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The Problems of Higher Education Funding: The Case Study of "Babeş-Bolyai" University of Cluj-Napoca, Romania

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Abstract

Our study is intended to analyze: a) the issue of higher education under funding; b) the "disguised subsidizing" of higher education based on tuition fees; c) the supplementary revenues sources for universities; d) the funding mechanisms of higher education. We aim to incite debate on the relation between the educational policy and the funding strategy of higher education at both national and operational levels, instancing the case of the Babes-Bolyai University of Cluj-Napoca.

The fundamental guide marks of this analysis are: the average cost per student, the budgetary allowance and the tuition fee. What sources of supplementary revenues for universities are there? What kind of scientific research provides incomes? Which university services generate supplementary resources? How can the university infrastructure be "exploited"? In what measure the cooperation and partnership opportunities with the economic and social environment are being identified? Which are the facilities, the steering directions, the conditions and the benefits of accessing European Structural Funds?

With the purpose of answering these questions we have conceived a funding strategy model, entailing: regulations, institutional infrastructure, working instruments, budgetary allowance distribution models, educational costs estimation methods, funding mechanisms, all these operating in a gearing meant to attain, by solving the problems, the objectives of higher education policy.

Keywords*: Financing higher education, models, strategies, institutional levels, students, education budget expenditure.*

JEL Classification*: A22, A23, E61, E65, H52, I22, I28.*

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1. Introduction

The "Babes-Bolyai" University is a higher education public institution that has established as its mission to promote multi-cultural, intercultural and inter-confessional dialogue. It has students and teachers of Romanian, Hungarian, German ethnicity and even representatives of the rom ethnicity. Considering its 21 faculties, 17 offer their curriculum in Romanian and Hungarian while 11 have it in Romanian and German. Around 1275 full professors teach at "Babes-Bolyai" University and around 54.000 students study for their bachelor, master or PhD degree.

2. The Financial Problem – Indicators, Figures

Having as a starting point the above mentioned dimensions and its complex character, the purpose of this paper is to analyze the financial management of the expenses for the teachers. The analyses takes place at unit level, i.e. the faculty and the indicator that we have built and determined is ***the rate of covering the salary expenses***, calculated into two variants: R_a ***and*** R_a^1**,** for the financial year represented by January 1st 2008 – December 31st 2008:

$$R_a^1 = \frac{Al_B}{Ch_S} \times 100 \qquad (1)$$

$$R_a = \frac{Al_S + Vp_D}{Ch_S} \times 100 \qquad (2)$$

where: R_a^1 represents the rate of covering the staff expenses from the budget dole;

R_a the rate of covering the salary expenses from the budget dole and the extra budgetary incomes (mainly the schooling taxes) available for this;

Al_B the annual budget dole (financial year);

Ch_S the annual didactic staff expenses (salary expenses);

Vp_D own (extra budgetary) incomes available for covering the salary expenses.

The two rates were determined for each of the considered faculties that further led to grouping the entities into 5 categories, as follows:

Table 1. Group A, faculties with R_a >124%

Nb.	Faculty	R_a (%)	R_a^1 (%)
1.	Faculty of Environmental Science	**168**	**87**
2.	Faculty of Political Science and Public Administration	**155**	**74**
3.	Faculty of Physical Education and Sport	**139**	**57**
4.	Faculty of Media and Theater	137	133
5.	Faculty of Geography	**136**	**93**
6.	Faculty of Psychology and Science of Education	**130**	**75**
7.	Faculty of Roman Catholic Theology	**130**	**74**

Source: Author's researches

Table 2. Group B, faculties with 100%< $R_a \leq$ 124%

Nb.	Faculty	R_a (%)	R_a^1 (%)
8.	Faculty of Business	**124**	**23**
9.	Faculty of Biology and Geology	121	114
10.	Faculty of Protestant Theology	112	119
11.	Faculty of Economics and Business Administration	**106**	**43**

Source: Author's researches

Table 3. Group C, faculties with 90%< R_a <100%

Nb.	Faculty	R_a (%)	R_a^1 (%)
12.	Faculty of Mathematics and Computer Science	**97**	**85**
13.	Faculty of Physics	**97**	**89**
14.	Faculty of Sociology and Social Assistance	**90**	**81**

Source: Author's researches

Table 4. Group D, faculties with 80% $\leq$ R_a <90%

Nb.	Faculty	R_a (%)	R_a^1 (%)
15.	Faculty of European Studies	83	45
16.	Faculty of Orthodox Theology	**83**	**71**

Source: Author's researches

Table 5. Group E, faculties with R_a < 80%

Nb.	Faculty	R_a (%)	R_a^1 (%)
17.	Faculty of Law	78	53
18.	Faculty of Chemistry and Chemical Engineering	**76**	**74**
19.	Faculty of Letters	**72**	**57**
20.	Faculty of History and Philosophy	**67**	**65**
21.	Faculty of Greek Catholic Theology	**56**	**51**

Source: Author's researches

To be mentioned: for the "Babes-Bolyai" University, the rate of covering the salary expenses from the budget dole and its own available incomes (R_a) is **124%.**

3. Financial Management for the University, Financial Strategies and National Policies

Which are the measures that are imposed starting from these determinations? The 124% level of the rate of covering the staff expenses of the whole university must not just please, so the analysis and the resulted financial solutions must be applied to the faculty level (the working entity).

The first operation, almost a "surgical" one, was made within the cost optimizing strategy, i.e. **the reduction of the salary expenses** through *eliminating the unjustified vacant positions and loading the teaching norms*, but staying within the legal limits.

This measure was applied by all faculties, and it brought good results especially for the Faculty of European Studies, the Faculty of Mathematics and Computer Science and the Faculty of Physics, and they will end the 2008/2009 school year with R_a > 100%, according to the forecast, further "covering" the budget deficit. The further monitoring of the salary expenses is imposed and recommends itself, too.

Although the best rated faculties for employment after graduation are the Faculty of Business and the Faculty of Economics and Business Administration, having 90%, respectively 81% the weight of bachelor degree taxed students to the total number of students, the faculties from **Group A**: *Faculty of Psychology and Science of Education (81%)*[†], *Faculty of Physical Education and Sport (77%), Faculty of Political Science and Public Administration (76%), Faculty of*

[†] The bracketed figure represents the weight of the taxed students to the total number of students for the bachelor's degree of each faculty.

Environmental Science (60%), Faculty of Geography (57%), open new (non-traditional) interesting and personalized perspectives and from the point of view of the didactic staff, they are "young faculties", having the weight of lecturers and assistant teachers in between 60% and 84%, the explanation for the more reduced salary expenses as compared to the faculties from groups C, D and E. On the other hand, the faculties from groups C, D and E are faculties with "strong structures" and where more than 50% of the total students are budgeted, state-financed students.

Table 6. Faculties with financial difficulties – statistical indicators

Nb.	Faculty	P_{SB} (%)	$P_{p,c}$ (%)	R_a^1 (%)	R_a (%)
1.	Faculty of Chemistry and Chemical Engineering	**94**	**59**	**74**	**76**
2.	Faculty of Physics	**92**	**66**	**89**	**97**
3.	Faculty of Greek Catholic Theology	**89**	19	**51**	**56**
4.	Faculty of History and Philosophy	**80**	**61**	**65**	**67**
5.	Faculty of Mathematics and Computer Science	**74**	**51**	**85**	**97**
6.	Faculty of Sociology and Social Assistance	**69**	**51**	**81**	**90**
7.	Faculty of Orthodox Theology	**64**	32	**71**	**83**
8.	Faculty of Letters	**56**	33	**57**	**72**

Source: Author's researches

To be mentioned:

1. $P_{SB} = \frac{Sb}{St} \times 100$

P_{SB} represents the weight of the budgeted students to the total number of bachelor degree students;

Sb the number of budgeted state-financed students;

St the total number of bachelor students.

2. $P_{P,C} = \frac{P + C}{T_P} \times 100$

$P_{p,c}$ represents professors and associate professors' weight in the aggregate teaching staff;

$P + C$ is the total number of professors and associate professors in ordinary;

T_P the aggregate teaching staff in ordinary.

As a matter of fact all these faculties have been subsidized and maintained out of the extra-budgetary funds acquired by A and B groups' units. All these

faculties, whose situation has been presented in Table 6 are confronted with a diminution of the youth' interest towards them against the background of a general of the whole Romanian higher education system.

The following faculties are demanding instant solutions: The Faculty of Chemistry and Chemical Engineering, The Faculty of Greek-Catholic Theology, The Faculty of History and Philosophy and The Faculty of Letters.

In succession we will present the ***Matrix of solutions*** that we have conceived *in order to straighten out the financial condition of these faculties*.

Table 7. Matrix of solutions

Solution / Unit	The Faculty of History and Philosophy, The Faculty of Letters, The Faculty of Orthodox Theology, The Faculty of Greek-Catholic Theology, The Faculty of Sociology and Social Assistance. *Vocational Faculties*
Budget allocation per strategic objectives	**Actors**: *The State.* The Government represented by the Ministry of Education must increase the budgetary allowance through higher education national politics. **Objective:** Precisely, on a time horizon of 3-4 years, the burden of the indirect funding would be transparently and responsibly taken over from the university level to the central level, in the context of a coherent national policy. As such, the state would assume its role of academic authority on the ground of an increasing financial allocation for all high education institutes. **Key factor:** Our proposal is to introduce and apply, complementary to the cost coefficients, coefficients of academic (vocational) support c_S **.** In order to establish these coefficients the cost of curricula per student, C_C , will be considered, as follows: $c_S = \frac{C_C}{Al_B}$, where: c_S represents the coefficient of academic support; C_C the cost of education (according to the curricula); Al_B the budgetary allowance per unit equivalent student (see *Annex 1* at the end of the paper). All these are conceived for the minimum working team of at least 20-25 unit equivalent students.

	Instrument: *The institutional budget*, according to which the additional allocation aims at supporting only those specializations, programs, branches of knowledge that are strategic, decisive for the development of a country.
Mixed Budget Allocation	The Faculty of Chemistry and Chemical Engineering, The Faculty of Physics, The Faculty of Mathematics and Computer Science, etc.
	Exact Sciences orientated Faculties
	Actors: the State, the university, the faculties, the departments, the collectives of research. **Objective:** Supporting of the educational component through research and consulting "commissioning". **Key factor: 1)** the completion of the budgetary allowance, tuition fees in order to cover the remunerations (wage expenses) on the basis of grants/ research agreements, third parties agreements: $Ch_S = Al_B + Vp_D + F_C$ where: Ch_S annual wage expenses; Al_B annual budgetary allocation (budgetary year); Vp_D own incomes (extra budgetary) available for covering wage expenses. F_C **complementary funding** through the Chapter: staff expenses afferent to grants/ research agreements, third parties agreements. **2) complementary budget** supplied under the increase of the overhead expenses value: $F_C = (c_R^1 - c_R^0) \times B_C = (c_r^1 - c_R^0) \times (V_C - Ch_C)$ where: F_C **complementary funding;** c_R^1 represents the overhead expenses value established by each faculty; c_R^0 the overhead expenses value settled at the university level (i.e. 23% for research agreements, 10% for third parties agreements); B_C the basis of calculation established a the faculty level; V_C the value of the grant/ research project (agreement) or the value of the third party agreement; Ch_C capital expenses afferent to the grant/ research agreement.

	Instrument: The budget of the entity, of the faculty, *the budgeting of the entire amount,* both on an educational line and on a research line, consulting line, etc.
Donations	Faculty of Greek-Catholic Theology, Faculty of Orthodox Theology, Faculty of History and Philosophy, Faculty of Letters, etc.
	Vocational faculties
	Actors: Personalities, persons/ donor institutions, religious endowed establishments, philanthropic non-profit endowed establishment foundations. **Objective:** **1)** Diversification of financial sources, method of gathering incomes **2)** Reduction of the dependency, at least partially, though temporarily, of governmental funds. **Key factor: donations,** the source of educational programs funding.

5. Conclusion, Future Topics of Reflection at the End

After the huge expansion of the higher education during the last two decades, both at a national and a global level, we are now attending a governmental incapacity of coping with the pressure of costs. The budgetary allowance doesn't cover more than 50-60% of expenses per student. The governmental mechanism of higher education funding must be urgently improved in order to get through the changes.

The State education will play a prominent part as far as the equality of chance regarding the access of young people belonging to different social groups (people with handicap, poor people, etc) to higher education is concerned and will be the guarantor of the coherence of national politics.

The extension of the private component of the high education, even inside public institutions is profitable for certain segments, as those who buy high education are also influencing the "nature" of what they buy.

At an institutional level we intend to give substance and to allow management to effectively operate in high education funding through the following prompt measures:

a) a severe supervision of all categories of expenditure;
b) the raising of additional funds and an improved allocation of subsidizes;
c) an improved administration of liquidities;
d) protection against frauds;
e) Materialization of the settled financial indicators.

Finding the breakeven point between the academic university model, the traditional university model and that, so disputed nowadays, of the entrepreneurial university is the keystone of our entire approach to the conceiving of the preeminent funding (financial) strategy.

6. References

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Appendix 1.

$$Al_B / \text{SEU} = \frac{Al_B}{SEU^T} \quad (1)$$

where:

Al_B / SEU represents the budgetary allowance per unit equivalent student;

Al_B total budgetary allowance;

SEU^T the total number of unit equivalent students at the university (faculty).

$$SEU^T = \sum_{d=1}^{D} c_d \times SE_d \quad (2)$$

where:

c_d represents the cost value of the *d* education field*;*

SE_d the number of equivalent students of the *d* education field.

$$SE_d = \sum_{f=1}^{F} c_f \times Sf_d \quad (3)$$

where:

c_f is the equalization value corresponding to the f form of education*;*

Sf_d Represents the number of physical students studying the *d* education field at the *f* form of education.