

**Ka održivom i jednakopravnom  
finansiranju *visokog obrazovanja*  
u Bosni i Hercegovini, Crnoj Gori i Srbiji**

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



## **WP4. FINANCING AND EQUITY POLICY FRAMEWORK**

**Report from the Working Group in the Federation of B&H**

**Contents**

- Part 1. INTRODUCTION..... 2**
- 1.1. Context..... 2
- 1.2. Composition of the Working Group..... 3
- 1.3. Report goal and structure ..... 4
  
- Part 2. FINANCING AND FUNDING MECHANISMS OF HIGHER EDUCATION IN THE FEDERATION OF B&H ..... 6**
- 2.1. Higher education financing challenges in the Federation of Bosnia and Herzegovina ..... 6
- 2.2. Funding mechanisms of higher education ..... 8
- 2.3. Funding mechanism/s of higher education in the Federation of B&H ..... 11
- 2.3.1. Analysis of a survey conducted at HE institutions..... 12
- 2.3.2. Higher education financing strategy..... 16
  
- Part 3. THE EXISTING HIGHER EDUCATION FUNDING FRAMEWORK ..... 19**
- 3.1. Challenges of HE funding..... 19
- 3.1.1. Policy recommendations for improvements of funding framework ..... 19
  
- Part 4. FINDINGS AND RECOMMENDATIONS FROM THE WORKING GROUP .... 21**
- 4.1. Findings of stakeholder consultations ..... 21
- 4.2. Recommendations of stakeholder consultations..... 23
  
- REFERENCES..... 24**
- Annex 1: Questionnaire: Measured Indicators and Budgetary Funding of Higher Institutions in the Federation of Bosnia and Herzegovina ..... 26

## Part 1. INTRODUCTION

### 1.1. Context

Higher education system is a dynamic process between the university, state and society. *“Higher education institutions will always be required to be responsible to the public, regardless of whether they themselves are public or private. The society has too many interests in higher education to allow ‘pure’ autonomy (which has, most probably, always been a myth) to prevail”* Meek (2003).

The question of higher education financing is one of the most discussed questions in higher education policy. Modern interpretation of *institutional autonomy* states that internal organization of a university is not governed by state regulations, and neither are the type of university government, internal management of financial resources, type of income generation from different sources (except state ones), staff employment and study conditions, as well as the freedom of scientific research and teaching. In other words, the idea of institutional autonomy allows higher education institution self-government without external interventions.<sup>1</sup>

Financial sustainability, increased autonomy, appropriate governing structures and strong management and leadership capacities are key elements in order for universities to fulfill their multiple missions and respond to the current challenges in an increasingly complex and global environment.<sup>2</sup> One of the key aspects of institutional autonomy is the autonomy of financial transactions. However, there is the question of compared to whom should higher education institutions be autonomous and in which domain.

Demands for diversification of public higher education institutions’ financing sources have often been exposed to public discussion in the previous period. The financing mechanisms that were based on analysis of output parameters were most often the topic of the discussions. Limited financing sources from the public sector on one side, and the needs for higher investments into higher education, on the other, brought the urge to find new sources for higher education funding. Diversification of financing sources and decrease of government share in financing would often start a discussion on what makes a higher education institution *public*. Is it the financing, governing structure, proclaimed mission or something else?

---

<sup>1</sup> <http://www.university-autonomy.eu/dimensions/financial/> (December, 2015)

<sup>2</sup> [http://www.eua.be/Libraries/publications-homepage-list/Financially\\_Sustainable\\_Universities\\_II](http://www.eua.be/Libraries/publications-homepage-list/Financially_Sustainable_Universities_II) (December, 2015)

## 1.2. Composition of the Working Group

After the consultations of the Coordinator with project partner in the Federation of B&H in December 2014, the Working Group consisted of the following representatives, who took active role in working activities and, later, in the writing of the Report.

**Federal Ministry of Education and Science** a **Zlatan Buljko**, Professional Advisor,  
Institutional Coordinator for TEMPUS FINHED  
Project

### University of Mostar

Ph.D. **Ljerka Ostojić**, Rector of University

Ph.D. **Ivo Čolak**, Vice Rector

Ph.D. **Izabela Dankić**, Vice Rector

Ph.D. **Vojo Višekruna**, Project Coordinator

Ph.D. **Dražena Gašpar**, Professor at the Faculty of  
Economics

Ph.D. **Sanja Bijakšić**, Professor at the Faculty of  
Economics

Ph.D. **Željko Marić**, Professor at the Faculty of  
Economics

Ph.D. **Milenko Obad**, Professor at the Faculty of  
Mechanical Engineering and Computing

### 1.3. Report goal and structure

Higher education system of Bosnia and Herzegovina is regulated by the Constitution of Bosnia and Herzegovina (1995), guaranteeing that all persons within the territory of Bosnia and Herzegovina shall enjoy the human rights and fundamental freedoms including the right to education and, upon signing the Bologna Declaration in 2003, the Framework Law on Higher Education in Bosnia and Herzegovina (2007) stating that Bosnia and Herzegovina accepts the European strategic goals in the field of higher education, as expressed in the Declaration of the European Higher Education Ministers made in Bologna (1999) as well as the subsequent development of this concept as well as that higher education is an activity of special interest for Bosnia and Herzegovina<sup>3</sup>.

Article 4 of the FLHE B&H<sup>4</sup> stipulates that the term “higher education” shall mean education upon completion of secondary education, leading to an internationally recognized higher education degree, and will be based on:

- academic freedoms, academic self-governance and the local community,
- openness of the university towards the public, the citizens and the local community,
- indivisibility of teaching and scientific research, i.e. artistic creation,
- respect for European humanistic and democratic values, and harmonization with the European higher education system,
- respect for human rights and civic freedoms, including prohibition of all forms of discrimination,
- the concept of lifelong learning,
- interaction with the community and the obligation of the university to develop social responsibility of students and other members of the academic community.

The FLHE B&H does not include any explicit provision regarding the system or model of higher education financing, but implicitly defines areas for which a financing principle is both necessary and feasible: the right of acquisition and management of public and private financial resources; determination and collecting of tuition fees and other fees; hiring of the staff; determination of the curricula and financial development plans; co-financing of the scientific research activities; and others. The Law stipulates that the Agency for Development of Higher Education and Quality Assurance (HEA) is charged with making a recommendation on the minimum fees for all students at accredited higher education institutions with the objective of harmonizing them across Bosnia and Herzegovina.

According to the Constitution of B&H<sup>5</sup>, education in general, and in that way the tertiary education is falling within the competence of various levels of authorities in B&H. More precisely, it is under the Ministry of Education of Republika Srpska authority, and at the cantonal level, or their Ministries of Education, Science, Culture and Sport in the Federation of Bosnia and Herzegovina, and under the Department of Education authority in the Brčko District

---

<sup>3</sup> Article 2 of Framework Law on Higher Education in Bosnia and Herzegovina

<sup>4</sup> Framework Law on Higher Education in Bosnia and Herzegovina

<sup>5</sup> B&H =Bosnia and Herzegovina

of B&H. It is a very complex model of organization and management, and consequently implying different models of higher education financing.

When it comes to the Federation of B&H, the higher education financing is characterized by decentralized and fragmented model. The formula for the allocation of cantonal revenues does not include a provision for higher education financing, and thus the burden of financing higher education institutions is divided unequally by cantons.

The goal of this report is to give an overview of the complex issues of higher education financing and various financing input data collected from higher education institutions during the course of the project, a strategic direction for higher education financing in B&H, present a model of financing developed by recently completed Reform of Higher Education Financing project in B&H as well as analysis of a research/survey conducted at HE institutions with their opinions and suggestions.

## Part 2. FINANCING AND FUNDING MECHANISMS OF HIGHER EDUCATION IN THE FEDERATION OF B&H

### 2.1. Higher education financing challenges in the Federation of Bosnia and Herzegovina

Since the end of the war to date, Bosnia and Herzegovina is facing a number of problems in the education system. Constitutional organization of B&H, different policies arising from different legal regulations and lack of national harmonization in education at the state, entity and the Brčko District level, lead to a different attitude towards education and educational policy.

Since the higher education system has not yet been defined by minimum common standards harmonized at all levels of government, thus a space is open for heterogeneity and deviations of working method along with the violation of basic human rights, right to education, integrity and autonomy of the academic community in B&H calling into question the quality of academic, scientific - research and university life.

Article III.4 of the Constitution of the Federation of B&H stipulates that the cantons have all competencies that are not expressly granted to the federal government. In particular, they are competent for establishing education policy, including adoption of regulations on education, and establishing and implementing cultural policy.

Competencies of the Federation of Bosnia and Herzegovina in the area of education are determined by its responsibility for ensuring the right to education. According to legal responsibilities in this area, Federal Ministry of Education and Science performs administrative, professional and other activities, as well cooperates and coordinates activities with the cantons. The key role and functions of the Ministry are at a consultation level and ensuring efficient coordination of the education sector activities in the Federation of B&H, and provision of technical and other support to cantons for the successful implementation of policies agreed at the level of Bosnia and Herzegovina.<sup>6</sup>

According to gathered statistical data during the project, the number of enrolled students has begun to rise from the academic year 2007/2008 through the academic year 2010/2011 but it decreased in the academic year 2011/2012. When comparing the academic years 2006/2007 and 2010/2011, with the highest number of enrolled students, there is increase in enrolment by 14%. The number of higher education institutions (i.e. universities and higher schools/colleges) in the Federation of Bosnia and Herzegovina has begun to rise from the academic year 2007/2008, but only the private ones along with the adoption of the FLHE B&H in 2007 and

---

<sup>6</sup> Strategic Directions for HE Development in the Federation of B&H from 2012- to 2022, Federal Ministry of Education and Science, 2013

their number almost doubled in the academic year 2012/2013. We noticed an increase in graduate students of all study programs by 79%, when comparing 2006 as the baseline reporting year with the year 2012, for which mostly contributed the introduction of the Bologna system of studying. Since the target year for completion of old university degree study programs is 2015 there was a decrease in number of graduate students, but an increase in number of Master of Science graduates by 200% in 2012 compared to 2006.

Data taken from the Questionnaire for CEP and the ministries (Parts I and II) filled out by public universities in the Federation of B&H, as well as cantonal budgets and financial database of the Federal Ministry of Education and Science, show that investment in higher education from national public sources<sup>7</sup> was ranging from 0,61% of GDP in 2006 to 0,68% of GDP in 2012 (the highest was in 2008, or 0,81% of GDP) and is almost twice times lower than the European average of 1,3% of GDP. But, when we are referring to GDP percentages we should also take into account the nominal amount of GDP and then make comparison/s with EU countries. When it comes to public expenditure per student, in the Reform of Higher Education Financing report is stated that “Public expenditures for tertiary education in 2010 were € 759 per student, equivalent to 2,021 € PPS (PPS - Purchasing Power Standard represents an artificial common reference currency unit used in the European Union in order to allow a reasonable comparison of consumption by country, taking into account differences in the price level). In European terms, there is an extremely low consumption, amounting to only 29% of the European median of € 8087 PPS and about half of that as much in Greece as a European country that spends the least (Report on the Implementation of the Bologna Process in 2012)”<sup>8</sup> and concluding that “the figure of 2,021 PPS € per student is in strong contrast with the next lowest figure in the case study countries, which amounts to 4764 PPS € (Bulgaria), and is only 29% of the median consumption of the EHEA 8,087 PPS €.”

There are currently three integrated and still three non-integrated public universities in the Federation of B&H, although the FLHE B&H stipulates otherwise<sup>9</sup> and according to Maja Letica (2014) there is “resistance to integration at those universities whose faculties have still the status of legal persons, especially at those faculties that are substantially financed from own resources”.

Data collected on financial support to student standard, i.e. to students and mobility of students from public sources in the Federation of B&H show that, although still at a low level, total allocations to students from public sources, have almost doubled when comparing the baseline year 2006 and the year 2012, but there was very small allocation to student mobility in the reported period. Grants, scholarships for students with special needs, Roma students, talented students, support to student unions / associations / councils had the highest allocation in 2008 and 2009 and sharp decline in the subsequent years due to budget cuts at the federal level, but increase by 30% in subsidies for student accommodation and restaurants in 2012 compared with 2006. Funds from public sources available to students for mobility are at the lowest level.

---

<sup>7</sup> Government funding (state level), government funding for research only (separate from HE) allocated to HEIs, entity/cantonal/city/municipal level funding

<sup>8</sup> Reform of Higher Education Financing: Context and Recommendations

<sup>9</sup> Article 60 para 2 of the FLHE B&H (2007) stipulates as follows: “*Integration of higher education institutions shall commence on the date of this Law coming into force, and shall be completed no later than one year after its coming into force*”.

Fees for self-funded students in B&H are relatively high according to European standards and indicative data show that the share of income of universities coming from students and their families are among the highest in the EHEA.

## 2.2. Funding mechanisms of higher education

Universities receive funding from various sources. There are three main options:

1. public funds (government),
2. private agents (households / private sector) or
3. international sources.

Public funds from the government are the largest source of income for most universities in B&H. In most countries, public funds are allocated to universities by the ministries responsible for higher education and research.

Private funds are the second most important source of funds for universities in the EU and in a few cases are actually the most important source. These are funds that universities provide the household or students and their families or the private sector, such as private companies, institutes and so on. Revenues from individuals usually come in the form of scholarships, academic charges and fees or costs of entry, while the proceeds from the private sector in the form of fees for research and development services, or income from the provision of services, such as counseling, rental facilities, libraries, museums, or other services or in the form of endowments. Universities also receive philanthropic funds, such as grants, donations, sponsorships from various private sources, charitable organizations or foundations. These funds make up a small component of the income structure of European universities, usually in the amount of 3-4% of the total income of the university.

International sources can be public (i.e. funds received through various projects and programs of the European Commission, World Bank, etc. or other international organizations or foundations) or private (mainly fees from international students for tuition and agreements with foreign legal entities).

Various sources of funding are shown in Figure 1.

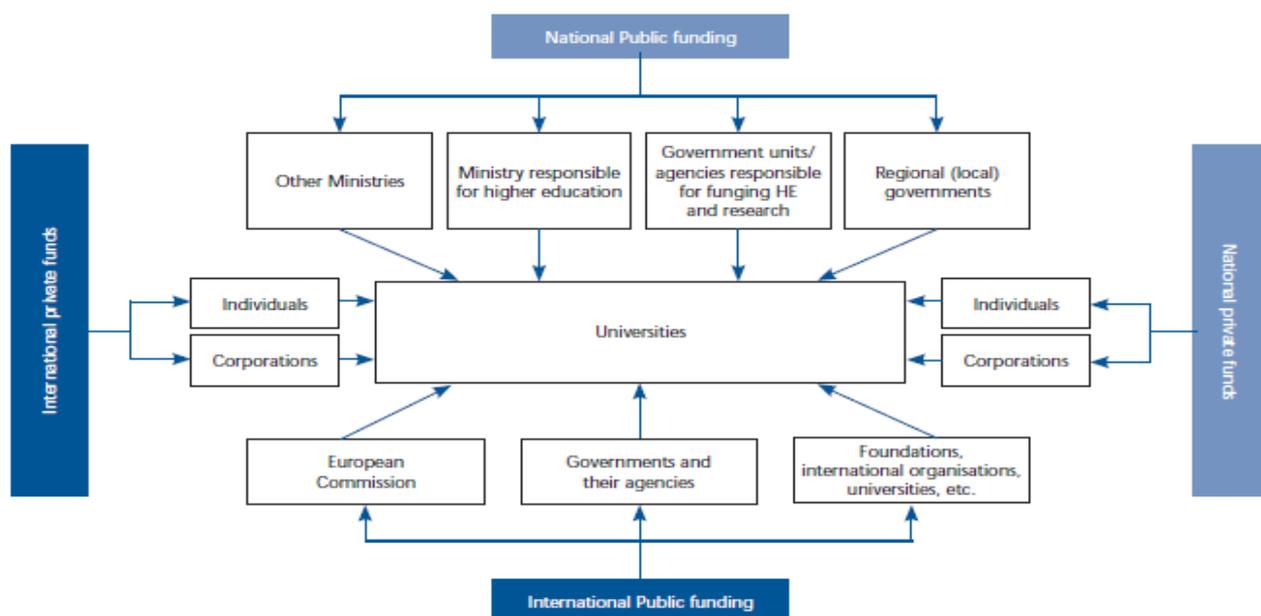


Fig. 1- Sources of funding for university<sup>10</sup>

The funds are usually allocated directly to universities - mostly in the form of grants or through budget lines, or by students through vouchers or expenses paid by the government, and most of the system has a component of financial support for students and their families, either through grants / scholarships, loans, subsidies or tax incentives. The B&H authorities transfer funds to the universities directly. A small percentage of the funds is given indirectly, through scholarships to students. The mechanisms the governments use to channel public funds to higher education are complex and diverse. According to the Council of Europe study<sup>11</sup> they can be evaluated by two dimensions (Figure 2):

- To what extent the authorities are trying to directly manage the operations of HE institutions;
- To what extent funds are based on the fulfillment of different objectives.

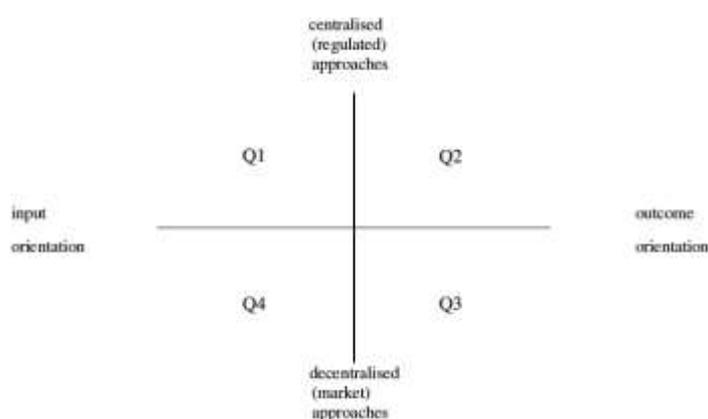


Fig. 2 -Mapping public funding regimes

<sup>10</sup> EUA Publications 2008; Financially sustainable universities, Towards full costing in European universities, p.23

<sup>11</sup> Salerno, Carlo, Financing higher education: the economics of options, trade-offs and dilemmas, The public responsibility for higher education and research, Council of Europe Publishing, Strasbourg, April 2005, p. 182

The first dimension analyzes how the government is involved and how much weight to manage the work of institutions of higher education. The second dimension analyzes the criteria by which the government provides funding for higher education. On the one hand the governments using criteria that are based on inputs, providing resources necessary for the functioning of higher education, on the other hand are governments that use the results and outcomes as well as the criteria for funding.

Q1 is a traditional type of financing. Centralized systems usually allocate funds on the basis of annual applications that were submitted by the budgetary authorities.

Q2 is also a centralized system, but the criteria for the provision of funds are based on the results achieved.

Q3 is a market-oriented system whose key feature is represented by HEIs that are essentially competing regarding the cost of given support to research activities of graduates by submitting offers to the national funding agencies.

Q4 is the most progressive and as such is likely to be implemented by a voucher system.

In terms of funding mechanisms there is no uniform agreement on the types of funding mechanisms for universities. The traditional approach, which is most common in Europe is the historical one (incremental or negotiated), with the amount of funds agreed in relation to the funds from the previous year. Within the ongoing reform of the financing of universities, the main mechanisms related types represent formula funding, contracting and project finance or earmarked funding. There is a definite shift towards funding is based on a formula, even though there are still many cases in which the historical funding is the main method.

In addition to basic activities financing, their different types and their development in this respect, there have been a number of government initiatives in different countries in Europe regarding the use of central funding, in order to set specific policy priorities.

Policy priorities typically comprising such initiatives include: priority subjects / disciplines (for economic, linguistic / cultural, political reasons); social inclusion; graduation rates / retention; centers of excellence for research or teaching / learning; support to internationalization; sector 'streamlining', costly infrastructure financing.

Different approaches, including central management of funds have been used. Funds are provided for within the budget allocations to HE; financial incentives within financing methodologies; 'joining' initiatives to encourage cooperation or institutional mergers.

As with the basic funding, there are a variety of access methods of allocation of public funds directed to specific policy objectives. They can be divided into the following main types:

- Competitive funding: resources allocated to institutions through the competition after submitting proposals / applications through a competitive selection process;
- Funding formula: the algorithm is based on standard criteria to calculate the amount of public grant funding for universities;
- Harmonized or self-financing: this refers to the financing for which the main funder requires that an institution as beneficiary provides a proportional amount of the total cost of activities or project to be financed from own or other sources;
- Grant or lump sum allocated to each university: financial grants intended to cover several categories of expenses such as teaching or research;

- Grants / subsidies: financial support provided directly to students;
- 'Seedcorn' funding: funding that is provided for a limited initial period to ensure that the project or initiative becomes the only viable.

The variety of approaches reflects the range of different operational and policy contexts within the EHEA countries. The method of distribution is reflected in the purpose of financing and the overall goal of policy specific initiatives. For example, if specific funding is used to ensure that all universities undertake a particular activity or the supply of a certain goal, then the mechanism of distribution is less likely to be competitive, but will ensure that funding is provided to support this goal at all universities. Unlike the one across the EHEA, funding for specific research projects tends to be competitive and distributed on the basis of excellence.

There is an increasing trend in Europe and at the international level to move away from historically based financing to financing based on the formula for basic university's activities. In fact, financing based on formulas distributes public funds to universities based on defined and transparent formula, instead of the historical and / or negotiated agreement. Therefore, it is consistently predictable and is not open to corruption or manipulation. Financing based on formula is still based on input measures such as the number of students or employees, however, originally outcome-oriented formulas or components of the funding are increasingly being used, at least for part of the financing.

Recent studies identify European trends towards (mainly limited) element of cost-sharing (the contribution of students / family to costs of higher education) for more diversified sources of financing and according to an approach that is more oriented to public funding of universities based on performance either through contracts on the outcomes, conditions of the grant, or the revision of the arrangement. Funds for research are mainly set in relation to the ultimate impact, while funding for basic financing of teaching based on performance tends to be marginal. The general direction of shift is also towards greater financial and operational autonomy of the university, but with corresponding greater accountability. The development in terms of management involves the shift in a small number of countries towards the CEO - style of Rector and beyond to the increased use of external governors.

### **2.3. Funding mechanism/s of higher education in the Federation of B&H**

Criteria for determination of the amount of public funding for HEIs mostly do not exist and funding by cantons is made on a lump sum basis, depending on availability of cantonal funds, largely based on costs from the previous year, regardless of the expressed needs of HEIs. Below are some explanations:

1. In the Una –Sana Canton, where a treasury system is in place, a basis for budget financing represents the total number of students enrolled at the University of B&Hać, number of teaching and non-teaching staff according to the standards of higher education, capital investment and costs in accordance with the University vision of the development and other budgetary positions proposed by the University and accepted by the Government of the Canton. The University is required to comply with the legally stipulated deadlines to submit an annual budget proposal, based on established criteria, which should be correlated with the annual financial plan of the University. A request for funding is an instrument by which the University presents its needs for budget allocation. The process of preparing each annual

budget begins by planning a three-year rolling budget plan representing an estimate of the preliminary budget projections for the next two years. The three-year budget and projections for the next two years aim to simplify and improve transparency in budget planning, as well as to improve the predictability of funding from the budget.

2. In the Zenica – Dobož Canton, also using a treasury system, criteria for determining the amount of public funding do not exist, but the funding is done by the Canton on a lump sum basis depending on the availability of cantonal funds, mainly on the basis of costs from the previous year, despite the expressed needs of the University of Zenica.

3. Both universities in the Herzegovina – Neretva Canton are funded on a grant basis and they are not kept as budgetary beneficiaries.

4. In the Sarajevo Canton, the University of Sarajevo is funded through a transfer for non-profit organizations (i.e. grant) named a transfer for HE and transfer for science programs through the Ministry of Education and Science of Sarajevo Canton.

When it comes to spending funds received by cantons, a detailed line item budget is in place at universities using treasury system and others are using a lump sum methodology. Own income of HEIs represents on average 44% of the total income being increasingly used by universities to contribute to the difference in salaries, and thus the level of participation of students and their families in the total costs of HEIs is significant since the largest part of income originates from tuition and other fees.

The general funding mechanism of higher education corresponds to the Q1 model explained above. The funds that universities receive are based on inputs and outcomes are not taken into consideration.

### **2.3.1. Analysis of a survey conducted at HE institutions**

In order to get insight into financing priorities the higher education (HE) institutions should rely on in the Federation of Bosnia and Herzegovina, a questionnaire has been delivered to managers of public higher education institutions. The questionnaire contained a variety of indicators, and the respondents had to assign ratings based on importance - from 1 (least important) to 10 (highest priority). More precisely, managers of public higher education institutions were asked to assess the influence that each of those indicators should have on the amount of the funds that will be allocated to individual higher education institutions from the cantonal ministries (Table 1).

An extensive list of indicators that have been evaluated was created on the basis of indicators that are a measure for financing of public higher education institutions in the European Union countries. Nevertheless, for the same list of indicators, the managers of public higher education institutions were asked to evaluate the importance of each indicator from the aspect of its impact on the quality of the studies. The questionnaire was sent to 72 addresses of public higher education institutions, but only 21 or 29,10% of them have accepted to participate and submitted their answers. Among 21 higher education institutions that were ready to participate in the research, there were 18 managers of faculties (vice-rectors, deans and vice-deans) and 1 manager of higher vocational school/college, while the rest were 1 QA Manager and 1 President of the Scientific and Teaching Council.

**Table 1: Indicators arranged by importance for funding of public (HE) institutions**

No.	Indicator	N	Min.	Max.	Arit. mean	Sta Dev.
1	Structure of teaching staff	21	7	10	<b>8,81</b>	1,0519
2	Number of teaching staff	21	6	10	<b>8,71</b>	1,2009
3	Number of laboratories and centers	21	3	10	<b>8,10</b>	1,9495
4	Total number of students at undergraduate studies in the previous academic year with budget status	21	4	10	<b>8,00</b>	2,0237
5	University/faculty ranking on international lists	21	3	10	<b>7,90</b>	1,7431
6	Training experts in the priority areas for the Federation of B&H	20	3	10	<b>7,80</b>	2,1119
7	Area of available buildings	20	3	10	<b>7,75</b>	2,3211
8	Total number of students at Master/graduate studies in the previous academic year with budget status	20	1	10	<b>7,60</b>	2,4779
9	Total number of graduated students at undergraduate studies in the previous academic year	21	4	10	<b>7,52</b>	1,7894
10	Number of scientific institutes	20	1	10	<b>7,35</b>	2,5937
11	Total number of graduated students at Master/ graduate studies in the previous academic year	20	1	10	<b>7,30</b>	2,2159
12	Revenue from external financing sources	21	3	10	<b>7,29</b>	2,1634
13	Total number of students at PhD studies in the previous academic year with budget status	20	3	10	<b>7,25</b>	2,7180
14	Number of papers in magazines with an impact factor in the previous academic year	21	1	10	<b>7,14</b>	2,2315
15	Total number of defended PhD theses in the previous academic year	21	1	10	<b>7,10</b>	2,4862
16	Total number of obtained ECTS points in the previous academic year by students with budget status	21	3	10	<b>7,00</b>	2,0471
17	Number of non-teaching staff	21	4	10	<b>6,86</b>	2,0068
18	Structure of non-teaching staff	18	1	10	<b>6,78</b>	2,8782
19	Awards won by students at international competitions	21	1	10	<b>6,71</b>	2,9137
20	Number of international students	21	3	10	<b>6,67</b>	2,5135
21	Awards won by employees at international competitions in the previous academic year	21	1	10	<b>6,62</b>	2,8027
22	Awards won by employees at national competitions in the previous academic year	21	1	10	<b>6,57</b>	2,7355
23	Awards won by students at national competitions in the previous academic year	21	1	10	<b>6,48</b>	3,0647
24	Number of accepted patents in the previous 3 academic years	20	1	10	<b>6,20</b>	2,9086
25	Number of student help services (career guidance services, student help services, etc.)	21	1	10	<b>6,09</b>	2,4476
26	Number of applied patents in the previous 3 academic years	20	1	10	<b>5,55</b>	2,6547

The managers of higher education institutions gave the highest importance to the structure of teaching staff as an indicator that should primarily affect the funding of higher education institutions (M = 8.81). This indicator has the lowest standard deviation, which indicates that the higher education institutions, to a large extent, agree that this should be the main indicator on which financing of higher education institutions will rely. Immediately after this indicator follow indicators that are related to the number of teaching staff (M=8.71), number of laboratories and centers (M=8.10), number of students who are funded from the budget (M = 8.0). Small standard deviations for these indicators suggest that there is considerable agreement regarding the importance of these indicators for funding of public higher education institutions. They are followed by the university/faculty ranking on international lists, training experts in the priority areas for the Federation of B&H, as well as the area available for buildings.

Managers of higher education institutions consider that funding of their activities should not depend on awards to students and employees, number of non-teaching staff, as well as the quality of scientific research. They support that claim with low grades assigned to the importance of the number of papers in journals with a specific impact factor (M = 7.14), awards that employees received at international competitions in the previous academic year (M = 6.62), the number of patents (M = 5.55), awards that students won at different kinds of competitions (M = 6.71).

When asked to propose something else or new indicators when the importance for funding of public HEIs is concerned, we received the following inputs:

1. International exchange
2. Number of international and local projects as well
3. Number of teachers with diplomas obtained in EU/other countries
4. Mobility of teachers at EU universities
5. Mobility of students at EU universities
6. Number of contracts signed with companies both locally and internationally
7. Professional practice
8. Inter-faculty and inter-university cooperation
9. Activities of alumni associations
10. Activities of the forum of stakeholders
11. Number of international lecturers
12. Mobility of own staff.

**Table 2: Indicators arranged by importance for quality of public (HE) institutions**

No.	Indicator	N	Min.	Max.	Arit. mean	Sta Dev.
1	Number of papers in magazines with an impact factor in the previous academic year	19	7	10	<b>8,84</b>	1,1362
2	University/faculty ranking on international lists	18	5	10	<b>8,50</b>	1,6415
3	Awards won by students at international competitions	19	5	10	<b>8,47</b>	1,6016
4	Number of laboratories and centers	19	5	10	<b>8,26</b>	1,4812
5	Awards won by employees at international competitions in the previous academic year	19	2	10	<b>8,26</b>	2,0479
6	Awards won by students at national competitions in the previous academic year	19	4	10	<b>8,26</b>	1,6171
7	Number of teaching staff	19	5	10	<b>8,21</b>	1,5754
8	Area of available buildings	19	4	10	<b>8,16</b>	1,7848
9	Training experts in the priority areas for the Federation of B&H	18	4	10	<b>8,06</b>	2,1724
10	Structure of non-teaching staff	19	3	10	<b>7,95</b>	1,9049
11	Awards won by employees at national competitions in the previous academic year	19	4	10	<b>7,95</b>	1,791
12	Revenue from external financing sources	19	3	10	<b>7,89</b>	1,8034
13	Total number of defended PhD theses in the previous academic year	19	2	10	<b>7,84</b>	2,4119
14	Number of accepted patents in the previous 3 academic years	18	4	10	<b>7,83</b>	1,8333
15	Number of scientific institutes	19	3	10	<b>7,58</b>	1,8727
16	Number of student help services (career guidance services, student help services, etc.)	19	3	10	<b>7,58</b>	1,8727
17	Number of international students	18	4	10	<b>7,50</b>	2,1148
18	Total number of graduated students at Master/ graduate studies in the previous academic year	19	3	10	<b>7,47</b>	2,1366
19	Total number of graduated students at undergraduate studies in the previous academic year	19	3	10	<b>7,37</b>	2,1327
20	Structure of teaching staff	19	3	10	<b>7,16</b>	1,9538
21	Number of non-teaching staff	18	3	10	<b>7,11</b>	2,1574
22	Number of applied patents in the previous 3 academic years	19	5	10	<b>7,11</b>	2,3372
23	Total number of students at PhD studies in the previous academic year with budget status	19	1	10	<b>6,89</b>	2,6734
24	Total number of obtained ECTS points in the previous academic year by students with budget status	19	2	10	<b>6,89</b>	2,1495
25	Total number of students at Master/graduate studies in the previous academic year with budget status	20	1	10	<b>6,60</b>	2,6816
26	Total number of students at undergraduate studies in the previous academic year with budget status	20	1	10	<b>6,43</b>	2,5471

The number of papers in magazines with an impact factor in the previous academic year and university/faculty ranking on international lists are of the utmost importance for quality of HE institutions in the Federation of B&H (M=8.84 and M=50 respectively). Those indicators are

followed by awards won by students at international competitions, number of laboratories and centers, awards won by employees at international competitions in the previous academic year, awards won by students at national competitions in the previous academic year as well as number of teaching staff and area of available buildings. Total number of students at undergraduate/graduate/PhD studies in the previous academic year with budget status, number of obtained ECTS points, then structure of teaching and non-teaching staff, number of graduated and international students are assessed to of low importance for quality. The number of research institutes has not been assessed as a significant neither for funding nor for the quality at the public higher education institutions.

When asked to propose something else or new indicators when the quality of HE institutions is concerned, managers gave the following inputs:

1. Exchange and mobility of students
2. Number of students who find employment in the country or outside the country
3. Number of visiting professors
4. Number of students/teachers in the process of mobility
5. Number and type of organized scientific and professional conferences/seminars etc.
6. Compatibility of study programs with international study programs

as well as all other inputs listed above for the importance for funding of public HEIs.

### **2.3.2. Higher education financing strategy**

There is no an overarching higher education financing strategy either at the state or Federation level.

The Strategic Directions of Development of Higher Education in the Federation of Bosnia and Herzegovina from 2012 to 2020 proposes three key measures to improve the higher education financing in the Federation of B&H.

Firstly, they imply a modification of the cantonal system of higher education financing in order to prevent misallocation of resources among cantons, whilst taking into consideration the complex institutional context. It is necessary to create a combined financing system that will take into account financing per student formula, and thus financing would not be based on input costs, but on the number of students as well as to establish a better planning and allocation of resources through the development of the Medium Term Expenditure Framework (MTEF) for the higher education sector.

Federal Ministry of Education and Science is also advocating for financial autonomy of universities, which allows them receiving and managing funds from any legal source. This form of autonomy means and involves greater accountability of higher education institution for quality management and transparent use of financial resources.

Autonomy of universities in the management of allocated budget, earned and / or otherwise realized income is the official platform of the European University Association and also a criterion, benchmark and requirement in the European system of accreditation of higher

education institutions. There is the low internal efficiency not taking into consideration the efficiency of higher education institutions, based on the fact that 43% of the budget is spent on students who drop out the study and never complete their education (approx. 50% of students). The annual drop-out rate of students and those who repeat the studies is significant (13% and 24% respectively). In the previous period, it took seven years on average to complete the four-year program. Drop-out rate is very high because there are no financial incentives to universities to stimulate success of students and effectively manage the teaching process.

A common vision of public higher education policies in Bosnia and Herzegovina is presented in the Reform of Higher Education Financing in Bosnia and Herzegovina project report [3]:

The higher education sector is of particular importance for B&H. It can and must play a key role in the development of highly educated and flexible workforce that can support the economic development of B&H and development of more enterprising and more active citizens. This includes the need for a larger number of students included in the 2<sup>nd</sup> and 3<sup>rd</sup> cycle studies and more emphasis on science and research.

In the HE sector policy, planning and management there should be a better balance between the autonomy and the capacity of universities to manage and plan their tasks and responsibilities towards authorities for the effective use of public funds / realization of the high level objectives. On the other hand, ministries of education should play a more active role in the dialogue with the universities and as well as in mediating between universities and ministries of finance.

Universities should establish an appropriate central control, management and planning, linking plans colleges / universities with higher-level strategies.

When it comes to modernization of teaching, learning and assessment / reform of the European Higher Education Area (EHEA), the higher education sector should offer a modern service in terms of pedagogy, a mixture of disciplines and levels, the quality of teaching and graduates, and the relevance of the labor market for the needs of society. Universities should improve the effectiveness and usefulness of outcomes - including rates / period of study, employment of graduates.

The level of financing, particularly public funding is not sufficient for universities and they are not able to pay for proper maintenance / development of contents / services. The students and their families pay a relatively high proportion of the cost of university, while the students' standard and the quality of services are generally considered to be at a low level.

Further internationalization of higher education in B&H is essential, that is the universities must increase the mobility of students and staff and must participate and provide resources for international projects, especially in the light of the new opportunities provided by new international programs.

However, the change of current higher education financing in the Federation of B&H will not solve the acute need for investments in higher education. Existing obsolete scientific and teaching equipment, small investments in the renewal and acquisition of new equipment on an annual basis, energy inefficiency, and other problems related to the low level of investment in the higher education sector are dominant.

Recently completed the EU funded project “Reform of Higher Education Financing in Bosnia and Herzegovina” (2014) proposed a reformed financing mechanism, i.e. a student-based allocation model or *“a model of financing public higher education institutions / universities is to be defined as the principle of higher education financing according to which the basis for financing would be represented by costs per student of a certain study program, within a certain study cycle”*. The computer program was developed by experts enabling universities to calculate costs of operations, establish actual and optimum costs per student and study program, as well as to identify deficit or surplus study programs, examine how cross-subsidization works or needs to work between the public and university income sources and among study programs. However, this proposed model has not yet been implemented.

## **Part 3. THE EXISTING HIGHER EDUCATION FUNDING FRAMEWORK**

### **3.1. Challenges of HE funding**

One of the biggest challenges in the existing constitutional order of Bosnia and Herzegovina is that there is no currently a compliance system of higher education financing, not even his real coordination. FLHE does not contain specific provisions governing the issue of revenue and financing. In the Federation of B&H, cantons have exclusive competence in the field of education and policy-making.

The treasury system is a system of central control of costs, under which revenues and expenses are carried by line items from which funds can be reallocated or move easily, which often results in lengthy procedures to do so. On the other hand, TS does not imply planning on a multi-year basis and does not provide for the transfer of the budget, which can represent a potential loss for universities in a situation where any amount of money that is not spent in a given budget year is returned to the government. The result of this is that there is no incentive for savings at universities.

Financing of universities largely depends on the government since public universities are mainly financed from the budget, and partly from their own sources. Despite clear reference in FLHE that 'the higher education activity is of special interest for B&H', and the fact that other strategies in B&H at the lower levels of government also underline the importance of higher education, this is not always reflected at the level of higher education funding in B&H, especially in some cantons in the Federation. Even relatively low budget funds are not always transferred to universities. It is also noted that even such low funds have been sometimes reduced in the event of budget cuts or lack of resources.

#### **3.1.1. Policy recommendations for improvements of funding framework**

Given the above challenges in B&H, the proposal for improvements of funding framework should include as follows:

1. Establishment of cooperation / coordination mechanisms

Public universities together with the relevant authorities, and ministries of education and finance ministries, at the cantonal, entity and state level, should reach an agreement on who will be responsible for the further implementation of the reform of the higher education financing in BH.

2. Establish a method of functioning

This approach can be a multilateral agreement for greater cooperation that would include agreement on roles and responsibilities, frequency of meetings, decision-making and so on. This would help to overcome one of the challenges facing the higher education sector at the moment, and that refers to the lack of open discussion between the government and universities.

3. Identify necessary actions for implementation comprising 3 phases:
  - Analysis of status and inclusion of cost analysis in the funding mechanisms
  - Determine the financing methodology
  - Application of the selected financing methodology

Below are recommendations both for authorities and universities:

**I. Recommendations to the competent authorities:**

- Ensure sufficient amounts and reliable public funds to ensure that complementary funding will not replace public funding;
- Ensure that the ABC program has been included in all the arrangements for the public universities financing in B&H;
- In the medium term, as and when funds are available, consider establishing financial incentives for universities to be included in partnerships and obtain donations from the private sector so that financing schemes are harmonized;
- Develop a plan to implement the long-term goal of reaching the rate of GDP as a target of investing in higher education, through a combination of public and private contributions.

**II. Recommendations for universities:**

- Introduce compatible, operational MIS systems within universities (covering finance, students, and employees). The focus would be on internal management at the universities, but could also provide statistics / information at the entity / state level and provide the data necessary in the context of Eurostat and EUROSTUDENT;
- Universities pending the integration process should consider the implementation of the common principles of the allocation of the budget used on integrated universities in Europe and at international level;
- Universities should continue to also include and fully exploit the cost analysis for internal budgeting, distribution, planning and to improve the efficiency and effectiveness of their programs;
- To stimulate the process of monitoring feedback from students, to identify the reasons for withdrawal from studies / long studying, to monitor the employment of graduates;
- Human resources strategy should include plans for the systematic development of knowledge of English by the academic staff in order to support greater international involvement and exchanges/mobility.

The proposed student-based allocation model or *“a model of financing public higher education institutions / universities is to be defined as the principle of higher education financing according to which the basis for financing would be represented by costs per student of a certain study program, within a certain study cycle* should be taken into consideration by all stakeholders and start with the use of the computer program developed.

## Part 4. FINDINGS AND RECOMMENDATIONS FROM THE WORKING GROUP

### 4.1. Findings of stakeholder consultations

Higher education financing is not systematically regulated in both the Federation of Bosnia and Herzegovina and Bosnia and Herzegovina.

In the Una -Sana Canton, a basis for budget financing represents the total number of students enrolled at the University of B&Hać, number of teaching and non-teaching staff according to the standards of higher education, capital investment and costs in accordance with the University vision of the development and other budgetary positions proposed by the University and accepted by the Government of the Canton.

In Zenica –Doboj Canton, criteria for determining the amount of public funding do not exist, but the funding is on a lump sum basis depending on the availability of cantonal funds, mainly on the basis of costs from the previous year, despite the expressed needs of the University.

In Tuzla Canton, a budget request is prepared by the University in accordance with Instructions for preparation of budget for a given budget year.

In Herzegovina – Neretva Canton, two universities are funded on a grant basis and they are not kept as budgetary beneficiaries.

In Sarajevo Canton, the University is funded through a transfer for non-profit organizations (i.e. grant) named a transfer for HE.

The funding does not recognize outcomes in higher education, because its formula does not include output elements in the criteria of allocation of budget funds to higher education institutions.

When it comes to spending funds received by cantons, a detailed line item budget is in place at universities using treasury system and others are using a lump sum methodology.

The stakeholders emphasize that the main problem in higher education financing is insufficient amount of planned funds for higher education from the budget, which forces the institutions to turn to other financing sources, which, often, results in a decrease of higher education quality. According to the available data, participation of budget funds for higher education in the GDP in the Federation of B&H is 0,68%, and the average participation in the European Union countries is 1.31%.

According to recent statistical data for 2014<sup>12</sup>, the total public expenditure for educational institutions (public, private and international) in higher education was 24,5% of the total expenditure in all levels of education and of which 72,66% was public funding (the remaining

---

<sup>12</sup> Institute for Statistics of FB&H - *Financial Education Statistics, 2014, First Release No. 12.6.1*

part was the private and international funding).

The total public expenditure for higher education is shown in Table 1<sup>13</sup>:

Table 3: Total public expenditure for educational institutions in FB&H, 2014 (in KM)

<i><b>Total public expenditure</b></i>	<i><b>Total</b></i>	<i><b>Higher education</b></i>
<i>Total (1+2+3+4)</i>	807.215	<b>161.232</b>
<i>1.Direct expenditure for public institutions</i>	758.247	<b>125.842</b>
<i>2.Direct expenditure for private institutions financed from the budget</i>	10.317	<b>2.016</b>
<i>3.Public transfers to households and other private entities</i>	12.290	<b>7.014</b>
<i>3.a.Scholarships and other grants to students</i>	11.915	<b>6.639</b>
<i>3.b.Transfers to other private entities</i>	374	<b>374</b>
<i>4.Research and Development (R&amp;D)</i>	26.360	<b>26.360</b>

By level of education, in 2014 the share of private expenditure for educational institutions was the highest in tertiary education, including data on R&D (26,5% of total expenditure for tertiary educational institutions) where expenditure of households paid directly to public institutions represents only 12,35% of the total private expenditure, whilst expenditure of households paid to private HE institutions was 56,80% and expenditure of other private entities for Research and Development (R&D) was 17,75% of the total.

The WG finds that the shortage of official information on the social dimension of studying additionally complicates the activities on creation of a unique higher education financing model. Within FINHED Tempus project, the data on the social dimension of studying in the Federation of B&H became available for the first time.

Considering different mechanisms for allocation of funds, a good starting base for creation of a wholesome financing system are findings and recommendations of the Reform of HE Financing project. The Working Group did not analyze advantages and shortcomings of the proposed higher education financing mechanism, but this model is only suggested by the Working Group representing a good base, since it respects the specific qualities, limits and sensitivity to social equality of distribution of funds in the education system.

Wanting to examine the attitude of the higher education institutions themselves about the introduction of the new financing model, the Working Group made an effort to estimate,

<sup>13</sup> Idem.

through a mini-survey, how the managements of the institutions see the factors that need to be taken into account when creating the funds distribution mechanisms. Upon analyzing the survey, the impression is that institution managements are ready to view the problem of higher education financing in a more modern way when it comes to quality of HE intuitions (mobility, internationalization, number of papers in magazines with an impact factor in the previous academic year, University/faculty ranking on international lists, Awards won by students at international competitions..). On the other hand, the managements gave highest significance to the factors that have already been clearly established (number and structure of teaching staff and students). This actually means that the reform of the financing system will demand a serious effort in promoting an innovative approach among employees at public universities.

## 4.2. Recommendations of stakeholder consultations

Bosnia and Herzegovina expressed its willingness to become included in the European Higher Education Area, and thus to reform its HE sector. From the analysis conducted by the Working Group, and in order to have a modern and reformed HE sector, the funds from public sources, being at a low level compared to other countries, should be invested into higher education according to criteria and standards that are different from the existing ones.

In that regard, the WG deems necessary as follows:

- Establish cooperation and coordination of all stakeholders in higher education at the state level;
- Establish a model for HE financing in order to overcome the existing differences in financing of HEIs;
- Introduce new financing model/s for public HEIs directing also education towards profit-oriented partners from the private sector (PP initiatives), that will actively participate in the shaping, management and realization of different activities from the area of education. In that concept lies the potential of participation of the private sector in education financing;
- Introduce new mechanisms of improvement of the social dimension of higher education, in order to prevent student dissipation, improve righteousness, higher education efficiency, as well as defining of socially sensitive criteria;
- It is necessary to establish a fund or funds for the development of higher education in Bosnia and Herzegovina with the function to deal with the main development priorities / policy priorities for the sector, such as those expressed in the shared vision and can be a mix of public and private resources, and to deal with the following areas: student accommodation and restaurants, alumni fund raising, support for collection of resources, potentially with international assistance, international and commercial service offices or units that can increase international cooperation and collaboration with the industry, and establish and utilize external resources etc.

A high level of professionalization of HEIs management is needed in order to implement the above recommendations.

## REFERENCES

- Albrecht, D., Ziderman, A. (1992). Funding mechanisms for higher education: Financing for stability, efficiency and responsiveness. World Bank Discussion Papers 153, the World Bank, Washington D.C.
- Albrecht, D., Ziderman, A. (1995). Financing universities in developing countries. (London, Flamer Press)
- Babin, M., & Lažetić, P. (2009). Financing a Disintegrated University in Serbia. Financing Higher Education in South-Eastern Europe: Albania, Croatia, Montenegro, Serbia, Slovenia.
- Branković, J., & Babin, M. (2011). Investing in research. Research policy, financing and performance: Croatia, Serbia and Slovenia in comparative perspective, 86-111.
- Dobrota, M & Benković, S. (2014). Comparing “Ex-Cathedra” and IT Supported Teaching Methods and Techniques: Policy of Teaching Practice, Croatian Journal of Education, Vol.16; Sp.Ed.No.3/2014, pp. 91-108
- Framework Law on Higher Education in B&H, [http://www.fmon.gov.ba/images/Okvirni zakon o visokom obrazovanju u B&H.pdf](http://www.fmon.gov.ba/images/Okvirni_zakon_o_visokom_obrazovanju_u_B&H.pdf) (visited in December 2015)
- Johnstone, D. (1998). The financing and management of higher education: A status report on worldwide reforms. The World Bank. Washington. D.C.
- Jongbloed, B. & H. Vossensteyn (2002). Financiering masters: Argumenten en Arrangementen. (Studie in opdracht van de Werkgroep Financiering Masters) Ministerie van OC&W. (translation: Funding Masters: arguments and arrangements)
- Jongbloed, B. and Koelman, J. (2000). Vouchers for higher education? A survey of the literature. Hong Kong University Grants Committee.
- Kaiser, Vossensteyn and Koelen (2001). Public funding of higher education – A comparative study of funding mechanisms of ten countries. Center for Higher Education Policy Studies.
- Letica Maja(2014): Financiranje visokog obrazovanja kao pretpostavka autonomije sveučilišta, in Zbornik radova sa međunarodnih okruglih stolova I konferencija o implemntaciji BP u FB&H – godina 3 – broj 3, Mostar 2014.
- Meek, V., L. (2003). Introduction. In Amaral, A., Meek V., L. & Morsen, I.M. (eds). The Higher Education Managerial Revolution? Dordrecht. The Netherlands/Boston, MA London, Kluwer, pp. 1-29.
- Patrinos H. A, Barrera-Osorio F. and Guaqueta J. (2009). The Role and Impact of Public-Private Partnerships in Education, World Bank, pp. 25.
- Questionnaire for CEP and the ministries (Parts I and II)- within Tempus FINHED project, 2013
- Reforma finansiranja visokog obrazovanja u B&H: Kontekst I preporuke, Human Dynamics, Sarajevo, 28.02.2014.
- Salerno, Carlo, Financing higher education: the economics of options, trade-offs and dilemmas, The public responsibility for higher education and research, Council of Europe Publishing, Strasbourg, April 2005
- Strategic Directions for HE Development in the Federation of B&H from 2012- to 2022, Federal Ministry of Education and Science, 2013

- WP4. Financing and Equity Policy Framework, Report from the Working Group in Serbia
- <http://www.university-autonomy.eu/dimensions/financial/> (December, 2015)
- [http://www.eua.be/Libraries/publications-homepage-list/Financially Sustainable Universities II](http://www.eua.be/Libraries/publications-homepage-list/Financially_Sustainable_Universities_II) (December, 2015)
- [http://www.eua.be/Libraries/publications-homepage-list/Financially Sustainable Universities](http://www.eua.be/Libraries/publications-homepage-list/Financially_Sustainable_Universities) (December, 2015)

## Annex 1: Questionnaire: Measured Indicators and Budgetary Funding of Higher Institutions in the Federation of Bosnia and Herzegovina

### Potential indicators of budget financing of higher education institutions

The table gives indicators that are used as a base for higher education financing in Europe. Please rate each indicator from 1 to 10, in relation to the importance you think the indicator should have in the context of reallocation of budget funds towards higher education institutions, as well as rate to which extent each of the indicators represents an indicator of higher education quality in the Federation of Bosnia and Herzegovina.

Please fill in the following information on your institution:

- 1 Name of higher education institution for which the questionnaire is filled out:

---

Type of higher education

- 2 1 University institution:

- 2 Faculty, i.e. arts academy within the university  
3 Vocational studies academy  
4 College  
5 Vocational college

- 3 Your position at the institution

---

### Rating of importance of indicators for higher institutions financing system in the Bosnia and Herzegovina

In the following table, please rate the **importance** that, in your opinion, each of the given indicators should have in determining the amount of budget funds that will be allocated to individual higher education institutions by the state.

#### Instructions:

Please mark a number on a scale of 1 to 10 where:

**1** indicates that the indicator is **not important at all**, in your opinion

**10** indicates that the indicator has **very high importance**.

You can mark the number by making it bold or you can mark it in a different color. Please rate each indicator by **one number only**.

**On a scale of 1 to 10:**

**1** indicates that the indicator is **not important at all**, in your opinion

**10** indicates that the indicator has **very high importance**.

Indicator	1	2	3	4	5	6	7	8	9	10
1 Total number of students at <b>undergraduate</b> studies in the previous academic year with budget status	1	2	3	4	5	6	7	8	9	10
2 Total number of students at <b>master</b> studies in the previous academic year with budget status	1	2	3	4	5	6	7	8	9	10
3 Total number of students at <b>PhD</b> studies in the previous academic year with budget status	1	2	3	4	5	6	7	8	9	10
4 Total number of <b>graduated students</b> at <b>undergraduate</b> studies in the previous academic year	1	2	3	4	5	6	7	8	9	10
5 Total number of <b>graduated students</b> at <b>master</b> studies in the previous academic year	1	2	3	4	5	6	7	8	9	10
6 Total number of <b>defended PhD theses</b> in the previous academic year	1	2	3	4	5	6	7	8	9	10
7 Total number of obtained <b>ECTS</b> points in the previous academic year by students with budget status	1	2	3	4	5	6	7	8	9	10
8 Number of <b>international</b> students	1	2	3	4	5	6	7	8	9	10
9 <b>Number of teaching</b> staff	1	2	3	4	5	6	7	8	9	10
10 <b>Structure of teaching</b> staff	1	2	3	4	5	6	7	8	9	10
11 <b>Number of non-teaching</b> staff	1	2	3	4	5	6	7	8	9	10
12 <b>Structure of non-teaching</b> staff	1	2	3	4	5	6	7	8	9	10
13 <b>Area</b> of available buildings	1	2	3	4	5	6	7	8	9	10
14 Number of <b>laboratories</b> and centers	1	2	3	4	5	6	7	8	9	10
15 Number of <b>scientific institutes</b>	1	2	3	4	5	6	7	8	9	10
16 Number of <b>student help services</b> (career guidance services, student help services, etc.)	1	2	3	4	5	6	7	8	9	10

**On a scale of 1 to 10:**

**1** indicates that the indicator is **not important at all**, in your opinion

**10** indicates that the indicator has **very high importance**.

Indicator

1 7	Revenue from <b>external financing sources</b>	1	2	3	4	5	6	7	8	9	10
1 8	Number of <b>papers</b> in magazines with an impact factor in the previous academic year	1	2	3	4	5	6	7	8	9	10
1 9	Number of <b>reported</b> patents in the previous 3 academic years	1	2	3	4	5	6	7	8	9	10
2 0	Number of <b>accepted</b> patents in the previous 3 academic years	1	2	3	4	5	6	7	8	9	10
2 1	Awards won by students at international competitions	1	2	3	4	5	6	7	8	9	10
2 2	Awards won by employees at international competitions in the previous academic year	1	2	3	4	5	6	7	8	9	10
2 3	Awards won by students at national competitions in the previous academic year	1	2	3	4	5	6	7	8	9	10
2 4	Awards won by employees at national competitions in the previous academic year	1	2	3	4	5	6	7	8	9	10
2 5	University/faculty ranking on international lists	1	2	3	4	5	6	7	8	9	10
2 6	Education of experts in priority areas in Serbia	1	2	3	4	5	6	7	8	9	10
2 7	Something else (add what) _____	1	2	3	4	5	6	7	8	9	10
2 8	Something else (add what) _____	1	2	3	4	5	6	7	8	9	10
2 9	Something else (add what) _____	1	2	3	4	5	6	7	8	9	10