of the ongoing development of national qualifications frameworks);
- involving other stakeholders in these activities, especially the business community;
- developing new approaches to student assessment that help students chart their progress, using objective, transparent methods; and,
- ending the heavy reliance on year-end exams.

Most professors will likely need pedagogical training to meet the new curricula and assessment demands. This training will not only require specialized support, including targeted funding, but strong political leadership in order to overcome resistance and provide incentives. Many of these changes can be facilitated by implementing properly existing European mobility tools, such as the European Credit Transfer and Accumulation System (ECTS) or the Diploma Supplement (DS), for which funding is available from various sources. Countries in SEE should be encouraged to develop their own teams of Bologna promoters, possibly with the idea of consulting at the regional level, and to fully participate in ongoing European exchanges in this field.

Box 1: The Bologna Process

The Bologna Process aims to create a European Higher Education Area by 2010, in which students can choose from a wide and transparent range of high-quality courses and benefit from smooth recognition procedures. The Bologna Declaration of June 1999 put in motion a series of reforms needed to make higher education in Europe more compatible and comparable, more competitive, and more attractive for Europeans, as well as for students and scholars from other continents.

The three priorities of the Bologna process are: introduction of a three-cycle system (i.e., bachelor's, master's, and doctorate), quality assurance, and recognition of qualifications and periods of study. A ministers meeting in London in 2007 agreed to the creation of a Register of European Quality Assurance Agencies.

Source: EU Web page on the Bologna Process, http://ec.europa.eu/education/policies/educ/bologna/bologna_en.html (accessed November 2007).

The quality assurance system in each country needs urgent attention to ensure an appropriate balance between accountability and improvement. As outlined above, different countries have focused on different quality assurance solutions, with the United States having accumulated significant experience in the area of accreditation, while countries such the Netherlands and, to some extent, France and the United Kingdom, come from a tradition geared towards inspection by external quality assurance bodies. Although there is not one single Bologna model of quality assurance, it is worth noting that:

- European countries that have significant experience with external quality assurance, such as the United Kingdom and Ireland, tend to focus less on the program level and more on the institutional level. Other European countries, such as Germany, find it increasingly difficult to keep "heavy maintenance" systems that involve detailed checking at the program level and more recently have been discussing approaches that focus on the institutional (or "process") level.[19]
- In accordance with good European and international practice, quality assurance increasingly combines a fitness *for* purpose and a fitness *of* purpose approach (see earlier discussion of these topics).
- As mentioned above, the Berlin Communiqué stresses that higher education institutions bear the key responsibility for the quality of the education they provide. The "Irish model," in which external quality assurance is largely self-organized by universities, has attracted a lot of attention within Europe and beyond.

[19] This model has been put forward by Acquin, a German accreditation agency that is organized as a network of higher education institutions.

- The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)[20] provide a framework for European QA bodies, which are increasingly applying it to their activities.

Therefore, it is recommended that quality assurance in SEE focus more on internal quality assurance, taking into account good practices established in Europe and elsewhere. As stated above, developing a comprehensive peer review system in the region that focuses on best European practices can only be meaningfully addressed at the regional level.

The Role of the Private Higher Education Sector

There is no single recipe for the role of private tertiary education institutions, which have performed different tasks in different countries. In terms of access, private institutions in the countries in Central and Eastern Europe have helped meet pent-up demand for tertiary study, particularly among different subgroups in the population (Slantcheva and Levy 2007). All countries of SEE have enacted higher education laws that addressed private education soon after they became independent. These countries—especially Bosnia and Croatia—need to be careful, however, that these regulations do not choke off the supply of private institutions at a time when no institutions are capable of enrolling significant numbers of additional students. Here the experience of Lithuania is salutary: the first private institution gained recognition only in 1999, by which time 25 percent of Estonia's and 12 percent of Latvia's enrollment was already in private institutions (Slantcheva and Levy 2007). The lack of private sector institutions prevented Lithuania expanding tertiary enrollments as quickly as its neighbors; the country still lags behind the other two Baltic countries in private enrollment and, more importantly, in overall tertiary education enrollment rates.

Perhaps the biggest contribution of the private sector in SEE will be to promote a diversity of higher education institutions. This diversity would help challenge the idea that there is only one type of tertiary education institution, namely, one that offers a full range of subjects and combines teaching and research. Private institutions in CEE and SEE are almost always smaller than public institutions (certainly on average), rarely offer research degrees, and are usually focused on a narrower range of subjects and programs. Private institutions could,

[20] See European Association for Quality Assurance in Higher Education (2005).

however, innovate in a number of ways, for example, by introducing new modalities of access and delivery (e.g., distance learning, part-time courses, teaching at times that suit the working population) and curriculum innovations (i.e., developing curricula that are closer to labor market demands, including, in the long term, sub-baccalaureate degrees). One way in which private institutions have been able to offer this kind of diversity is by being established with or through an institution from another country.

Diversity in the tertiary sector will require that the quality assurance system in general, and accreditation and licensing in particular, support institutional diversity. This means that national or regional accreditation regimes should use the "fitness for purpose" approach, whereby an institution defines its objectives and quality assurance processes seek to help it achieve its goals and make continuous improvements. In this approach, an institution is accredited if it meets (or is judged to have the capacity to meet) the objectives it has set itself. However, in most countries, current licensing and accreditation requirements assume that institutions have essentially the same set of objectives and therefore the same structure, in terms of numbers of subjects or programs offered.[21]

In addition, governments will need to address the problem that most teaching staff at private tertiary education institutions already have contracts with public institutions. This double employment is welcome to individual professors, who substantially augment their public salaries, as well as to the private institutions, which are able to significantly increase revenues with even less accountability than is required for public income. It is tolerated by governments since it lessens the pressure for additional public resources to facilitate the expansion of enrollment. However, these arrangements effectively provide a public subsidy for private institutions, create potential conflicts of interest, and adversely affect the quality of education because individual teachers have multiple obligations and employers, as well as too many students, to provide good-quality teaching. An important contributory factor to the situation is that a public university professor is considered full-time (and receives a full-time salary) with very few teaching hours (four in most countries), yet in accordance with this arrangement, salaries continue to be low.

[21] In spite of the flexibility required in this respect, it is important to note that students at private institutions would still be expected to meet the same standards in terms of learning outcomes as students at public institutions; as defined by this threshold, a degree in a given subject should be of the same quality regardless of the institution.

Strengthening R&D

The countries of SEE face multiple challenges in improving their R&D systems, but the foundations for the longer-term effectiveness of these systems need to be established now. The transformation of countries like Finland, Ireland, and Singapore took decades, and it is likely that the same will be true for countries of SEE.

In the short term, these countries should emphasize adaptation of existing knowledge, rather than innovation and the creation of new knowledge. The highest priority should be to strengthen links between universities and enterprises. The biggest contribution that a research sector can make to a country is helping companies adopt and adapt new ideas and technologies from elsewhere. To achieve this goal, private funding needs to increase dramatically, as does the employment of researchers in the private sector. The focus on linkages will, moreover, provide a way for public funding to become more effectively targeted.

Fortunately, **many countries around the world have successful experience in implementing public-private R&D partnerships, which take a variety of forms.** Such partnerships include matching grant programs, incubators, and technology/science parks (Goldberg et al. 2007). The most essential element is the need for objectivity in the selection process, with funding going only to the strongest proposals. This type of arrangement places a premium on the transparency of the actions of public officials and the inclusion of international peer reviewers. It is important that risk is shared, with the private sector making a significant contribution (typically, 50 percent of the cost of a project). The composition of external governing bodies of the education institutions, the involvement of private companies in design of curricula and course offerings, the development of student internships, and the use of employees as part-time teachers all have a role of play in strengthening the links between tertiary education institutions and the business sector.

In the longer term, an emphasis on the adaptation of existing knowledge will help improve basic research. Experience, knowledge, and money generated in collaboration with the private sector will help build the capacity of institutions and people to do more basic research. It will also provide a signal to governments about the areas in which a given country has a particular comparative advantage that could be exploited with further investments.

Reducing the priority of basic research in public funding requires new approaches to the appointment and promotion of academic staff in the universities. Currently the major criterion for promotion within a state university is publication of research in academic journals. There is usually no value given to working with enterprises or excellence in teaching. In the medium term, tertiary education institutions in SEE might consider more flexible salary schemes, which would enable them to provide academics incentives for the kind of activities they seek to promote, in accordance with their respective institutional missions.

Support for young researchers will require particular attention, both because it will ensure an improved supply of highly qualified R&D experts and because young researchers can become change agents. This support can take various forms. First, research training should—in accordance with broader European consensus[22]—acknowledge that doctoral candidates are both students and early-stage researchers, facts that should be reflected in their institutional status. Doctoral programs should also cater to the needs of candidates who want to pursue an academic career, as well as those who intend to continue their careers outside the higher education sector. In summary, doctoral programs need to reflect a variety of goals, not just preparation for tenure.

Providing resources to young researchers on a competitive basis will be needed. Given that the average age of university teaching and research staff in SEE is quite high, young researchers do not currently have easy access to funding (and the political influence that accompanies such resources). This situation provides them few incentives to continue their careers as researchers. Competitive funding will help young researchers play a key role in new research and generate income for their institutions (e.g., with regard to innovations, industry collaboration, and securing patents). Special support should be given to enabling the mobility of young researchers within and beyond the SEE region, together with the creation of safeguard and support measures for returnees.

It should be noted that not all academics at SEE universities will be able to carry out original research, especially at institutions that have deliberately chosen to focus on teaching and learning. The reward systems at such institutions should reflect this fact, instead of copying

[22] See the "Conclusions and Recommendations" of the Bologna seminar on "Doctoral Programmes for a European Knowledge Society," Salzburg, Austria, February 3–5, 2005, available on the Web site of Latvian Academic Information Center, http://www.aic.lv/ace/ace_disk/Bologna/Bol_semin/Salzburg/050203-05_Conclusions.pdf (accessed February 2008).

reward systems from types of tertiary education institutions with different missions. Researchers at universities and those working in industry should benefit from increasing permeability between the two sectors, from which both higher education institutions as well as companies would benefit. Most institutions in SEE do currently not pay sufficient attention to these issues.

There is a clear need for deeper regional R&D collaboration. For the foreseeable future, the countries of SEE will not be able to excel in research in more than a few areas each due to the present condition of their research infrastructure and the basic constraints of their small size. These limitations present a major challenge for governments that seek to identify the areas that justify further investment and development. There are two ways for governments, therefore, to spread the risk of investing in R&D. The first is to involve the private sector in these decisions, since businesses are better placed than governments to identify areas of value-added research. The second way is to build cooperation between countries and institutions, whereby investments are coordinated and resources—i.e., people, equipment, and ideas—are shared.

In the countries of SEE, most research, especially at the basic level, has been conducted by specialized institutions. Research institutes and academies have a separate legal identity and funding arrangements from universities in the region, but their funding significantly decreased or, in some cases, collapsed altogether during the 1990s. It is likely that an important medium-term goal will be to consider the role of these bodies, including how many, if any, need to operate separately from universities. More broadly, the relationship between teaching and research must be considered. This report has not, however, attempted to address these issues because of its already substantial agenda, as well as the fact that very difficult political hurdles would need to be overcome.

III. Implementing Change through Regional Collaboration

The realization of the reform agenda outlined above will require time and considerable additional resources. These requirements argue for a well-designed implementation strategy and cost sharing via regional collaboration, both of which are discussed in this section.

This study has not attempted to calculate the costs of the various reforms discussed; however, it is clear that needed resources would be significant. One way to make these costs more manageable is to conduct certain activities through regional collaboration. Regional collaboration is, moreover, needed for effective, sustainable reform because certain issues cannot be successfully addressed at the national level—certain structures and arrangements must be established beyond national boundaries in order for countries to overcome the reform blockade that they currently face.

Regional collaboration among the countries of SEE can take two basic forms. In the first form, activities are essentially national in character, but because the same issues are faced by all countries in the region, they could be addressed together in a coordinated manner. The second form of collaboration consists of activities that *require* a regional approach in order to be effective.

Coordinated regional activities could include:

- enhancing the external quality assurance of universities;
- strengthening the internal quality assurance of universities;
- supporting the establishment of internationally recognized data collection systems and indicators on university quality; and
- special support of young researchers.

Integrated regional activities could include:

- a regional center for external quality assurance;
- regional centers of excellence, especially for research and graduate education. Such centers could take two forms: (a) different institutions in different countries specializing in different subjects, but that develop clear profiles to foster the mobility of students and researchers; and (b) institutions in different countries working collectively to improve research (and teaching) in a given field;
- joint degree programs;
- a grant program to support collaborative activities in improving teaching and learning;

- a regional resource center for higher education that would support institutions in the implementation of the Bologna Process, distribute information on European and international good practices in teaching and learning, facilitate international cooperation and mobility, and build the capacity of ministries of higher education and research; and
- funding and promoting mobility arrangements across countries.

In addition to the SEE region, action needs to be taken at three additional levels in order to facilitate regional collaboration:

- *European level:* the context and framework within which countries reform their higher education and research systems is increasingly set by the European Union. All countries in the region have joined the Bologna Process. The EU has significant sources of funding, both to implement the Bologna goals (e.g., TEMPUS) and to strengthen R&D (i.e., the Framework Programmes).
- *National level*: governments need to meet EU requirements by amending laws, providing appropriate funding, and removing obstacles to researcher and academic mobility. They must also provide the basis for integrated universities and appropriate external quality assurance systems.
- *Institutional level*: European and international experience have shown that the future of higher education lies in strong universities that are autonomous (so that they may fulfill their public duties), but accountable to society at the same time. The management of these institutions needs to be both flexible and efficient, given that they bear the major responsibility for quality assurance and implementation of the Bologna Process.

Several regional education and R&D initiatives already exist in the Balkan countries. These initiatives have a variety of organizational structures and mandates, as well as representation from countries outside the region, including:

- bodies with wide country participation, a high level of representation, and a broad mandate that exceeds education and research, such as the Regional Co-operation Council (RCC) (formerly the Stability Pact) and the Central European Initiative;
- bodies with more narrow country representation and technical representation from ministries of education, such as ERI-SEE (Education Reform Initiative of South East Europe) and the Task Force on Building Human Capital under the RCC; and
- expert bodies with fee-paying members, such as the European University Association.

The World Bank intends to use this analytical paper as the basis for discussions with the countries of the Balkans. These discussions will seek to verify the evidence and arguments presented here and to identify ways to assist these countries to move forward on the reform of tertiary education and research and development.

Annex 1. Lisbon Agenda Indicators

		Albania	Bosnia and Herzegovina	Bulgaria	Croatia	Macedonia	Montenegro	Romania	Serbia (data for 2000, 2001 include Montenegro)	Slovenia	EU 15	EU 27
Objective	**Investing 2% of GDP in higher education**											
Indicator	Private and public expenditure on tertiary educational institutions and administration as percent of GDP	0.50%	n/a	1.31 %	0.83 %	0.44 %	n/a	0.78%	n/a	1.30%	1.10 %	1.33%
Year		2003	2003	2003	2003	2003	2003	2002	2003	2002	2003	2004

Source: UNESCO Institute for Statistics Database, February 2008; Commission of the European Committees ("Progress Towards the Lisbon Objectives in Education and Training," Indicators and benchmarks, 2007) for EU 27.

Objective	**Spending 3% of GDP on research and development by 2010**											
Indicator	Total gross domestic expenditure on R&D as percent of GDP	0.18% (*)	0.05 % (*)	0.51 %	1.14 %	0.26 %	0.24 % (*)	0.40%	0.5% (*)	1.61%	1.98 %	1.93% (*)
Year		2003	2006	2004	2003	2002	2006	2004	2004	2004	2001 *	2001

Source: World Bank (2005), United Nations Population Division (2004), UNESCO Institute for Statistics Science and Technology database.

* *Source:* Science and Technology Country Reports, EU.

		Albania	Bosnia and Herzegovina	Bulgaria	Croatia	Macedonia	Montenegro	Romania	Serbia (data for 2000, 2001 include Montenegro)	Slovenia	EU 15	EU 27
Objective	**Increased cross national mobility of students in higher education**											
Indicator	Inbound mobility rate (%)	0.9	n/a	3.6	2.3	0.6	n/a	2.6	n/a	2.3	n/a	n/a
Indicator	Outbound mobility rate (%)	26.3	n/a	10.5	8.3	14.8	n/a	1.5	5.81 (**)	1.0	n/a	n/a
Year		2004		2005	2003	2005		2005	2001	2005		

Source: UNESCO Institute for Statistics Database, February 2008.

Objective	**Increasing the number of mathematics, science and technology graduates by at least 15% by 2010 (compared with 2000)**											
Indicator	Change in share of tertiary graduates in engineering, manufacturing, construction and science as percent of total graduates (percent points)	-0.56%	n/a	3.82 %	-5.76 %	-7.88 %	n/a	-2.60%	-0.07% (**)	-4.89%	n/a	n/a
Year		2000-2003		2000-2005	2000-2003	2000-2005		2000-2005	2000-2001	1999-2005		

Source: World Bank, calculations based on SIMA database, February 2008.

** Serbia and Montenegro.

References

Adamović, Mirjana, and Silva Mežnarić. 2003. “Researching Potential Migrants: The ‘Brain Drain’ of Young Scientists from Croatia.” In Croatian. *Sociological Review [of Croatia]* 24, no. 3–4: 143–60.

Barr, Nicholas, ed. 2005. *Labor Markets and Social Policy in Central and Eastern Europe: The Accession and Beyond*. Washington, DC: The World Bank.

Betcherman, Gordon, Martin Godrey, Shweta Jain, Arvo Kuddo, Toby Linden, and Keiko Miwa. 2007. “The Labor Market and Education and Training in the Western Balkans: A Policy Note.” World Bank, Washington, DC. Manuscript available from the authors.

EC (European Commission). 2006. *European Innovation Progress Report 2006: Trendchart*. Luxembourg: Office for Official Publications of the European Communities.

———. 2007. “Progress Towards the Lisbon Objectives in Education and Training: Indicators and Benchmarks 2007.” EU, Brussels, http://ec.europa.eu/education/policies/2010/doc/progress06/report_en.pdf. Accessed February 8, 2008.

EUA (European University Association). 2003. “Institutional Review of Ss. Cyril and Methodius University in Skopje.” Institutional Evaluation Programme. EUA, Brussels.

———. 2007. “Trends V.” EUA, Brussels.

European Association for Quality Assurance in Higher Education. 2005. *Standards and Guidelines for Quality Assurance in the European Higher Education Area.* Helsinki: European Association for Quality Assurance in Higher Education, http://www.bologna-bergen2005.no/Docs/00-Main_doc/050221_ENQA_report.pdf. Accessed February 2008.

European Centre for Higher Education. 2005. “Statistical Information on Higher Education in Central and Eastern Europe 2004-2005.” European Centre for Higher Education, http://www.cepes.ro/information_services/statistics.htm. Accessed November 2007.

Gesellschaft zur Foerderung der Forschung. 2006. *Research and Development in South Eastern Europe*. Vienna: Neuer Wissenschaftlicher Verlag GmbH.

Goldberg, Itzhak, Manuel Trajtenberg, Adam Jaffe, Thomas Muller, Julie Sunderland, and Enrique Blanco Armas. 2007. “Transforming Russian Universities into World-Class Universities: Briefing Note.” World Bank, Washington, DC.

Grubb, Norton. 2003. “The Roles of Tertiary Colleges and Institutes: Trade-offs in Restructuring Postsecondary Education.” World Bank, Washington, DC.

Kwiek, Marek. 2007a. “The European Integration of Higher Education and the Role of Private Higher Education.” In Slantcheva and Levy, *Private Higher Education,* 119–34.

Kwiek, Marek. 2007b. “The Legal Integration of Universities and its Impact on University Management in South Eastern Europe.” Report prepared for the World Bank.

Mertaugh, Michael, and Eric Hanushek. 2005. “Education and Training.” In Barr, *Labor Markets and Social Policy,* 207–242.

OECD (Organisation for Economic Co-operation and Development). 2007. *Education at a Glance 2007.* Paris: OECD.

Pachuashvili, Marie 2007. “Legitimacy Sources and Private Growth.” In Slancheva and Levy, *Private Higher Education,* 75–93.

Patrinos, Harry Anthony, Cris Ridao-Cano, and Chris Sakellariou. 2006. “Estimating the Returns to Education: Accounting for Heterogeneity in Ability.” World Bank Policy Research Working Paper, no. 4040. World Bank, Washington, DC.

Radosevic, Slavo. 2007. “Research and Development and Competitiveness in South Eastern Europe: Asset or Liability for EU Integration?” Economics Working Paper, no. 75. Centre for the Study of Economic and Social Change in Europe (CSESCE), University College London.

Republic of Croatia. Ministry of Science, Education, and Sports. 2007. *OECD Thematic Review of Tertiary Education: Country Background Report for Croatia.* Zagreb: Ministry of Science, Education and Sports.

Rutkowski, Jan, and Stefano Scarpetta 2005. *Enhancing Job Opportunities in Eastern Europe and the Former Soviet Union*. Washington, DC: World Bank.

Salmi, Jamil, and Arthur M. Hauptman. 2006. *Innovations in Tertiary Education Financing: A Comparative Evaluation of Allocation Mechanisms*. Education Working Paper Series, no. 4. World Bank, Washington, DC.

Slantcheva, Snejana. 2007. “Legitimating the Difference: Private Higher Education Institutions in Central and Eastern Europe.” in Slantcheva and Levy, *Private Higher Education,* 55–76.

Slantcheva, Snejana, and Daniel C. Levy, eds. 2007. *Private Higher Education in Post-Communist Europe: In Search of Legitimacy.* New York and Basingstoke, England: Palgrave Macmillan.

UNESCO Institute for Statistics. N.d. Science and Technology Database. Accessed during the period June 2007–February 2008.

United Nations Population Division. 2004. *World Population Prospects.* New York: UNPD.

Uvalic, Milica. N.d. “Science, Technology, and Economic Development in South Eastern Europe.” Science Policy Series, no. 1. UNESCO, Venice.

World Bank. 1994. *Higher Education: The Lessons of Experience*. Washington, DC: World Bank.

———. 2002. *Constructing Knowledge Societies: New Challenges for Tertiary Education*. Washington, DC: World Bank.

———. 2003. “Project Appraisal Document for the Bosnia Education Restructuring Project.” World Bank, Washington, DC.

———. 2005. *World Development Indicators.* CD-ROM. Washington, DC.

———. 2006. “Public Financial Support for Commercial Innovation: Europe and Central Asia Knowledge Economy Study, Part I.” World Bank, Washington, DC.

———. 2007. *From Red to Gray: The “Third Transition” of Aging Populations in Eastern Europe and the Former Soviet Union*. Washington, DC: World Bank.

———. 2007a. “Bulgaria: Accelerating Bulgaria’s Convergence: The Challenge of Raising Productivity.” Report no. 38570. Poverty Reduction and Economic Management Unit, Europe and Central Asia Region, World Bank, Washington, DC.

———. 2007b. “Croatia Living Standards Assessment.” Report 37992-HR. Poverty Reduction and Economic Management Unit, Europe and Central Asia Region, World Bank, Washington, DC.

WEF (World Economic Forum). 2007. *The Global Competitiveness Report 2007–2008*. Geneva: WEF.

Yusuf, Shahid, and Kaoru Nabeshima, eds. 2007. *How Universities Promote Economic Growth*. Washington DC: World Bank.

Ziderman, Adrian. 2005. *Policy Options for Student Loans Schemes*. Paris: International Institute for Educational Planning, UNESCO.

Ziegele, Frank. 2007. “Funding Higher Education in Montenegro: Challenges—Models—Next Steps.” Report prepared for the World Bank.

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This paper examines the challenges that Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro and Romania, Serbia and Slovenia face in order to have a labor force with a significant pool of people with tertiary education qualifications. These people, however, will be needed to meet increasing demand for highly-skilled labor and support economic growth. The rapid decline in youth cohorts compounds problems of low graduation and often low enrollment rates, slow growth in private institutions, and a range of serious quality issues. In addition, the research and development systems in South Eastern Europe make little contribution to their respective country's competitiveness via innovations. The paper proposes a range of policy options. These include the legal restructuring of universities, giving high priority to the proper implementation of the Bologna process as a means to improve the quality of teaching and learning, reform of the funding system to make higher education systems more responsive and efficient, and finding the appropriate role for private sector institutions. In research and development, there should be more emphasis on the adaptation of existing knowledge rather than on innovation and the creation of new knowledge which might only be achieved and supported in a few selected areas. The realization of the reform agenda outlined above will take time and, especially, considerable additional resources. This argues for a well-designed implementation strategy and for a sharing of costs through regional collaboration. The World Bank intends to use this analytical paper as the basis for discussions with the countries of the Western Balkans.