



**Towards Sustainable & Equitable  
Financing of *Higher Education***  
in Bosnia and Herzegovina, Montenegro and Serbia

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Herzegovina, Montenegro and Serbia

Comparative Report on the Institutional  
Funding in Higher Education in Bosnia and  
Herzegovina, Montenegro and Serbia

## **EXECUTIVE SUMMARY**

The aim of the report is to provide a descriptive and analytical overview of the institutional funding practices at selected universities in Western Balkans. The report has been produced within the TEMPUS project FINHED and is based primarily on the data provided by the participating universities (University of Banja Luka, University of Belgrade, University of Montenegro, University of Mostar, University of Novi Sad, Singidunum University), through an elaborate questionnaire combining quantitative and qualitative data.

The report analysed data concerning financial planning at universities, their financial and material resources, the institutional allocation practices, tuition fees and institutional student support, and activities concerning the universities third mission. Based on the collected information the report concludes that financial planning, revenue management and expenses at public universities in the Western Balkans are highly dependent on national or regional/cantonal authorities and the existing legal framework. These governmental restrictions hinder many of the universities to take a pro-active approach to income diversification and thus could compromise their financial sustainability. The vulnerability of universities is especially noticeable concerning their declining revenues, which many of them associate with the current financial crisis. While public funding stagnates or in some cases decreased, revenues from private sources, such as tuition fees, research projects, contracts, and so on, have not increased substantially, which can easily lead to a general underfunding of the sector. Moreover, there have been almost no attempts by universities, to systematically look for other sources of income, for example by emphasizing cooperation with industry or engaging in the establishment of spin-off companies.

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## INTRODUCTION

Public higher education in Europe is caught in between two extreme pressures; increasing demand for higher education keeps driving up the costs, while European austerity measures seek to reduce public funding for the sector. In light of these developments the report aims to provide a descriptive and analytical overview of the current financial situation of higher education institutions (HEI) in Western Balkans. It is meant to help institutional leaders and national policy makers to make informed choices about the possible improvement of funding practices by highlighting some of the long term consequences of the current situation. The report has been produced within the TEMPUS project FINHED and is based primarily on the data provided by four public universities: the University of Banja Luka (BA), the University of Belgrade (RS), the University of Montenegro (ME), the University of Mostar (BA), the University of Novi Sad (RS), and Singidunum University (RS), which is a private institution. Data and information have been gathered through an elaborate questionnaire combining quantitative and qualitative elements. The questionnaire is provided at the end of this report.

The participating universities use different local currencies. Montenegro funds its public sector in Euros, Bosnia and Herzegovina uses Convertible Mark that has a fixed exchange rate to the Euro, while Serbia uses Dinars with a flexible exchange rate. To enable comparability across the different institutions, funding received in local currencies has been converted to Euros using the official exchange rates from the 30<sup>th</sup> of June for each year. Because of this, the changing value of the Serbian Dinar might distort the comparative data (i.e. the presented decrease in public funding might have less to do with public budget cuts, but rather explained by the decreasing value of the Dinar compared to the Euro).

The report is organised into several chapters, which roughly follow the structure of the questionnaire. In the first chapter we provide a descriptive account of institutional funding practices in the European context. This section aims to contextualise the cases at hand, with a particular attention on major trends in the last decade. In chapter two we introduce the universities that participated in this study and provide some general information about them. Chapter three is organised into five sub-chapters, which deal with key aspects of institutional funding. These aspects are: (i) financial resources of the institution, i.e. the streams and amounts of revenue, (ii) internal allocation mechanism, (iii) students, both as a source of revenue and as a destination of financial resources through various support systems, (iv) property and investments, and finally, the (v) university's third mission, most notably on the role of spin-off companies and knowledge transfer activities as a way to ensure financial sustainability. The obtained information is presented in a comparative

manner, although in several instances institutional particularities will be highlighted as well. A comprehensive summary of the findings is provided in the final chapter.

## CHAPTER 1: EUROPEAN CONTEXT IN BRIEF

The current financial crisis in Europe has provided once again a motive for questioning the idea of full public funding of higher education in Europe. Governments face difficulties in providing adequate financial support for high quality education in light of national austerity measures and continuous massification of higher education, which keeps driving costs up. However, as the European University Association (EUA) notes, the tendency to cut public funding is not uniform across EU member states. There are still many countries that perceive higher education as an investment rather than a public expenditure alone, which encourages them to continue investing greatly in higher education. EUS's monitoring tool, which looks at the impact of the financial crisis on higher education institutions in Europe, highlights that between 2008 and 2013 countries such as Iceland, Austria, Norway and Sweden increased the amount of public expenditure for higher education with about 30% or more<sup>1</sup>. Then again, countries like Greece, Hungary, and the United Kingdom have substantially reduced public funding for higher education<sup>2</sup>. These budgetary cuts affect higher education activities differently, depending on the countries' funding model. In countries where funding is earmarked according to the type of costs (e.g. research activities, salary costs, maintenance) national governments decide where to reduce expenses. On the other hand, in countries where institutions receive their funding through block grants universities are forced to make individual decisions where to save money, and in turn many different strategies emerged.

Despite decreasing public funding in some cases, direct government support remains the most important source of revenue for public universities in Europe (Estermann and Pruvot 2011, 8). Governments utilize several funding models, such as negotiated funding, input based funding, output based funding, and student based funding (Albrecht and Ziderman in Jongbloed 2000). In the first case allocation of funds is based on the negotiations between the institutions and the government and relies on the previous year's budget. In the case of input based funding, allocations follow the costs of higher education as determined by the number of teaching and research staff, the number of students, or the size of the property. In contrast, output based funding takes into account institutional performance and its achievement in producing certain results (number of graduates, produced scientific papers, etc.). In case of student based funding, resources get allocated to institutions via students and the most common form of this funding is through vouchers (Jongbloed 2000).

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<sup>1</sup> The estimate is not adjusted for inflation.

<sup>2</sup> Public Funding Observatory. Accessed on 12.01.2014. Link: <http://www.eua.be/eua-work-and-policy-area/governance-autonomy-and-funding/public-funding-observatory-tool.aspx>

Countries also vary depending on the extent to which governments can influence on what public money should be spent on. Many European governments provide block grants or lump sum funding to institutions, where universities are responsible for allocating the funds internally according to their needs. In contrast, universities have very little freedom to manage their public funds when they are earmarked, which means that the purpose of the funds is already pre-determined by the government (Jongbloed 2000). Besides, many governments tend to rely on targeted funding to steer higher education towards achieving specific political goals. Through such funding, governments can influence enrolment patterns of students by deciding which programmes to fund and by how much, or by defining priority areas for funding research (Jongbloed 2000). It is also more and more common that governments provide funds on a project-basis (especially in the area of research), which encourages universities to compete against each other on the basis of a set of criteria. In reality, many of these funding models and practices are applied in various combinations, making higher education funding in Europe very complex. Depending on the mix of financial models in place, the pressures of the financial crisis are felt differently in countries and their consequences can also vary.

The full impact of the financial crisis on higher education is still unfolding, however, many universities expect public funding for teaching to decrease during the next years (Estermann and Pruvot 2011, 8). The most radical cuts in this area are supposed to take place in the United Kingdom where universities' teaching budget is likely to be reduced up to 79% (Estermann and Pruvot 2011, 80). Cuts in public funding for teaching have been already observed in Estonia, Latvia, Hungary and the Flemish community in Belgium (Estermann and Pruvot 2011, 82). Higher education institutions face further financial pressures by the increasing cost of education, which is driven by the growing demand for higher education and by external calls to maintain and increase the quality of educational outputs. Under such circumstances many institutions opt for cutting the number of their study programmes or merging them to reduce costs. Freezing staff numbers or the salary levels is also a frequent solution, while in some cases institutions have also introduced redundancies, like in Latvia, Ireland, Italy, Hungary, and the United Kingdom (Estermann and Pruvot 2011, 82). Two exceptions in this regard were France and Poland, where additional financial means have been made available to universities for hiring new staff and salary increases ('EUA's Public Funding Observatory' 2013, 3).

Interestingly, research activities seemed to suffer less from decreasing public financing. The only exceptions are the Netherlands, Spain and Austria, where research has been affected more in comparison to funding teaching activities (Estermann and Pruvot 2011, 83). Many countries have also implemented targeted research funding, which commonly favours applied research in specific thematic areas (Estermann and Pruvot 2011, 83).

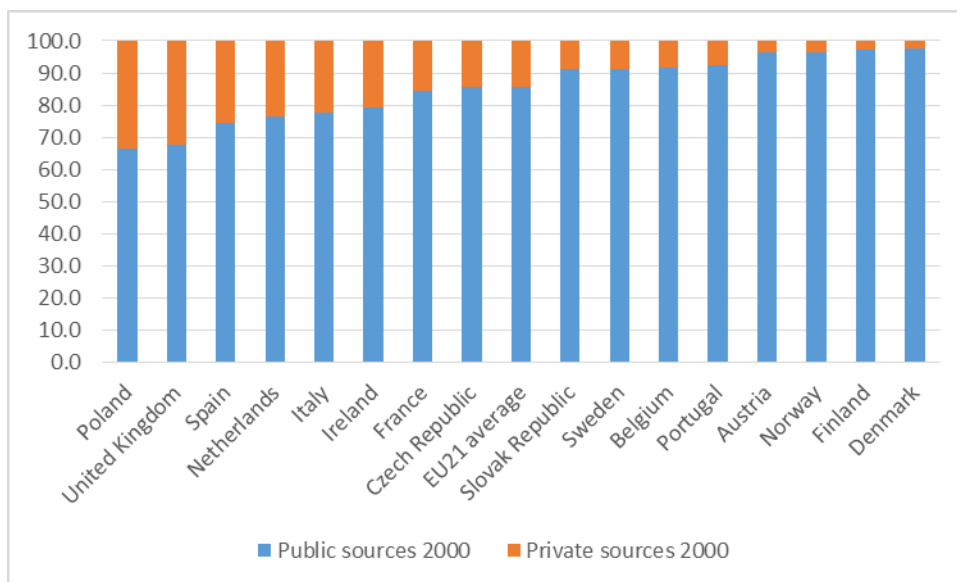
Furthermore, expenses linked to infrastructure maintenance and development are also among the first to be cut, whether directly by public authorities or as a result of the universities' own decisions ('EUA's Public Funding Observatory' 2013, 8). Funding for maintenance was reduced in Croatia, Greece and Ireland, and over the period 2010-2014 capital investment from public sources was cut by about 50% in England and Wales ('EUA's Public Funding Observatory' 2013, 4). The outlined trends confirm that the financial situation of higher education in Europe is under extreme pressure, while some countries are being hit more than others by financial restrictions and austerity measures.

As public support decreases income diversification becomes a necessity for many universities. As the former Dutch Minister of Education and Science put it: „When public funds decrease and the social demand in higher education increases then only private finance can keep universities from being strangled” (Ritzen, p143). Thus, universities need to turn to new sources of revenues, such as tuition fees, contracts with the private sector, or income generated by the provision of services to ensure their financial sustainability. Currently, public funding still accounts for the lion share of universities' income (EU21 average in 2010 was 77,3%), however, as the data from OECD demonstrates, this is slowly changing across several European countries, as private revenues increases on average by 7.3% during the last ten years.

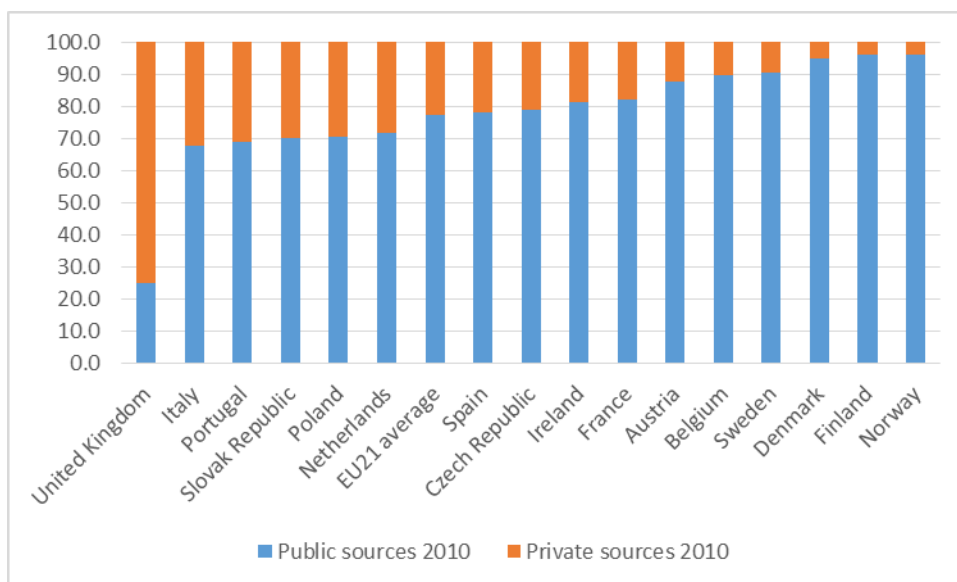
Figure 1: Public and Private Expenditure on Higher Education as a Percentage of Total Expenditure on Higher Education in selected European countries, 2000 (top) and 2010 (bottom)<sup>3</sup>

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<sup>3</sup> Only those countries are shown in the tables in which comparative data was available for both time periods.



Source: OECD, 2013



Source: OECD, 2013

Revenues from tuition fees represent an important income source for universities, which is likely to grow in significance as public funding decreases. However, many European countries still resist the introduction of tuition fees, mainly due to societal pressures. In other cases universities can charge fees, but their level is often regulated by the state and hence it contributes only a small percentage to university's income (Estermann and Pruvot 2011, 8). This might change in the near future, considering that tuition fees could become a

favourable alternative for stakeholders in case public authorities cannot provide sufficient revenues for higher education to function properly (Johnstone, p7). Such a trend is already noticeable in Spain, where tuition fees have increased between 15% and 25% and in Ireland, where an increase is foreseen in the coming years ('EUA's Public Funding Observatory' 2013, 4). Nevertheless, there are still some exceptions, like the Czech Republic and Germany, where plans to introduce tuition fees have been withdrawn ('EUA's Public Funding Observatory' 2013, 4).

European funds, and most notably the EU structural funds and the Horizon 2020 programme, are another promising source to which institutions are likely to turn in the future. The European Union offers a non-negligible income for universities which on average amounts to 4% of the institutions' budget in Europe (Estermann and Pruvot 2011, 9). Since European funds are provided on a competitive basis, the EUA expects that competition will become more acute, despite co-financing requirements and the difficult administrative processes and accountability requirements, which are coupled with these grants.

Strengthening the third mission helps universities to engage more deeply with society and industry. Generating revenues from financial activities and services is an alternative way to diversify the income sources of institutions. Many institutions are developing their fundraising capacities to attract donations from foundations, companies and alumni. The obtained funds are often channelled towards to institution's endowment, which can play a crucial role in stabilizing short term financial turbulences. However, endowments have still a minor role in university finances across Europe (Ritzen, p144). In systems with an earmarked funding model it is even more difficult for institutions to build up financial reserves, due to lack of institutional autonomy. In addition, managing institutional endowments requires more financial responsibility and long term planning capacity, which tends to be more developed in systems that utilize a lump-sum funding model (Jongbloed, p26).

Generally, contracts with industry generate more revenues than fundraising, especially through contractual research with the private sector (Estermann and Pruvot 2011, 9). Universities' ability to generate revenues from the provision of services is highly differentiated across Europe and averages to 4% of their income structure (Estermann and Pruvot 2011, 9). In many cases, the provision of services is founded on a partnership between the university and a private company. There are several models of cooperation, while the most advantageous are long-term strategic partnerships. However, as noted by the EUA, such partnerships remain a challenge for most universities (Estermann and Pruvot 2011, 13).

Income diversification is related to many institutional factors, like a strong and effective management system, expertise in service provision and cooperation with industry, as well the presence of fundraising structures. The creation and development of science parks and spin-off companies also constitutes a significant strategy towards revenue generation, which requires adequate internal support by university management and faculty (Estermann and Pruvot 2011, 11). Institutional autonomy is also positively linked to the degree of income diversification (Estermann and Pruvot 2011, 9). This means that universities need to be free to manage their staffing matters, including recruitment and salary levels of their staff, their own property and equipment, define student numbers and tuition fees, and be free to handle revenues obtained from private sources. Moreover, universities must be able to identify the full costs of all their activities, to assess the degree to which these costs are covered by the funding source, and whether engaging with a given partner results in a profit or a loss for the institution (Estermann and Pruvot 2011, 59). Consequently, universities without the ability to manage their expenses can hardly engage in income diversification which makes them more vulnerable to uncertainties in public funding.

## CHAPTER 2: INTRODUCTION OF THE PARTICIPATING UNIVERSITIES

### *University of Montenegro (UoM)*

The University of Montenegro was founded in 1974 and it is the largest higher education institution in the country in terms of students, staff, and infrastructure. The university's seat is in Podgorica, the capital of Montenegro, although its faculties are dispersed across four towns and offers study programmes in six more. The university encompasses 20 faculties, 3 scientific institutes, and two independent study programmes<sup>4</sup>. About 20.000 students conduct their studies at one of the 77 undergraduate programmes offered by this institutions. The University of Montenegro has 1170 employees, out of which 56% constitute academic staff.

The responsibilities for the management of the university are shared among the Management Board, the Senate, and the Rectorate. The latter includes the Rector, the Vice-Rectors, the Secretary General, the Head of Finance and adequate expert services. At the level of the faculties the highest academic body is the Faculty Council. Until 2004, the University of Montenegro was a decentralised higher education institution, where faculties were independent legal entities and had full financial autonomy, which, among others meant that faculties had their own governing bodies (i.e. governing boards and senates), separate financial accounts, and received public funding directly from the government. After 2004, when the new Law on High Education was adopted, the university became more integrated and faculties lost most of their legal and financial autonomy. Due to these changes public funding was distributed to faculties through the university. However, faculties retained some financial autonomy, which was specified in the statute of the university and were allowed to open sub-accounts that enabled them to handle their financial matters. The integration also meant that 20% of the faculty's revenue, which occurred from tuition fees, had to be transferred to the university, together with 10% of the revenues from various projects and contracts with the private sector. The funds transferred to the university were then redistributed among the faculties based on the faculty's financial status and their particular needs in terms of equipment, maintenance, literature, scientific conferences, student activities, and so forth. This practice was interrupted in 2010 because the consecutive budget cuts, which required from the individual units to devote a growing amount of their own income for covering basic requirements such as salaries.

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<sup>4</sup> Independent study programmes are Geodesy and Teacher training in Albanian language.

### *University of Mostar (SVEMO)*

The University of Mostar was founded by five cantonal authorities (Županija) and since 2004 the university opened up centres in all five cantons (Herzegovina-Neretva, Posavina, West Herzegovina Cantons as well as Canton 10 and Central Bosnia Canton) where they deliver educational programmes based on the needs of that particular region. The university offers 50 different study programmes with 46 areas of specialization, and accommodates about 16.000 students. The educational activity is carried out by 1.069 employees, while 168 employees work in the area of administration and technical work.

The University of Mostar has 11 faculties, including an Academy of Arts, and 9 institutes. It is organized as an association of independent institutions with a high degree of academic and partial financial autonomy. While faculties don't have separate legal entities, they are free to organise their employment strategies, manage student enrolments and their own finances. At the university level we find a small number of offices dedicated among other things to international relations, quality assurance, and other services of a common interest. Additionally, several commissions are organised at the university level to deal with the Bologna process, interuniversity cooperation, regulatory acts, and with investments and development. The management of the university consists of a Governing Board, a Senate, and the Rector. The Governing Board has 9 members, out of which 5 are nominated by the founding cantonal authorities, and 4 by the highest academic body of the university, namely the Senate.

### *University of Novi Sad (UNS)*

The University of Novi Sad was established in 1960. Today it comprises 14 faculties located in four major towns of Vojvodina, namely in Subotica, Zrenjanin, Sombor, and Novi Sad where its main campus and most of its faculties, including the university Rectorate are based. The university has 353 accredited study programmes and about 42.000 students studying at undergraduate level. There are 4.708 employees, out of which 73% belong to academic staff.

All the faculties of the university are legal entities including the Association of University Centres for Interdisciplinary and Multidisciplinary Studies and Developmental Research. The university is managed by the Rector and the University Council, while the Senate with its auxiliary expert organs is the highest academic body. The Rector convenes the Collegium of the University, which involves the Rector, the Vice-Rectors, the Secretary

General and the Deans of all of the faculties comprising the University. The Collegium is a consulting body that makes policy decisions within the range of the Rector's responsibility, and seeks to foster mutual cooperation and coordination among the faculties. The Collegium's administrative tasks are conducted by Expert Offices (e.g. financial office, office for legal affairs, office for project management, and office for education, science and public relations).

*University of Banja Luka (UBL)*

The University of Banja Luka was established in 1975. Currently, the university has 16 faculties, one institute, and one associated member (the College of Internal Affairs). It has 57 accredited undergraduate study programs and around 17.000 students are enrolled at them. The university has about 600 professors, 400 assistants, and 450 administrative staff employed.

It is governed by a Steering Board, a Senate and the Rector. The Steering Board is the managerial body of the university and consists of nine members: four representatives of the academic staff, one representative of non-academic staff, one representative of students and three members appointed by the government. The University Senate is the highest academic body, which discusses all academic issues and has 29 members. The Rector is assisted by four Vice-Rectors in charge of research and scientific work, international relations, teaching and student issues, and human resources. At the level of the faculties the highest academic body is the Faculty Council. Until 2008, the University of Banja Luka was a decentralised higher education institution, where faculties were independent legal entities and had full financial autonomy. Among others, it meant that faculties had a separate financial accounts, and received public funding directly from the government. As of 2008, faculties lost their legal status and most of their financial autonomy. The changes also meant that public funding was distributed to faculties through the university. However, faculties retained some financial autonomy and were allowed to open sub-accounts that enabled them to handle their financial matters.

### *University of Belgrade (UBG)*

The University of Belgrade is one of the oldest higher education institutions in the region, and its origins can be traced back to the beginning of the 19th century. Today, the university comprises 31 faculties, 11 research institutes, and 7 university centres. Faculties of the university are separate legal entities and have their own management bodies as well as financial independence. The university, besides its coordinative function, has a certain number of legally defined responsibilities, such as setting the criteria for academic promotions and quality assurance.

The institution's governing bodies are the University Council (with 33 members, out of which 23 are appointed by the university) and the Rector, as a single-man body. The Rector also establishes the Rector's Collegium, in which also the Vice-Rectors and the Secretary General participate. The Senate is the highest academic body (consists of 44 members) and deals with issues related to education and science. Besides the Senate, the University of Belgrade has 4 related Faculty Group Councils, the Council of Institutes, and the Council for Multidisciplinary Studies, 8 Scientific Councils, and other technical and advisory bodies.

### *Singidunum University (USGD)*

Singidunum University is a private university founded in 2005 in Belgrade. It has 5 faculties, one of them being located in Valjevo. These faculties are independent legal entities and are accredited for the realization of undergraduate, master and doctoral study programmes in three scientific-research fields: social sciences, technical sciences and natural sciences and mathematics. About 9.000 students are enrolled at these study programmes.

The University Rectorate is constituted by the university management and the Rector's Office. The university management is formed by the Rector, the Vice-Rectors, the Deans of the Faculties, the Directors of the Departments and Institutes, and by the Secretary General of the university. The Rector's Office employs experts who conduct professional, administrative, technical and general tasks necessary for the functioning of the university. The university's highest professional body is the Senate. It has 15 members, from which 10 are representatives of the university, 2 members are nominated by the Department Council, 1 representative of professional services, and 2 representatives of students, nominated by the Student's Parliament. The university has also an extended Senate, which also includes two additional representative delegated from each Faculty (one professor and one student) with legal status.

## **CHAPTER 3. ANALYSIS OF FUNDING PRACTICES AT UNIVERSITIES**

### **3.1. Financial resources: streams and amounts of revenue**

#### **3.1.1. Financial planning practices**

Financial planning at universities is strongly related to how public organisations are managed. In countries where mid and long term financial planning is part of the normal budgetary procedures universities also tend to develop such projections in close cooperation and negotiation with the representatives of the government. Where this is not the case, universities operate on annual budgets. Nevertheless, several institutions in this study outlined that while they do not have long term financial plans, they do make plans for the future, which they try to accommodate within their annual budgets.

According to the provided information, only the universities in Bosnia and Herzegovina produce mid-term financial plans. The University of Banja Luka has a three-year budget plan. The proposal is developed by the university and sent to the Ministry of Education and Culture for review and approval. After its approval, the mid-term plan serves as the basis for developing the annual budget of the university. In a similar way does the University of Mostar produce a financial proposal for four years for the cantonal authorities. The budgetary planning at the institutional level is initiated by the Senate of the university, which asks faculties to submit their draft financial plans to the Rectorate. These are later reviewed and organized into a comprehensive budget plan by the universities financial office and submitted for consideration and adoption to the Senate. Following its adoption, the Governing Board produces the financial plan which is sent to the cantonal authorities for inclusion into the public budget. The plan outlines the required financial resources for the normal functioning of the university, and includes projections about public income and expected private income as well (from tuition fees, donations, projects, and other sources).

The University of Novi Sad does not produce any long term financial plan. As the institution notes, the reason for this can be found in the lack of long term planning by the state and the provincial government, which prevents the university from developing such plans. Neither does Singidunum university, which is the only private university participating in this study, produce any mid or long term financial plans; however, they set objectives (like constructing or buying new facilities, establishing an institute, etc.) which are then taken into account in the institution's annual financial plan.

### 3.1.2. Streams of revenue

According to the data provided by HEIs, public revenues constitute the majority of their revenues (except for private universities). This stream of revenue has fluctuated during the last five years, with a sharp decrease in 2009 and 2010, and rising again afterwards (see Figure 2)<sup>5</sup>. This increase is most noticeable in the case of the University of Montenegro, and to some extent, in the case of the University of Belgrade. A steady trend of decreasing public funds is only noticeable in the case of the University of Mostar (see Figure 3).

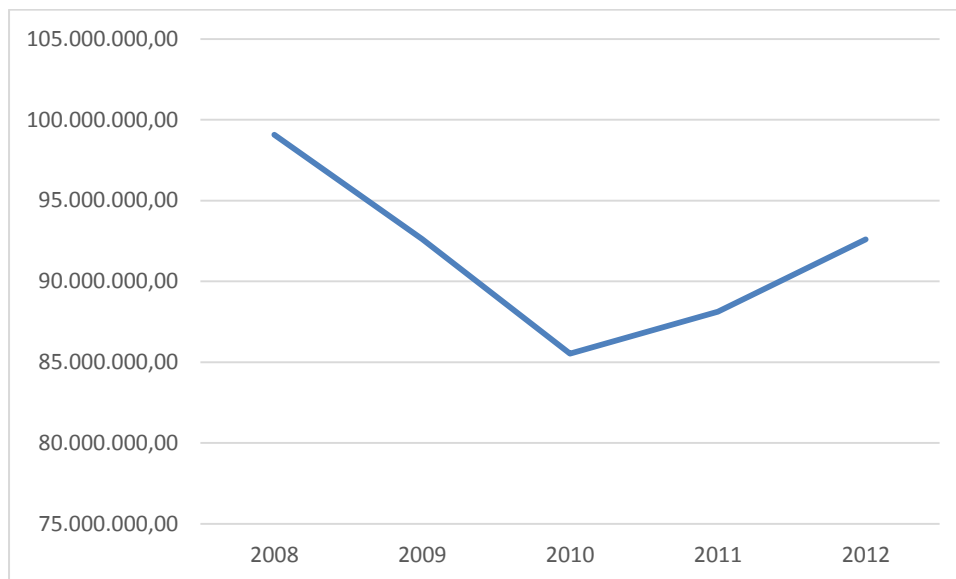


Figure 2: Cumulative amount of public funding (including funds earmarked for teaching and research from all public sources) received by the participating universities (In EUR)<sup>6,7</sup>

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<sup>5</sup> Because the national currencies are converted into Euros, the observed trends are likely to be influenced also by the currencies exchange rate. This could particularly be the case of Serbian, which uses flexible exchange rates for its currency.

<sup>6</sup> Official exchange rates on the 30<sup>th</sup> of June have been used for each year.

<sup>7</sup> Due to lack of data, the chart does not include the University of Novi Sad.

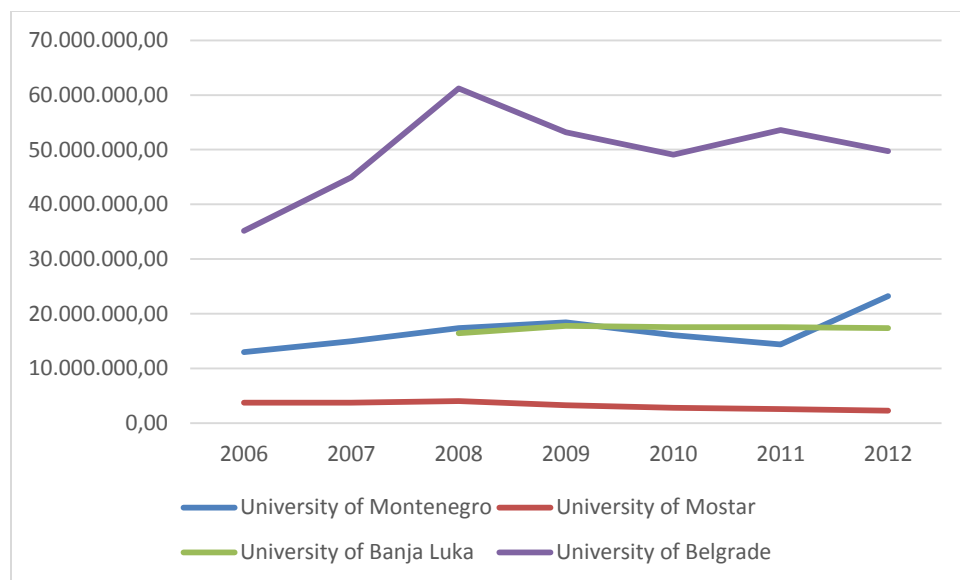


Figure 3: Revenues of higher education institutions (including funds earmarked for teaching and research) from all public sources (in EUR)<sup>8,9,10</sup>

The University of Mostar represents a unique case among the six universities, because it is financed through five cantonal authorities<sup>11</sup>. Moreover, the institution is not funded regularly through the regions' yearly budget, rather it is sustained through separate grants for which the regions issue calls. In a similar fashion, does the university receive governmental funding from the Republic of Croatia for teaching purposes carried out by guest lecturers from Croatia. This income is shown in the institutions private revenues.

Considering the composition of public funding, we can say that the largest part of it is earmarked for educational purposes. Funding for research is usually obtained through competitive grants, thus the amount depends on the successful application of the researchers. Moreover, many universities do not count the revenues obtained in this way as regular public support, rather as a supplementary funding.

<sup>8</sup> The University of Banja Luka did not report the amount of public funding for the years 2006 and 2007, because during this period funding was transferred directly to the individual faculties.

<sup>9</sup> Due to lack of data, the chart does not include the University of Novi Sad.

<sup>10</sup> Data for the University of Belgrade does not include all the faculties.

<sup>11</sup> Herzegovina-Neretva, West Herzegovina, Posavina, Central Bosnia Cantons and Canton 10.

Research funding constituted only a minimal amount in the total budget of the University of Montenegro until 2012 when it suddenly increased ten times (see Figure 4). However, the university did not provide any explanation for this increase. In contrast, research funding at the University of Belgrade continually accounted for about 20% of the institution’s public revenues (see Figure 5). This percentage is somewhat lower at the University of Novi Sad, where it is estimated to be around 10%. Revenues from local municipalities and other national sources account for a very small portion of the total public revenues of the University of Belgrade.

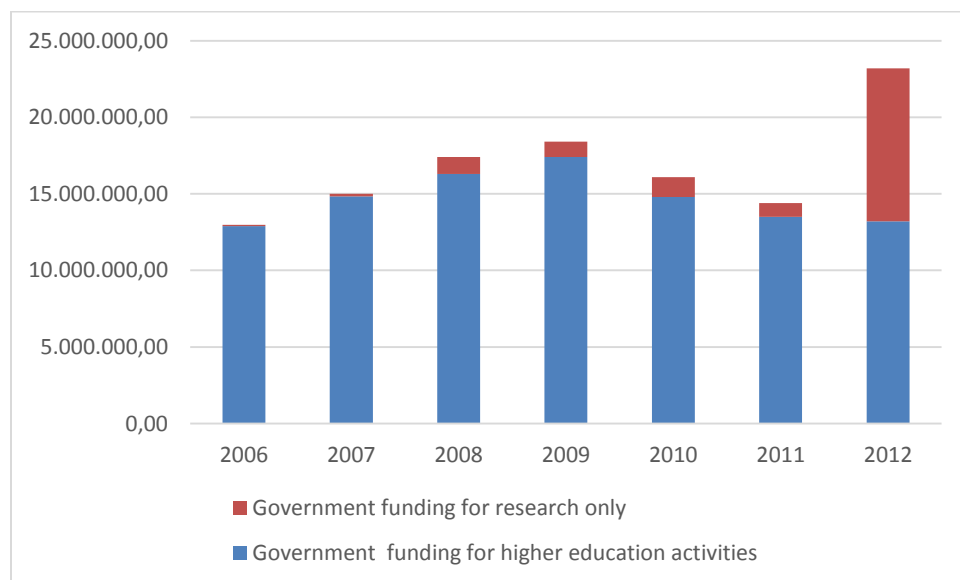
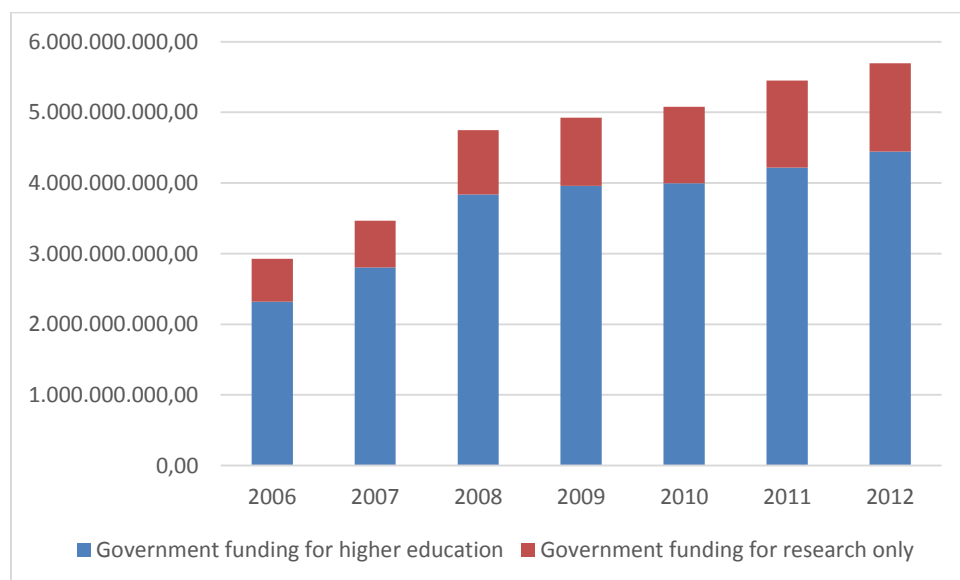


Figure 4: Composition of public funding at the University of Montenegro (In EUR)



*Figure 5: Composition of public funding at the University of Belgrade (In RSD)<sup>12</sup>*

In contrast to Figure 3, where revenues of the University of Belgrade were presented in Euros, Figure 5 presents the institutions revenues using the original amounts in Serbian Dinars. Thus, it becomes evident that public funding for both teaching and research have steadily increased over the years, however, their value has decreased when compared to the Euro. This concern has also been highlighted by the University of Belgrade.

Besides public revenues, universities can obtain additional funding from private sources. On average, universities obtain between 35% and 40% of their total revenues from such sources. This is a considerably higher percentage than the EU21 average, which amounts to 22,7% (see page 7). The most common private sources of revenue are tuition fees, administrative fees, donations and commissioned projects (such as laboratory services, project development, and supervision services) (see Table 1). Some universities also rely on consultancy fees, leasing of facilities and spaces, and revenues from publishing. In addition, the University of Belgrade reported to have external revenues from its endowment, which was obtained from various donations and is now managed by the university. A detailed presentation of external revenue sources by institutions is shown in the table below.

	UoM	SVEMO	UNS	UBL	UBG	USGD
Tuition fees						
Administrative fees						
Consultancy fees						
Leasing facilities/space						
Commissioned projects						
Donations						
Publishing						

*Table 1: Sources of private revenues<sup>13</sup>*

As shown in Figure 6, both public and private revenues have slightly decreased during the last years compared to 2008. Private revenues decreased by 3,43% while public revenues

<sup>12</sup> Data for the University of Belgrade does not include all the faculties.

<sup>13</sup> The coloured squares indicate that universities obtain income from the mentioned sources.

by 6,54%. However, there are considerable differences across institutions concerning private revenues (see Figure 7). The University of Belgrade, which is the largest university in the region has the highest levels of revenues from private sources, although there is an obvious decreasing tendency when adjusted for the value of Euro<sup>14</sup>. In contrast, the University of Banja Luka, while it is not the smallest university in terms of student numbers, generates the least amount of private revenues. The University of Mostar is the only case, where we can observe a steady growth of private funding during the time period 2006 - 2012.

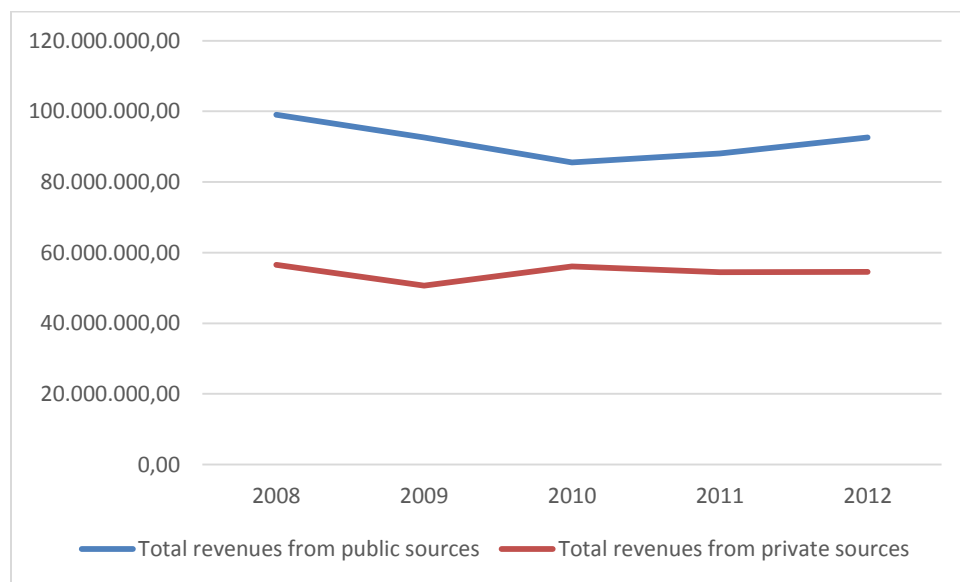


Figure 6: Cumulative total revenue of the participating universities from both public and private sources (in EUR)<sup>15</sup>

<sup>14</sup> Revenues in dinars have constantly increased during the past years, except in 2009, when they decreased by 2,23%

<sup>15</sup> The chart does not include the University of Novi Sad and Singidunum University.

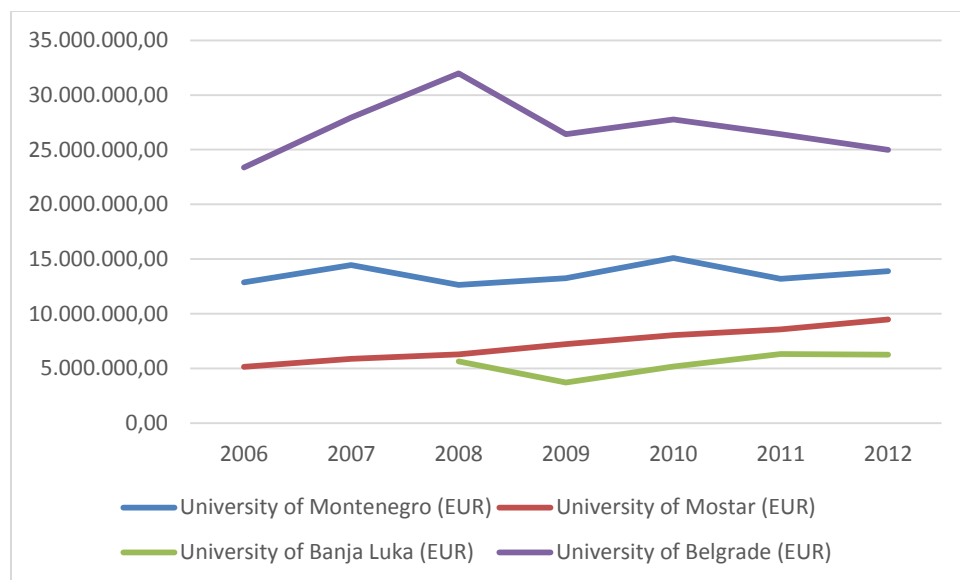


Figure 7: Private revenues of higher education institutions (in EUR)<sup>16,17,18</sup>

As shown in the individual tables, in most cases there is an inverse relationship between public and private revenues. When one is decreasing, the other is likely to increase. This might suggest that universities are more likely to turn to private income generation, when public funding is decreasing. However, the exact mechanisms through which they achieve it remains unclear.

<sup>16</sup> The University of Banja Luka did not report the amount of external revenues for the years 2006 and 2007, because in this period revenues from private sources were primarily managed by the individual faculties.

<sup>17</sup> Due to lack of data, the chart does not include the University of Novi Sad and Singidunum University.

<sup>18</sup> Data for the University of Belgrade does not include all the faculties.

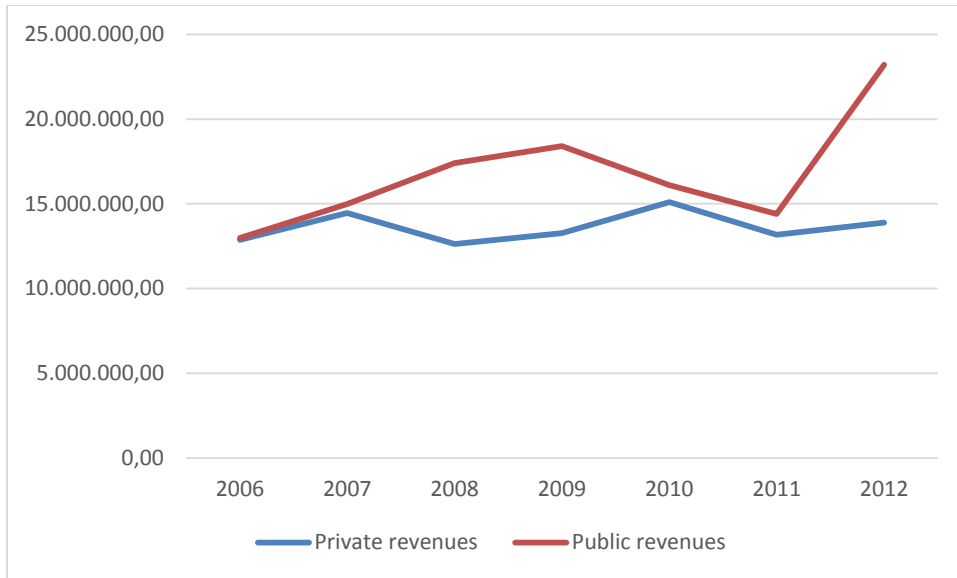


Figure 8: Public and private revenues of the University of Montenegro (in EUR)

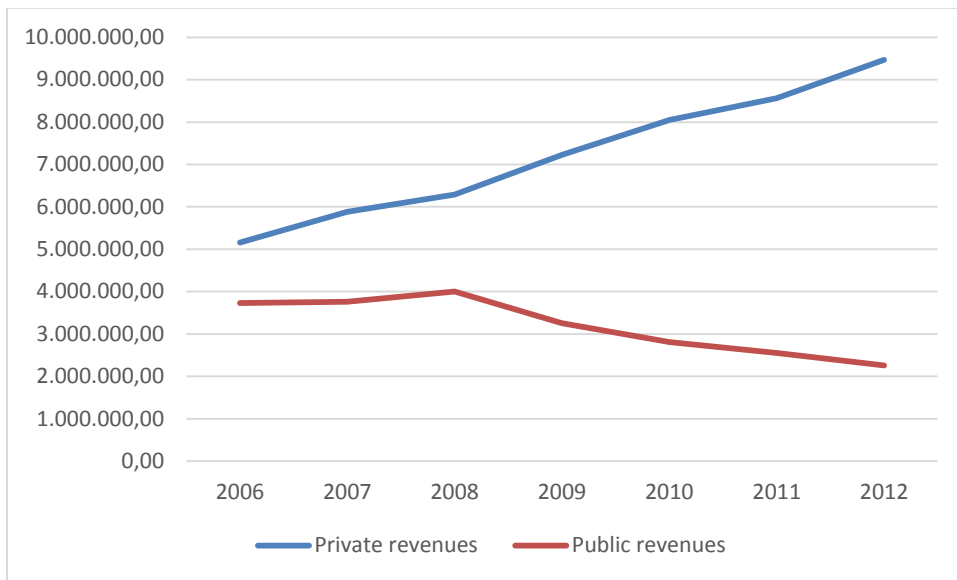


Figure 9: Public and private revenues of the University of Mostar (in EUR)

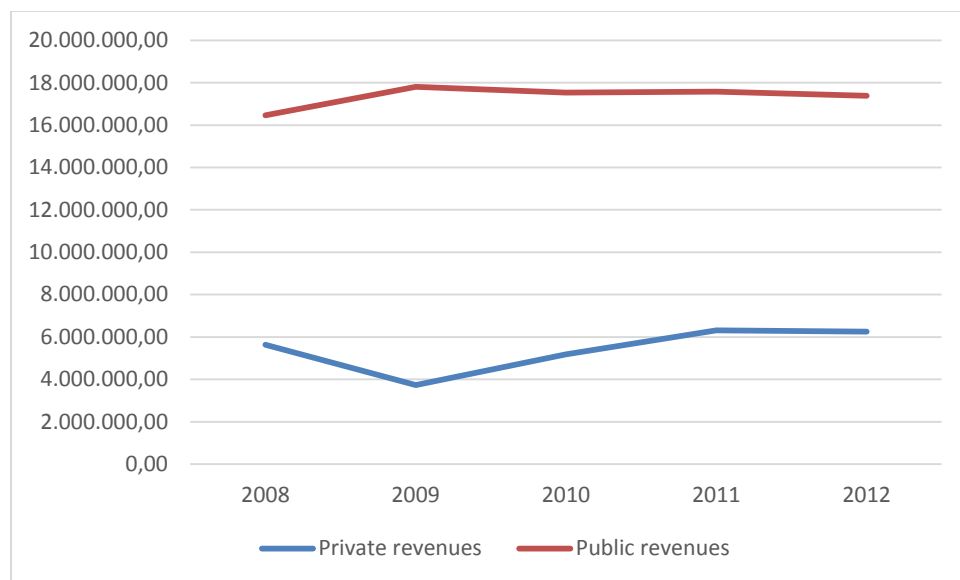


Figure 10: Public and private revenues of the University of Banja Luka (in EUR)<sup>19</sup>

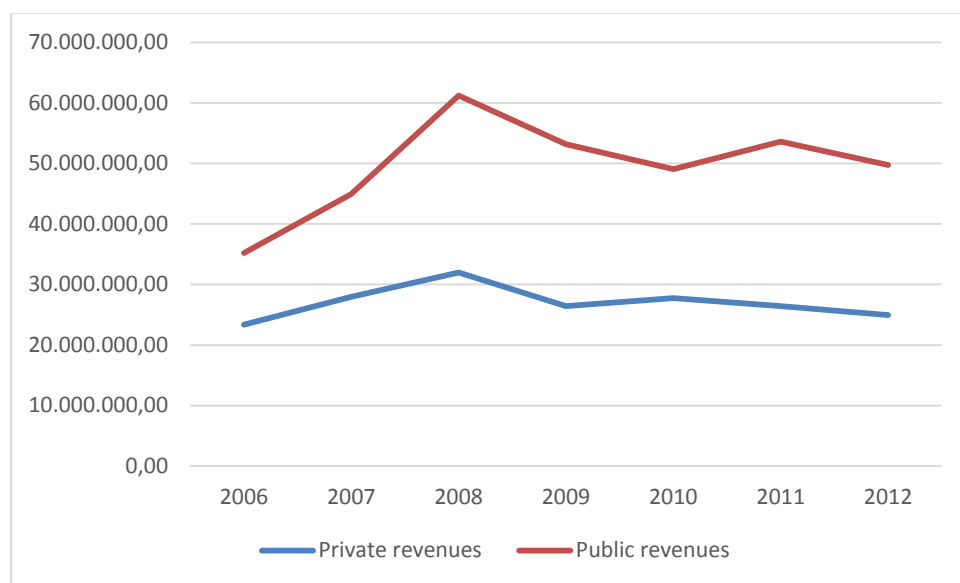


Figure 11: Public and private revenues of the University of Belgrade (in EUR)

In 2012 the University of Mostar was the least dependent on public revenues (it constituted only 19.26% of the institutions total revenue<sup>20</sup>). In the same year, 92,5% of its

<sup>19</sup> Until 2010 tuition fees were regarded as revenues for the budget of the republic (although some percentage remained for the institution). Since 2011 they became once again the university's revenue, and the organisational units that realised them, increasing the total amount of private revenues.

private revenues came from tuition fees. On the other hand, the University of Banja Luka relies the most on government funding (73,57% of their budget was obtained from public sources).

Considering the sources of private revenues, tuition fees account for more than half them (56%) across all participating universities. They are followed by revenues obtained from consultancy (8%), commissioned research projects (8%), and EU research projects (6%). Revenues from spin-off companies are the only income source, which is not utilized by any institution, thus no income has been reported under this category.<sup>21</sup>

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<sup>20</sup> It has to be noted that the University of Mostar accounts for support received from the Republic of Croatia as external revenue.

<sup>21</sup> The University of Novi Sad stated to have revenues from spin-off companies, however didn't specify the amount in the budget.

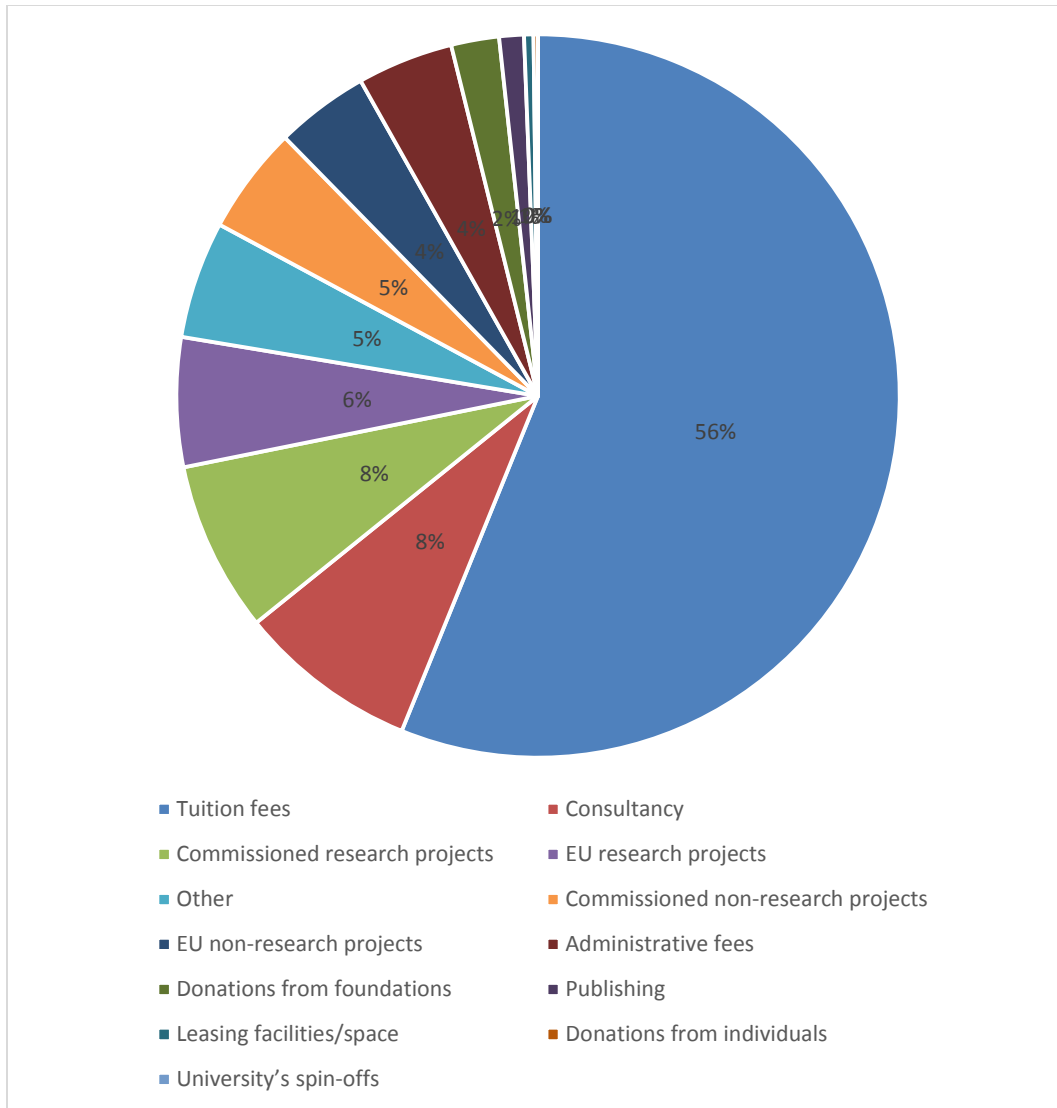


Figure 12: Cumulative percentage of private revenues by categories across all participating universities<sup>22, 23, 24</sup>

<sup>22</sup> Only those revenues are shown for which the individual faculties account toward the university.

<sup>23</sup> Data from the Singidunum University is not included.

<sup>24</sup> Data for the University of Belgrade does not include all the faculties.

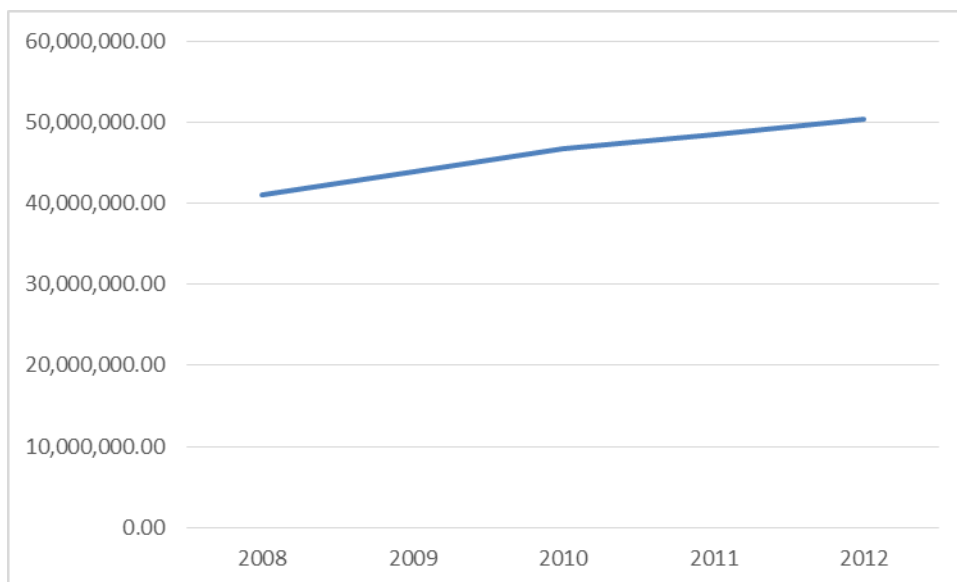


Figure 13: Total revenues from tuition fees by the participating universities (in EUR)<sup>25, 26</sup>

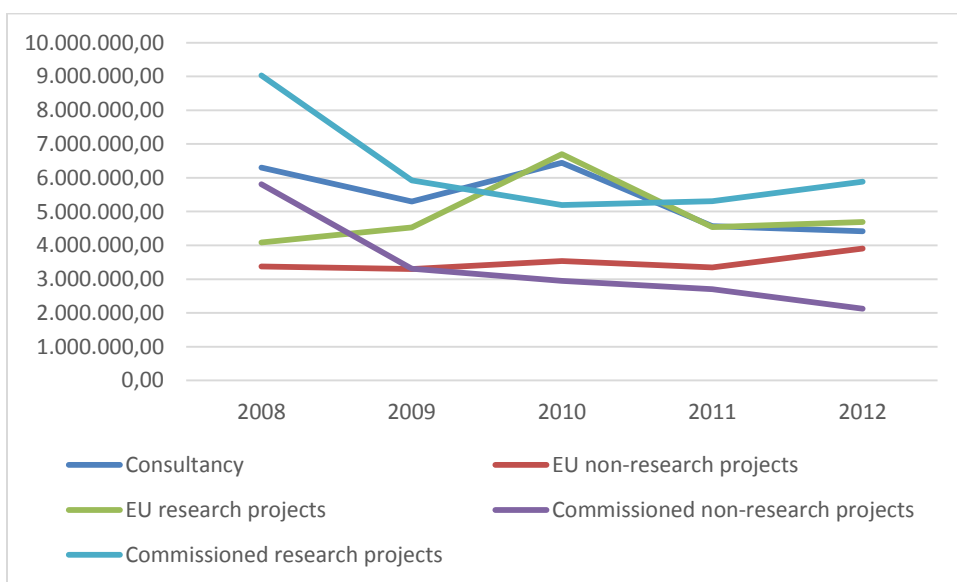


Figure 14: Total revenues from grants and contracts by the participating universities (in EUR)<sup>27, 28</sup>

<sup>25</sup> Data from the Singidunum University is not included.

<sup>26</sup> Data for the University of Belgrade does not include all the faculties.

<sup>27</sup> Data from the Singidunum University is not included.

<sup>28</sup> Data for the University of Belgrade does not include all the faculties.

The above figures show that revenues from tuition fees have been steadily rising over the last seven years. However, revenues from consultancy and commissioned non-research projects have fallen, while revenues from EU grants have slightly increased during the same period.

There is a lack of systematic and structured attempt to attract revenues from private sources. The universities that participated in this study do not have organizational units dedicated to fundraising activities. In most cases, the vice-rector or a member of the university management is responsible for following the financial status of the university. However, this does not necessary involve an active search for new income sources, rather the person's task is to oversee the flow of resources within the institution and negotiate with the government about future funding.

### 3.1.3. Summary of key findings

The participating universities have outlined several drivers behind the increase, decrease, or stability of different revenue types. Decreases in public funding are most commonly associated with the financial crises and the governments' policies that encouraged public savings. On the other hand, the stability and increase in private revenues is largely related to the growing revenues from tuition fees (both expansion in terms of number of enrolments and rising fees) and partially due to the availability of European grants.

The public funding for the University of Montenegro has been fluctuating across the years (see Figure 3). Funds were increasing until 2009 when they started to decrease until 2012, when a sharp increase in public research funding (ten times more than in the previous year) was noticeable. As the university explains, the decreasing public funding for teaching is mainly due to cuts in state budget. On the other hand, the increasing number of students and study programmes helped the university to almost double its revenue from tuition fees between 2006 and 2012. Revenues from leasing of facilities and equipment, as well as EU funds also increased during this period. Due to the dispersed character of the university, a substantial part of the generated income is used to cross-subsidize programmes that are realized in the less developed north part of the region. This policy has been based on the assumption that the financial burden would be shared with the local authorities, which, as reported, is usually not the case.

Public funding of the University of Mostar, which is obtained from cantonal authorities, was constantly decreasing between 2006 and 2012. As the university outlines, one of the

reasons for this decline can be found in the fact that the institutions funding is managed on the basis of grants, which is never certain. On the other hand, the university's revenues from external sources were increasing throughout these years. The most notable increase in private revenues occurred with regards to tuition fees, which tripled between 2006 and 2012. As the university states, this increase can be explained by the periodically rising amount of tuition fees and by the increasing number of students who were attracted by the university's expanding number of study programmes.

Based on the provided data, we cannot conclude much about the financial situation at the University of Novi Sad. As the university explained, their public revenues are determined by fiscal stability (i.e. inflation), the available resources of the Serbian government for higher education, and by the formula, which is used by the Government for calculating the maintenance costs and overhead expenses of the university and its faculties. On the other hand, the university reported that their income from private sources remained stable between 2006 - 2012.

Public funding at the University of Banja Luka has been more or less constant throughout the years with very little fluctuations. There was a slight, but visible increase in their private revenues, mainly due to increases in income from tuition fees and donations from foundations. The university stated that their revenues were influenced by several factors, such as the global economic crisis, changes in the status of tuition fees<sup>29</sup>, changes in the tax rate and contributions to personal income of employees, initiation of new study programmes and the gradual introduction of master programmes for existing studies. While the number of faculties at the University of Banja Luka has increased during the last couple of years, that did not inflate the expenses of the university because the new faculties emerged with the separation of existing ones. This has increased slightly the administrative costs, but did not increase significantly the cost of education as the teaching staff continued to deliver the same teaching as before, thus the same educational activities were carried out regardless of the organisational structure.

Revenues (both public and private) of the University of Belgrade fluctuated between 2006 and 2012. As the university outlines, the decrease in the country's economy, and hence decreasing public investment into research and education, has discontinued in 2008 the growth path of increasing public revenues (see Figure 11). Only funding for research

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<sup>29</sup> Until 2010 tuition fees were regarded as revenues for the budget of the republic (although some percentage remained for the institution). Since 2011 they became once again the university's revenue, and the organisational units that realised them, increasing the total amount of private revenues.

activities shows a steady increase, and was doubled during this time of period. On the private revenue side, the most visible increase was realized in the categories of tuition fees and administration fees, EU grants, and under other costs.

The Singidunum University obtains most of its revenues from tuition fees. The stability of the student numbers has contributed to the sustainable development of the university in the previous period.

## **3.2. Internal allocation mechanism**

### **3.2.1. Revenue distribution**

The majority of the universities faces some limitations in spending their revenues. Public funding is normally earmarked and most of it is allocated towards salaries. Similarly do faculties, institutes, and departments within universities face some limitations in determining how to spend public money. The only exception is the University of Mostar, where faculties are free to combine governmental funds with their own revenues and spend them according to their own financial plan. At the end of each year, the faculties of the University of Mostar submit an annual financial report to the Rectorate. In the case of the other universities, faculties have to spend public funds according to the prescribed budgetary lines and the laws that regulate salaries of public servants. Hence, funds cannot be used for other types of activities. As the University of Banja Luka emphasized, every change in the predetermined budget requires the approval of the Ministry or the government.

Considering revenues from private sources, most universities reported to have no restrictions on how they spend them. This is the situation at the University of Montenegro, the University of Banja Luka, the University of Mostar, the University of Belgrade, and at Singidunum University. The only institution that faces limitations in this respect is the University of Novi Sad, which said they have to spend their own revenues also according to the prescribed budgetary lines.

Generally, individual faculties, institutes, and departments are free as well to determine the way in which they wish to use their revenues from private sources. However, as noted by several universities, in most of the cases, these revenues end up filling in the gap between real costs of the institution and the inadequate governmental funding. In an attempt to conform to the Law on public procurements in Bosnia and Herzegovina the University of Banja Luka has introduced internal limitations on spending, which requires that faculties that wish to conduct capital investments above the value of 6,000 KM (approximately 3,000

EUR) need to get a written approval from the rector of the university, and in case of 20,000 KM (approximately 10,000 EUR) from the Senate of the University.

In Serbia public funds are distributed directly to faculties, and from faculties to the university, i.e. bottom-up. This is the case at the University of Novi Sad and the University of Belgrade. The percentage of revenues that faculties need to transfer to the university are defined by the Senate of the university. Another common distribution model is the combination of top-down (from the university level to individual faculties/institutes/departments) and bottom-up model. At the University of Montenegro the funds of the university represents a combination of government funds and the revenues of individual units (30% of tuition fees + 10% of projects). At the University of Banja Luka governmental funding is managed by the Rectorate, who pays for the salaries of the staff at each faculty. However, faculties transfer funds to the university as a contribution to maintenance costs (7.5% of their private income). The only institution with a top-down distribution model is the University of Mostar, which has an integrated organisational structure. The grants obtained from cantonal authorities are distributed to faculties according to a predefined percentage.

Revenues of universities are allocated towards different types of expenses (see Table 2). However, at most of the universities we can't find a separate expenditure for research staff, and expenditure for student scholarships is also not common across all institutions. Singidunum University offers support for talented students in the form of tuition waiver, so it is a forgone earning for the institution, but not an expenditure. The most common expenditures under the category of 'Other' include: subscription to databases, subscription to scientific journals, student activities, partial coverage of the costs for participation at scientific conferences for academic staff, rewards for published papers in leading scientific journals, support of short specializations abroad for academic staff, co-financing of EU projects, membership fees for international associations, organization of scientific conferences, accreditation fees, expenses of committees, and costs related to public procurements (like advertising).

	UoM	SVEMO	UNS	UBL	UBG	USGD
Salaries of academic staff						
Salaries for research activity only						
Salaries of administrative and support staff						
Equipment						
Maintenance						
Scholarship fund for students						
Printing and publishing						
Other						

Table 2: Types of expenditures of the participating universities

The following figures indicate the composition of the allocated public funds. Since detailed data was available only in the case of the University of Belgrade and the University of Montenegro, just these two examples are presented.

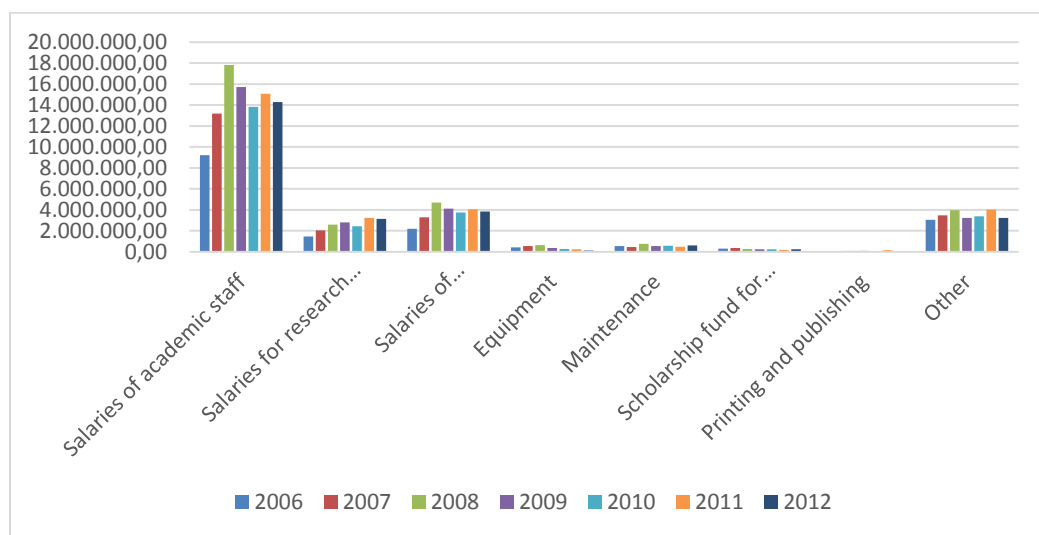


Figure 15: Composition of the allocated public funds at the University of Belgrade (in EUR)

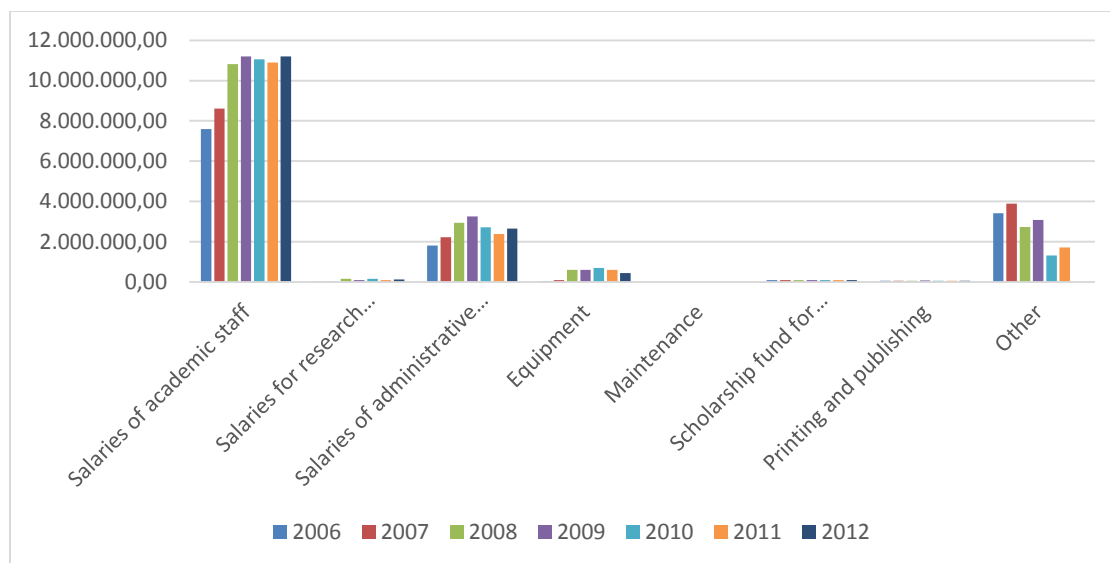


Figure 16: Composition of the allocated public funds at the University of Montenegro (in EUR)

The data illustrates that in both cases public funds are allocated mainly towards the salaries for academic staff. The amounts assigned for the salaries for administrative staff, and for research staff (in case of the University of Belgrade) are also substantial. Besides, a significant amount of public funds is distributed towards the heading of other costs<sup>30</sup>

Considering the level of total expenses across all participating universities we can observe a rather stable trend (or slightly increasing in some cases) between 2006 and 2012. The dominant category of expenses are related to the salaries of academic staff, towards which also most of the public funds are allocated. Expenditures for maintenance costs are usually between 5% and 10% across the participating universities.

<sup>30</sup> In the case of the University of Montenegro, other costs include utilities, material costs, as well as travel costs. Other costs at the University of Belgrade are comprised of utilities and expenses for employees.

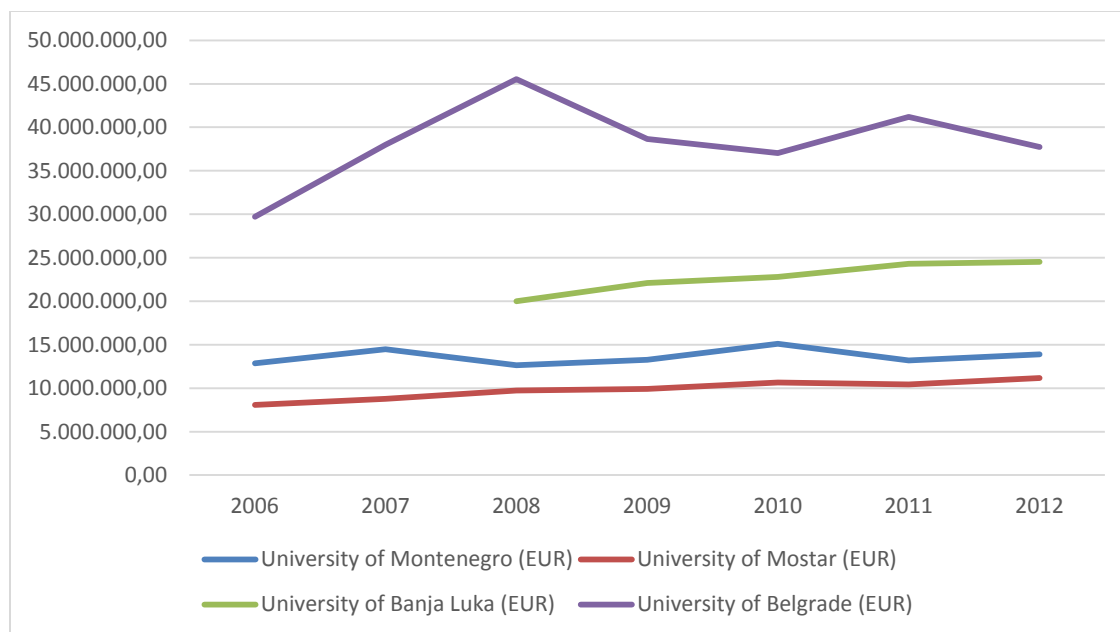


Figure 17: Total amount of expenditures at the participating universities (in EUR)<sup>31</sup>

At the University of Montenegro expenditures remained stable despite substantial increase in the number of study programmes, which is due to the fact that the number of students and employees remained constant over this period. The level of expenses at the University of Mostar have gradually increased over the years and most notably with regards to salaries. On the other hand, employee benefits and material costs have remained rather unchanged due to the institution's strategy to fulfil only its minimum needs. Expenses also rose somewhat at the University of Belgrade mainly because the inflation rates and changes in the value of the domestic currency. An increase was most noticeable in the area of salaries for research activity. Data about expenditure is not available or just partially available for the University of Novi Sad, the University of Banja Luka, and the Singidunum University.

As the data shows, salaries constitute the main expenditure across all universities. Their levels are usually regulated by the national/entity law or a by-law that defines the calculus according to which salaries of employees in the education sector are determined. At Singidunum University, salaries are regulated entirely by institutional acts, however, they do adhere to some of the general provisions set by the Law on Higher Education. In addition, universities adopt their own internal regulation which supplements the existing national ones. These regulations serve as a basis for additional salary increases based on

<sup>31</sup> Due to lack of data the University of Novi Sad and Singidunum University are not included.

the institutions' own revenues. In some cases, such as the University of Belgrade and the University of Banja Luka, they are adopted on the level of faculties, thus may results in considerably different wage levels within the same institution. As the University of Banja Luka highlighted, in 2006 they have supplemented the salaies of employees with 30-40% on average, and they currently do so with 60-80%.

With the exception of the University of Belgrade and the University of Banja Luka, most universities reported that data on salary levels is not available. Therefore, we outline only the amounts and criteria which exist at these two insitutions. In Republica Srpska, the salaries are calculated according to coefficients defined by the law. Each employee of the university is classified into a category based on his or her position and educational level. These categories have a coefficient, which is multiplied by the base salary, which is 106 KM (approximately 50 EUR).

	RS	BiH/RS
Full professor	968.74	1,081.63
Associate Professor	898.79	919.39
Lecturer, researcher, consultant with a doctorate	823.06	811.22
Research assistant with a doctorate	697.92	648.98
Senior lecturer or senior lector	672.57	703.06
Teaching assistant	596.20	594.90
Teaching associate	566.06	

*Table 3: Salary levels of academic staff (including fees and charges) paid by the Serbia Government and by the Republic of Srpska (In EUR)<sup>32</sup>*

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<sup>32</sup> Exchange rate applied from 30 June 2012.

	RS	BiH/RS
Secretary General of a university with more than 15 faculties (and chief financial offices in the case of Republica Srpska)	631.17	703.06
Secretary General of a university with less than 15 faculties (and chief financial offices in the case of Republica Srpska)	622.83	703.06
Professional associate, Librarian researcher, Secretary of the Faculty	555.77	
Librarian	357.78	459.69
Technical secretary, technician, financial operations, warehouse worker, driver	276.60	297.45
Heating technician, security guard, watchman, janitor, warehouse worker, driver, supplier	250.93	270.41
Cleaner	219.16	189.29

*Table 4: Salary levels of administrative and technical staff (including fees and charges) paid by the Serbia Government and by the Republic of Srpska (In EUR)<sup>33, 34</sup>*

Based on the person's management role, the salary is increasing as the following:

	RS	BiH/RS
For the rector	40%	50%
For the vice-rectors and the deans	30%	10%
For vice-deans (and for leaders of research institutes in Serbia)	20%	5%
For chairs or heads of departments, for the secretary of the faculty, for the chief financial officer, for the head of the rector's office, for the head of studies	10%	
For the head of office, or service	5%	

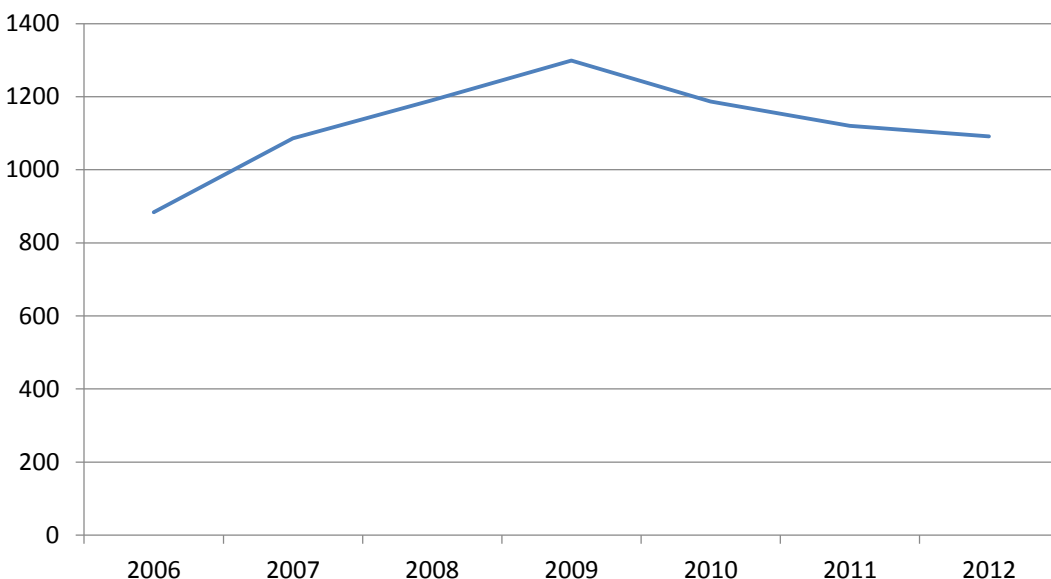
*Table 5: Salary increases for staff (In EUR)*

### 3.2.2. Cost per student in an academic year

Only two institutions have attempted to calculate the institutional cost per student in an academic year. The University of Montenegro has adopted a method, whereby they divide the amount of funds obtained from the government and from the students by the total number of students. The costs are shown in Figure 18 and display the average value for all study programmes. However, the university states that there is considerable variation across study programmes (e.g. cost per student in the arts department comes near to 10.000 EUR per year/student).

<sup>33</sup> Wages are determined in line with the national qualification framework.

<sup>34</sup> Exchange rate applied from 30 June 2012.



*Figure 18: Institutional costs per students at the University of Montenegro (in EUR)*

Another university to calculate the institutional cost per student is the University of Novi Sad. Similarly to the previous method, the cost of teaching staff, non-academic staff, working materials at laboratories, consumables, maintenance of buildings and assets per year, and investment costs (equipment) have been added up and divided by the total number of students. The obtained costs vary from 5000-10.000 EUR per student depending on the student's year of study (e.g. in the 1<sup>st</sup> year costs per student are highest and they gradually decrease in the next years of study). While the university didn't provide exact calculations they outlined that the Ministry of Education contributes with only 2200 EUR per student for an academic year.

According to the provided data, none of the universities attempted to calculate the marginal institutional costs per student. As the University of Novi Sad explained, this is due to the fact that the Provincial Government and the Ministry of Education prescribe the maximum number of students that can enrol in each academic year and universities/faculties cannot exceed this number (no additional students). Thus, it wouldn't be worthwhile to calculate the marginal cost of additional students.

### 3.3. Students as source of revenue and institutional student support

#### 3.3.1. Tuition fees and administrative costs

Several factors influence universities in deciding the total number of students to be enrolled at Bachelor level. While taking into account governmental recommendations and limits set by accreditation agencies, they also consider the institution's capacity and enrolments from previous year(s) (see Table 6). Estimation of the labour market needs and institution's expenditure from the previous year were seen as moderately important. Among other things, the University of Banja Luka highlighted the socio-economic situation in the region as being a very important factor.

	UoM	SVEMO	UNS	UBL	UBG	USGD	Average
Enrolments from previous year(s)	5	5	5	4	2	5	4.33
Institution's capacity (staff, facilities)	4	4	4	5	5	5	4.50
Institution's estimation of the labour market needs	3	3	3	5	5	4	3.83
Institution's expenditure from previous year	4	3	3	4	3	5	3.67
Other				5	5		5.00

*Table 6: Relevance of factors affecting the decision on the maximum number of students at Bachelor level.*

For determining the number of fee paying students the University of Montenegro uses the same procedure for all cycles of studies and is described as follows: "The initial proposal comes from the faculties, the Senate deliberates on the proposed figures and forwards the proposal to the Governing Board, whose decision is sent to the Government for final approval." In addition, it has been reported that the university has little freedom in determining the number of fee paying students. The limit for the total number of students a faculty can enrol is limited by the provisions of the licence issued by the Ministry of Education. This number is based on the type of study, building and lab capacities, equipment and human resources. All of these factors are taken into account when proposing the enrolment figures in an academic year.

Similarly, at the University of Novi Sad, the University of Belgrade, and the Singidunum University the number of fee paying students (on all levels) is determined on the basis of

the acquired licence (resulting from the accreditation procedure), which is usually decreased by the number of state-funded students.

In Bosnia and Herzegovina, the government only intervenes in determining the number of state funded students. At the University of Mostar both publicly funded and fee paying student numbers are determined by the individual faculties, but in case of the former, the public authorities' financial status has significant effect on the final numbers. For setting the number of Bachelor or Master students faculties consider in detail the needs of the labour market, their physical and teaching capacity, after which the open call is published. The faculties also enjoy the freedom to determine who gets access to doctoral education, and in this case they cover the incurring costs.

In 2012 the average tuition fee for Bachelor studies across all the institutions was 769 Euros, for Master studies 1,003 Euros, and for doctoral studies 1,857 Euros. Generally, tuition fees are determined on the same basis for each level of studies. Universities take into account the recommendations of the government, the labour market needs and the socio-economic status of students. Changes in the amount of tuition fees are usually proposed by the academic councils of the institutions.

In the case of the University of Montenegro, two types of tuition fees exist, namely a minimum and a maximum that students pay at each level. The minimum tuition fee for Bachelor studies is 500 EUR per year and is for those students who want to study at a state supported study programme but did not qualify for the quotas imposed by the Ministry. The maximum tuition fee is 1000 EUR per year for study programs that are not supported by the state budget. As for the Master level, the university charges 1500 EUR per year, except for a few study programs where costs of delivering the programme are higher. Finally, for the PhD level, each study program proposes the amount of tuition to the Ministry for approval, which needs to be supported by a justification of costs. The amount of tuition fees for Bachelor studies at the University of Montenegro have not changed for the last ten years. It was also pointed out that the university had to take into account the average family income in Montenegro, so that the current tuition fees reflect the social responsibility of the state university.

At the University of Mostar tuition fees for Bachelor and Master studies are determined based on the suggestions of the individual faculties. The recommendations are put forward by their academic councils. Before the tender for study programmes opens, the Ministry has to give approval of these recommendations (which also include the number of students). Tuition fees for PhD studies are determined by the faculties according to their own calculations, which are applied in line with the regulatory acts.

The University of Novi Sad calculates the tuition fees for Bachelor, Master, and PhD studies according to the real costs of studying and considering also the needs of the labour market. As the university notes, tuition fees are significantly under their real cost due to the socio-economic circumstances of the region.

Similarly, does the University of Banja Luka define tuition fees for Bachelor studies on the basis of living standards and the overall socio-economic and political situation in the region. Consequently, they have not changed significantly during the last few years. The amount of tuition fees for Master studies are formed in the same way, but are slightly higher, while fees for doctoral education are based on the real costs of teaching and research.

At the University of Belgrade tuition fees for Bachelor, Master, and PhD studies are determined as a percentage of the fees paid by the government, and according to a calculation that takes into account the student demand for the given study programme or the educational profile of the programme.

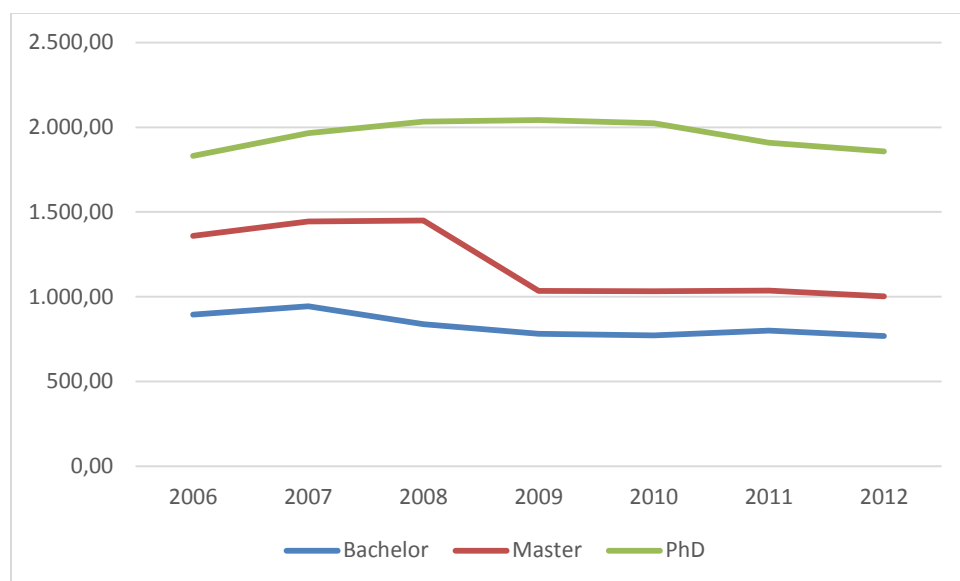


Figure 19: Cumulative average tuition fees at all participating universities (In EUR)

With the exception of the University of Novi Sad, tuition fees for Master studies are higher than tuition fees for Bachelor studies. The above chart also demonstrates that the average tuition fee for PhD studies is more than double of the tuition for Bachelor studies. The observable decreases in tuition fees over the years is largely a result of the Serbian Dinars decreasing exchange rate. A more detailed elaboration by different institutions is shown in the subsequent figures.

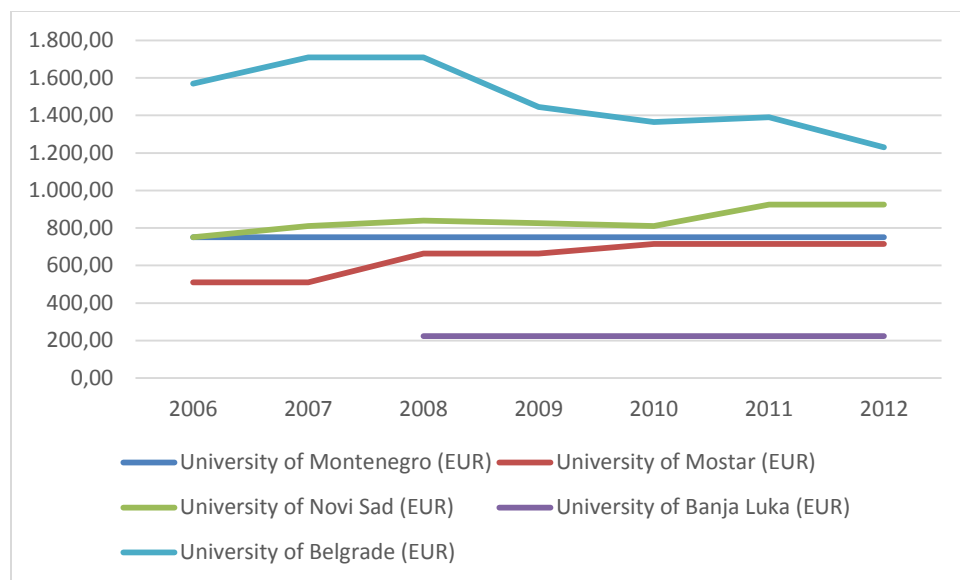
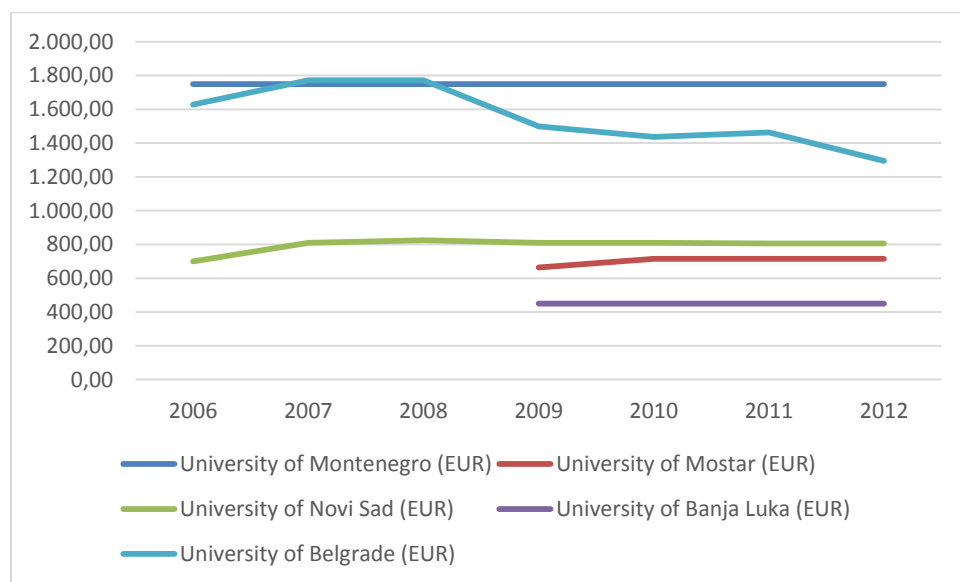


Figure 20: Average tuition fees for Bachelor studies across institutions (In EUR)

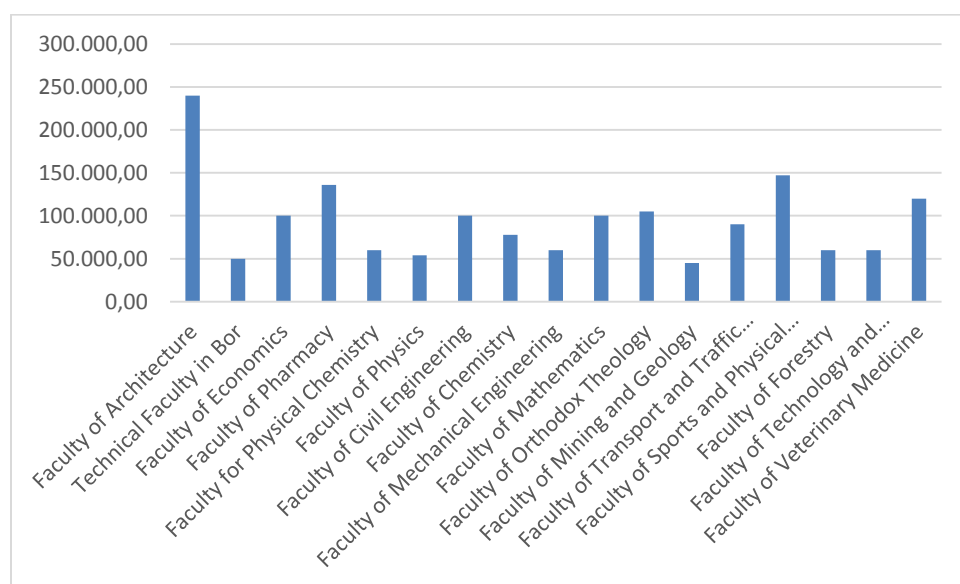
As Figure 20 indicates, the decrease in average tuition fees at Bachelor level is a combination of stable tuition fee levels at the University of Belgrade and the decreasing value of the domestic currency. Other universities kept their tuition constant or increased them. A very similar tendency is visible when we look at average tuition fees at Master studies (Figure 21).



*Figure 21: Average tuition fees for Master studies across institutions (In EUR)<sup>35</sup>*

According to the University of Montenegro, the conspicuous trend is that tuition fees are virtually unchanged during the last decade. The main reason for this stability is the sensitivity of the university towards the stable but low level of family income in the country. In the case of the University of Mostar, we can observe a slight increase of tuition fees, which is mainly due to the trend in general living costs, but also due to lack of support, that is, the non-stable financial revenues from public sources. At the University of Novi Sad the main reasons for changing the level of tuition fees is related to the socio-economic background of students and the increase of institutional costs. At the University of Belgrade, the main drivers behind the changes were related to inflation and changes in material costs.

There is considerable diversity regarding the amount of tuition fees between individual faculties. In case of the University of Mostar tuition fees are the lowest at the faculties of social sciences, while they are the highest at the faculties of medicine and health sciences. The following chart demonstrates this diversity in the case of the University of Belgrade.

*Figure 22: Tuition fees at the faculties of the University of Belgrade in 2012 (in RSD)<sup>36</sup>*

<sup>35</sup> Because the University of Mostar started to implement the Bologna requirements in 2005/2006, the first Masters studies started in 2008/2009.

Data about the tuition fees at the Singidunum University are not available. However, the university outlined that the amount of tuition fees has not changed drastically during the past years.

### 3.3.2. Institutional student support

With respect to direct or indirect student support, independently from the government allocated support, most of the universities present a number of awards to their best students. In some cases, there are also tuition waivers or scholarships available for students with disabilities or for students from a disadvantaged background. In the following part we outline these support mechanisms separately at each university.

The University of Montenegro provides each year awards for the three best students, one from the field of natural sciences, life sciences and medicine, one from social sciences and humanities, and one from arts. In parallel, each year all faculties choose one student to be awarded a grant by the university for one academic year. Faculties also award a certain number of their best students at the beginning of the academic year.

The University of Mostar has a Rector's award, while at the faculty level, there is a Dean's award. The criteria of receiving these grants is based on the academic results of the student from the previous year of studies. It is expected that the student has a grade point average above 4, passed all the required exams, and signed up for the next academic year without any unfinished subjects from the previous year. If all the criteria are met, the Dean proposes in a written document the names of these students to the Rectorate. At most two students from one faculty can receive the Rector's award, which is handed over at an official session of the University Senate during the Anniversary of the University. The criteria for the Dean's award is defined by each Faculty separately, and awarded on the Anniversary of the Faculty.

The University of Belgrade has several ways to support directly or indirectly its students. The University provides scholarships from its endowment according to a set of performance criteria. They also support students from disadvantaged social, material status or with disabilities, and also provide financial support for sport and social activities of students. At the University of Novi Sad student support is realized through student scholarships and awards given to the best students at the university. Similarly do the best

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<sup>36</sup> Contains data for a selected number of institutions only.

students from each faculty at the University of Banja Luka receive an award each year. Tuition waivers are also a common practice at universities. The Singidunum University provides tuition waivers for the best candidates, as well as the University of Belgrade, and some faculties of the University of Novi Sad (e.g. the Faculty of Economics). In total 2,5% of all students are exempt from paying tuition fees University of Novi Sad. At the University of Montenegro, students with disabilities are also exempt from paying tuition fees and in the academic year 2012/2013 there have been 38 such cases. The University of Banja Luka exempts students whose family members died in the Balkan wars from paying tuition fees, and offers a 50% tuition waiver for students coming from the same family. Thus, it is a common practice at universities to take into account the socio-economic background of the student and accordingly decrease or completely eliminate the required tuition fee.

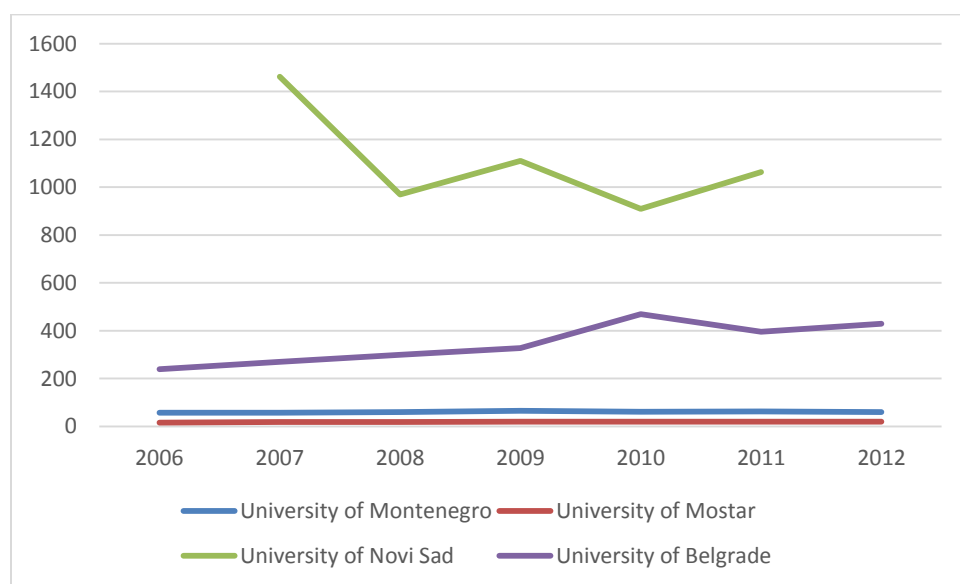


Figure 23: Total number of students supported by the universities<sup>37</sup>

<sup>37</sup> Data from the University of Mostar contains only the number of students supported by the Rectorate.

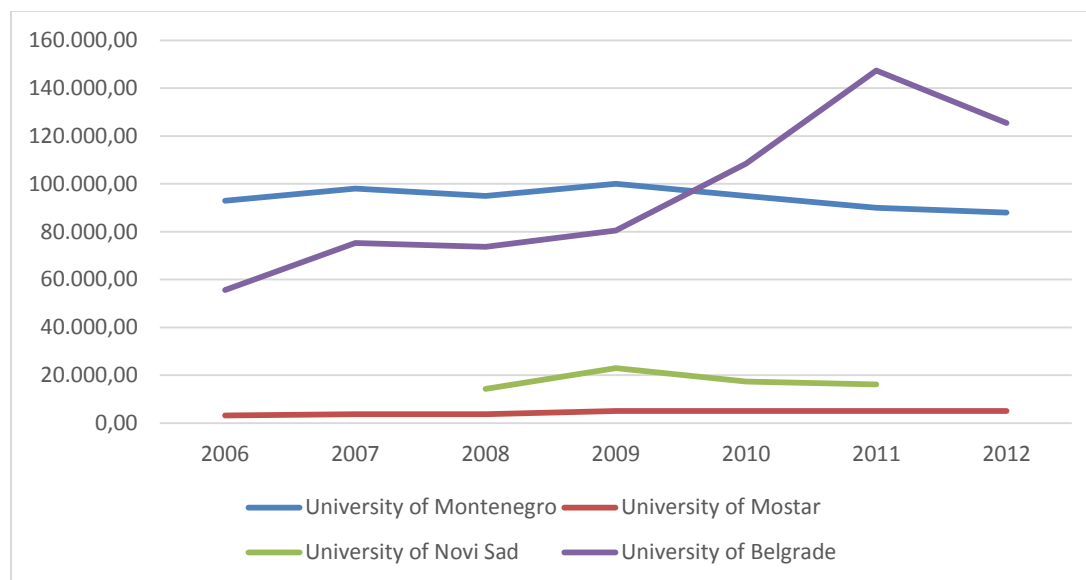


Figure 24: Total amount spent on student support by universities (in EUR)<sup>38</sup>

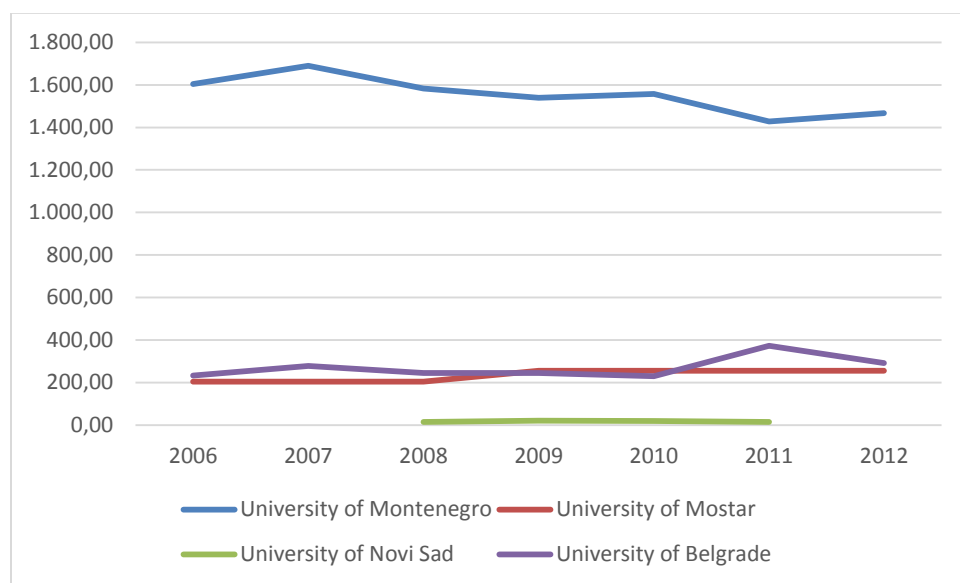


Figure 25: Per student support by universities (in EUR)<sup>39</sup>

<sup>38</sup> Data from the University of Mostar contains only the number of students supported by the Rectorate.

<sup>39</sup> It is not clear whether the scholarships of the University of Montenegro also include a tuition waiver or not.

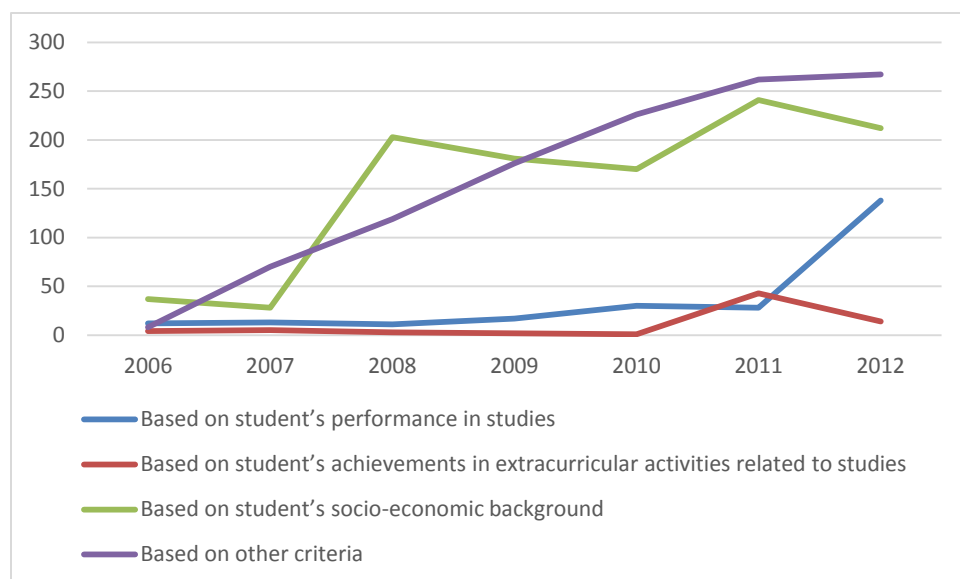


Figure 26: Students exempt from paying tuition fees at the University of Belgrade<sup>40</sup>

When looking at the relationship between the numbers of students supported and the amount spent on student support, we cannot observe a clear relationship. Some universities support a few students only, but devote a considerable amount for such purposes (i.e. the University of Montenegro), while others spend much less on student support, but many students are benefiting from this (i.e. the University of Novi Sad). Considering the amount devoted to student support we can observe a growing trend only in the case of the University of Belgrade. Data from this university shows also an increase in the number of students exempt from paying tuition fees, especially based on the student's socio-economic background and other criteria, set by the individual faculties. Tuition waivers are applied less frequently based on the student's academic performance or his or her extracurricular activities.

### 3.4. Property and investments

With the exception of the universities in Bosnia and Herzegovina (University of Banja Luka and Mostar) and Singidunum University in Serbia, the property of the institutions is owned by the state. Consequently, maintenance costs are shared between the university (and their faculties) and the government. At the University of Montenegro 75% of these costs are covered through the institutions own resources and the remaining costs by the state. In

<sup>40</sup> Contains data only for a few individual faculties of the university.

contrast at Serbian universities, the government covers the lion's share of the maintenance costs together with the individual faculties. Both, at the University of Belgrade and the University of Novi Sad, the central units contribute only 25% to these costs. Some of these universities also rely on domestic and European grants to cover part of their maintenance costs. In the case of the University of Belgrade, these can account for almost 75%.

At the University of Mostar, which owns its buildings, the costs are divided between the university, which covers about 25%, and its faculties, who cover 75% of the total costs. In this case, the university covers the maintenance of the central heating system and the costs of the ICT infrastructure. All other costs are covered by the faculties. In the case of the University of Banja Luka, the government, while not being the owner, still contributes to maintenance costs between 50% and 75%. The remaining costs are divided between the university and its faculties.

With the exception of the University of Belgrade, all other institutions reported to have had major investments in their properties since 2006. At the University of Montenegro, the Montenegrin government built a new building for the Rectorate of the university, and the university invested from its own revenues into finishing the buildings of three faculties. Other sources, such as university units, the EU, have not directly contributed to capital investments.

The University of Mostar had also conducted several capital projects. It has reconstructed the central heating system from its own resources. The first building of the Faculty of Pedagogy was also constructed with the joint investment of the university and the Republic of Croatia. The Republic of Croatia, with some support from the World Bank, has also donated to the building of the Civil Engineering Faculty, the Medical Faculty, and the Faculty of Philosophy. Besides, the mentioned buildings several other faculties have been renovated as well.

In 2005 the University of Banja Luka received a new building from the government of Republic of Srpska (former military base) with complete infrastructure, and another property for accommodating the university Rectorate and five faculties. Subsequently, the government has adopted two major grants, one in 2006 and one in 2009 for the reconstruction of the campus. The total amount of these grants was 8.150.000 KM (approximately 4 million EUR). In 2011 the development fund of the Republic of Srpska granted additional 7 million KM (about 3,5 million EUR) for the reconstruction of three faculties. These investments were followed by other investments in equipment from the universities own funds and through a loan from the Austrian government in a value of 6 million Euros.

The University of Novi Sad and Singidunum University reported to have conducted major infrastructural investments, but did not specify them.

The participating universities reported that in most cases capital investments from the government are not followed by an increase in public contribution to the maintenance of university property, which increases the share of the universities contribution to such purposes. This was the case at the University of Montenegro, the University of Novi Sad, and the University of Banja Luka. In some instances, the contribution has also decreased, for example at the University of Banja Luka, where following a change in the higher education law (which converted tuition fees into the universities own revenue) the government cut its contribution to the universities maintenance costs.

	UoM	SVEMO	UNS	UBL	USGD
University, through its own revenue					
Faculty/institute/department, through its own revenue					
Government					
European Union					
Government, through EU funds					
Other		Republic of Croatia			

*Table 7: Sources of funding for major capital investments*

	UoM	SVEMO	UNS	UBL	USGD
University, through its own revenue					
Faculty/institute/department, through its own revenue					
Government					
European Union					
Government, through EU funds					
Other					

*Table 8: Sources of funding for new equipment*

Considering the procurement of new equipment the universities reported to acquire them mainly through their own resources, while direct or indirect EU support contribute only in some cases to such investments. At the University of Mostar, new equipment was procured primarily through the universities and its faculties own resources. However, funds from TEMPUS projects, donations, the Republic of Croatia, and from the Federal Ministry of Education and Science have been also used to acquire new equipment.

### **3.5. Third mission**

#### **3.5.1. Cooperation with industry/business sector**

With the exception of the Singidunum University all other institutions have members from outside academia in their Governing Boards. These members are usually representing a public authority and are appointed by the respective governments or regional authorities. Therefore, the universities have very little (if at all) influence on who are going to be their external board members. In contrast, the selection of internal board members (employees of the university) is carried out through a public contest within the institution.

As the University of Novi Sad explains, the procedure of the appointment of external members is initiated by the provincial government by proposing their representatives to the University Council who makes the official decision on their appointment for a three-years-long period. The selection of external board members at the University of Banja Luka is taking place through a public call, and it sometimes happens, that employees of the university apply for such positions as well. The selection of external board members is done by the Government of the Republic of Srpska.

### 3.5.2. Knowledge transfer activities

There is no organised manner in which universities would address knowledge transfer, and practices tend to vary across institutions. The University of Mostar, through the engagement of its faculties, participates in organizing different types of courses or training for the wider public. The institution also takes part in the work of the technological park "Intera"<sup>41</sup>. Besides, most of the faculties have signed cooperation agreements with institutions who are related to their field and these agreements serve as a basis for initiating knowledge transfer activities. The University of Banja Luka established a University Centre for Entrepreneurship with the support of the state in 2009, which deals with knowledge transfer activities. The university has also contributed to the opening of an Innovation Centre and took part in the formation of the Banja Luka Technological Business Park, which is not functional yet. Similarly, the University of Belgrade has a large number of innovation centres, business incubators and spin-off companies that have been established in the recent years with the aim to increase knowledge transfer. At the University of Novi Sad, the most prominent way of knowledge transfer is realised through spin-off companies. The Singidunum University has established an Institute, which functions as a separate organisational unit and realizes research projects and cooperation with the private sector. The University of Montenegro has not reported any knowledge transfer activities (e.g. spin-off companies, science parks, etc.) and outlined that there are no units dedicated to such purposes. Additionally, neither the university nor any of its faculties have established spin-off companies since 2006. The University of Montenegro also highlighted that the current internal funding model of the institution impedes knowledge transfer activities, because no financial support is associated with it. On the other side, the University of Novi Sad highlighted that the internal funding model of their institution encourages knowledge transfer activities, however, they are not very stimulative.

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<sup>41</sup> Participation is ensured through the universities involvement in the governing board of the park.

The only university, which has a dedicated unit for knowledge transfer is the University of Belgrade. The unit is called Centre for the Transfer of Technologies and is funded through the private revenues of the university. It has two employees, one full time, and one employee on temporary contract. The centre carries out various tasks related to the efficient and effective transfer of research results for the purpose of industrial and social development. It supports the realisation of activities that strengthen the knowledge transfer between the university and the economy, helps to introduce new technologies to the market, connects different stakeholder for the integrated development of new technologies, educates and inform stakeholders about patents and intellectual property rights, provides help in the development of technological and business plans related to new products or services, and assesses the potential value and benefits of patents. This centre relies on revenues from donations and on funds provided through IPA projects (European funds). In 2012, it had 2.119.010,80 dinars (about 18.500 EUR) in revenue and expenses of 308.078,31 dinars (2.660 EUR)<sup>42</sup>.

The following table shows the universities perceptions of the relevance of different activities relating to knowledge transfer. The least relevant activity is the creation of interactive web-pages for public audience to discuss specific research issues. On the other hand, the most important activity (as perceived by university leaders) is the encouragement of students to make their thesis for enterprises. Similarly are activities concerning the popularization of research results and giving public lecture series for enterprises marked as important to certain extent.

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<sup>42</sup> Information obtained from the yearly report of the University of Belgrade.

	UMN	UM	UNS	UBG	Average
Through public lecture series marketed to entrepreneurs (or other targeted populations)	4	4	4	2	3.50
Through popularising research results	2	4	4	4	3.50
Through actively supporting personnel participation in the advisory boards of enterprises	1	5	2	4	3.00
Through establishing exchange programmes for personnel to visit/work part-time in enterprises	2	4	2	4	3.00
Through establishing exchange programmes for personnel to study and work abroad	2	4	2	2	2.50
Through prioritising collaborative projects with enterprises on a non-profit-basis	2	5	2	4	3.25
Through encouraging students to make their Bachelor, Master or Doctoral thesis for enterprises	2	4	4	5	3.75
Through personnel active presence in media by participating in popular programmes and writing research-based blogs or articles to newspapers	2	4	2	4	3.00
Through enhancing public access to university library services	2		4	2	2.67
By creating interactive web-pages for public audience to discuss specific research issues	1		2	2	1.67

Table 9: Perceived relevance of different activities for knowledge transfer<sup>43</sup>

### 3.5.3. The role of spin-off companies

Most of the universities have not established spin-off companies since 2006. The only exceptions are the University of Novi Sad and the University of Belgrade. In both cases professors and talented students have initiated such companies. The University of Novi Sad (that is their faculties) have established 68 spin-off companies since 2006, out of which many still operate at the premises of the university. The majority of these companies has been established by the Faculty of Technical Sciences where a number of professors

<sup>43</sup> Relevance: 1 - Not at all; 2 - To limited extent; 3 - Not sure; 4 - To certain extent; 5 - To large extent

utilized their experiences and connections working for private companies (Sabic 2009). The established spin-off companies provide opportunities for student's practical placements, but also contribute to income diversification. In most cases, the faculty is a co-owner of these companies and obtains a percentage of their revenues. Due to the benefits they bring to the institution, they are also highly appreciated by the faculty members.

The absence of spin-off companies at other universities is mostly associated with the lack of incentives. The University of Montenegro and the University of Belgrade reported that they do not have any measures which would stimulate entrepreneurial activities of their staff members (e.g. as criteria for promotion, remuneration, etc.) either at the university or faculty level. Similarly did the University of Mostar notice, that only informal stimulation exist at their institution, namely recognition by the management of the university for the individual's work. The University of Novi Sad or its faculties do not prevent anyone to establish spin-off companies, rather encourage students to participate in the work of already established ones (through internships, volunteering). At the University of Banja Luka, when it comes to the promotion of individuals, entrepreneurial activities (professional projects, patents and innovations) are taken into account. However, they are rarely a decisive factor for promoting academic staff members. Moreover, entrepreneurial activities are also considered by the internal quality assurance system of the university, but there are no special awards or other privileges for individuals engaged in such activities.

Universities tend to regard knowledge transfer activities as not very important or neither important nor unimportant. Both the University of Montenegro and the University of Belgrade stated that spin-off companies are irrelevant for the institutions financial stability. Compared to research activities, engagement in spin-off companies is perceived as a peripheral activity, which is rather individual and very specific (see tables below).

	1	2	3	4	5	6	
Peripheral							Central
Symbolic							Vital
Individual activity							Collective activity
Tied to specific themes							Omnipresent

Table 10: Perception of the importance of spin-off companies compared to the total set of activities of the University of Novi Sad

	1	2	3	4	5	6	
Peripheral							Central
Symbolic							Vital
Individual activity							Collective activity
Tied to specific themes							Omnipresent

*Table 11: Perception about the importance of spin-off companies compared to the total set of activities of the University of Belgrade*

#### 3.5.4. Cooperation with the private sector

Universities identified as their most important business partners large national companies, who are mainly working in the energy sector or telecommunications. International companies and public non-profit organisations are mentioned only in a few cases.

For the University of Montenegro the most significant partners are IT companies, metal processing companies, and energy companies. These companies used to be state owned and the partnership was maintained with them after their privatization. They contributed to the development of many university buildings and equipment. For the University of Mostar the main business partners are metal processing companies, aircraft manufacturing companies, energy companies, communication and IT companies, and commercial banks. The University has signed cooperation agreements with many of them, however, in many cases these agreements do not result in concrete projects, although there are some exceptions mentioned by the university. For the University of Novi Sad the main business partners are energy companies, food processing companies, and IT and electronics companies. The University of Belgrade maintains partnerships with big national and international companies in the field of energy and telecommunications, as well with many private banks with which the University and its faculties have cooperation agreements. These agreements usually result in concrete educational activities, which the university carries out for the employees of these companies. Sometimes the university participates also in developing the project documentation for investments by these companies.

## **CHAPTER 4: SUMMARY OF CONCLUSIONS**

This report has outlined several trends and institutional practices related to the funding of higher education in Western Balkans. There are many similarities across institutions due to the countries common historical tradition in higher education. The universities have very similar management structures, in most cases are highly fragmented with different institutional regulations and in some cases have an independent legal status, and rely greatly on state for funding and setting student numbers. These characteristics are clearly reflected in the institutions' financial practices.

Universities tend to operate on annual budgets while producing long term financial plans that would take into account projections of both public revenues and revenues from private sources are rare. Annual budgets are defined according to public revenues and in close cooperation with state or regional/cantonal authorities. Revenue from private sources are handled separately by the management of the university and used to supplement public funding in areas where it is necessary (to adjust the salary levels of employees, contribute towards maintenance costs, to support scientific activities, and future investments in property or equipment).

Revenues from public sources are the dominant income source for most of the universities. Since 2008 many universities are faced with stagnating or sometimes even decreasing public funding in light of the current financial crisis. Funding of research activities was the only area in which public funding has increased at several universities. Consequently, revenues from private sources play an increasingly important role in counterbalancing the decreasing public support. In this regard, tuition fees constitute the main source of private revenue for universities. Beside the governmental regulations and the labour market needs, also the socio-economic status of the region is taken into account when setting the tuition fees. Between 2006 and 2012 the level of tuition fees has increased modestly, and in some respect even decreased. However, this is rather related to currency fluctuations than actual changes in real value of the fees.

Salaries make up the largest share of the institutions' expenses, which have slightly increased over the years. Besides, the institutions spend a considerable amount on the maintenance of their properties as well. In most cases the university property is owned by the state, who also contributes to their maintenance costs. Several universities reported to have undertaken larger investments into their property, which were dominantly financed from the state budget. However, rarely have these investments been followed up by adequate financial contribution to their maintenance by the state, which requires

additional contributions from the universities' and their faculties' own revenues. There are different models for the internal allocation of funds and many institutions rely on a specific calculation method, which defines the percentages of funds to be transferred from or to the individual units. These funds are mostly used to subsidize running costs across the institution, and often result in internal rivalry between faculties that generate more revenues than the others.

All universities reported to have a system in place to support their students from their own revenues. The most common way to do so is through various institutional awards for the best performing students, although some universities have also programmes for supporting students with disabilities or from disadvantaged backgrounds.

The universities third mission is a rather peripheral area with very little incentives in place to encourage such activities. The basis for knowledge transfer are cooperation agreements signed between the university and different private or public companies, which sometimes result in concrete projects or activities conducted by the university employees.

As the report shows, (public) universities in the Western Balkans are very much dependent on governmental support, although they obtain a substantial amount of revenues from private sources as well. Their income from private sources is considerably higher than the EU21 average, and because it is mainly generated through tuition fees, it makes universities vulnerable towards decreasing students numbers. Consequently, competition for students is likely to become a core strategy for the institutions to ensure financial sustainability, especially in light of stagnating or even decreasing public support. As part of this strategy, universities often try to invest into their infrastructure, for which they secure funding from public sources. On the other hand, fostering activities related to the institutions third mission is rather absent, except in the case of a few universities. Therefore, further decrease in public support might likely force universities to increase their tuition fees, while at the same time direct away funding from larger investments, which would be necessary for further improvement in the quality of teaching and research.

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