INSTITUTE OF KNOWLEDGE SOCIETY
POLISH RECTORS FOUNDATION

Financing and Deregulation in Higher Education

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Preface

We would like to acquaint our readers with a new book of the series of Monographs of Polish Rectors Foundation. The present book focuses on a fundamental contemporary issue in higher education of some countries, namely, the model of financing HEIs, in particular, with systemic solutions regarding the funding of studies.

A thorough analysis of the issues regarding higher education requires taking into account the context of a HEI's functioning. It determines, among others, due to cultural and economic considerations, the possibility of implementing selected solutions in particular countries. This means that we need to take into consideration local traditions in HE, a society's welfare, as well as mentality-related factors at a particular stage of development of each country and their HE system. These issues are of special importance in case of Central and Eastern European countries, which have entered the path of a systemic transformation and liberating themselves from the tradition of so called real socialism order. However, we should also pay attention to universal matters, such as solutions or good practices originating from other countries. The analysis of implemented earlier models of HEI funding provides certain guidelines as regards the character and type of systemic rules, as well as some lessons learnt from previous experience; thus, the followers are able to avoid the mistakes typically made by pioneering countries which entered the new path before.

Another essential factor is the need for following global development trends. For the European countries participating in the Bologna Process, the trends currently observed on our continent seem to be of particular interest. From this perspective, we should bear in mind the fundamental underlying values of a HEI funding model. Among them we should mention, on the one hand, the principle of HEIs autonomy, and on the other hand, the principles of responsible fund distribution, which requires full transparency in this respect. Autonomy and accountability are closely related to each other, like two sides of one coin. Those considerations guarantee that a HEI, which distributes public funds, acts within the boundaries of general public interest and for its benefit, which in turn determines its authority and positive image in public opinion.

However, there are also other values to be considered. In particular, we need to address the issues related to the level of harmonizing the solutions applied in HEIs funding with fundamental objectives, as well as with constitutional patterns in various countries. They are related to the mission of an educational system and involve the right to education, providing universal availability of education and equal access to it. This may impose significant constrains over the process of developing

selected regulations defining the models of funding, e.g. as regards charging fees or the principles of co-funding studies. Similar constraints may be derived from systemic assumptions regarding social policy, and consequently the postulated educational social structure, in particular, the proportion of high schools graduates or the holders of BA, MA and PhD degrees. The selected examples mentioned above determine the adoption of particular solutions shaping HEIs funding models in each of the countries.

The conditions and determinants specified above served as the basis for composing the present monograph, focusing on current issues related to the methods of funding projects and institutions of HE system. The present crisis in Europe has made the overall implementation of co-funding the studies less realistic in many countries. In view of this, in this monograph we focus, in principle, on systemic solutions related to HEIs funding from public funds. The issues concerning research funding represent a different area and need to be considered separately.

Bearing in mind the considerations specified, Polish Rectors Foundation, acting jointly with the Institute of Knowledge Society, fulfils its mission, defined by rectors, of a leading think-tank in Poland (supported by strategic partners[1]), carrying out research on higher education.

In order to complete the project in the form of the present publication, we have commissioned a number of reports which were prepared by the experts representing several countries. Following the elaboration the texts received, after the presentation and open discussion on their findings[2], they were incorporated in the present publication, thus forming its chapters[3].

It is noteworthy that four countries have been selected, namely, Poland and three neighbouring countries, which deserved to be considered from the Polish perspective – the Czech Republic, Germany and Ukraine. Also, in one of the chapters an interesting case of England has been referred to, due to its successfully operating fund distribution model, which remains unchanged despite short-term political pressures, including ministerial arbitrary decisions. At the same time the system does not bind a HEI, due to financial considerations, with the obligation to retain the students who, for a number of reasons, do not deserve to have their studies financed by taxpayers, in particular, as they fail to make progress. Other benefits appreciated by a HEI are related to the timeline, which exceeds one fiscal year, as well as with a contract-based funding formula. Also, in the present publication the analysis was performed of other crucial components linked to HEIs funding systems, including the issues of typology, grouping and classification of HEIs, as well as quality stimulating solutions and those related to the learning outcomes accomplished.

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[1] Among others, PKN Orlen, which sponsored the present monograph.

[2] During the Symposium *"Financing and deregulation in Higher Education System"*.

[3] The Publisher refrained from altering the texts received, with the intention of preserving their genuine character.

The issues of funding models have been supplemented in the present monograph by the questions of deregulation in HE system. Those questions are addressed in various parts of this publication, however, a separate chapter is devoted to them; the necessity of avoiding oversimplification concerning the system regulation is emphasized there. In conclusion, it is stated that similarly to other fields of operation of other institutions in a country, e.g. in banking, the system of higher education has to be regulated so that the security of individuals taking up and continuing studies is increased. In this special time young people invest precious capital of their young age, which cannot be brought back once it is wasted. Similarly, financial capital raised over years, once it is wasted in banking system due to lack of guarantees resulting from insufficient regulations, cannot be recovered. Naturally, in both the cases quoted – in the system of higher education and in banking – some space for the risk residual in an individual citizen's investment should be left.

However, all the above remarks do not imply resignation from counteracting the trend frequently demonstrated by governments to introduce too many regulations, which leads to overregulating the system of higher education.

In accordance with the principles of PRF-IKS operation, this book will be complimentarily distributed in the academic community in Poland and among the representatives of neighbouring countries; it will also be offered to the representatives of public authorities, rectors and other experts.

Jerzy Woźnicki

Part I

Financing and Deregulation in Higher Education – Case Studies

1.1. The Role of Deregulation in the Higher Education System (HES) in Poland

Jerzy Woźnicki

1. Introduction

From an international perspective, it is noteworthy that in the ranking of higher education (i.e. U21 '2012), among the 48 countries studied, we found ourselves at the 27th position, but taking into account legal rules introduced earlier - those established prior to the amendment of the Act of 2011 – the HE system in Poland took fifth place in the ranking. This means that the public image of our higher education has been deliberately blackened – as it happened also to elementary and high schools.

In the chapter we present the introduction to the idea of deregulation of the system of higher education in Poland. The theses formulated outline the issue, no detailed discussion on specific articles of the Polish act Law on Higher Education is proposed. The conclusions and comments presented are largely of universal character.

In the Polish higher education a particular status quo has been achieved resulting from currently implemented regulations, specifying the accepted balance regarding the relationship between public power (including supervision) versus autonomy and responsibility (transparency) of an institution of higher education. In this relation we can conclude that as far as the principle is concerned, there is no need to search for a new balance in this respect, since HES is concerned as a whole.

Establishing in the nearest future several so called research universities should be conditioned on introducing new dedicated act, deregulating legal requirements of their activity.

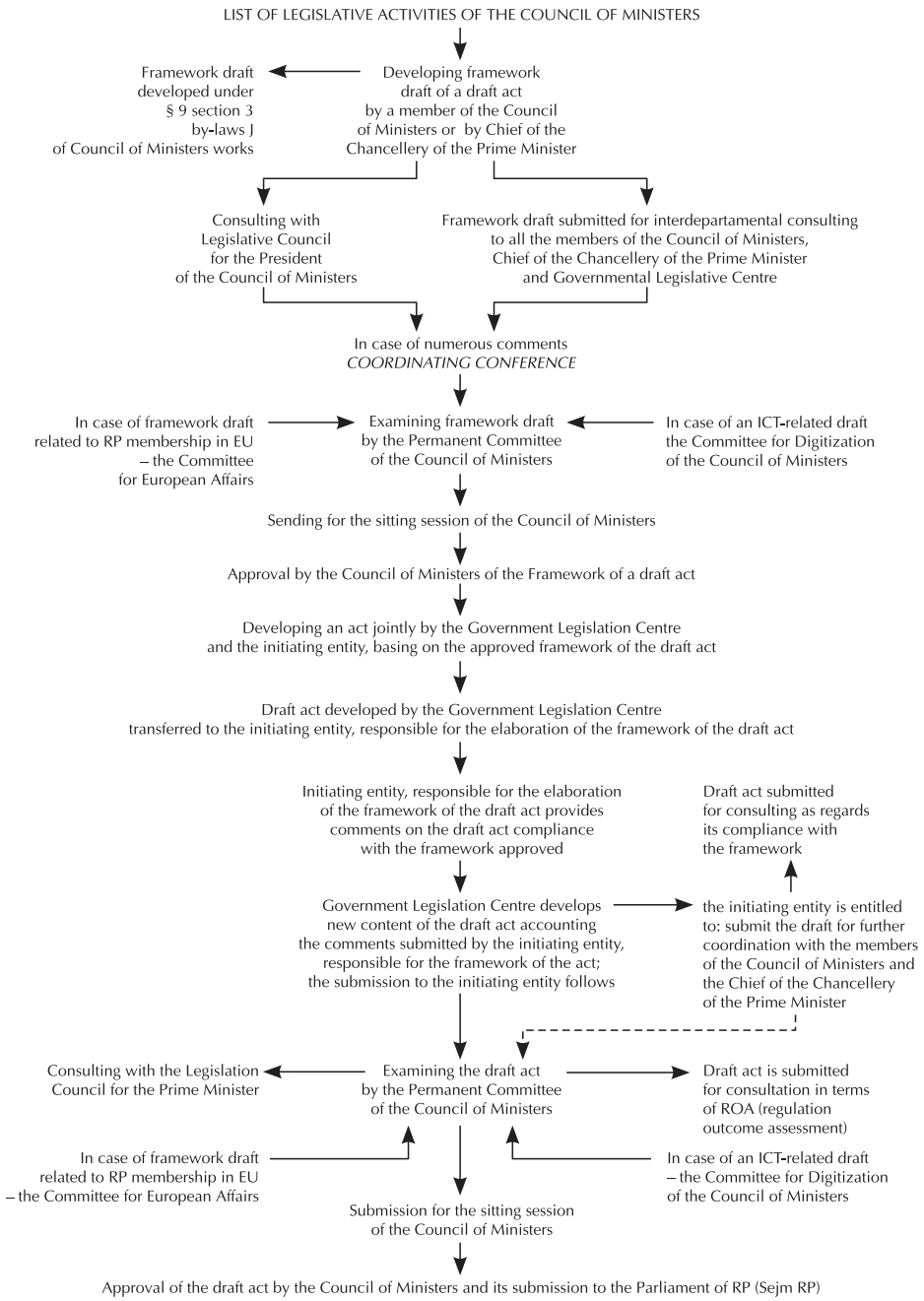
The main dilemma regards the scope of specific regulations, in particular, those fundamental issues that define a model of an institution of higher education, as well as its relations with internal and external stakeholders. Why is this area likely to be overregulated? What examples of these practices can be indicated? What can affect the legislative process, in particular, the works conducted by the government? These questions seem to be crucial.

Figure 1 illustrates the mechanism of the governmental legislative process.

In accordance with the Directive of the president of the Council of Ministers of June 20th, 2002 on "The principles of legislative mechanism"[4], the decision regarding the development of an act draft is preceded by a number of activities, including

[4] Published in "Dz. U. of July 5th, 2002.

Figure 1. The Governmental Legislative Process of developing a draft of an act, based on the framework of an act draft



Source: portal of the Governmental Legislative Centre, http://www.rcl.gov.pl/zalaczniki/rpl-ustawy_zalozen.pdf

the process of collecting opinions from the subjects involved. However, this stage is frequently omitted and replaced directly by the submission of the main assumptions of the new regulation. Similarly, the requirement of selecting the method of public authorities intervention is not observed (see § 1, item 5) – the path of referring directly to a legislative act[5].

According to Article Two of the Directive mentioned above: "The Act is to entirely regulate a particular area of issues, so that any relevant issues do not remain unregulated". This provision is crucial as regards addressing the factors enhancing overregulation. The provision quoted, on the one hand, being one of the requirements of the legislative mechanism, on the other hand, may inhibit the process of simplifying legislation in this respect. This might lead to leaving crucial issues beyond the scope of regulation. Hence, the failure to comply with the requirements of legislative process might be pleaded. This underlying approach in the legislative culture seems to enhance overregulation.

Four prominent institutions monitor the observance of the principles: the Government Legislation Centre, the Permanent Committee of the Council of Ministers, The Legislative Office of the Polish Parliament and the Senate.

2. The proposal of selective deregulation

In the academic community project of the Strategy for Higher Education Development by 2020[2] the proposal of selective deregulation was formulated. Deregulation in the system of higher education is stipulated, among others, by means of:

"– eliminating – through selective deregulation in the system of higher education – the regulations imposing the participation of the government in micromanagement within Higher Education Institutions (HEIs);
– diversifying legal requirements towards HEIs stipulated by legal acts on funds distribution with respect to their source, enabling rational HEI functioning."

The Strategy demonstrates that the principle of HEIs autonomy and more general principle of subsidiarity imply the need of mitigating regulation through widely binding normative acts, so that it is reduced to absolute minimum – to establishing the unified obligatory principles to be observed within the whole system. The legislation is supposed – within the institutional framework it developed – to offer the state-owned HEIs the chance to select the most suitable model for each of them,

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[5] **§ 1.** 1.Making decision on preparing a bill draft is preceded by:
1) outlining and describing the nature of social relationship in the area requiring the intervention of public authority, as well as the desirable directions of change;
2) establishing possible legal and other measures aimed at the accomplishment of the objectives set;
3) specifying anticipated social, economic, organizational, legal and financial outcomes of individual solutions considered;
4) getting opinions of the subjects involved, interested in the solutions developed;
5) selecting the mode of public authority intervention. (…)

§ 2. The Act is expected to entirely regulate a particular area of issues in such a way that significant spheres of the area do not remain unregulated.

within the indicated minimum of regulations. This is not the case today. Therefore, the desired deregulation regarding the system of higher education should be of selective character.

An example of a set of minimum regulations can be indicated. It is recommended that establishing a HEI requires the approval of a corresponding public authority or issuing a suitable permit by a corresponding state authority. Similarly, studies in a HEI should be conducted upon obtaining accreditation issued by a competent authority specified by the Act. Commencing studies requires reliance on an educational institution, which typically grows proportionally to the nominal length of studies. The trust in a HEI can be treated as a kind of personal investment made by a student, who deposits with a HEI their invaluable capital of a few years from their life, dedicated for studies. All these considerations lead to the conclusion that HEIs, unlike training companies, have to be perceived as institutions of public trust. The scope of credibility is determined by the provision of certain guarantees by the state, which result from its regulatory and supervising role. Due to the considerations mentioned above, higher education is not supposed be fully deregulated. Let us make some comment on this statement. Similarly, the state is obliged to guard the systemic order and provide budget-based funding, which requires precise regulations. The state, with its supervisory role towards higher education, is expected to maintain the ability of effective intervention in case any inappropriate situation occurs in any HEI; this requires suitable detailed regulations. Pathologies publicly revealed in – so far – limited number of HEIs, seem to justify this requirement. It cannot be left exclusively to market forces, and this seems to be justified not only by the fact that HEIs' funding is based on the budget. The main argument here is the deferred, by nature, ability in students to assess their performance, as well as to verify the provision and quality of their studies. The systemic order introduced and guaranteed by the state diminishes the risk of replacing the studies by semi-academic education, which cannot be adequately evaluated by an applicant and a beginning student. Thus, wasted years of studies could not be restored.

A similar situation is observed in banking. Despite the fact that banking sector has been dominated by private entities, the level of its regulation exceeds that of higher education. For instance, the consent of National Financial Supervisory Authority (Polish Komisja Nadzoru Finansowego, KNF) is required in case of appointing a president of a bank, even in case they demonstrate suitable qualifications. If we transferred a similar requirement to higher education, the election of a rector would be followed by the rector-elect's application to a particular state committee, whose role would be to state whether the rector-elect is suitable for the post or not. It sounds unbelievable. Apart from this, we should take into consideration the obligatory recommendations of KNF. Why has this system been adopted in banking? The main factor is the fact that the state feels responsible for mitigating the risk of banking activities in order to prevent massive frauds, when a citizen is deprived of their valuable capital, in many cases gained over generations. On the other hand, the state protects banking system as well. In this relation the requirements such as those related to credit worthiness or underwriting deposits are to be observed.

In case of young people – students, we can state that the equivalent of financial capital are the assets of the best years in their life, which cannot be recovered once wasted or lost. In view of the above considerations, it is necessary to introduce selective deregulation in HE.

Micromanagement, i.e. management at the institutional level in HES should be deregulated. For instance, the requirements regarding fund distribution stipulated by regulations should vary, with respect to the funds source of origin. The diversification of requirements should enhance rationalizing a HEI's operation. This refers to, among others, the liberalization or ceasing of certain requirements laid down by the Act on Public Finance or the Act on Public Procurement.

3. Overregulated versus deregulated HEI

Let us discuss some consequences of regulations basing on a model of a HEI in an overregulated system and a model of a HEI functioning in a deregulated system. An overregulated HEI is subject not only to the regulatory and supervisory power of the minister responsible for HE, but also to his/her managing power. The state is responsible for a HEI's budget. A HEI is to follow the statism-based HE model – all academic staff members representing particular groups have unified salaries throughout the whole country, the ministry strictly specifies the overall wage fund (the minister's consent is required in case of employment of the new staff). As a result, a HEI's autonomy is marginalized. We were operating according to this model in the communist era; there were also instances of more strict regulation than in the example quoted above.

"Deregulated" HEI develops its own remuneration system, diversified in respect to academic staff, as well as its own task-based system (where minimum workload is not a statutory requirement). A HEI is entitled to make use of its property in order to increase its capital and obtain funds for further development. In addition to this, a HEI, while remaining a public entity, enjoys independence in terms of management. Similar "deregulated" HEI has greater institutional autonomy, independence of remuneration policy, at the same time bearing full responsibility for its fiscal discipline.

Clearly, deregulation decreases state responsibility and provides more beneficial competition rules in terms of development priorities within the system of higher education. It is also worth mentioning that a similar model reflects the main trends in HE systems development worldwide.

4. Regulations and HEI autonomy. A review of legislation regarding HE in Poland

The autonomy of a HEI is of statutory character. The scope of institutional autonomy seems to be a significant indicator defining various HEI models; this reinforces the fundamental significance of autonomy in the area of higher education. When analyzing Polish legislation on higher education, we should focus on

four aspects, where the scope of the minister's competence is essential in terms of a HEI's autonomy

1. The appointment of a HEI's authorities (the rector, vice-rectors, deans);
2. Establishing and liquidating units within a HEI;
3. Developing plans of studies and educational programmes;
4. Monitoring HEI's costs and expenditures (expenditure approval) and personnel policy (offering full-time employment, hiring and dismissing staff).

Let us make a short review of legislative legacy since 1920[6].

I. **Act of July 13th 1920 on academic institutions** – it did not provide the minister with the title to appoint a HEI's authorities or establish their units; however, it was the minister's responsibility to approve plans of studies and educational programmes. HEIs could enjoy greater autonomy in terms of fiscal control and HR policy.

II. **Act of March 15th 1933 on academic institutions** – came in force as a result of so called Jędrzejewicz reform (Sanation Rule); it complied with the general statutory trend of tightening the state's authority and control, depriving the HEIs of autonomy in all the areas.

III. **Act of December 15th 1951 on higher education and academic staff –** the "Stalin" act, which meant lack of autonomy.

IV. **Act of November 5th 1958 on higher education institutions** – the minister was entitled to raise objections to the appointment of a HEI's authorities, no autonomy was granted, which was typical of the corresponding stage of development of real socialism.

V. **Act of May 4th 1982 on higher education** – increasing autonomy. It was decided to pass the act under the martial law. The act was prepared by the existing then General Council for Science and Higher Education, following Solidarity outbreak, under control of the authorities of that time. Apparently, an attempt was made to gain the support of academic community and to draw away this community from the activities of Solidarity underground. Due to this, the act offered HEIs unprecedented autonomy; however, soon after it came to force, a number of rebellious rectors were dismissed, with the amended act cancelling various rights of HEIs.

VI. **Act of September 12th 1990 on higher education** – a new political system, a new situation, granting autonomy to HEIs**.**

VII. **Act of July 27th 2005 Law on higher education** – the trend reinforced, the scope of HEIs autonomy widened.

VIII. **Act of March 18th 2011 on the amendment of the Law on higher education, amendment of the Act on scientific degrees and academic title and on degrees and title in arts, as well as on amendment of other selected acts. –** the principal components remained unchanged in terms of the four aspects mentioned; the competition-based option was introduced to replace the elections of a HEI's authorities.

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[6] Amendments are not considered, except those introduced after March events (1968), as well as amendments introduced over 1984 – 1985 and in 2011.

A short review presented below clearly shows that with a growing number of areas not being subject to the minister's decision regarding a HEI's operation (see the word "no" in Table 1), the greater autonomy of a HEI was observed.

Table 1. Legislation review. The minister's competences and a HEI's autonomy – four aspects

Act of..	Appointing a HEI's authorities	Establishing and liquidating units	Developing plans of studies	Monitoring costs/ personnel policy
1920	NO	NO	APPROVES	YES/NO
1933	YES	YES	APPROVES	YES/YES
1951	YES	YES	YES	YES/YES
1958	Entitled to declare objection	YES	YES	YES/YES
1982	NO	YES	OUTLINES	YES/YES
1990	NO	NO	NO	NO/NO
2005	NO	NO	NO	NO/NO
2011	NO	NO	NO	NO/NO

Source: Woźnicki, Jerzy, Uczelnie akademickie jako instytucje życia publicznego, Fundacja Rektorów Polskich, Warszawa 2007, s. 161. (Woźnicki, Jerzy, Academies as institutions of public life, Polish Rectors Foundation, Warsaw 2007, p. 161).

When we compare the volume of individual acts expressed by the number of articles, to the level of autonomy granted to HEIs, we can state that in Poland a greater volume of an act is typically correlated with a higher level of HEIs autonomy (see: Table 2).

This comparison indicates the scope of changes occurring over the last 100 years concerning the laws on higher education in Poland. The Act of 1933 in comparison to that of 1920 was shorter; it consisted of only 62 articles. However, it deprived HEIs of their autonomy. Similarly, the act of 1951 (the Stalinist period) was also short, offered much more limited autonomy than the one of 1958, twice longer (passed as a result of the "Polish October"). At present the situation seems to be much more complex; also, making a comparison is more difficult, as the Act of 2005 actually consolidated four previously independent legal acts, including two comprehensive ones: on higher education and on state higher vocational schools. Combining them straightforwardly would have meant developing an act composed of 400 articles; after consolidation it is much shorter, comprising 277 articles. This means that the bill is extensive, at the same time providing HEIs with a significant, higher than in the past, level of autonomy. Thus, it can be noted that with the support of the Conference of

Rectors of Academic Schools in Poland (KRASP), in 2005 the idea of certain deregulation of the HE system was partly conducted.

Table 2. Legislation review. Volume as a unit of measurement

Act of..	Number of articles	Level of autonomy
1920	114	significant
1933	62	minor
1951	78	very low
1958	159	increased
1982	233	significant
1990	210	high
2005	277*	significant and increased
2011	328	?

Source: a study based on: Woźnicki, Jerzy, Uczelnie akademickie jako instytucje życia publicznego, Fundacja Rektorów Polskich, Warszawa 2007, s. 162. (Woźnicki, Jerzy, Academies as institutions of public life, Polish Rectors Foundation, Warsaw 2007, p. 162).

Clearly, it can be stated that, contrary to popular belief that "a law should be short to guarantee a greater autonomy", historically, a shorter act typically meant less autonomy of HEIs.

The shortest act could stipulate as follows: "The system of higher education in Poland is established hereby, where the decision on founding a HEI is made by the Parliament. The executive body related to HEIs shall be the minister, who is responsible for making decisions concerning the system; within HEIs as individual entities the minister shall be acting through rectors, whom he/she shall appoint and revoke". Naturally, a similar act would not be desirable. An act typically consists of many articles, since they describe the diminishing scope of the minister's power. The issue of distributing funds for research can serve as an example. It would be possible to stipulate in one article that it is the minister's responsibility to specify, by means of a resolution, the principles and the mode of granting funds on research – both basic and applied, based on the applications submitted. Since we wish the process was conducted in a different way, other two acts had to be passed: on the National Centre of Science and the National Centre for Research and Development. Thus, one article was transformed into two separate acts; as a result, we have more regulations, which, however, is a much better solution than having just one article on the scope of the minister's competences.

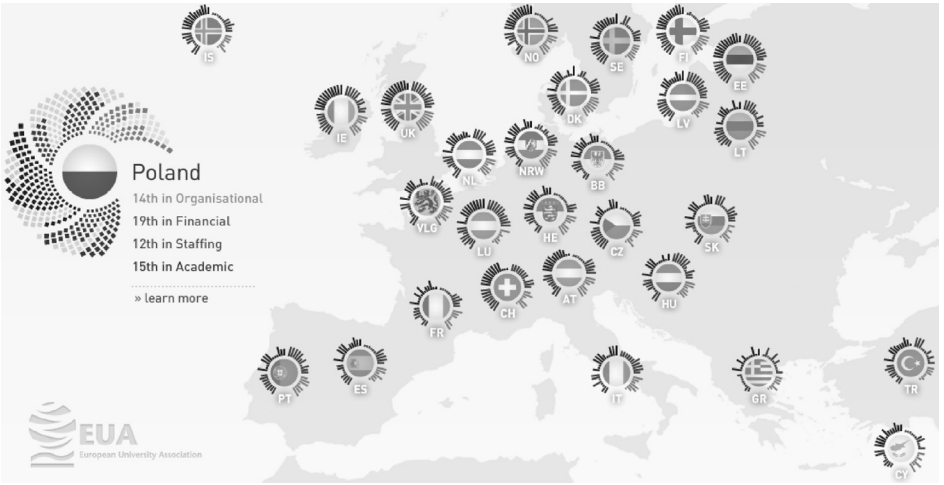
According to the author, this example may be of educational value; it may indicate that more autonomy sometimes means a larger volume of an act. Therefore, it is not desirable to propose a short act to be passed. We should introduce acts

providing HEIs with autonomy, despite the necessity of preparing a more precise, and consequently, a more extensive regulation.

5. The autonomy of Polish HEIs compared to general situation in Europe

In the report of The European University Association (EUA) **"**University Autonomy in Europe II The Scorecard" Poland was located in the middle as regards all the criteria (see Figure 2): 14th place (out of the total 29) in terms of "organizational" autonomy, 19th in terms of "financial" autonomy, 12th as regards "staffing" autonomy and 15th in terms of "academic" autonomy.

Figure 2. The position of Poland as regards HEIs autonomy in 4 categories in comparison to 29 other HEIs systems of European countries



Source: EUA Project website "University Autonomy in Europe" http://www.university-autonomy.eu/ (access date 10.04.2013).

Poland is in the middle and it has still some capacity to improve, that is to increase – by selective deregulation – the scope of autonomy of Polish HEIs within the system of higher education. In order to achieve this, we should analyse in a more detailed way the scores of Poland by each category (see: table 3).

It is necessary to deregulate certain areas, while some other regulations remain in force. Undoubtedly, the minister's activity requires regulation. Unlike in case of functioning, the organization needs to be altered, yet, deregulation is required. It seems that student affairs need to be regulated rather than doctoral studies, which should be deregulated. Regulations should be applied in case of state funding, as it is the minister's of finance statutory responsibility, with the fund distribution to be deregulated within HEIs. Also, HEIs' economic activity is supposed to be regulated, as it may be a sensitive area, where pathologies might be developed, consequently affecting the authority of HEIs. However, it seems advisable to de-

regulate research-related issues. Supervision and reporting should be regulated, in view of supervision and transparency requirements; also, it would be reasonable to decrease reporting requirements. On the other hand, staffing policy needs to be substantially deregulated.

Table 3. Criteria of HEIs autonomy, considered in EUA study

Organisational Autonomy • **Executive leadership** • **Internal academic structures** • **Creating legal entities** • **Governing bodies** • **Recent developments**	Financial autonomy • **Allocation of public funding** • **Keeping surplus on public funding** • **Borrowing money** • **Ownership of land and buildings** • **Students' financial contributions** • **Recent developments**
Staffing autonomy • Recruitment of staff • Staff salaries • Dismissal of staff • Staff promotions • Recent developments	**Academic Autonomy** • Overall student numbers • Admission mechanisms • Introduction and termination of degree programmes • Language of instruction • Quality assurance mechanisms and providers • Designing academic content • Recent developments

Source: EUA Project website "University Autonomy in Europe" http://www.university-autonomy.eu/ (access date 10.04.2013).

Table 4. Some examples of areas requiring regulation and deregulation in higher education

ISSUES TO BE REGULATED	ISSUES TO BE DEREGULATED
Minister's activity	HEIs functioning and organisation
Student affairs	Doctoral studies
State funding	Fund distribution within a HEI
Economic activities	Scientific research
Supervision and reporting	human resources policies

Source: author's study.

One of the areas of the desired deregulation in higher education remains the area of funding. This should concern a significant reduction of administrative barriers arising from the provisions of the laws and regulations. They severely limit the possibility of rectors for flexible policy towards disposition of the funds acquired by universities, while providing the required transparency of decisions and principles of internal audit and control system.

The tendency of imposition over universities more and more extensive barriers and restrictions reduces the scope of their managerial competences, driven by incidentally occurring symptoms of pathological behaviour, should be replaced by the policy of greater trust and openness, focused on the enforcement of responsibility for respecting the fundamental principles of legality, economic prudence, efficacy and reliability, rather than on redundantly placed bureaucratic demands.

The common goal of public authorities and universities should be a strive to provide opportunities for the development of the university's endowment and possibilities of obtaining funds from more diverse sources, including non-public ones. This should result in immediate withdrawal from the anachronistic today principle that every type of income of the university, regardless of its source, is classified as public fund.

In the long term, the process of deregulation should also concern socially sensitive issues, including – after the change of the Constitution – the principle of co-payment for tuition to a limited extent, with the widespread system of student loans, because of the requirement to respect the principle of universality and accessibility of higher education as constitutional values.

Generally, it can be stated that transparency requirements and those related to the provision of rights should be subject to regulation; those issues are crucial. Undoubtedly, in higher education certain rights, in particular, the rights of an individual have to be respected. The rules of verification and developing outcomes – according to the principles of supervision – have to be implied by a suitable regulation. However, the methods and ways of achieving the outcomes, as well as procedures, should be deregulated.

Table 5. Criterion of selecting issues to be regulated or deregulated in HES

TO REGULATE	TO DEREGULATE
Transparency requirements	The methods and ways of achieving the outcomes (procedures, structures, invoices…)
Rights provision issues	
Principles of verifying outcomes completion	
Principles of supervision	

Source: author's study.

As an example of deregulation we can quote a fragment of the Act of 2005 (Law on Higher Education), which excluded state-owned HEIs from the sphere of the state budget. In particular, this means that the minister of finance does not specify the overall wage fund; thus, it can be decided by a HEI what part of the fund will be allocated for wages and salaries. It is worth emphasizing that this provision was made, with retaining the statutory guarantee of the budgetary financing of HEIs' activities aimed at higher education tasks completion, on top of those resulting from

the initial participation in this sphere. It seemed crucial not to allow for secondary or subsequent deregulation, unfavourable for HEIs. Previously, it was a common practice applied by the minister of finance, who presented the state budget draft, to increase salaries – politically driven in view of forthcoming elections – at the expense of so called material expenditure. As a result, this approach led to achieving a disproportion between too high value of labour in comparison to small value of other expenditures in HEIs budget. In order to maintain balance between the funds, a requirement of subsidies indexation was introduced, based on inflation rate. The provision remained in force in the Act of 2011. Its implementation, however, is still another issue.

The postulate of improving the position of HE in Poland and of establishing a group of universities having possibilities to face international competition requires the establishment of a group of research universities. They would serve as the flagship HEIs[7] confirming the potential of higher education in our country – to the benefit of the image of all universities, also the smaller ones. Achieving this goal requires institutional consolidation of selected universities, including the aggregation of material resources and the integration of academic staff. Therefore, the legal framework should be introduced by the legislature, dedicated for such processes and referring to the rules of targeted deregulation.

6. Conclusions

Important premises for the deregulation process are provided in the European Union document "Council conclusions on the modernization of higher education". The conclusions of the Council and of the Representatives of the Governments on developing the role of education in a fully-functioning knowledge triangle identified "the need to reform further the governance and financing structures of universities allowing for greater autonomy and accountability, so as to facilitate a more diversified revenue stream and more effective collaboration with the business world and to equip universities to participate in the knowledge triangle on a global scale"[8].

Strengthening the knowledge triangle between education, research and innovation is perceived as a key condition for "enabling higher education to contribute to jobs and growth, for reforming governance and financing structures, and for enhancing its international attractiveness"[9].

The system of higher education represents a kind of democratic system. Hence, it should be based on three fundamental issues: procedures, outcomes and the principle of participation as regards decision-making processes (not limited only

[7] HEIs – higher education institutions.

[8] Council conclusions on the modernisation of higher education, point 8, p. 2.

[9] Council conclusions on the modernization of higher education, point 4, p. 6.

to developing proposals). Until recently the first element (procedures) prevailed; however, NCBiR[10], NCN[11], KRK[12] open the second sphere (outcomes). As regards the actual implementation of the third issue, it requires partnership of public authorities with a representative social partner, a competent and responsible body. Such kind of partnership would enhance deregulation as an essential value in higher education and science.

It is worth mentioning that in Polish academic community a similar partner already exists – there is a strategic consortium consisting of KRASP (KRePSz) – FRP – KRZaSP[13], as well as the allies legally established by the act: RGNiSW, KRD, PSRP[14], with the partners representing employers and entrepreneurs: ZBP, KIG, BCC, Pracodawcy RP, PZPPE Lewiatan[15] etc. This partnership cannot be replaced by unjustified media campaigns, signs of frustration or emotional letters on higher education, signed by a number of individuals. Moreover, the fact that individual statements, reinforced by the media, influence the activities undertaken, should be regarded as a kind of "destruction of the system". This is due to the fact that the activities should be initiated on the basis of professionally conducted research and projects, whose findings are supposed to be disseminated and publically discussed.

It is also worth emphasizing that among powerful regulators we can mention: the system and scope of funding and costs settlement, imposing – often indirectly – certain HEIs behaviours. Therefore, funding has to be subject to changes, justified by the idea of deregulation; funding has to be interrelated with the objective, which is supposed to be clearly defined beforehand. Currently a combination of postulates can be observed, regarding the accessibility of studies, popularity of higher education, quality of education, creativity of alumni, etc. It seems to be necessary to address the issue of combining and incorporating the objectives mentioned in educational policy, as they partially contradict to each other. For instance, quality of education may require certain constraints in terms of popularity of higher education.

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[10] Narodowe Centrum Badań i Rozwoju – The National Centre for Research and Development.

[11] Narodowe Centrum Nauki – the National Science Centre.

[12] Krajowe Ramy Kwalifikacji – the National Qualifications Framework.

[13] KRASP – Konferencja Rektorów Akademickich Szkół Polskich – the Conference of Rectors of Academic Schools in Poland, KRePSZ – Konferencja Rektorów Publicznych Szkół Zawodowych – the Conference of Rectors of State Owned Vocational Schools, FRP – Fundacja Rektorów Polskich – the Polish Rectors Foundation, KRZaSP – Konferencja Rektorów Zawodowych Szkół Polskich – the Conference of Rectors of Vocational Schools in Poland.

[14] RGNiSW – Rada Główna Nauki i Szkolnictwa Wyższego – the General Council of Science and Higher Education KRD – Krajowa Reprezentacja Doktorantów – the Polish Representation of Doctoral Students, PSRP – Parlament Studentów Rzeczypospolitej Polskiej – the Students' Parliament of the Republic of Poland.

[15] Związek Banków Polskich – the Polish Bank Association, Krajowa Izba Gospodarcza – the Polish Chamber of Commerce, Business Centre Club, Polski Związek Pracodawców Prywatnych Edukacji Lewiatan – the Polish Confederation of Private Employers in Education Lewiatan.

Certain deregulation, in particular, concerning the issues indicated in the present chapter, is required not only as regards the acts, but also the regulations laid out in the Minister's directives. Also, deregulation is expected in currently applied rules of financing HEIs from public funds, as well as the principles of cost accounting. However, deregulation is not supposed to violate certain rules. Firstly, the scope of autonomy and responsibility of HEIs should be closely correlated. The more autonomy, the more responsibility of HEIs is expected. Secondly, the Minister should have at his/her disposal certain instruments of supervision, specified in terms of scope and mode, and strictly derived from the provisions of the Act. The transparency of the minister's activities, as well as HEIs transparency, are unquestionable values in the system of higher education. Finally, the statute of a HEI has to be perceived as a sign of a HEI's autonomy – the reference in terms of legal provisions, embracing a growing scope of academic issues.

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1.2. Reforms of Higher Education Funding in the Czech Republic

Jan Koucký

The article describes the changes in the financing of Czech tertiary education since 1990 in the wider context of the development of the tertiary education system, focusing on its key moments. It aims at analysing the impact the three different funding systems – Incremental, Per Capita, and Performance Based – have had, particularly on stimulating the transformation of higher education, proving that funding is one of the most powerful tool of indirect steering by the state.

1. Starting the transformation in 1990

The objectives and priorities of reforms of Czech higher education more than twenty years ago were, to a large degree, a reaction to the situation of that time. Before 1990, the education system was rigid and highly centralised as an economic and political system. Higher education was of a very small capacity (it catered for only about 15 per cent of the age group) and elitist in nature. Central authorities prescribed types of specialisation and controlled the number of students; in all fields of study the *numerus clausus* – was determined on the basis of detailed development plans for the Czech economy, albeit mostly not implemented – was enforced (moreover, access to higher education was influenced by class criteria and Party membership of students or their parents). The planning machinery was based upon attitudes of the representatives of state enterprises and other organisations, which in fact were blocking any substantial growth of higher education sector.

The demand of the young generation for study places was far higher, although the relationship of qualification to wages was neither direct nor straightforward (Czechs have always highly valued cultural and social functions of education). Admission to upper secondary and higher education in many cases became a very efficient tool for manipulating parents, as applications had to be recommended (officially by local authorities, the previous school or employer, in fact, by the Party who had the decisive say everywhere) and this depended on the behaviour of both student and parents alike. The development of higher education had stagnated and responded neither to people's rising educational aspirations nor to their demand for higher education.

After the political turnover in 1989, the basic structure of the whole education system in the Czech Republic remained intact but its functioning and nature were significantly transformed, a closed and uniform system was changed into an open

and pluralistic one. This happened largely because four fundamental top-down measures of education policy were introduced:

- recognition of the right of students to choose their own educational path;
- per capita funding (which motivated schools to increase their intake);
- recognition of the right to establish private and denominational schools (but for higher education);
- devolution of power and increase in autonomy of schools.

These reform steps led to the overall liberalization of the education system, allowing educational supply to respond to changes in demand. They also led to expansion in quantity, structure, and diversity of education, particularly concerning technical education at the upper secondary level. This, however, was not quite the case as regards higher education. Its situation differed in one crucial aspect: for certain, basically political reasons, the right to establish private institutions was denied to higher education, which remained the monopoly of the state. In consequence, a similar expansion in structure and diversity of higher education did not happen. Although a need for shorter and vocationally oriented types of tertiary education emerged, during the first half of the 1990s higher education still consisted of traditional universities focusing only on academically oriented studies. They remained highly selective, and their limited capacity could not by far satisfy the individual demand.

2. Initial reforms – the 1990 HE Act and Per Capita Funding

New initiatives reacted in the first place to the situation of the day. They aimed to rectify the development of the past forty years which had negated former traditions and deformed universities in many ways. Firstly, both civic and academic freedoms were substituted by a total subordination to the Party and State bureaucracy. The ruling ideology permeated all activities (most nefariously in social sciences and humanities) and dictated the selection of teachers, who were also subject to periodic purges. Secondly, the function of the institutions of higher learning was considerably narrowed to teaching; most research was transferred to the Academy of Science and government research institutes established by individual ministries. Thirdly, natural development of schools offering higher education was retarded: there was just a single long (mostly five-year long) cycle with a theoretical content, without differentiation of form, content or aim of study. Compared with developed countries, the proportion of enrolled to the relevant age group remained very low.

At the beginning of the 90s, two major steps were taken in the area of higher education policy. The first one was the 1990 HE Act, the second one the introduction of Per Capita Funding in 1991 (affecting university budgets from January 1992).

The preparation of the 1990 HE Act was driven predominantly by the post-Velvet revolution initiative of higher education institutions (HEIs). Its main focus

was to restore the traditional position of universities, their autonomy, the so-called academic freedom (understood, in particular, as absolute independence from political structures of any kind), and to devise a corresponding mechanism of governance and steering, independent of the state. All crucial decisions concerning HE institutions – their internal structure, content and organisation of study, fields of study, appointment of academics, number of students and their enrolment – have been returned to the hands of elected functionaries (rectors, deans) and bodies (academic senates).

Another important step was the introduction of shorter, bachelor degree studies. Although they mostly remained just the first part of master degree studies, and only rarely were conceived as a terminal, practically oriented programme, followed by a direct entry on the labour market, they opened the way for so-called short cycles as the first signs of diversification of higher education. A far more important fact was the extension of the existing network of schools, offering higher education by turning former self-standing regional faculties of education (once known as teacher training colleges), and also some HEIs of technology, into fully-fledged universities, matching regional needs. Eight new regional universities thus emerged, which constituted roughly one third of all public HEIs in the Czech Republic.

However, even the new representatives of academia were only little aware of the huge progress that after the WW II was made in widening the participation in higher education. They found it appropriate that the access to it was rather limited. In 1991 the proportion of newly enrolled students decreased even further, down to 14 per cent of the whole age group (mostly as a result, however, of a great inflation caused by liberating the exchange rate of the Czech currency, which threatened the financial stability of HEIs in 1990 and 1991). Some representatives of academia strove to restore an elite system with stringent entry achievement criteria and a limited number of students.

Most of the general public, the new political representation and the state have a different view. The Ministry of Education realised that one of their most important tasks is to substantially increase the participation in HE in order to be really able to "return to Europe" – as the popular slogan of the day had it –, and that they must find a way of achieving it, although it was limited by two factors: by respecting the newly gained autonomy of HEIs, which excluded direct steering on the one hand, and by being barred from establishing private HEIs on the other.

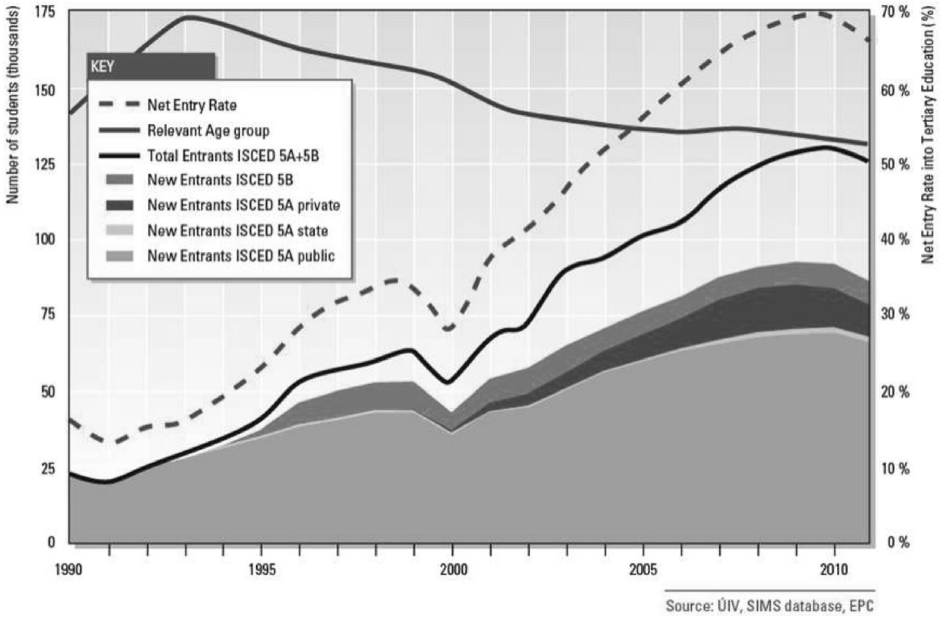
The Ministry of Education offered a solution: to reform the funding mechanism in such a way that it motivates HEIs to constantly increase the number of students. The system of incremental funding inherited from the old regime was far from meeting this requirement: the budget of HEIs for the new fiscal year was always based on the previous one, any change was negotiated directly between the Ministry and the HEI in question, no long-term strategy existed. Subjectivity of the process, lack of motivation of HEIs to improve their quantity or quality, and no commitment to long-term aims and objectives were the main set-backs of the incremental funding.

Therefore, a new mechanism of Per Capita Funding was introduced in 1991 (to be used for calculating school budgets in 1992) in order to motivate HEIs to expand. Its basic principle is very simple: HEIs will be funded by the number of their students (and/or graduates), where also the relative cost of the field of study is taken into account (at the time of introducing the new mechanism, budgets of individual HEIs could be reduced by up to 10 % against the previous year). The decisive factors are the demand to study at a particular HEI and the number of students enrolled. In other words, the HEIs themselves decide by their activity, how much money they receive.

The new mechanism of Per Capita Funding seemed to be working. In the period of 1991–2010 the number of new entrants increased almost fourfold, and the number of total entrants more than fivefold. In relative terms the increase was even more pronounced, as the relevant age group was steadily declining, and the net entry rate finally reached as much as 70% against about 14% in 1991.

Figure 1 shows the overall increase in number of students – the coloured area - that of new entrants (that is, students entering HE for the first time), and the black line that of total number of entrants (that is, including students entering HE for the second or even third time for various reasons, such as a new and better start or choosing another study programme).

Figure 1. New Entrants intro Tertiary Education and Net Entry Rote. Czech Republic, 1990–2011



The number of new entrants was steadily increasing till about 2010 with the only exception of the year 2000, when the number fell by about 20%. It was caused by a reform of primary schools, extended by one year in 1996. Consequently, almost the entire age cohort of upper secondary school graduates was missing for another four years, and almost all new entrants were recruited from the group of applicants who were not successful in previous years and who applied for the second time. This eased to some extent the pressure on the available study places; although their number was increasing every year, they were still not meeting the demand.

While the number of students was increasing, the corollary process of diversifying the HE provision was rather delayed and, unfortunately, rather deformed. After a four-year experiment, a new type of tertiary institutions, the Higher Professional Schools (HPSs, in Figure 1 marked in blue), came into existence (1996). However, they were not granted the status of higher education institutions, although it had been originally presumed that their establishment would become the main way of diversifying higher education (subsequent to its expansion) at its lower tier. They could have been established only as an extension of upper secondary vocational education under the 1996 amendment of the existing School Act (which also abolished other existing forms of post-secondary studies), without any systemic links to existing public universities (enabling, for instance, transfers of credits or recognition of studies).

This proved to be a serious setback for their development. In the long run it undermined their competitive position against professionally oriented bachelor programmes that were first offered by traditional universities in the second half of the 90s as part of the Bologna Process.

Although the duration of studies is the same, links to enterprises are much closer and vocational orientation is more pronounced in higher professional schools, yet, their diplomas (classified as ISCED 5B) enjoy less prestige than the first university degree (classified as ISCED 5A), as they do not allow their graduates to enrol into postgraduate programmes. In consequence, further development and even the existence of higher professional schools was thwarted. Two minor points have to be mentioned. First of all, while only the number of students was considered in the beginning, later it was partly substituted by the number of graduates, as an indicator enabling the introduction of some measure of support given to students, and consequently, of the quality of studies. However, later this change was suppressed because it might have led to some contradictory side effects of examiners being less rigorous at final examinations.

Secondly, the range of the Coefficient of Field of Study Cost (CFSC) is too wide, approximately twice as high as in other countries. As the CFSC range was proposed by HEIs themselves, it was feared at the time of its introduction that excessive differences would encourage the HEIs to gradually move students from less costly fields of study to those more costly. However, the data for the period of 2005–2011 indicate that the proportion of students in each category remained stable.

Table 1. Since 1992 – Per Capita Funding (Per Student and Per Graduate – SGF)

Field and Study	CFSC	Numer of students in public HEIs			
		2005		2011	
Humanities, Economy	1.00	86 184	33%	113 904	34.3%
Philosophy, Education	1.20	38 942	14.9%	50 221	15.1%
Technology	1.65	80 687	30.9%	95 595	28.8%
Agriculture, Forestry	2.25	26 083	10.0%	37 818	11.4%
Chemistry, Medicine	2.80	23 314	8.9%	25 906	7.8%
Veterinary medicine, Stomatology	3.50	3 827	1.5%	6 318	1.9%
Arts	5.90	2 329	0.9%	2 660	0.8%
Total		261 365	100%	332 420	100%

Budget of HEI = Number of Students/Graduates×Coefficient of Field of Study Cost.

3. Further developments – the 1998 HE Act

The second key moment of the past twenty years was the year 1999, when the new Act on HE, the second one after the Velvet Revolution, came in force. The new Act introduced some important changes, in particular, it permitted to establish private HEIs (it was presumed at that time that only a few private schools would be established, and further, that they would focus only on the programmes which were not offered by public HEIs, or those where the demand for study places significantly exceeds the provision offered by public HEIs).

First of all, as the new HE Act stipulated, almost all state HEIs became independent public institutions, and were endowed their premises and sites, formerly the state property (only two HEIs, serving for the purposes of the armed and police forces, have retained their status as state institutions). Thus, their autonomy increased significantly, for example, in terms of property management or financial matters, allowing for the long-term use of their resources at their discretion. In order to increase their financial accountability as well, a new steering body alongside the Academic Senate, the Board of Governors (or Trustees), was introduced. Further, at public HEIs limited tuition fees were introduced – as a relatively high sanction fee when the length of studies exceeded the standard duration by more than a year, as well as for programmes delivered in a foreign language. A necessary pre-requisite, an information system on students and study processes, was established as well. (In this respect, it is interesting to note that the development was not as favourable as previously intended. Today, more than three quarters of foreign students come from Slovakia, and since their language is very close to Czech, they naturally study Czech programmes without paying a fee. Other major group of foreign students,

coming from former socialist countries, prefers to attend an intensive course of Czech, in order to be able to study in this language as well. A relatively small part of foreign students study in English or other world languages and has to pay a high tuition fee. Although HEIs are quite happy to have bright and motivated Slovak students – and studying in the CR is a matter of prestige for most Slovaks – this aspect of internationalisation of higher education does not work very well.

The new Act also defined the role and function of higher education to much wider extent. On top of both traditional functions – teaching and research – it added as the third function (or, rather the mission/role), the involvement of HEIs in lifelong learning, community building, cooperation with business enterprises and support to regional economy. This amendment, at first seemingly not having a direct effect, in fact, substantially modified and deepened the concept of diversification of HEIs.

Another amendment had a similar focus – to promote further diversification of HE by increasing the proportion of bachelor programmes. It defined a new category of *Non-university HEIs* that would be entitled to offer only bachelor programmes, by definition, of vocational/professional orientation. It was also hoped that the best Higher Professional Schools would use this opportunity and eventually attain this higher education non-university status. However, so far only two of them have achieved it.

After nearly ten years upon the passage of the first HE Act, political reasons blocking the establishment of private institutions at the HE level disappeared, and finally it was possible to employ this efficient measure for increasing the educational offer. Thus, the new Act made it possible to establish private

HEIs (in Figure 1 marked in red), not funded by the state, but charging tuition fee as a dominant source of their income (this is also why private HEIs usually offer those fields of study that are less costly and more in demand, and this is the case of studies in economics, business or in humanities). In contrast to the existing Higher Professional Schools (HPSs), most new private HEIs embraced the opportunity and have been established as *Non-university HEIs*.

Thus, the 1998 HE Act rounded off the Czech HE sector, composed of three categories of HEIs: Public, State and Private ones. However, if our perspective is changed from higher to tertiary education, we also have to consider Higher Professional Schools (HPSs), established under the School Act. Both public and private HPSs form the fourth category of tertiary institutions. Each category has a very different mechanism and diverse sources of funding. In the academic year 2011– 2012 the whole tertiary sector had nearly 430 thousand students.

The core of the sector is formed today by 26 Public higher education institutions (HEIs), financed from the budget of the Ministry of Education, until 2009 by means of Per Capita Funding (and Performance Based Funding since 2009). In the academic year 2011-212 they had about 340 thousand Students, which constitutes 79 % of the total number of those enrolled in tertiary education.

On the other hand, the second category is very small, with only two State HEIs funded directly from the budgets of the Ministries of Defence and of Interior. In the

academic year 2011–212 they had about 5 thousand students, which constitutes 1% of the total number of enrolled in tertiary education. Today the last HE category contains 44 Private HEIs funded almost exclusively from private sources, mostly by their students (who are entitled to receive the same study grants as students of public HEIs). In the academic year 2011–212 they had about 55 thousand students, i.e. 13% of the total number of enrolled in tertiary education.

Higher Professional Schools, both public and private, do not have the status of higher education institutions. They form the last segment of the tertiary sector. Because they fall under the School Act, also public HPSs can charge tuition fees, albeit comparatively small, far lower than private HPSs. In the academic year 2011–212 HPSs had about 30 thousand students, i.e. 7% of the total number of enrolled in tertiary education.

Nevertheless, during the second half of the 1990s, and particularly after the turn of the millennium, when substantial changes (such as the strengthening of vocational education at the tertiary level, massive expansion of bachelor studies, and setting up private non-university higher education institutions) were introduced, the number of study places substantially increased – at first, slightly and then substantially during subsequent years. It is important to note, however, that irrespective of the fact, to what extent short bachelor studies were supported by the Ministry, as a part of the implementation of the Bologna Process, still about 80% of bachelors do not directly enter employment but go on to study master programmes.

4. From quantity to quality, introducing performance indicators

From the quantitative point of view, the Czech tertiary education sector has thus already attained a level comparable to that average of other developed European countries. In the academic year 2006/2007 alone, the proportion of enrolled students exceeded 60% of the respective age cohort; it was higher than in some other countries with similar educational tradition (like Germany, Austria and Switzerland).

The rapid growth lasted, its dynamics being one of the highest among developed countries, twice as good as the average numbers of OECD countries. The increase in the net entry rate was even more dynamic, as the relevant age group (full blue line in Figure 1) was steadily declining. Finally, in 2010 total number of entrants (full black line in Figure 1) almost equalled the relevant age group, and the net entry rate (broken red line in Figure 1) was as high as 70%.

The first critical opinions concerning the provisional achievement in terms of quantitative expansion and the need for tempering it, and concentrating on the problem of decreasing quality instead, were pronounced as early as in the middle of the first decade of the new millennium. Yet, only in 2009 and 2010 some practical measures were taken. They supported the development of the new strategic material of the Ministry of Education for the period 2011–2015, where the focus shifted from quantity-oriented to quality oriented, in order to enhance further diversification of the HE sector. The funding mechanism had to be changed ac-

cordingly, not only to conform to strategic priorities, but also to become the most efficient tool in the process of their implementation.

As Martin Trow showed as early as in the 70s (and later modified for the European context), the expansion of higher education in terms of the number of students, has to be coupled with an adequate diversification of HEIs as its corollary. The student population has become far more heterogeneous; students differ in their interests, aspirations and also individual capacity. Moreover, they have to be prepared for diverse positions in society and economy. At the same time, it is necessary to maintain the high standard of best universities, which play a highly important role for the future of society.

While the HE sector has to fulfil many functions, no single institution is able to engage and compete in all of them. The range of functions naturally leads to a range of different characteristics and qualities of individual institutions. They have to "profile themselves", i.e. to focus on those activities at which they are the best. Alongside with top research universities, there would co-exist other HEIs focused predominantly on teaching and on their third function (or mission/role). The main aim of the new funding mechanism is to support them all, to guarantee to all of them adequate funding they require, in order to reach their specific goals.

As a result, it was decided to introduce a new mechanism of performance-based funding encompassing the whole range of activities HEIs could perform. Three measures were adopted. Firstly, the Performance Based Funding was introduced only in certain parts of the budget allocated to Public HEIs and its proportion was gradually increasing. Secondly, further expansion of the sector was capped by limiting the number of new students to be funded by the state. And thirdly, both measures were linked together – for each HEI the number of students funded by the state would depend on performance indicators attained. Thus, it seems to be clear that the choice of performance indicators is a very sensitive matter, as it can significantly affect the behaviour of HEIs and their further development.

Measuring research performance objectively poses specific problems. Yet, only by using performance indicators it is possible to overcome traditional approaches based on subjective assessment. In this respect, the new mechanism of Performance Based Funding made it possible to use indicators previously developed for funding all the research, both in and outside HEIs, particularly in the institutes of the Academy of Science and in the research institutes of various government departments. The reform of research funding commenced in 2006, when new Government regulations on research stipulated (following the 1998 HE Act) that all research funding from public sources should be allocated competitively. Two channels were used for allocating the state budget for HEIs' research: the first one is institutional funding, which directly supports HEIs in proportion to their R&D results, measured by a newly introduced database of R&D output of all research institutions (RIV system); and the second one, which distributed funding according to research grants acquired from specialized grant agencies, ministries and government agencies. Funds allocated by both channels are of similar volume.

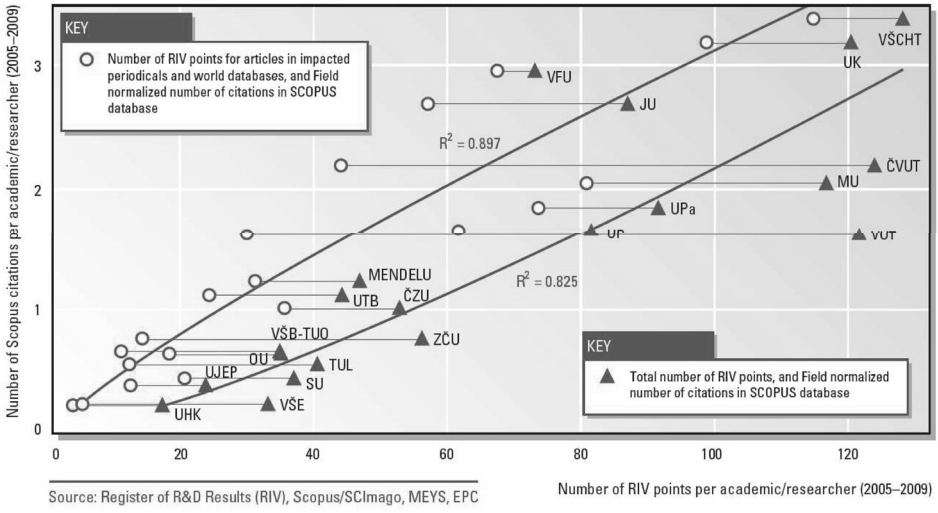
The introduction of RIV system (an abbreviation for Information Register of R&D Projects) has been the first attempt to objectively measure the R&D output by

a standard mechanism in the Czech Republic. In all categories of R&D the results were measured by attributing to them a certain specified number of so-called RIV points. Table 2 illustrates, firstly, that RIV points are awarded for all types of results – for several types of publications, patents and other outcomes of applied research – and secondly, what proportion of points was granted to various categories of research institutions.

The system has been severely criticised (and also nicknamed as a "coffee-grinder") for being unfair and oriented at applied research; it has already been partly modified since then. Yet, at the moment there is no other system which might replace it.

The existence of RIV system and the information gathered by it was one of the important prerequisites for Performance Based Funding of higher education that began to be gradually implemented three years later. Figure 2 illustrates the mechanism of RIV system as well as its relation to a well-known international *Scopus* database (all data have been taken from *SciMAGO World Institutional Report SIR, 2012*). This relation is very close, which can be noticed when we compare the outcomes of Czech HEIs by the number of citations in the *Scopus* database and by the number of gained RIV points (especially for articles in impacted periodicals). It also shows how the research performance of Czech HEIs differs, indicating the difference between basic research (represented by circles) and overall, basic and applied research (represented by triangles): the shorter the distance between them, the greater the proportion is of basic research. This demonstrates clearly that the new Performance Based Funding will have a great impact on the performance of Czech HEIs, this may also play an important role, for instance, in the process of their categorisation and diversification.

Figure 2. R%D result (RIV) and citations in Scopus database. Public higher education institutions, Czech Republic 2011



5. Gradual introduction of Performance Based Funding (initiated in 2009)

The Performance Based Funding is being implemented step by step. The Ministry of Education is fully aware of the fact that drastic changes in the way how funds are allocated would introduce insecurity into the budgets of HEIs and could have some unpredictable adverse results and complications; also, that a measure of stability should be maintained. It has been agreed that changes in the calculation of budget allocations could have only a very limited effect on new budgets of HEIs, in the range of plus/minus 10 %, as compared to the budgets of the previous year. If new parameters or indicators are considered, they must be backed by feasibility studies showing their sustainability, benefits and threats, as well as the possible impact on HEIs performance.

When Performance Based Funding was introduced at preparing the 2009 budget, it was limited to 9% of the overall HEIs budget. For the first time a comprehensive system of indicators and their weights was devised. It was perhaps too simple, however, it included all the main areas of evaluation: performance in research, quality of studies, and internationalization. The possible effect of this innovation is illustrated by Table 3.

Table 3.

Budget 2009: Public HEIs funding: 91% Per Student (and Graduate) Funding (SGF), 9% Performance Based Funding (PBF)
PBF 2009 Indicators and their weights: R&D results (RIV points) – 50% Income generated by the HEI – 15% Number of Full and Associate Professors (FTE) – 10% Students mobility (incoming and outgoing) – 25%

Since 2009 the gradual implementation of Performance Based Funding has continued. The mechanism has been perfected by discussing it with representatives of HEIs and by introducing further, typically even more comprehensive indicators. When the budget for 2012 was being prepared, another much bolder step was taken.

First of all, the proportion of PBF was increased more than twice, to 20% of overall budget of HEIs.

And secondly, the composition of indicators was more sophisticated, all the three areas included further important indicators, such as grants obtained, employability of graduates and collaboration with foreign institutions (see Table 4).

The effect of the increased proportion of PBF on the overall budget (see Figure 3) is indeed quite significant, in particular, immediately after the new approach was first implemented; and the right mix of ingredients is still tested.

Beside its practical value, the new approach can serve as a powerful analytical tool. Figure 3 illustrates that it has already had a visible effect on differentiating Czech HEIs.

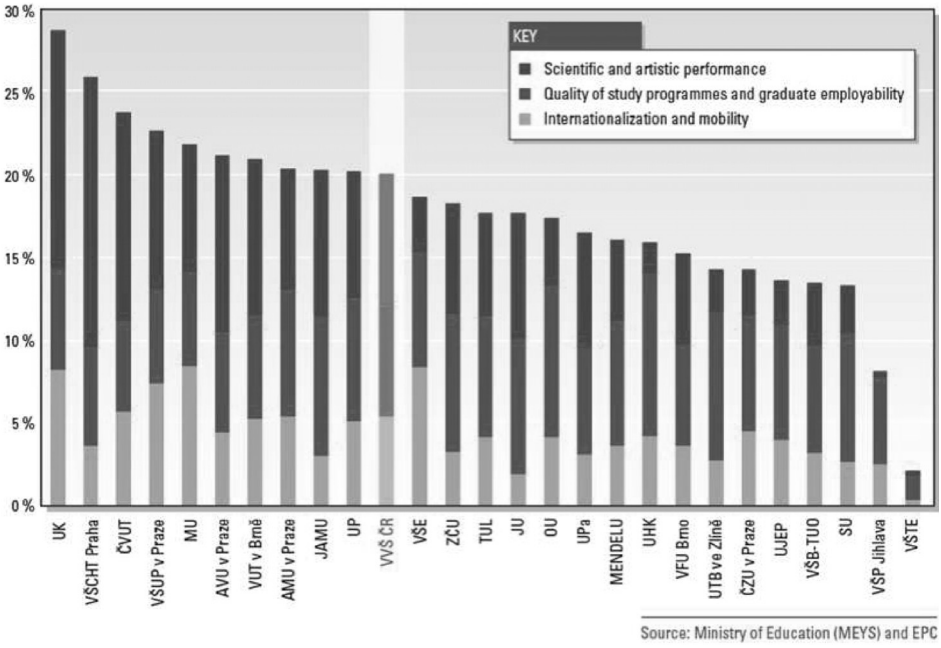
Table 4.

PBF – budget 2012: 80% Per Student (and Graduate) Funding (SGF) 20% performance Based funding (PBF)
PBF 2012 Indicators and their weights: **Performance in research and artistic activities – 39%:** Performance in research activities (system of RIV points based on number of journal articles, publications, patents, applied research) Performance in artistic activities (system of RUV points based on register and classification of artistic performance indicators) Funds for research gained by the HEI through competition for grants Income generated by the HEIs
Quality of study and Employability of graduates – 34%: The professional quality of teachers (measured by the staff structure, due to lack of relevant indicators Employability of graduates (unemployed in the period from 6 months to one year after graduation)
Internationalisation and mobility – 27%: International collaboration with foreign institutions Number of foreign students Self-funded students Students mobility (incoming and outgoing)

In 2012, 20% of Public HEIs funding were allocated according to the above PBF indicators. As illustrated by Figure 3, the "winners" are located on the left side from the average value (VVŠ ČR, a white column), and the "losers" on the right side. The best "research-type" universities are indicated as the first three columns on the left (UK – Charles University in Prague, VŠCHT – Chemistry and Technology University in Prague, and ČVUT – Czech Technical University in Prague). On the other hand, many HEIs in the right part of the range clearly focus on educating qualified and employable graduates (for example, UHK – University in Hradec Králové, JU – South Bohemia University in České Budějovice, and OU – University in Ostrava). Also, the more attractive schools for foreign students can be easily identified (for example, MU – Masaryk University in Brno, and VŠE – Prague School of Economics).

One can also see that both public *non-university* HEIs (two last columns on the right, VŠP Jihlava – Industry HEI – and VŠTE – Technology and Economy HEI) have gained very little from the new mechanism.

Figure 3. Proportion of HEI's budget based an quality and performance criteria. Czech Republic, public higher education institutions, 2012



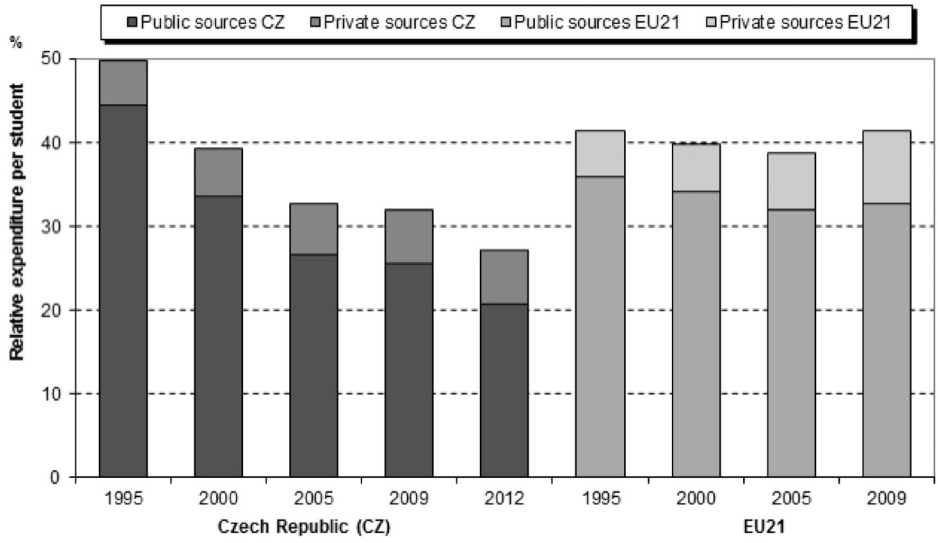
6. Budgetary cuts and discussion on tuition fees

Current situation is affected by the financial crisis and government budgetary policy. According to the three-year saving plan passed by the Parliament in December 2011, the education budget should be cut by 20% by 2014. To make the situation even worse, funding of higher education in the Czech Republic has been problematic for a long time, when compared with other EU countries (see Figure 4). In the last 20 years, an increase in funding has never been compensated by an increase in the number of students. The last 3 years, from 2009 onwards, have only strengthened this adverse trend. Austerity in education has added fuel to a never ending debate about tuition fees and other income from private sources.

General introduction of a tuition fee in all public HEIs is a very sensitive and contested political issue in the Czech Republic. It was bound to be introduced in the mid-nineties, when a Bill, modelled on the Australian HECS, was prepared and voted down in the last minute. The idea emerged once again when a centre-right government came to power in 2006, but on that occasion its implementation failed (when a centre-right government was voted down at the beginning of 2009 during the Czech EU Presidency). After the last elections in 2010 and a renewed victory of a centre-right coalition, the introduction of tuition fees together with a student support scheme has even become part of the Government Programme. However, it turned out to be too difficult to devise a loan system guaranteed by the state, and

today it seems that only a very limited registration fee at the beginning of each term might be introduced (2013/2014), covering, on average, approximately one tenth of full study costs (about 200 €).

Figure 4. Expenditure per student relative to GDP per capita. CZ 1995–2012 and EU21 1995–2009



Source: OECD methodology; till 2009 - real data from the OECD database; CZ 2012 - based on MEYS and MFCR preliminary data.

The disapproval of the introduction of tuition fees in public higher education is gradually growing in Czech society. Tuition fees are only supported by 21% of respondents, according to a survey conducted in September 2012. Three years ago they were still supported by 29% of respondents. On the other hand, a limited use of tuition fees in public HEIs was introduced in particular instances by the 1998 HE Act from 2006. While in public HEIs there only exists a sanction fee, in private HEIs the fee should cover most or all study costs. In higher professional schools, or the non-higher education segment of tertiary education, tuition fees are charged in both public and private institutions; accordingly, their range is very wide, from 200 to exceptional 5 000 €. Altogether tuition fees are paid approximately by a quarter of students of tertiary education.

Apart from tuition fees, i.e. the income generated from households, HEIs can generate income from the business sector. In total, the income from private sources cannot be perceived as low, it amounts to 20% of HEIs budgets. To increase it, it would be necessary to introduce tax incentives for enterprises to stimulate their co-operation with HEIs. Unfortunately, its most effective form, co-operation in research, is still in its initial stage of development; in fact, it is inhibited by the current tax system. However, the pending tax reform has not found much support in the Parliament and from the general public.

7. Conclusions – funding and HE transformation

The Czech experience can be summed up by stressing that the funding system is a powerful tool of indirect steering, which can be effectively used not only for achieving strategic aims in a long-term perspective, but also for implementing short-term objectives.

The selection of the funding model, its parameters and indicators is of utmost importance. They should be transparent and easily understood by both HEIs and general public, they should closely correspond with the aims of the long-term development of higher education. They should be applied systematically, without interruption, and unsubstantiated doubts about the main principles. Only indicators can be discussed, and they have to be applied with great sensitivity, as they will significantly affect the behaviour of individual HEIs.

At the same time, it is necessary to warn that the current period of budgetary cuts and of passionate discussions about the introduction of tuition fees creates rather unfavourable setting for reforming rules of higher education funding. The same also applies to current instability and turbulence of our political scene. It is too difficult to implement such reforms in times of austerity and deep cuts, affecting not only HEIs but also the families of present and future students.

1.3. Development of University Autonomy and Higher Education Funding Structures in the Federal Republic of Germany

Brigitte Göbbels-Dreyling, Henning Rockmann

1. Introduction

Higher education institutions (HEIs) and higher education policy in Germany have been subject to fundamental change over the past twenty years, as a complete recalibration of the relationship between the state and universities has taken place. It was previously thought that HEIs of the size comparable to that of a mid-sized company could not be successfully and efficiently managed if they were simply treated as subordinate institutions of ministries. In public debates, however, critics claimed that higher education institutions were not developing in terms of quality. For a long time, state policy clung to the idea that all universities should be equal. It was thought that a degree in a particular subject should always be of the same quality and value, regardless of where it was awarded. The state, therefore, took measures to standardise the facilities and provisions (personnel etc.) of all universities using various key performance indicators; these defined how much money could be spent on certain services. For example, there were standard values set for the curriculum, which specified exactly how many hours of supervision each student should receive in a particular subject, as well as other guidelines stipulating how large teaching rooms should be, and so on. The state also maintained legal and academic jurisdiction over a university, a range of provisions on building permits, as well as a say on other university matters. The state could further exert authority using laws, ministerial decrees and ordinances.

This approach led to the successful completion of the first phase of expansion of the higher education system and the creation of a large number of good HEIs. Once this phase was completed, very poor universities became a thing of the past; however, there were also none that were exceptional or which had international renown. In public discussions, critics increasingly perceived this as a key deficit in Germany's higher education system. The drive for a competitive edge now overtook the desire for equality; it seemed to be clear that, with similar funds and resources, market and competition were suitable factors determining the accomplishment of better results. The positive experiences of other countries that had already implemented similar changes played an important role here. And so began a gradual conversion to a system in which the HEIs took more and more decisions independently and, in return, became accountable to the state and taxpayers for the services that they provided. This process of change was further accelerated due to the scarcity of resources in the public purse: it was easier to pass on the task of

administering the budget cuts or shortfalls to the universities and to commission the task of implementing the changes to the HEIs rather than oblige the state to carry out these activities.

In return, HEIs made emphatic demands for greater freedom to make their own decisions. They argued that they were far better placed to take decisions on the spot, especially regarding academic matters, than an official sitting in a far-off ministry.

2. Educational federalism in Germany

Education and culture fall under the jurisdiction of individual federal states in Germany. The mothers and fathers of the constitution decided on this allocation of responsibilities after witnessing the devastating consequences of a centralized state and its ideology in the 1930s. Cultural diversity was implemented in order to prevent a recurrence of this kind of 'Gleichschaltung', or enforced conformity. University laws are, therefore, decreed by individual states, and the states must ensure that HEIs receive basic funding. The Federal Government is involved only in the financing of research projects in higher education. Although this decentralized solution ensures a high degree of diversity in the German educational system, the recalibration of the relationship between universities and the state was applied across the country in every federal state, albeit at varying pace and in different forms. Since the end of the nineties at the latest, new methods such as overall budgets, target agreements, performance-based funding allocation, cost-performance analyses, supervision, strategic planning, evaluation and accreditation have forged a new path for higher education. The activities of university boards responsible for academic self-government have been transformed, university management have become more strongly professionalized, and new actors such as university committees have begun to play an active part in the process.

The various paths chosen by different states also illustrate that there is no one single effective model in this process; many routes lead to the same goal. Therefore, the German Rectors' Conference (HRK) has limited its recommendations regarding autonomy and management systems to basic principles and has never demanded the implementation of a specific concept.

3. Different areas of autonomy and their development

In addition to the right of HEIs to establish their own statutes, they are also free from state influence in legislative, executive and judicial matters. Consequently, HEIs can act independently when making academic, financial and personnel-related decisions. Due to educational federalism in the Federal Republic, the degree of independence from the state varies across the country. The sources of law for university autonomy are the formally legalized guarantees of self-regulation, as well as the constitutionally guaranteed protection

set out in article 5, paragraph 3, of the Basic Law. This constitutional principle relating to academic freedom guarantees the autonomy and right to self-government of HEIs. When universities take decisions under their own jurisdiction, the rights of the university staff and other university groups must also be taken into account accordingly, for the same reasons. The universities, therefore, decree their own basic principles, degree programme regulations and examination regulations.

Since the passage of the University Freedom Act in 2007, North Rhine-Westphalia has become the state with the highest degree of university autonomy in Germany. Universities in this federal state exercise autonomy as regards hiring employees; they have complete financial freedom regarding the overall budget (awarded to every university); also, they are exempt from state influence in academic matters, while the state maintains legal jurisdiction over them.

For the German higher education system to continue to differentiate and become nationally and internationally competitive, however, a higher degree of autonomy in other federal states will be necessary. This is even more urgent since the passage of the Academic Freedom Act in 2012 by the federal legislator, which grants non-university research institutions greater autonomy in budget and personnel-related matters, as well as building measures.

4. Introducing flexible budgets

Decisions on the extent and allocation of financial resources constitute some of the primary management functions in higher education. The most significant questions surrounding university development are closely linked with the allocation of funds. Consequently, the crucial first step in achieving greater university autonomy was to remove so-called 'cameralism' (a form of public sector accounting) and to introduce flexible budgets, or overall budgets. Up until that point, university budgets had constituted a part of the budget of the respective ministry of science and education, and were structured by the ministry, for administrative purposes. University budgets were subject to clear regulations as to how much could be spent on particular purposes. For a long time, unused funds that had been earmarked for a particular purpose could not even be reallocated for different use; they had to be returned at the end of the fiscal year. Nowadays, the budget is paid either as an overall sum or as several large sums, which can be flexibly allocated and also carried over to the next fiscal year if not spent. HEIs can decide how the resources are used or where cuts are made; they can decide to support a particular aspect of a university's profile or to fund a new degree programme or research area. In return for these freedoms, HEIs are obliged to improve their reporting related to their activities, since the system can only work if institutions can be compared with one another, and if they can be measured according to agreed performance goals. HEIs are entrusted to pursue the goals, and the attainment of these goals is then evaluated at a later stage.

5. Allocating performance-based funding

The transition to a system of overall budgets meant that there was no longer the need to maintain historical budget estimates or the 'top-down' approach. Performance should be evaluated. Universities that were especially productive in the field of research and teaching were to receive a bigger slice of the cake than others. In the spirit of competitiveness, a system that offered performance-based funding allocation using incentives was developed. This meant that funds were awarded automatically, based on various performance indicators in teaching and research. This system is intended to offer incentives and improve the level of transparency and predictability of funding allocation for the recipients of the funds (the universities).

In the beginning, universities were apprehensive about the introduction of performance-oriented models for allocating funds. Would this new system mean that funds would be redistributed? Would their own university score badly in comparison with others and receive less funding than in previous years? Subsequently, procedures were introduced to dispel these fears. For example, the universities were involved in developing the funding allocation system. In working groups comprising different universities and the ministry, calculations were made in order to determine the different effects of using particular key performance indicators or weightings. In addition, – as it was mentioned above – the proportion of the budget that was awarded based on performance was restricted at first, and then gradually increased. Finally, caps on funds were also implemented in the early stages, which meant that there could be no redistribution of funds above a certain percentage threshold.

The current situation with regard to performance-based funding allocation seems to comprise a number of characteristic elements.

It is common to all formula models for funding allocation implemented at state-level that they focus on key performance indicators for teaching, particularly on the role of the number of students as an indicator of workload and teaching demands, as well as the number of graduates as a measurement of teaching success. For these calculations, some states take into account the total number of students, others the number of students in the standard stage of study, or the number of students in the second year of study. Some states recognise different subject areas, whereas other states do not. Secondly, key performance indicators for research activities are also considered, in particular, the amount of third-party funding and the number of doctoral researchers; in some cases research prizes are taken into account, too. Also, some states take additional factors into account, such as the successful implementation of gender equality policies, for example (the number of newly appointed female professors), or the internationalisation of the university.

6. Different forms of performance-dependent funding allocation

Approximately one third of federal states currently pursue a strategy whereby they attempt wherever possible to allocate all state contributions basing on key

performance indicators. In a considerable proportion of cases the indicators that are not performance-oriented (such as the number of professors) are also included. Of course, this is also related to the fact that the amount of money required for the running of a university cannot be infinitely adjusted; around 60% of the funds are used for staffing, where permanent positions prevail.

Most states adopt an approach whereby a limited proportion of the state-allocated budget is awarded on the basis of a formula model. In these states, the majority of the budget received from the state is determined annually, following the tradition of cameralist budgeting, as before. The percentage of funds allocated according to performance-based indicators in the states mentioned ranges from under two per cent to 60 per cent.

For the incentives that are set at the state-level to be effective, it is necessary to incorporate them into a university's internal management levels; that is, to benefit from performance-oriented funding allocation, the relevant distribution mechanisms and key performance indicators should be applied when awarding funding to different faculties at a HEI. Performance-related incentives that are set at the macro level must, therefore, also be set at the micro level to ensure that everyone makes any effort to jointly reach the same goal.

7. The effects of performance-oriented funding allocation

Performance-oriented funding allocation has become a reality. However, there are still some considerations surrounding this practice that cannot – and rightly so – be ignored. Let us mention some of them.

- Performance indicators are based on past record rather than current achievements.
- Is it really possible to reduce the complex achievements of a university to a few indicators, or could performance-controlled funding allocation have a negative effect? This point is often raised in relation to the frequently used indicator, intended to measure the significance of research, i.e. the number of doctoral candidates. Universities are keen to see the highest number of candidates through to the successful completion of their doctorates; however, this is likely to result in a reduction in quality. It seems to be is true also in case of the number of graduating students; compromises in quality are likely to be made in order to achieve a high success rate.
- The final key point to be noted is the fact that the budget awarded to universities on the basis of performance is generally capped. This means that some universities on certain occasions will be forced to accept budget cuts despite improved performance; this situation may occur if other universities can demonstrate that they have performed better (e.g. through higher number of students). Implementing budget cuts for universities that have demonstrated improved performance may deteriorate the intended effects of the incentives. Funding allocated per student or per professor is declining since those states that are relatively poor in comparison with the rest of the federacy are not able to cope financially with the increasing pressure to meet the growing demands towards universities.

8. Target agreements

The globalisation of budgets has also prompted political and constitutional discussions. If the budgets are no longer structured, executive powers would lose the democratic legitimacy for their spending decisions. The budgets will be decided by the parliament, which can provide a detailed outline of how much money is to be spent on particular purposes and thereby theoretically exercise influence over the universities. If a sum of money is awarded to universities without linking it to political targets, however, it leaves it open to challenge. This is how the idea of target agreements came about. The aim was to create a link between the provision of financial resources and politically negotiated targets.

Targets are agreed upon and processes are developed for the evaluation of the outcomes achieved. Target and task descriptions are directly linked to the question of how much funding is available. The separation of strategic and operational decisions is intended to make the tasks – not least under the pressure of public funding bottlenecks – more efficient and effective. Through the implementation of target and performance agreements, the universities and the state act as equals, although each party has different functions and tasks. They agree on targets that are then evaluated at a specific time in the future.

The state maintains legal supervision over HEIs, yet largely refrains from intervening into academic matters. Instead, the state negotiates particular goals with the universities and then hands over the responsibility to the universities to develop internal procedures and to implement the measures that are necessary to achieve these performance goals.

Concluding target agreements is a complicated process and should therefore be limited to selected areas, namely, the definition of performance targets that are related to development processes. They should aim to achieve a sustainable change in the respective field of activity. Suitable targets include those related to such issues as developing a university's profile, the introduction of innovative teaching methods, research and administration, as well as those concerning quality development. Conversely, target agreements are not intended to replace or update the existing performance targets. An automatic process of allocating funds is preferably applied in this case, such as the formula-based option, since this produces better results with minimum effort. Therefore, target agreements and performance-dependent funding allocation are complementary instruments for regulating autonomous universities.

9. Sufficient funding as a core requirement for the autonomy of universities

Greater degree of autonomy awarded to universities and the development of corresponding regulatory tools are creating new scope of freedom in decision-making and allow for successful development of flexibility. Alongside strengthening HEIs' autonomy, a sufficient level of basic funding is still needed from the state in order to ensure that the envisaged targets can actually be achieved. At present,

however, this funding has not reached the desired level. Science and education have been prioritised on the political agenda in the past few years, and funding for education and science in general is indeed increasing. All the stakeholders now acknowledge a close connection between future economic and social success and successful overcoming the challenges that the nation faces, such as demographic changes, and the need for innovation and training of highly qualified workforce.

Yet, a closer look at the financial situation of universities shows that an increase in overall funding conceals a funding structure that has been subject to major changes. The number of students has risen by 27 per cent over the past 15 years, whereas the increase in basic funding is approximately ten per cent higher. This means that expenditure per student has declined in real terms. The federal states are experiencing severe difficulties in fulfilling their financial responsibilities. Following the reduction of federal political tasks, there is only a little part left for federal state financing of schools and universities. Universities therefore demand an amendment to the Basic Law so that the Federal Government can be offered greater involvement in the funding of higher education institutions.

A modest increase in basic funding has been accompanied by a significant increase in third-party funding, which has doubled in real terms. This is one of the consequences of numerous competitive programmes that have been established to strengthen research activity; it is also a result of the efforts made by individual HEIs to diversify their funding sources. The total sum combining basic and third-party funding illustrates a positive trend in university financing; yet, this transformation of the funding structure is not unproblematic. The acquisition and administration of third-party funds are dependent on solid financed structures. Further issues include the unpredictability of third-party funding, the time and resources spent on the submission of funding applications, as well as the limited funding periods, which make it impossible to create additional permanent positions. For the future funding of universities, then, grants that are awarded in competition from third parties should therefore merely supplement rather than replace basic funding.

In conclusion:

1. The development of university autonomy and the accompanying aspirations are restricted by financial capacity;
2. Competitive approach has its limitations. Up to a certain point, performance incentives can bring about positive results; however, surpassing this point may be to the detriment of universities.

1.4. Financing and Deregulation in Higher Education System in Ukraine

Yevheniy I. Borodin, Iryna Degtyarova, Leonid Prokopenko

Having joined the Bologna process in 2005 Ukraine has proved striving to be a fully-fledged participant to the process of European integration and EHEA, and country's strong willingness to modernize Ukraine's higher education following the best standards and European values. But a "stumbling block" of all discussions concerning the future of national HE has always been the problem of funding of education. This seems to be clear, since only proper financial support enables higher education institutions to develop and function effectively. The analysis of the current state of education, financial mechanisms, state regulation, political and legal support for the system is extremely relevant. Funding of higher education should not be considered in isolation; it is closely connected with historical roots on the one hand, and governance issues on the other hand, particularly, in terms of academic autonomy, the distribution and balance of responsibilities of higher education institutions and the state. It is considered that **funding mechanism** as a part of the government toolkit contains four 'tools' (Jongbloed, 2004): regulation (rules, laws); funding (subsidies, grants, taxes); public production (provision of goods by government-owned providers); communication (information, persuasion). To study the models of university funding and composition of its resources in Ukraine first we need to research the Ukrainian tertiary education governance, the ways of funding, regulation and deregulation of the system.

The objectives of the present paper are the following:

1) to trace academic roots in Ukrainian history, which helps to understand the spirit of the system, as well as the mentality of academic community; to show the development of models of University funding in Ukraine since Kyivan Rus times;
2) to outline the development of HE system and its financial models in Soviet times;
3) to research the HE system development since 1991, to analyse the ongoing processes of HE reforms;
4) to have a look into the future of HE in Ukraine and analyse current issues in HE reforming.

1. Academic traditions of Ukraine: models of university management (from 10TH to early 20TH century)

Academic traditions of Ukraine have their long history, which goes back to the times of Kyivan Rus. The first attempt to create a higher educational establishment was made at the end of the 10th century. According to the author of

Primary Chronicle "Tale of Bygone Years", after the Christianization of Rus in 988 Volodymyr the Great introduced and promoted education, so called "book science". Taking the example of the Constantinople University, he opened the Palace School, which some researchers (B. Grekov, S. Babyshyn) regard as a high school with traditional for middle ages "septem artes liberales", others (M. Braichevsky) – as a university. Palace School primarily was oriented for the children of Kyivan nobility, who were getting prepared for government positions, for different fields of religious and cultural life, the school was funded by the Great Princedom Treasury. According to the M. Stryikovskyi Chronicle and Perm-Volgograd Chronicle, 300 students were educated at this School. That model of higher education funding was **public** by its nature and could be named **"palatial".** After the period of feudal fragmentation any information about its existence in the annals disappears.

The second attempt to establish a higher education institution took place during the period of Reformation and Counterreformation and was closely connected with the "Polish period" in Western Ukrainian history: the period when Ukrainian lands were under the rule of Polish–Lithuanian Commonwealth. The development of higher education in Western Europe, founding the Krakow University (1364), Wilnos University (1578), Lviv University (1661), Zamoyski Academy (1593), which were Polish at that time, encouraged opening similar Eastern Orthodox higher educational establishment. As a result, Prince Vasyl-Kostiantyn of Ostroh founded an educational establishment in Ostroh (1578) – Ostrozka School, or Ostroh Greek-Slavic-Latin Collegium known as **Ostroh Academy**, a Western European type higher education institution in terms of its form, but Slavic and Orthodox by nature. It was the first higher education institution of the Eastern Slavs and also the first private university. Prince Ostrozky's niece, Princess Halshka of Ostroh, was the beneficiary of the Academy and spent a significant amount of money on its development. It is noteworthy that the Renaissance of the Ukrainian nation was closely connected with Ostroh Academy. The Ostrozka School served its mission for sixty years; its achievements include the foundation of Ivan Fedorov's Publishing House with Cyrillic type and issue, in 1581, the first full translation of the Bible into Church-Slavonic language (famous Ostroh Bible), Greek and Slavic ABC-Book, the first Ukrainian school-book, polemic works, etc. A student of Ostroh Academy, Meletius Smotrytsky, wrote and published there the first fundamental Slavic Grammar (1619) called "the gates to learning" by M. Lomonosov. Among its approximately 500 graduates, one may find many writers and other famous individuals. The Academy was closed in 1632[16]. However, its experience and achievements were transferred to Kyiv and Moscow.

Such synthesis of Slavic-Greek-Latin studies was a great example, boosting the establishment of other HEIs. Notably, in 1632 in Kyiv Petro Mohyla established the

[16] Ostroh Academy was revived in 1994 by the Decree of the President of Ukraine as a fundamental symbol of Ukrainian HE. In 2000 Ostroh Academy officially became the National University; now it possesses a unique status of autonomous research national higher educational establishment.

Brotherhood College, whose legal status of a higher education institution and the title "Academy" was granted according to The Treaty of Hadiach (1658), approved by the Polish king and Parliament (Sejm) in May, 1659 and by the Tsar's Charters in 1694 and 1701 [6].

Kyiv-Mohyla Academy made an important contribution to the development of the national system of higher education; it was created as an open and nationwide higher education institution for humanities. Studying at the Academy was free of charge. As far as the governance model is concerned, it was subordinated to Kyivan Metropolitan Bishop and was funded by Kyiv Brotherhood Monastery College, donations by Hetmans, Metropolitans and the rich; in 18th century also from the funds of Military Treasury of Hetmanshchyna. The Rector and faculty supervisors were monks from Monastery College; also appointing monks as teachers reduced the threat of them being indecent. From the times of Hetman Ivan Samoylovych, a tradition of direct Hetman governance (patronship) over the academy. was introduced The Rector was elected by professors and approved by the Hetman and the Kyivan Metropolitan. This model changed late in 18th century, when in the times of the Metropolitan T. Shcherbacky the Academy lost its democratic elective system, and the Metropolitan in person got the right to appoint rectors and prefects. A similar model of higher education and its financing can be called **the church model.**

A new period in the development of education began in 18th century. At the end of 17th century the humanitarian type of culture did not correspond with the changing society values and needs, and in 1694 in Galle (Germany) University representing a new model was established. Not only the interpretation of canonical books, but also a wide range of disciplines were systemically taught. Also other universities in Germany and other European countries were reformed in accordance with this model. In the 18th century under the influence of Western European academic practices some new secular higher education institutions were established in Ukraine and education reform commenced in 1804. This movement culminated in the formation of Kharkiv University, which was opened on 17th January, 1805. There were 4 faculties: of ethics and political, philological, physics and mathematics, and medical. Unlike Western European universities, the "Charter of Universities of Russian Empire" (November 5th, 1804) did not provide the creation of theological faculties; instead, church staff had to be trained in Theological Academies.

According to the Statute of 1804, the university structure was similar to that of German universities. Universities were provided with a wide autonomy, the highest authority in terms of their educational issues and legal cases was the General Assembly, or the Council, composed of professors and adjuncts gathering once a week to consider the major scientific and administrative issues. The Council annually elected the rectors from among ordinary professors, and the rector was approved by the Emperor through submission of the Minister of Education. Professors also elected deans of faculties. Executive power was entrusted to the University Board (Dyrektorium) consisting of deans, and headed by the rector, it addressed

current issues. Universities had the right to establish scientific groups, to have their own press printed, to issue journals, newspapers and publish academic literature. Universities were fully funded by the state treasury. Thus, in 1805 out of the total amount of public expenditure (125.5 million roubles), 2.6 million (2%) were directed to the system of education. The major portion of money was spent on universities, the residual – on provincial and district schools.

Under the influence of July revolution in France (1830) and Polish Uprising of 1830–1831 the government strengthened the pressure on educational establishments. It was reflected in the Statute of St. Volodymyr Kyiv University, founded in 1834 on the basis of the Kremenets Lyceum. It became the prototype of the University Statute of 1835, which significantly diminished the autonomy and the rights of the university court. Thus, the traditions of academic self-government, university autonomy, a developed sense of academic corporatism, decentralization of management specific to German universities, were contradictory to the centralized administrative system of the Russian Empire. At the beginning of 19th century this contradiction was attenuated by liberal ideas of Tsar Alexander's I entourage, but the Charter (Statute) of 1835 reflected a deep change of attitudes in the governmental circles towards the role of universities as research and educational institutions, the scope of autonomy, the character of university education.

However, according to the new Statute, financial support of educational establishments was increased – assignations for their needs rose significantly and the salaries of university teachers were doubled or even tripled, e.g., Kharkiv University was given 370,000 karbovanets (krb)[17]. The Statute of 1835 also contributed to the increase of a number of disciplines taught, and their further differentiation. The government sought to form the national character in education and make teaching politically secure, stipulated changes in the structure of universities: philosophical, law and medical faculties were established.

During the time of Great Reformations in 1860–70 another university reform was held. "The General Charter of the Imperial Russian Universities" of June 18th, 1863 combined the elements of French and German systems: according to the first one, the autonomy was renewed, the second one provided that students had the obligatory plan of education. The Statute was observed at Saint-Petersburg, Moscow, Kharkiv, Kyiv and Kazan Universities. The main idea was the autonomy of universities; in comparison with the Statute of 1835, the role of professorial corporations in solving academic issues and university management was significantly broadened; they became more powerful. The University Council consisted of ordinary and extraordinary professors; it was entitled to make decisions on academic, scientific, financial and administrative issues on their own, e.g. it distributed educational subjects and defined the succession of their teaching. The faculties awarded academic degrees and titles, held the distribution of state funds spent by departments, etc.

[17] The name "karbovanets" is used in the Ukrainian language for the Imperial rouble and the Soviet rouble.

A University was governed by the Rector, who was elected for a 4 year term by the Council from a number of university professors, and was approved by the Emperor. He chaired the Council and University Board meetings, attended by deans and the vice-rector or the inspector. The Council's meetings were held once a month; the most important issues were discussed, decisions approved, the Board had weekly meetings, and they focused on managing daily operations: budget problems, students' affairs (assignment of financial support to poor students, exemption from tuition fees, imposing penalties on the offenders, etc.).

However, according to this Statute, students did not get any corporate rights and could be judged in legal form by University Court. The Court was elected annually by the Council (composed of 3 professors) and was approved by the Trustee of educational district. The court was dealing with the cases of violating the rules by students on the University territory, conflicts with professors and officials, etc. On the other hand, the court did not allow for the inspector's self-will and exceeding their competenceDespite broadening professors' rights, according to the Statute of 1863, the Trustee of an educational district was granted considerable power and the right to make the final decisions on hiring or firing professors and officials, on the appointment of members of the university court, on financial support to poor students or exemption from tuition fees. The Trustee approved internal university regulations and dealt with crucial economic issues (maintenance of buildings, security, provision of fuel, etc.). He could suspend any decision of the Council interpreted as inappropriate to the statute.

The Minister had the title to appoint and dismiss deans, who were elected for 3 years from the group consisting of ordinary and extraordinary professors, the vice-rector or the inspector and professors. The Minister also made decisions concerning the structure of a faculty and its division into departments, reorganization of the departments, sending abroad junior faculty staff for internship, regulations on awarding scientific titles and degrees, etc.

The Statute of 1863 set out the university structure, formed in the middle of the 19th century, it promoted the universities growth and development. Universities were supposed to have 4 faculties: history and philological, physics and math, law and medical, with a further division into a number of departments. According to the Statute of 1835, universities had 34 departments, there were 53 afterwards, with their number varying across the faculties from 9–12 at the Faculty of History to 17 at the Medical Faculty. The increased number of University staff members allowed for a significant raise in theoretical level of teaching, making it deeper and more differentiated. Therefore, new courses were introduced, new departments created. The attributes of aristocratic education such as fencing, music and drawing were excluded from the curricula. Professors elected by the Council were approved by the Minister of Education; Associate Professors and Lecturers were approved by the Trustee of an educational district.

The Statute of 1863 created the conditions for on-going enhancement of the role of universities and their development. In addition to empowering universities, this was also promoted by the improvement of financial support for the teaching staff

and increased funding for educational institutions, e.g. the budget of Kharkiv University amounted to 338,829 krb per year, and that of Kyiv University to 345,710 krb. During the post-reform period, the government embarked on a path of increasing the number of universities: in 1863 there were 8, at the end of the century – 10, including the third one in Ukraine – Novorossiysk University, opened in 1865 in Odessa at the Richelieu Lyceum.

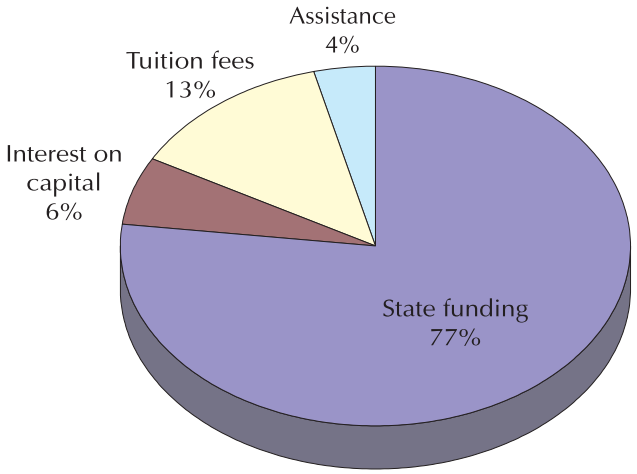
However, the conservatives from the ruling elite believed that the reforms were too radical, and a run of counter reforms began. Educational counter reform had to put an end to oppositional thoughts of both teaching staff and students. The Statute of 1884 actually abolished the autonomy of universities and reinforced the role of the Trustee and the Rector, who was not elected by the council any more, but appointed by the Tsar for a four-year term, according to the Minister's proposal. At the proposal of the Trustee of educational district the Minister appointed deans of faculties for a 4-year term, and professors for vacant positions. The number of issues dealt with by the Council itself significantly declined, with the number having been limited to the following three: establishing annually the total number of medals to be awarded to students for their topical composition, their distribution by departments, the approval of academic degrees for a faculty, the approval of doctoral degree granted to distinguished masters' students at a faculty's request. Other issues were resolved by the Minister or the Trustee of an educational district. University Court was abolished.

Nevertheless, the Statute increased the number of departments to 56 in each university. The total maintenance costs for 6 universities were set at 2,268.9 thousand krb, Kharkiv University received 327,190 krb, Kyiv University – 332,070 krb and Novorussian University – 218,150 krb. The decrease of financing compared to the Statute of 1863 was related, first of all, to the abolition of the position of assistant professors (privat-docent), consequently, all the funds intended to reward assistant professors, were transferred to the Minister of Education, who distributed them on his own with respect to the needs of a university. Beside regular amounts, universities could also receive trust funds. Thus, when Tsar Alexander III went to Kharkiv University in October 1888 and saw the terrible condition of the university clinic, he granted a subsidy of 400,000 krb to improve the supportive institutions of the University.

Although counter reform ideologists' calculations were not met, it was impossible to revive the pre-reform condition of the universities, due to the limitations in fund allocation, the rates of university education and research were decreased. At the same time, the government could not ignore a growing need for experts, required in connection with the rapid country development in the post-reform time. The total funding for higher education was gradually increasing, and in 1894 it reached 4,544,000 krb, although the relative costs per student decreased from 385 krb in 1880 to 318 krb in 1894.

The main funding sources for the universities at the end of 19th century were represented as follows: state funding (77%), interest on capital (6%), tuition fee (13%), and assistance (4%) (Figure 1).

Figure 1. Distribution of funding sources for tertiary education at the end of 19th century



Thus, in 1880–90s Universities were further developing, though the rates of higher professional and vocational education increased. It was connected with the growing significance of natural and technical education in everyday life of the post-reform Russia. Industrial revolution, whose essential feature was the transition from the manufactory to industrial and factory production, was in need for professionally trained narrow-profile specialists. Therefore, during the first half of 19th century educating highly qualified technical personnel was concentrated mainly in St. Petersburg, where Mining and Practical Institute of Technology, Institute of Railway Engineers, Building School (since 1864, the Institute of Civil Engineers) were functioning, providing specialists with higher education to satisfy at least the minimum needs occurring at the beginning of the industrial revolution of the 30-40s. After the reform a number of new higher education and special institutions emerged in the province, including Ukraine. The first HEI of that type was Kharkiv Veterinarian Institute, founded in 1873, based on the higher veterinarian school, functioning since 1851. Its status was equated to that of a university, along with similar institutions in Warsaw, Dorpat and Kazan. In 1885 the Kharkiv Institute of Technology was founded, in 1898 – Kyiv Polytechnic Institute, in 1899 – Katerynoslav Higher Mining School (since 1912 – Katerynoslav Mining Institute). It seems to be crucial that the establishment of such specialized industrial HEIs was financially supported by manufacturers and their associations; for instance, in 1880 the Association of Sugar Mill Owners from the South West region of Russia decided to collect funds to establish a technical institution and donated 1,000,374 roubles. Among other organisations and individuals who donated the funds, we can mention: Kiev Municipal Duma (Parliament) – 300,000 roubles, private individuals – 152,000 (Mr. Tereshchenko with sons – 150,000, Krasilevsky – 2,000), Kiev Land Bank – 15,000 roubles, etc. Altogether about 139 associations, banks, factories, departments, and individuals

donated funds for the University construction. The total cost of construction and equipment amounted to 2,650,000 roubles[18].

The government actually provided only minimal network of higher education institutions. If we consider the dynamics of the network development, we can notice that during the first half of the 19th century Ukraine established two universities and the Richelieu Lyceum, whereas during the second half there were 5 more founded: one veterinarian (Kharkiv), one historical and philological (Nizhyn), three technical ones (South Russian Institute of Technology in Kharkiv, Kyiv Polytechnic, Katerynoslav Mining). From the beginning of the 20th century no universities were established, except for the evacuation of the Institute of Agriculture and Forestry of the Novo-Alexandria Lublin province to Kharkiv during the World War I. Thus, early in 1917 in Ukraine there were 10 public HEIs out of 65 (15.4%) operating at that time in the Empire, including Kyiv Theological Academy. This proves, first of all, a slowdown in the development of higher education; and secondly, the disproportion between humanitarian (50%) and special education (50%), which indicates inadequacy in the process of transition to an industrial society [11].

These imbalances displaced non-governmental educational institutions, both of public and private status. The process of creating an ordered system of non-government (private) higher education institutions was approved by Emperor Nicolai II on December 3, 1905, and reflected in the Report of the Minister of Education I. Ignatiev. Thus, it was allowed to organize private training courses.

In January 1917, there were 59 private higher education establishments in Russia, 17 of them located in Ukraine. So-called "independent" (private-owned) higher education developed as a professionally differentiated dynamic system, at the pace exceeding that of the public system. Private HE strengthened the weakest features of the public HE (including educational, medical, technical, agricultural profiles), introduced new areas of study (economics, music). Also, it was more flexible and open to organizational and methodological innovations, filling social gaps concerning students' position, artificially created by the government. Yet, almost all of 27 Universities in Ukraine, both public and non-governmental, with 35.2 thousand students, were located only in four cities. Clearly, non-governmental educational institutions were established in large centres, where research staff and academic traditions were concentrated. Their creation was initiated mainly by professors of public universities; therefore, other regions were lacking higher education.

Thus, the model of funding higher education in pre-revolution period was **mainly public**, yet with a substantial proportion of funds provided by private individuals and manufacturers associations at the turn of 19th and 20th centuries.

[18] Data provided from official site of KPI http://inter.kpi.ua/about/history.

2. Development of Higher Education in the Soviet Period (1917–1991)

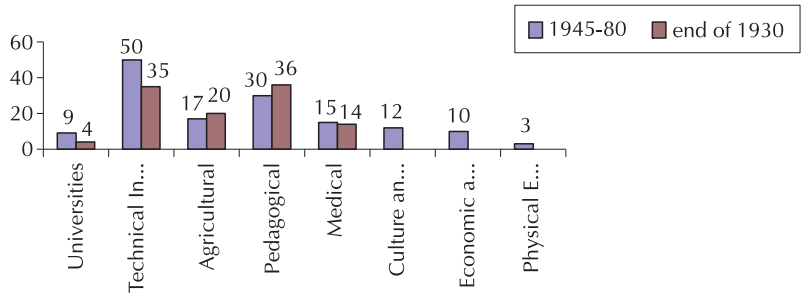
After October Revolution of 1917 and liquidation of the Tsarist rule, as well as the system of government, Ukraine became a part of the Soviet Union. During the Soviet period educational policy changed from the polycentric system to **full state monopoly for education at all levels**. Education was perceived as "leading the ideological, organizational and educational influence of the party", and aimed at training a "new" personality, a specialist of a new type, contributing to the acceleration of economic development. From 1930 USSR started to reform the whole educational system, basing on centralized planning, absolute political and ideological control by the Communist party as well as unification of education models and content in all the Soviet republics. For this purpose, a single structure of school education, as well as unified structure of higher education was introduced. The leading role in higher education was assigned to universities as higher education institutions, training well-qualified specialists in educational subjects and pedagogical specialties. Higher engineering education was developed by the sectorial principle in order to adjust it to the needs of the industry and labour market, to establish direct contacts between universities and enterprises, as well as to strengthen their financial base. Curricula and programs content within a specialty for all HEIs were unified, which ensured not only comparability, but also the equivalence of diplomas throughout the USSR. The administrative-command system of governance introduced the model of "one-person-management" in higher education: the appointment of the directors and deans of faculties replaced their election [1; 2; 6]. Also a new model of higher education funding was adopted **– total budget financing.**

During both pre- and post-war periods the number of vocational and higher education institutions was rapidly increasing. That intensive development started in the late 20s, which was connected with a "great leap" and huge changes in the structure of the state industry and subsequent increase in demand for skilled workers. It became necessary to train intellectuals specialising, primarily in manufacturing, technical and scientific fields, other professional groups were of secondary importance. However, that rapid growth also had some negative consequences, including a chaotic institutional structure for the higher education system [6, p. 15].

During 1930-1931 there was a four-fold growth in the number of higher education establishments in Ukraine up to 190 in 1932; with a student enrolment of approximately 106,400 people; in 1933 – correspondingly, 203 HEIs with 112,000 students. Many of them had a narrow specialisation and accelerated program of education. This contributed to reducing the shortage of skilled personnel in the country. Opening new divisions, laboratories, introducing new academic traditions fostered further academic development. In the mid 1930s the process was initiated of enlarging higher education institutions by merging those close in profile into one big higher education establishment. At the end of the 1930s there were 123 higher educational establishments, 4 classical universities (in Kiev, Kharkiv, Odessa and Dnipropetrovsk), 35 technical, 20 agricultural, 36 pedagogical and

14 medical institutions [1, p. 31]. These tendencies were also maintained after the war. Generally, the present network of public Ukrainian higher education establishments evolved in 1960–1970s. The number of students for the period of 1945–1980 increased up to 880,400 people, who studied in 146 establishments. There was the structure of HE system as follows: universities (9), technical (50), agricultural (17), pedagogical (30) and medical (15) institutions, HEIs of culture and arts (12), economics and law (10), physical education (3) (Figure 2).

Figure 2. Higher education establishments in Ukraine 1930–1980



Moreover, the impact of technological revolution on HE led to differentiation and integration of sciences; new fields of scientific research appeared (Nuclear Physics, Physical Electronics, Cybernetics, Biophysics, Cardio Surgery, Radiology, etc.), which stimulated the formation of new specialties and specializations, and further development in training. Thus, in 1965 the total number of specialists graduating from HEIs amounted to 955,000, in 1975 – to over 1.6 million and in the early 80's – to more than 2.5 million [2]. In the 1960s, following the increase in student numbers, Ukrainian higher education institutions increased their range of postgraduate courses. In 1967, the number of postgraduates tripled, compared to 1959.

From 1960–1970s the forms of university training changed. Full-time education was growing rapidly, but enrolment for part-time (evening) and distance forms of learning decreased. In the early 80s the ratio between full-time, evening and distance learning was approximately 6:1:3.

Funding higher education was continuously increasing, e.g. in 1980 the state budget for higher educational establishments was more than 350 million krb, and 50 million for the logistic support. Therefore, from 1980s considerable attention was paid to the development of university science, the budget for research in 1980 reached 262.3 million krb, including economic contracts with the enterprises – 233.6 million krb [14, pp. 42, 53, 56].

During the entire Soviet period (up to 1988), over 22,000,000 individuals entered the Ukrainian higher education system. By 1988, Ukraine had 146 full-cycle higher education institutions, enrolling over 850,000 students. Since 1960, the annual number of graduates of the full-cycle higher education institutions doubled,

while that of secondary-level vocational schools tripled [6]. Ukrainian HEIs used to train specialists for the all-USSR labour market needs, e.g. for mining, metallurgy, ship-building, oil and gas industry.

Consequently, the independent Ukraine inherited a well-developed system of higher education, the network of establishments with appropriate material and technical base, with highly skilled academic personnel, with social infrastructure that enabled the successful resolution of the problems our state faced in 1990s. The crucial moment in the state-building was the development and implementation of the national Ukrainian education policy, as in the first years of independence, higher education functioned according to the laws of the Ukrainian SSR. In 1991 Ukraine had an extensive system of higher education with 735 vocational and 156 higher education establishments, PhD courses in 300 specialties and Doctoral studies, 518 educational establishments and departments for advanced training and retraining [2, p.4]. By numerical indicators the network of higher education in Ukraine corresponded to that functioning in most developed countries. By the form of ownership a vast majority of higher educational establishments of Ukraine was state-owned, with several educational institutions formally owned and funded by cooperative and public organizations (Ukoopspilka, trade unions, the Communist Party and its youth organization); they in fact were also public property [3].

The majority of the first private HEIs did not own any property; educational buildings or logistics and full-time working teaching staff, and their first enrolment were a few dozens of students who failed to be admitted to public universities. The first private HEIs were targeted primarily at making profit. Licensing private HEIs began in 1993.

Thus, the first task of the fore, while maintaining positive achievements of the past years, was to create the national system of higher education as a prerequisite for national revival, state development and democratization of Ukrainian society.

3. Higher Education in independent Ukraine

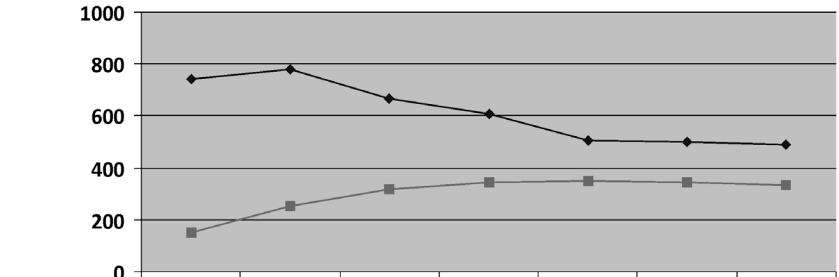
Thus, having proclaimed its independence in 1991, Ukraine started to change the structure and system of higher education in 3 general directions:

- establishing the legal framework of higher education and deregulation of HE governance;
- diversification of types of ownership of higher education establishments and funding sources;
- "desovietization" of the spirit and content of higher education (de-idealization of higher education and ukrainization of all public spheres).

The legal basis for HE development was laid down by the Law of Ukraine "On Education", the Constitution of Ukraine and a number of regulations concerning different issues of tertiary education. The process of reforming higher education began and a lot of changes were introduced in HEIs network, their structure and students' enrolment. In the middle of 1999 there were 653 colleges, technical and vocational schools, 298 universities, academies, institutes of both public and private type of ownership.

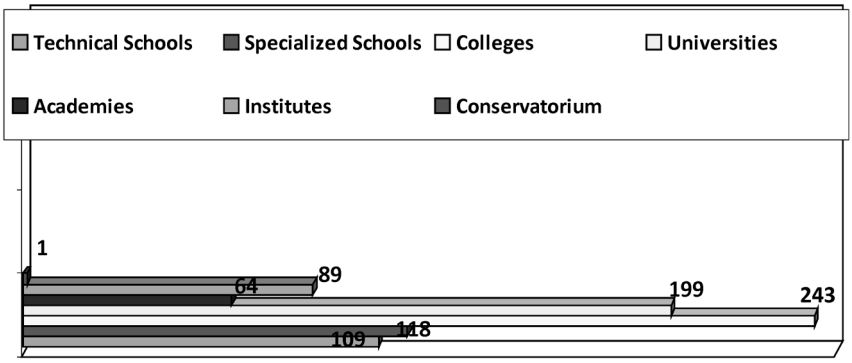
Nowadays there are 823 higher education establishments of I-IV levels of accreditation (l.a.) enrolling more than 2 million students: 489 institutions of I-II l.a. (college type: 208 public, 207 municipal and 74 private) and 334 – of III-IV l.a. (217 public, 14 municipal and 103 private ones) (The dynamics of HEIs and number of students are presented on the Figures 3-6[19]). Research and teaching staff in all Ukrainian higher education institutions amounts to 36,000, among them there are 69,000 PhD degree holders and 13,000 Doctors of Sciences.

Figure 3. Number of higher education establishments in dynamics



	1990/91	1995/96	2000/01	2005/06	2010/11	2011/12	2012/13
I-II l.a.	742	782	664	606	505	501	489
III-IV l.a.	149	255	315	345	349	345	334

Figure 4. Number of higher education establishments of I–IV l.a. by their types



[19] Source: the official data by Ministry of Education and Science (www.mon.gov.ua), State Statistics Committee (www.ukrstat.gov.ua).

Figure 5. Dynamics of HEIs of university type (III-IV l.a.) by form of property

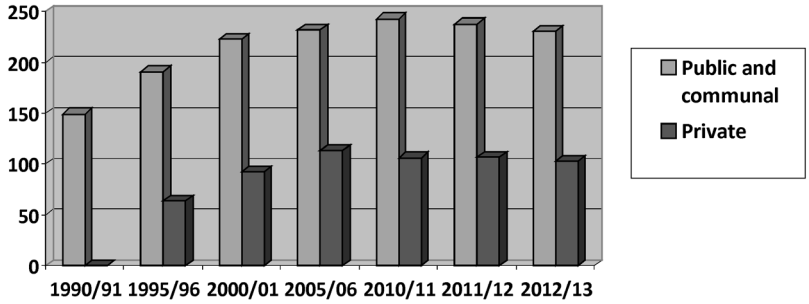
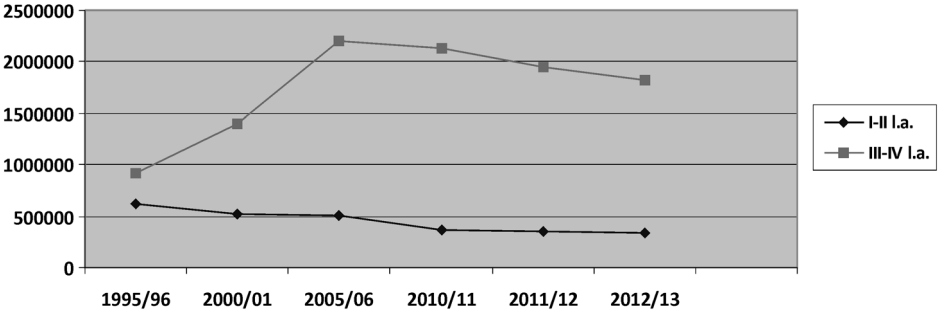


Figure 6. Dynamics of students of HEIs of I–IV l.a.



4. Regulations and Governance: Distribution of Responsibilities

The legal and regulatory framework of higher education management has been developed since 1991; the unified Ministry of Education was established by the President's Decree. According to it, the names of the national and regional authorities responsible for education were changing, but their status and subordination remained unchanged, as well as their rigid hierarchical subordinate structure. The changes in education management system were connected with the reforming of the system of state governance in general. In 1995, the management hierarchy in education was partially restored: education departments of district administrations were subordinated to the department responsible for education of regional state administration. They, however, were subordinated directly only to governors, not to the Ministry of Education. A fully managerial hierarchy was restored with the adoption of the new Law of Ukraine "On Education" in March 1996. Art. 14 of the Law stipulates that "the local educational authorities in the exercise of their powers are subordinated to local executive bodies, local authorities and relevant state educational authorities". Such dual subordination of education authorities was also fixed in the laws "On Local Self-Government in Ukraine" and "On Local State Administrations". As for higher education, it is subordinated directly to the Ministry of Education, but local administrations perform only coordinating functions.

The **Constitution of Ukraine** stipulates that the system of development and implementation of state policy is based on the principle of separation of powers. **Ukrainian Parliament** (Verkhovna Rada) as the only legislative body in accordance with Art. 92 of the Constitution, defines the bases of educational policy, its principles and directions, relevant organizational and legal mechanisms of the education governance. The Constitution guarantees the right to education and equal access to HEIs for every citizen, as well as the development of higher and postgraduate education of various forms of training, with the provision of state scholarships and privileges to students (p. 53).

The President of Ukraine has got a constitutional duty to provide functioning and interaction of the state bodies. First of all, it concerns all the bodies responsible for education and its stakeholders. The President of Ukraine initiates the development and submission to the Verkhovna Rada of the bills on current issues of educational policy. In this connection we should enumerate selected important presidential decrees published in the recent years: "On the main directions of the reform of higher education in Ukraine" dated September 12th, 1995, "On measures to reform the system of training and employment of graduates of higher education institutions", of January 23rd, 1996, "On additional measures to ensure the development of education in Ukraine" dated October 9th, 2001, and others.

The role of the highest executive body in Ukraine, also in respect to the system of higher education, is performed by the **Government** (**Cabinet of Ministers**) of Ukraine. In the functional interaction with the President of Ukraine, in accordance with Art. 116 of the Constitution of Ukraine, the Cabinet of Ministers provides the execution of state policy in education; guides, coordinates and supervises the work of the Ministries and other central and local executive bodies; develops and implements national programs. To realize its competence Government as the highest state executive and administrative body issues acts, which are binding on the territory of Ukraine for central and local authorities, educational authorities and educational institutions, regardless of ownership. In particular, Government regulations approved the model of regional departments of education and science and provincial education departments of district administrations; the position of different types of educational institutions, the list of areas of training and state standards of education, etc.

The main body in the system of central executive authorities implementing the state policy in the field of education and is directly subordinated to the Cabinet of Ministers of Ukraine is the **Ministry of Education and Science**. It is headed by the Minister, who as a member of the Government, is personally responsible for the development and implementation of government programs in education, state policy and public administration in the field. He/she also directs and coordinates the activities of other authorities on the matters within their jurisdiction. Within its powers the Ministry organizes the implementation of the acts of legislation and carries out a systematic control over the process. It also summarizes the practice of application of legislation on education, develops proposals of its amendments and introduces them to the President of Ukraine and the government.

The main tasks of the Ministry of Education and Science as the principal body for the implementation of the state policy in the area of education (Regulation, approved by the President of Ukraine № 410/2011 of 8 April 2011) include the formation and implementation of the state policy concerning education and science. The responsibilities of the Ministry cover all the spheres related to the organisation of education and science; some of them show the boundaries of deregulation or university autonomy (particularly its limited scope):

- develops and presents to the President of Ukraine and the Cabinet of Ministers of Ukraine draft laws of Ukraine, acts of the President of Ukraine, the Cabinet of Ministers of Ukraine;
- summarizes the practice of legislation application in the matters within its competence, develops proposals to improve legislation acts and introduces them to the President of Ukraine, the Cabinet of Ministers of Ukraine;
- defines the perspectives and priorities for education and science;
- ensures the development of education, science, of innovation and information potential of Ukraine;
- provides integration of national education and science according to the principles of strict following and protection of national interests;
- provides regulatory support in the areas that fall within the competence of the Ministry;
- creates conditions for obtaining by citizens higher education, inclusive education and life-long education, scientific degrees and academic titles;
- develops and approves terms of admission to educational institutions;
- provides regulatory and methodical support for educational institutions;
- defines a strategy for monitoring the quality of education and ensures its implementation;
- carries out the procedure for licensing and accreditation of higher education establishments, graduate education, regardless of ownership and subordination;
- develops and maintains a system of certification of educational, scientific and educational personnel, organizes training for these categories;
- ensures the unification of requirements in research skills for applicants for scientific degrees and academic titles;
- creates a network of specialized scientists and expert councils, approves academic councils' decision to award academic degrees or academic title of a senior researcher, as well is entitled to abolish those decisions;
- coordinates the activities of the executive authorities and supervises the process of awarding PhD and D.Sc. degree, the title of senior researcher, associate professor and full professor of research and HEIs; issues relevant certificates and diplomas;
- organizes elections (competition) for position of a chairman of subordinate universities, appoints and dismisses them;
- approves the appointment for the position of a head of higher education institutions of communal ownership;
- approves the Statutes (charters) of subordinated HEIs;

- approves the Statutes of state-owned universities subordinated to other central executive bodies, HEIs owned by Crimean Autonomous Republic, HEIs of municipal ownership;
- annually forms the proposals of state order for training specialists, research and teaching staff, training and retraining (continuing education) for public use;
- implements measures for moral and financial incentives of educators and other participants of the educational process and takes measures to improve the financial and living conditions of students, students, apprentices, trainees, educators, scientists as well as organization of health and community services;
- makes decisions on opening universities and institutions of education, research institutions (excluding research institutions of the National Academy of Sciences of Ukraine), PhD courses, adjunction and doctorate studies;
- regulates the order, issuance and accounting of documents on education policy;
- provides the maintenance and operation of public electronic databases, registries, including educational institutions, and other information systems in the area, within their competence;
- carries out work related to the implementation of the equivalence of certificates and diplomas, internationally recognized training courses, qualifications, academic degrees and titles;
- carries out international cooperation; ensures compliance and implementation of commitments under international treaties of Ukraine on matters within its competence, etc.

In carrying out its tasks the Ministry of Education and Science interacts with other central and local executive bodies, local authorities, academies of sciences, and the relevant authorities of other states. The decisions and regulations adopted by the Ministry are mandatory.

Local authorities are responsible for education and science, regulate and control subordinated to them educational establishments (communal, municipal type of ownership), the work of HEIs, according to delegated by the Ministry duties, organize training and retraining of teaching staff, promote the development of education network and community, organize elections (competition) for the position of a chairman to subordinated institutions, appoint and dismiss them; analyse the situation in educational sphere at regional (municipal) level, work out regional education programs and projects, forecast staff needs within the region and form regional order.

Thus, subordination and type of ownership of HEIs are important when we discuss financial issues in HE. Below there is a short summary of the existing **types of financing:**

– **public (state)** HEIs are funded by the state budget via the Ministry of Education and Science of Ukraine. Public sectorial HEIs are subordinated to other ministries and funded by the state budget via those ministries;
– **communal and municipal** HEIs are funded by regional and municipal budgets;
– **private** HEIs are funded by their owners (founders).

The total education budget amounts to 6.5% of GDP (6.2% public and 0.3% private), and 30.9% of it is directed to HE. The Ministry of Education and Science, The Ministry of Youth and Sports, the Ministry of Economic Development and Trade and the Ministry of Labour and Social Policy identify demand (state order) for certain professions (qualifications) and allocate it among state funded HEIs.

The budget for a specific HEI is calculated on the basis of the state order in accordance with the norms set out by the Ministry of Education and Science. Private HEIs do not receive public funding.

The legal basis for functioning and managing an educational institution is specified in the Standard Regulations of educational institution, approved by the Cabinet of Ministers of Ukraine, and specific forms of governance are set by its Charter (Statute). The Statutes of public institutions are approved by the authority they are subordinated to (the Ministry of Education and Science, other Ministries, regional departments).

An educational institution is headed by **the chancellor** – director, rector or the president. The chairmen of public and municipal educational establishment are appointed by the relevant governing body, according to the law (by secret ballot). A candidate who has got at least 30% of votes must be then appointed to the position by the owner or state body (Ministry, Department). To address the major issues in the activities of HEIs, collegial advisory bodies are established: higher education institutions of I-II l.a. – Pedagogical Council, in higher educational institutions of III-IV l.a. – Academic Council, Budget and Finance Committees.

According to Art. 10 of the Law of Ukraine "On Education", along with a system of state government the bodies of **community (civil) self-government** are established. They are (Art.16, Law): general meeting (conference) of the institution, district, city, regional conference of teachers, the Congress of Education of the Autonomous Republic of Crimea, Ukrainian Congress of Educators. The community bodies may unite members of the educational process, specialists in a particular professional area. They have the right to submit proposals for public policy in education, within their competence make decisions on educational, research, technical, economic and financial issues and activities of educational institutions. Powers of self-governing bodies are defined by the Ministry of Education and Science together with representatives of trade unions, national pedagogical (educational) associations.

According to p. 37 of "Regulations on the state university", approved by the Cabinet of Ministers of Ukraine № 1074 of 5 September 1996, the highest **collegial self-governing body of educational establishment** is the General Meeting (Conference) of its members, organized at least once a year. The procedure for electing delegates is established by the Charter of the university; at least 75% of the total number of delegates should be composed of teaching and research staff. General Meeting (conference) has a number of duties and rights: it considers the draft of collective agreement and authorizes the trade union committee or other legitimate collective body of university employees to sign a contract with the owner or the authorized body on behalf of the university; elects representatives of the

university to the competition commission for the vacant position of the chairman; it also elects representatives for commission on labour issues in accordance with the Code of Labour of Ukraine.

The Law "On Higher Education" (2002) accumulated all these regulations on HEIs autonomy in section VI and introduced decentralization of the decision-making process.

To enforce **students' duties** and protect their rights, the bodies of students' self-government are created in higher education institutions. The supreme body of the student government is the Students General Meeting (Conference) of a given university, which adopts regulations on student government, elects its executive bodies, determines their structure and powers, as well as discusses the reports.

To coordinate the activities of higher education institutions in the regions the Councils of Rectors and Directors of HEIs are established. Regulations on these boards are approved by the Ministry of Education and Science. The Chairman of the Councils organizes the activities with the Ministry of Education and Science of Ukraine, the Ministry of Education of the Autonomous Republic of Crimeaand with regional administrations. The Councils' decisions are of advisory character. At the level of regional HEIs of I-II l.a. there function regional (city) basic institutions, which organize and coordinate the work of methodological groups for teachers of educational and social subjects, humanities and specific disciplines.

To address the major issues of HEIs activities in accordance with its Statute, working and advisory bodies are established; the working bodies include the Rectorate, Deanery (for higher educational institutions of III-IV l.a.), the administrative council (for institutions of I-II l.a.), the admission committee; advisory bodies include academic council (for institutions of III-IV l.a.), pedagogical council (for I-II l.a.), budget and finance commission and others. Regulations for working and advisory bodies and their functions are approved by the decision of the HEI chairman. Based on the decision of the Academic Council of a HEI the rector can issue orders which are mandatory for the faculties, as well as for the staff and students of this institution. The University Academic Council is headed by its Chairman.

The Academic Council consists of: ex officio the vice-rector of the university, deans of faculties, directors of institutes, the scientific secretary, the head of the library, the chief accountant, heads of self-governing bodies of the university, as well as elected representatives, who represent the teaching staff and elected from among heads of departments, professors, doctors, elected representatives, acting on behalf of other employees of higher education and who work for it on regular basis, leaders of the student government (not less than 75% is composed of research-teaching staff, at least 10% - of elected representatives). One of the powers of the Academic Council is the adoption of the financial plan and the report of this particular HEI.

Thus, the analysis of the current structure of the education governance shows that over the last decades substantial changes have occurred. Firstly, instead of three managerial structures in the field of education, which existed before (for higher education – headed by the Ministry of Higher and Secondary Special Edu-

cation, for vocational training – headed by the State Committee on Vocational Education and for secondary education – headed by the Ministry of Education), a unified Ministry of Education and Science was established.

Secondly, there was a gradual transformation of the rigid and centralized education governance model based on the principle of democratic centralism and the methods of administrative-command style of academic leadership. The Ministry used to routinely determine the nature, the content, and the specific parameters of any changes, it also used to coordinate each step taken by HEIs.

5. Higher education policy and reforming

The main directions of Ukrainian state policy for higher education and the key concepts of its reforming are outlined and regulated by the National Program "Education (Ukraine of 21st century)", National Doctrine of Education, Law "On Higher Education", decrees, and regulations of the President and Cabinet of Ministers of Ukraine. The state monopoly for educational services was abolished by the Law on Education (1991). It also legitimized a diversity of HEIs' ownership, and introduced partially paid training system. **The National Program "Education (Ukraine of 21st century)"** (1993) adopted by the First Congress of Ukrainian Educators in December 1992 and subsequently approved by the Cabinet of Ministers identified the main directions and priorities of reforming higher education and proclaimed radical restructurization of governance in educational sphere through its democratization, decentralization, the creation of regional systems of governance of educational institutions. The general idea is decentralization, delegating a certain amount of powers and responsibilities to HEIs. This would allow for further deconcentration or deregulation of the HE system.

The adoption in 2002 of the **Law of Ukraine "On Higher Education"** was a milestone in the development of the national system of higher education. The Law defines the **scope of autonomy** of Ukrainian HEIs, and, above all, it is implemented through institutional autonomy, which includes identifying suitable forms of studies and administration; recruiting teaching and research staff, as well as other personnel; providing additional educational services; developing study and research programs; publishing activities; managing joint actions and collaboration activities; using the institutional estate The Law legalizes graduate education and four levels of accreditation (l.a.) of HEIs, which comprise: I–II l.a. – vocational and technical schools, colleges: I – training junior specialists; II – training junior specialists and/or Bachelors; III-IV l.a includes institutes, academies, universities as follows: III - training Bachelors, specialists and experts in certain professions (specialties) Masters; IV – training Bachelors, Specialists and Masters and offering postgraduate Doctorate (Aspirantura) and post-Doctorate (Doctorantura) programs (Table 1,2). Now the governance of higher education is considered to be decentralized. The Ministry of Education only approves the "rules of the game" and defines the state policy in the field of education, with the main directions of its development, provides a legal framework, specifying a single educational area and

the relationship between the state and regional educational policy. However, in comparison with European countries and with respect to Bologna principles, the governance of HE system is overregulated and rather centralized.

Article 64 of the Law regulates the **financing of higher education** specifying three types of ownership of higher education institutions (state, communal, private) and their financial responsibilities. The sources of financing educational services for students include: the state budget, non-governmental legal entity and individuals. University autonomy, including that concerning financial activities was acknowledged: each higher education institution has the right to raise additional funds and spend them for their statutory activities.

All sources of financing of higher education can be divided into two main funds: the state budget and a special fund generated from extrabudgetary funds. The sources for HE funding depend on many factors, such as the form of management and ownership of HEIs, the level of GDP, the size of income, tax-related laws, the method of budgeting, state order for training, the type and level of university accreditation, consumer demand for the education market, enrolment of students – tuition fees (contractual form of study[20]), sponsorship, charitable contributions.

Financing a state-owned HEI is provided by the state budget. The amount of budget allocations for higher education institutions complies with the Budgetary Code of Ukraine and the laws on the State budget of Ukraine adopted for each year. For instance. in 2011 total funding on educational activities of all HEIs of III-IV l.a. (university-type) amounted to 7171306,35 thousand UAH; in 2012 – 9334545,867 thousand UAH. Some leading Ukrainian Universities possess a unique status of self-governing (autonomous) state higher educational establishment[21], and their funding is defined directly in the State Budget in separate lines, e.g. budget for educational activities for 2011 (in thousand UAH):

– National Technical University "Kyiv Polytechnic Institute" – 551394.9
– Taras Shevchenko Kyiv National University – 513977.4
– National Aviation University – 246777.6
– National University "Yaroslav the Wise Law Academy of Ukraine" – 146357.1.

Some features of financing HE system are worth emphasizing, namely, the elaboration of a multi-source funding system; stimulating investment, sponsorship and charitable contributions to education; the application of market economy norms and payment systems; identifying priorities in funding education; tax exemption for educational activities, with the reinvestment of collected amounts in the educational process.

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[20] Students who do not study under a state order pay tuition fee on a contractual basis. Students or their parents may get a loan from a private commercial bank or the state to pay for their studies. Also, parents or working students may claim for tax relief.

[21] Nowadays there are 14 self-governing research Universities, but actually they have not got the proper funding. The Vice-rector of KPI used a comparison – the annual budget for science of one research University is lower than a transfer of a football player, and the total sum on transferring the football team can be compared to an annual budget funds for science of all Ukrainian Universities.

State funding for training specialists in different fields and specialties of relevant educational levels is provided in the following amounts: 100 students of HEIs of I-II l.a. and 180 students of III–IV l.a. per 10,000 people. Art. 23 of the Law of Ukraine "On Higher Education" set forth the ratio between students enrolled by the state order and on contractual basis – 51:49%.

The Law regulates finance-related rights (Art.63) of higher education institutions concerning the acquisition of funding and tangible assets (buildings, equipment, vehicles, etc.) from government bodies, enterprises, institutions and organizations (including charities) and individuals; conducting financial and economic activity in Ukraine and abroad; creating their own or using under the contract other logistical base for teaching and practical training of students, as well as for own activities; developing their social base, network of sports and recreation facilities, medical and cultural institutions; carrying out capital construction, reconstruction, repairs and maintenance of assets under the contract or with the use of other economic means; direct funds for the construction or improvement of social objects, as well as social support for teaching and research staff and other categories of higher education institutions and other stakeholders. The Law defined the mechanism of state order for training specialists with higher education, which is the main instrument of state finance.

Current legislation sets forth a list of sources of **extra-budget funds** in which a HEI may be involved: 1) tuition fees for education, training and retraining of personnel, according to the signed agreements; 2) payment for additional educational services; 3) funds received for research and development (services) and other works performed by the institution commissioned by businesses, organizations and individuals; 4) revenues from the sale of the products manufactured by a HEI (the list of paid services is approved by the Government); 5) subsidies from local budgets, 6) stock dividends, 7) voluntary donations and charity from enterprises, institutions, organizations, individuals, etc.

It should be noted that higher education in Ukraine is in a difficult situation now: reforms do not meet the needs of economic reality, uncontrolled commercialization occurs, and real expenditure on higher education does not comply with the Laws. According to Art. 61 § 2 of the Law of Ukraine "On Education", the state budget allocations for education must be composed of at least 10% of national income (approximately 8% of GDP), but over the period of Ukraine's independence this rule has not been enforced in any budget. In Ukraine in early 90s the share of public expenditure on education in GDP reached 5.6% (281 billion krb, 1992). For the independence period the rate averaged 5.8% and ranged from 4.3% in 1999 to 8.4% (almost 80 billion) in 2010[22] [5]. Most of this money was spent on funding secondary education. As for expenditures for higher education, in 2000s they amounted on average at 1.6% of GDP and ranged from 1.3% in 2000 to 1.7% in

[22] See amounts of Ukraine's budget funding for education, including higher education, 2000-2012 in the table 4.

2007. It must be noted that in U21 Ranking of National Higher Education Systems (2012) by the measure of "Resources", which presents a number of indicators illustrating government expenditure on tertiary education as a percentage of GDP; total expenditure on tertiary education as a percentage of GDP; total expenditure per student; expenditure in tertiary institutions for R&D as a percentage of GDP; expenditure in tertiary institutions for R&D per head of population, Ukraine was rated at the 10th place with total rank of 76.0[23].

Ukraine is gradually increasing its allocations for education, aiming to attain European standards by spending a minimum of 10% of the GDP on education by 2015. Gradual decentralization, separation of budgetary and extra-budgetary resources, correlation between allocated funds and educational services rendered, and a competitive fund allocation will ensure the efficiency of educational expenditures. Annually allocated state funds depend on costs per student. Various forms of financial support include direct budget financing of tuition fees, state scholarships, various grants, and municipal loans.

The public expenditures per one student are the cost of training 1 specialist and their assistance (scholarship), combined with the amount of abstract work applied to train a specialist. Experts prove that the costs of training 1 specialist are calculated and determined from the point of a HEI's view (expenditures for preparation, cost = net cost) and contracting authority (money paid to a HEI for skills and knowledge received by a specialist; cost + sum of profit laid by HEI). A lot of factors influence the cost of training, among them there are a HEI's rating, particular field of study and specialty, a form of HEI, innovativeness of HEI, the quality of knowledge, the formed competences, market demands, the quality of teaching staff, quantitative composition of teaching staff, the conditions of study and living for students, etc. Net cost of training 1 specialist is characterized by some absolute parameters (expenditures on teachers' salaries and other types of financial stimulae and incentives for teaching, as well as non-teaching administrative staff), costs of maintenance and infrastructure, etc. There are special formulas and economic mechanisms to calculate these indicators.

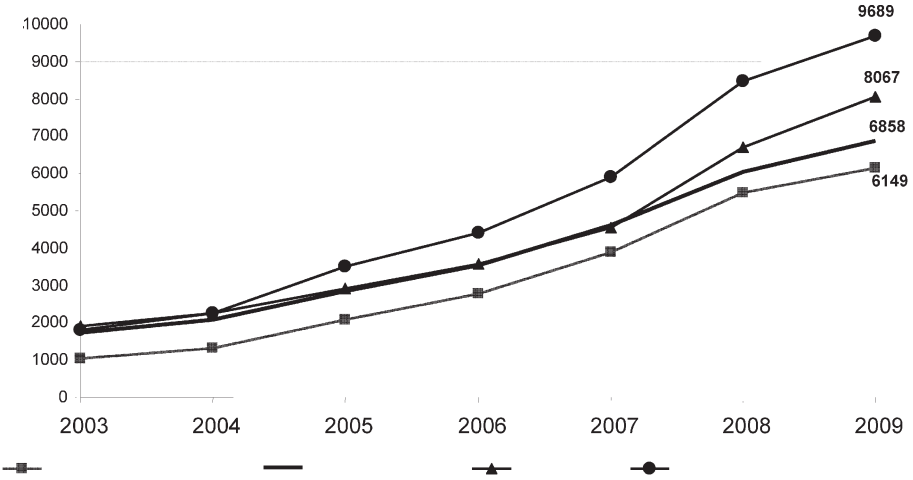
Tuition fees comprise 50% of the total income of the universities, indicating a high level of commercialization of higher education. This is a very high indicator, because even in the countries with Anglo-Saxon model of HE and social policy, this proportion is much lower: in the UK in the mid-2000s it amounted to 12%, in Canada – 11% in the U.S. – 14%. Total tuition fees depend not only on the prestige of universities, but also on the prestige of a particular specialty. The most expensive specialties traditionally have been medicine, law and economics. Thus, in 2012 the annual price of study for students at central leading and regional HEIs[24]

[23] U21 The Ranking of National Higher Education Systems is available on www.universitas21.com/article/projects/details/152/u21-rankings-of-national-higher-education-systems

[24] Data sources are official web-sites of the Universities: http://kpi.ua/contract, http://www.univ.kiev.ua/ua/abit/rules/, http://www.dnu.dp.ua/view/tariffs.

reached the following sums: at the National Technical University "KPI" for full-time education (Bachelor) – the sum ranges from 12,320 UAH to 15,400 UAH, and Master's – 17,120 UAH. At Shevchenko Kyiv National University 1 year of study on the specialty of "International Relations" will cost 30,000UAH a year, whereas "Philology" – 20,000 UAH, Physics, Mathematics and Science – 15,000 UAH. Oles Honchar Dnipropetrovsk National University established such tuition fees for study at the Faculty of International Relations amounting to 9,500 – 11,800 UAH per year, philological disciplines – from 7,800 to 12,300 UAH, physics and mathematics and science – approximately 8,000UAH. However, in recent years the tendency of growing fees for engineering professions has being observed.

Figure 7. Dynamics of budget expenditures per person [5]

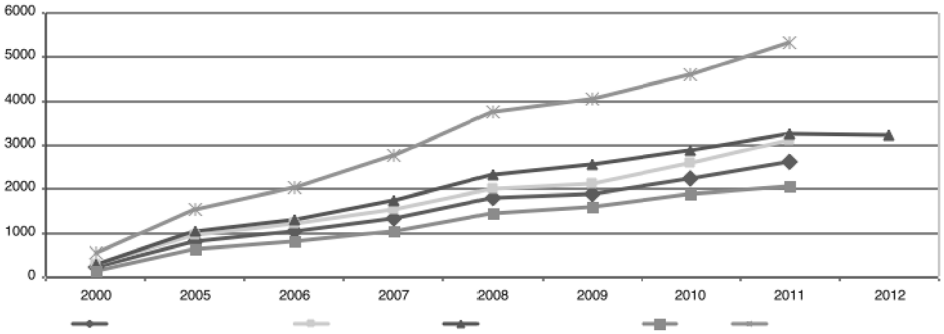


Many universities in order to "survive" during the crisis of 1990s, when engineering professions were not demanded on the labour market, and to foster their further development, were forced to establish new top-rated and popular specialties, which, however, in some cases, did not meet their academic profile. It is an unusual situation when the linguists interpret, lawyers and managers are trained at engineering universities, or in newly established small private universities, which resemble a college or a technical schools.

As far as funds for **teaching staff salaries** are concerned, they are determined by the total number of students. The salaries of teaching staff at state-owned institutions (of all types) have been raised twice since 2001 – by 25% and by 15%. In the budgetary sector, university staff salaries have increased as much as by 42%. In January 2003, state-owned institutions introduced long-service bonuses and supplementary annual leave benefits [6, p. 73]. Yet, the salary of teaching staff is still far from European standards, and it depends on the titles held, number of years of teaching experience, e.g. an average Ukrainian university teacher (a PhD degree holder) earns approximately 3500 UAH (350 Euros), a professor – approximately

5000 UAH (500 Euros). However, the salaries of HEI staff are growing at a lower rate than those of the employees of industry, financial sector, or R&D.

Figure 8. Dynamics of average monthly salary by economic activities, UAH [7]



Financial support for students depends on the form of their admission: students enrolled in public higher education institutions on full-time basis, financed from the budget, are entitled to scholarships equal to a double amount of the legally established minimum wage. This type of scholarship is exempt from taxation. The amount of the scholarship depends on the type of higher education institution, student's progress, and possible additional state subsidies (in case of social groups with special needs). Scholarship granting procedures are held in compliance with the resolution of the Cabinet of Ministries On the Adoption of the Order of Award, Payment, and Amount of Scholarship Support for Pupils, Students, Cadets, Listeners, Clinical Ordinates, Postgraduates and Doctoral Students. In April 2003, the sum of scholarships increased by 15% on average and by 30% [6] for some special categories of students (e.g., those who suffered from Chernobyl disaster, orphans and disabled). There are also special individually awarded scholarships, granted by the President of Ukraine, the Verkhovna Rada of Ukraine, and the Cabinet of Ministers of Ukraine.

The above principles are applicable to budget-financed institutions only; private institutions do not have a tax exemption status, unless they are budget-financed or registered as research institutions, according to special criteria developed by the Ministry of Education and Science.

Financing basic and scientific research, academic programs, projects of national importance in higher education and scientific research institutions is performed on a competitive basis (Art. 62, Law "On Education"), with the amount of at least 10% of state funds allocated for the maintenance of the university. At the same time the university budget consists mainly of so called "protected" items: salaries, utilities, and is desperately short of funds for the development and scientific activities. Experts claim that due to inadequate funding Ukraine is losing international credibility and competitiveness in the world. Today we should look for reserves for financial support

of graduate and PhD students; and find the methods to stop the "brain drain" abroad, but also create the conditions for their coming back to Ukraine.

Research and development activities at institutions of tertiary education are funded by their owners (state, public authorities, municipal communities, private entities). UNESCO Institute of Statistics in 2009 announced that state's share in total expenditure on science amounted to 49.8 %. At the same time the percentage of GDP spent on science in 2011 amounted to 0.73 % and reached the lowest index of 0.3%. International experience proves that if this parameter is lower than 0.4 % of GDP, science is able to perform only sociocultural function degrading as an instrument and means of innovative and sustainable development of the nation.

Among positive changes in financing higher education in Ukraine we should mention the fact that in 2003 de facto **state loans** for education were set up, and in 2010 for crediting education 8,869.5 thousands UAH were actually spent on loans. Unfortunately, this cannot be regarded as consistently active program, as the budget for 2011 envisaged 2949,098,000 UAH and for 2012 respectively 5,000,000 UAH for the loans; however, nothing was spent.

One of the sources of financing universities of various forms of ownership in Ukraine is targeted funding by international organizations and tuition fees of foreign students (now more than 27,000 foreign students from more than 110 countries study in Ukrainian higher education establishments). Within the framework of the Program of European Union TEMPUS 126 educational projects were implemented with a total budget of over 27 million Euros. The diversity of sources of funding for education has extended citizens' access to education and reduced the burden on the state budget; education contributed to additional financial, material and human resources.

The Head of the Parliamentary Committee on Science and Education Lilia Hrynevych claims that today in higher education we can observe some disparities between quantitative variables (government spending, the number of HEIs) and the qualitative ones (quality of teaching, quality of education), mainly due to preserving centralized state governance of higher education. Reforming the system during the years of independence "has not led to significant changes in terms of efficiency of economic autonomy and quality of education" [8]. Ukraine's accession to the Bologna Process gave a strong push towards reforming the legal framework and the introduction of systemic and structural changes in higher education.

Reforming higher education legislation has been one of the most painful issues lately, and there have been a lot of public discussions, with political bias dominating over professional approach. In 2003-2007 a number of amendments were made to the law, some bills were introduced to the Parliament. In four instances the bills were not supported by different Presidents of Ukraine (June 24th, 2004, September 22nd, 2005, February 21st, 2006 and March 22nd, 2007), primarily for budgetary and fiscal considerations. At the same time, ten amendments were made to the Law "On Higher Education" and 1 amendment introduced by the Constitutional Court of Ukraine to limit the amount of state expenditure, or solve the problems of specific professional groups [3].

In 2008 the Ministry of Education and Science of Ukraine in cooperation with the academic community elaborated the Draft of a new Law of Ukraine "On Higher Education", providing a range of measures for modernization of national higher education, in particular, the implementation of Ukraine's commitments to the Bologna Process. But it received a negative reception by the Ministry of Finance and other agencies mainly due to financial matters resulting from a greater university autonomy.

Further attempts to reform the legislation were made within the Program of Economic Reforms for 2010-2014 by the President of Ukraine Viktor Yanukovych "Prosperous society, competitive economy, effective government". In particular, the following objectives relating to finance and deregulation of higher education have been set: increasing the autonomy of educational institutions as regards administering their finance; optimizing the network of educational institutions with regard to demographic and economic realities and the need to enhance the quality of education (establishing enlarged regional universities), introducing a new model of financing HE (from everyday maintenance to forming the budget, based on the number of students and the standards of tuition fees; empowering educational establishments to raise additional funds through legalization of "endowment" – non-profit charity funds; using grant support for research projects and educational innovations; expanding the list of paid services provided by educational institutions; reforming state order for training specialists, based on a regional economic forecast.

Further in 2011 the Cabinet of Ministers of Ukraine submitted to the Parliament a new version of the Draft Law "On Higher Education", which was formally legitimized at the Third National Educators Congress; however, that project caused a negative reaction of many academic groups, NGOs, student organizations and independent experts. However, another two alternative drafts were prepared by the official representative of the President of Ukraine in the Verkhovna Rada, Yuri Miroshnichenko, and by the Parliamentary opposition. Again, neither experts nor legislators reached the consensus.

Nowadays, the public discussion is in progress. There are **three drafts of the Law "On Higher Education"** registered in the Parliament. The 1st project (№ 1187) was developed by a group of deputies from the ruling party "Party of Regions" (M. Soroka, S. Kivalov, H. Kaletnyk), the other two drafts are alternative: the 2nd – oppositional one (№ 1187-1), developed by A. Yatseniuk, V. Klitschko, O. Orobets, the Chairman in office of the Parliamentary Committee on Science and Education L. Hrynevych, and others; and the 3rd draft No 1187-2 was submitted by V. Baloha and prepared by a working group led by the Rector of the National Technical University of Ukraine "Kyiv Polytechnic Institute" M. Zgurovsky on the basis of previous governmental and alternative projects. Thus, the Ministry is not the author of any project, but now they actively support Bill 1187.

It is very important that the society, academic community, faculty, students and politicians are fervently discussing the future of Ukrainian higher education, debating on the changes to the Law that must be introduced. This confirms active attitudes of the civil society, but also the politicization of educational issues. A number of analytical reviews, surveys and interviews on current situation in the

sphere of higher education and science are published by the mass-media, some of them are very pessimistic and alarming. The Chairman of the Parliamentary Committee on Science and Education L.Hrynevych[25] emphasized: "These debates are not held between the authors of different bills, but between two paradigms – two visions not only of higher education, but also of the entire Ukrainian society. Today we choose not only a model of higher education, but also a model of society, the model of the country we will be living in"[8].

Furthermore, the academic community, policy makers, experts and students agree that various projects offer essentially different ways of Higher Education of Ukraine, and the Parliament should adopt the law, which will provide basic academic rights, real university autonomy and decentralization of higher education. We should highlight some key events in public debate: public hearings in the Committee on Science and Education of the Verkhovna Rada of Ukraine (February 27th, March 13th, 2013), preceded by public discussions held at Universities; conferences, roundtables meetings, such as the roundtable on "Bills on higher education: the findings of community", "February 18th, 2013 (support for the alternative bills), the debate held in the media - in "PedPresa" newspaper and in the online blog "The Future of higher Education: expert opinion" (in favour of the ruling party bill), a detailed analysis of the bills performed by the Centre of research community. Also, a number of comments, reviews and proposals were received by the Parliamentary Committee and posted on the website.

The Resolution on the results of the Roundtable "Bills on higher education: the findings of community" was adopted by the leading experts in educational policy and representatives of student organizations, it is claimed that "the revival of higher education in Ukraine is possible, given the law ensures the autonomy of higher education institutions, which is based both on a broad decentralization and the democratization of governance practices within the universities themselves, the decentralization of higher education at the national level, an increase of public funding and, accompanied by the establishment of full transparency and accountability as regards the use of budget funds". The recognized experts, with I. Likarchuk, I. Bekeshyna, V. Kovtunets, P. Polianskyi, T. Finikov, and others, are convinced that the draft by Kivalov-Kaletnyk-Soroka is conservative in its essence and does not provide adequate opportunities for the development of the national system of higher education; it rather enhances centralized governance of higher education system. However, the other 2 drafts offer the model of decentralization of higher education, democratization of the university system and the introduction of effective models of education funding.

[25] Lilia Hrynevych is considered to be one of the most experienced Chairing persons of this Committee for the years in educational management. She has entered the Parliament from the academic society, having worked for the Academy of Pedagogical Sciences. L. Hrynevych used to take part in the works on the establishment of the system of independent testing in Ukraine; she also worked for the National Centre. She has PhD degree in pedagogical sciences, her thesis was dedicated to the reforming of education in Poland. She is a co-author of the Draft of the Law 1187-1.

There is also no unity among student community. The Ukrainian Students' Council under the Ministry of Education and Science supports the pro-governmental bill 1187. The Ukrainian Association of Student Government, leaders of student organizations at the Roundtable "Identifying ways to reform higher education: student opinion" adopted a resolution expressing the opinion that only two bills No 1187-1 and No 1187-2 ensure the Bologna principles; in particular, they establish guarantees for academic mobility and elective subjects by students, promote transparency in educational processes, guarantee the rights of students, correspond with the needs and requirements of the modern world, and only those must be taken into consideration as the basis for further works[26].

The extended session of the Parliamentary Committee on Science and Education on February 27th, 2013 "On legislative provision on development of higher education in Ukraine" focused on discussing the future of higher education in Ukraine. Over 250 participants (MPs of Ukraine, representatives from the Ministry of Education and Science, other central executive bodies, regional administrations, regional councils, from the National Academy of Sciences of Ukraine, branch academies, higher educational institutions; representatives of student government, educational and youth organizations, experts and employers) were actively debating on the projects[27]. Let us consider a few key parameters relating to finance and deregulation of higher education based on comparative analysis of the bills:

1. The system of state order for training: current legislation provides social guarantee for financing state order in amounts necessary to provide 100 students of HEIs of I-II l.a. and 180 students of III-IV l.a. per every 10,000 population. The indicators are developed by the Ministry of Economy and based on the proposal of the Ministry of Education and Ministry of Social Policy (Article 68, p. 8).

   The Bill 1187 removes the existing regulation on the ratio of students and the number of population, as in the existing law the state order would be developed on a competitive basis. The Bill 1187-1 offers a completely new regulation on financing through individual government grants, which are transferred to the universities for training the best applicants; and the amount of regular grant equals the average tuition at public universities. They also suggest that the state should fund training for 50% of high school graduates of a current year (in 2012 the index was 34%). The Bill 1187-2 retains the existing rules on the students and population ratio. It is also proposed to allocate the state order depending on the preferences of the strongest applicants by the results of independent testing.
2. Finance and property rights of HEIs: the authors of all the bills agree that HEIs must be provided with academic and financial autonomy, tax exemptions

[26] Hearings Transcript on www.kno.rada.gov.ua/komosviti/control/uk/publish/article?art_id=54842&cat_id=54841. The Resolution is available on www.kno.rada.gov.ua/komosviti/control/uk/publish/article?art_id=54408&cat_id=53934).

[27] Unfortunately, it was hard to hold purely professional discussion, beyond politics; the opposing sides were criticizing each other and fighting for their ideas on the development of higher education.

(changing tax laws!); also, paid services and commercialization of research must be regulated.

The current law provides that a university is managed according to the rights of ownership or operational control (Art.63). Draft 1187-1 states two types of the use of property (ownership and economic authority); however, it does not provide the basis for their selection. The Draft 1187 maintains the existing regulation. Draft 1187-2 proposes to fix property on economic authority.

3. Tax Liberation: The biggest tax exemptions are suggested by 1187-2. Specifically, it provides the exemptions proposed by 1187-1 + liberating HEIs from the land tax and exemption from taxation of research activities, performed by universities and research institutions funded by enterprises, domestic and foreign customers for research. The most limited number of privileges is provided by 1187: the only proposal is exemption from tax payment on the cost of research.
4. Paid services: All the bills provide HEIs with the right to manage the income obtained from the chargeable services independently; the government determines their list, and three ministries – the procedure for the formation of their cost.

It is worth mentioning that all the bills legalize the Bologna terminology: European Credit Transfer System, ECTS credits, the European Higher Education Area. The majority of experts and educational community claim that the main ideological difference between the bills regards the area of fund management: centralized system of higher education management and manual governance (1187), versus the decentralized (1187-1, 1187-2). And, accordingly, there are **two paths of development of higher education in Ukraine**. In particular, L. Hrynevych considers that new law on higher education should be developed only on the basis of drafts No 1187-1 and No 1187-2.

The Recommendations of the Parliamentary Committee hearings defines the high priority problems and their solutions; in particular, regarding the improvement of legal mechanisms of equal access to higher education, the elimination of inconsistencies of higher education content and the needs of society and the labour market, the improvement of management of higher education, the provision of university autonomy, the establishment of a system of quality assurance, the integration of Ukraine with the European educational area.

Moreover, recommendations and the proposals of specific measures are issued, regarding the President of Ukraine (e.g. it is proposed to supplement the Program of economic reform and the reorganization of the Ministry[28]), the Parliament (e.g. it is proposed to prepare and submit to the Parliament the consolidated Draft Law of Ukraine "On Higher Education"), the Cabinet of Ministers of Ukraine (e.g. it is proposed to work out the Strategy of Development of Higher Education, to introduce some changes to the tax and customs legislation, including the national mechanism of "endowment", etc.), the Ministries of Education, Economic Development and Trade, the Union of

[28] Under the Decree of the President of Ukraine, the Ministry of Education and Science Youth and Sports of Ukraine has already been reorganized into two Ministries: the Ministry of Education and Science, the Ministry of Youth and Sports.

Rectors (e.g. it is proposed to organize an interuniversity methodological seminar on educational rights and management of the education system), etc.

On March 13, 2013 the Parliamentary Committee on Science and Education held the next public hearings "About the condition and legislative provision of financing scientific and research activities in Ukraine". It was emphasized that in 5 years Ukraine may lose the status of a scientifically advanced country if the models of science and research funding are not reformed. Research is funded from the state budget by at the level of 0.29% of GDP (however, the country guarantees the amount of 1.7% GDP, whereas the average world rate amounts to 2% of GDP. The critical level for science to survive has been set at 0.9%, and only if this condition is satisfied the economic impact of science is detectable (L. Hrynevych). A number of issues connected with financing education and research were discussed.

Summing up, first we must formulate a unified strategy for higher education and science in Ukraine and a common vision of the goals for changing legislation. Higher education of Ukraine must act as the main factor determining national progress and overall development; it also has to provide the quality of training for the government, as well as high-tech economy and sustainable development of the country. This requires innovative administrative and legislative decisions. This seems to be the main purpose of higher education, and it must be born in mind while reforming the legislation takes place. We hope that such active and productive public dialogue on the development of higher education will promote the preparation and adoption of a new Law, which will ensure true reformation of the HE system, in accordance with the European standards. We must rethink the objectively existing contradictions in the area of education management and the governance of HEIs, namely, between the intentions to deregulate and deconcentrate the decision-making functions and actual monopoly to make final decisions by governmental bodies; between limited resources and inefficient and non-transparent funds allocation and spending. Higher education must contribute to economic growth and structural changes in the economy, provide the necessary highly-qualified personnel. New Law must provide the implementation of the European experience of LL-learning, the government-public system of higher education, the university – employer integration (order for training specialists must be reformed), the development and promotion of national and international academic mobility of students and teaching staff, as well as the improvement of the status of university teachers and researchers.

Thus, **models of financing of higher education in Ukraine** have developed and evolved over the centuries as in the following way:
Palatial church ⇨ Mainly public ⇨ Total budget financing ⇨ Multi-sources funding.

Nowadays higher education is funded according to the model of **multi-sources financing,** but it should be improved on the grounds of the principles of real academic autonomy, university fundraising and good governance. The optimization of the structure of sources of HEIs financing is a guarantee of ensuring satisfactory quality of educational services, as well as of boosting the global competitiveness of Ukrainian universities.

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Appendix

Table 1. HEIs of Ukraine by the forms of accreditation, forms of property and number of students

	I – II l.a.						III – IV l.a.					
	1995/96	**2000/01**	**2005/06**	**2010/11**	**2011/12**	**2012/13**	**1995/96**	**2000/01**	**2005/06**	**2010/11**	**2011/12**	**2012/13**
Total number of HEIs												
By forms of property:	**782**	**664**	**606**	**505**	**501**	**489**	**255**	**315**	**345**	**349**	**345**	**334**
Public and Communal	735	593	517	423	423	415	191	223	232	243	238	231
Private	47	71	89	82	78	74	64	92	113	106	107	103
Number of students												
Total	**617660**	**528041**	**505331**	**361453**	**356768**	**345235**	**922838**	**1402904**	**2203830**	**2129835**	**1954789**	**1824906**
Forms of study												
Full time	455582	400810	373396	302871	297422	287855	616313	859488	1233847	1250211	1144963	1104105
Evening form	17099	3451	3014	2857	2689	2701	24090	10671	9308	6119	5021	3913
Extramural	144979	123780	128921	55725	56657	54679	282435	532745	960675	873505	804805	716888
Number of students in calculating												
per 10,000 population	120	107	108	79	78	76	180	285	470	465	428	401

Table 2. Higher Education Institutions by the forms of property, 2012/13 academic year

	I – II l.a.				III – IV l.a.			
		including by forms of property				including by forms of property		
	Total	Public	Communal	Private	Total	Public	Communal	Private
Number of institutions	**489**	**208**	**207**	**74**	**334**	**217**	**14**	**103**
Number of students	**345235**	**187067**	**121687**	**36481**	**1824906**	**1602062**	**35850**	**186994**
including Full time	287855	147585	110930	29340	1104105	1000277	24042	79786
Evening	2701	77	2624	–	3913	3683	–	230
Extramural	54679	39405	8133	7141	716888	598102	11808	106978

Table 3. Financing of education, including higher education, in 2000–2012 years (official data by State Statistics Committee)

	General government expenditure, m, UAH	Expenditure in % to		Expenditures on individual subsectors in % of spending on the sector	General government expenditure, m, UAH	Expenditure in % to		Expenditures on individual subsectors in % of spending on the sector
		Total expenditure	GDP			Total expenditure	GDP	
	2000				**2010**			
Total, including	48148,6	100,0	100,0	X	377842,8	100,0	100,0	X
On education	7085,5	14,7	4,2	100,0	79826,0	21,1	7,4	100,0
On higher education	**2285,5**	**4,7**	**1,3**	**32,3**	**24998,4**	**6,6**	**2,3**	**31,3**
	2005				**2011**			
Total including	141989,5	100,0	100,0	X	416853,6	100,0	100,0	X
On education	26801,8	18,1	6,1	100,0	86253,6	20,7	6,6	100,0
On higher education	**7934,1**	**5,7**	**1,8**	**29,6**	**26619,6**	**6,4**	**2,0**	**30,9**
	2009				**2012**			
Total including	307399,4	100,0	100,0	X	335752,9	100,0	100,0	X
On education	66773,6	21,7	7,3	100,0	72680,4	21,6	7,0	100,0
On higher education	**20966,3**	**6,8**	**2,3**	**31,4**	**21058,1**	**6,3**	**2,0**	**29,0**

Table 4. Number of students of higher educational establishments by the sources of financing educational activities

	In HEIs I – II l.a.			In HEIs III – IV l.a.			In HEIs I – IV l.a.		
	2010/11	2011/12	2012/13	2010/11	2011/12	2012/13	2010/11	2011/12	2012/13
Total number of students including those who study through	**361453**	**356768**	**345235**	**2129835**	**1954789**	**1824906**	**2491288**	**2311557**	**2170141**
State budget	130337	128468	125634	815211	777379	767596	945548	905847	893230
Local budgets	79348	79601	77950	20956	18372	18379	100304	97973	96329
Public authorities, Legal entities	250	391	340	8502	8886	6519	8752	9277	6859
Individuals	151518	148308	141311	1285166	1150152	1032412	1436684	1298460	1173723
The share of students (%), trained by the sources									
State budget	36,0	36,0	36,4	38,3	39,8	42,1	38,0	39,2	41,2
Local budgets	22,0	22,3	22,6	1,0	0,9	1,0	4,0	4,2	4,4
Public authorities, Legal entities	0,1	0,1	0,1	0,4	0,5	0,3	0,3	0,4	0,3
Individuals	41,9	41,6	40,9	60,3	58,8	56,6	57,7	56,2	54,1

Table 5. Higher Education Institutions of I-IV l.a. by the types of establishments and governing bodies (owners), 2012/13 academic year

	Totally	Types of establishments										
		Universi-ties	incl. pedago-gical	Acad-emies	Insti-tutes	incl. pedago-gical	Conserv-atorium	Col-leges	incl. pedago-gical	Special-ized Schools	incl. pedago-gical	Tech-nical Schools
Ukraine – Totally	**823**	**199**	**25**	**64**	**89**	**5**	**1**	**243**	**22**	**118**	**14**	**109**
including												
Ministry of Agrarian Policy and Food of Ukraine	43	17	–	2	–	–	–	13	–	–	–	11
Ministry of Education and Science, Youth and Sports of Ukraine	307	102	24	21	7	–	–	84	9	11	5	82
State Service of Youth and Sports of Ukraine	3	–	–	1	1	–	–	–	–	1	–	–
Ministry of Defence of Ukraine	6	1	–	3	2	–	–	–	–	–	–	–
State Agency of Timber Resources of Ukraine	2	–	–	–	–	–	–	2	–	–	–	–
Ministry of Social Policy of Ukraine	2	–	–	–	1	–	–	–	–	–	–	1
Ministry of Culture of Ukraine	36	4	–	7	–	–	–	3	–	21	–	1

Ukrainian State Building Corporation "UKRBUD"	10	–	–	–	–	–	–	9	–	–	–	1
Ministry of Health Protection of Ukraine	47	13	–	3	–	–	–	22	–	9	–	–
Ministry of Infrastructure of Ukraine	8	–	–	1	–	–	–	2	–	–	–	5
Ministry of Internal Affairs of Ukraine	8	5	–	2	1	–	–	–	–	–	–	–
Service of Defence of Ukraine	1	–	–	1	–	–	–	–	–	–	–	–
Others	173	14	1	11	12	1	1	62	13	73	8	–
Private HEIs	177	43	–	12	65	4	–	46	–	3	1	8
Central Union of Consumers' Communities of Ukraine	21	1	–	1	3	–	–	12	–	–	–	4

Table 6. Number of students of HEIs at the beginning 2012/13 academic year, by the sources of studies funding and governing bodies (owners)

	In HEIs I – II l.a.					In HEIs III – IV l.a.				
	Total number of students	students who study by the sources				Total number of students	students who study by the sources			
		State budget	Local budgets	Public authorities, Legal entities	Individuals		State budget	Local budgets	Public authorities, Legal entities	Individuals
Ukraine, totally	**345235**	**125634**	**77950**	**340**	**141311**	**1824906**	**767596**	**18379**	**6519**	**1032412**
Ministry of Agrarian Policy and Food of Ukraine	19310	14593	–	–	4717	167936	83945	–	4	83987
Ministry of Education and Science, Youth and Sports of Ukraine	151364	92947	6631	143	51643	1170893	554494	6785	1275	608339
State Institution (Service) of Youth and Sports of Ukraine	180	–	180	–	–	3179	1863	–	–	1316
Ministry of Defence of Ukraine	–	–	–	–	–	8197	5921	–	–	2276
State Agency of Timber Resources of Ukraine	1678	869	–	72	737					
Ministry of Social Policy of Ukraine	208	175	–	–	33	439	–	–	207	232
Ministry of Culture of Ukraine	8027	1132	5133	–	1762	21760	13118	–	–	8642
Ukrainian State Building Corporation "UKRBUD"	8574	6391	–	3	2180	–	–	–	–	–
Ministry of Health Protection of Ukraine	23091	179	12954	–	9958	71758	25435	83	153	46087
Ministry of Infrastructure of Ukraine	11045	4658	–	–	6387	5225	2534	–	–	2691
Ministry of Internal Affairs of Ukraine	–	–	–	–	–	54226	20161	–	4276	29789
Service of Defence of Ukraine	–	–	–	–	–	1398	700	–	55	643
Others	85277	4265	53052	–	27960	132901	59066	11431	123	62281
Private HEIs	36481	425	–	122	35934	186994	359	80	426	186129
Central Union of Consumers' Communities of Ukraine	18258	381	–	–	17877	16483	359	–	88	16036

Part II

Financing and Deregulation in Higher Education – What might be done?

2.1. Typology, Grouping and Classification in Higher Education

Joanicjusz Nazarko, *Katarzyna Anna Kuźmicz*

1. Abstract

Modern higher education institutions (HEIs) both public and private operate in a highly competitive market. Demographic decline and market saturation in higher education create the need to promote universities among the candidates wishing to study. Open borders and the increasing educational awareness among prospective students on study opportunities around the world, as well as the use of various types of support programs, have all changed the way of thinking about the management of a university and taking into account the global context. The new task for managers of higher education institutions is now university brand development and seeking a significant position in the market.

These factors should encourage managements of universities to designate their universities among others for the sake of student recruitment, but also to support efforts to fund research and cooperation with the external spheres.

Universities need to develop a system to facilitate self-identification and self-awareness of their potential and identity. This will help them to define their mission and develop the strategy in the desired direction. The stakeholders of higher education and universities themselves need the information that will help them notice the unique character and special features, but also similarities between particular universities. It is essential to establish cooperation, particularly at the international level.

2. Prerequisites for typology and classification in higher education

University management is a problematic task, inter alia, due to such factors of the higher education system as fuzziness, complexity, diversity and differentiation. As the instruments of order and transparency supporting the higher education system typologies and classifications of universities should be pointed out (Figure 1).

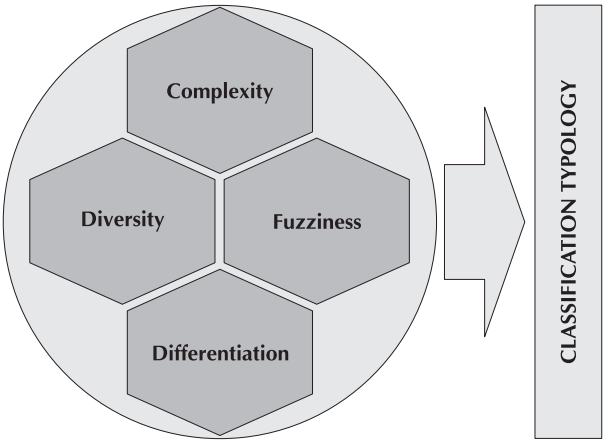
In particular, in Polish conditions fuzziness in higher education system should be emphasized, which is associated with imprecise legal regulations, measures of academic and teaching achievements, ambiguity in relations between HEIs and the external spheres, expectations of various groups of stakeholders, as well as with the multiplicity of forms of education.

A complex system is a system in which there is a multitude of interactions between various components. The complexity of the higher education system is reflected in the following aspects:

- multiplicity and complexity of regulations,

- variety and diversity of entities,
- multitude of stakeholders with different expectations,
- internal and external competition,
- various forms of financing,
- multiplicity of forms of education.

Figure 1. Prerequisites for typology and classification in higher education



Source: author's own model.

A fuzzy system is a system in which information is imprecise, uncertain or vague. Fuzziness of higher education include:

- imprecise regulations,
- vague expectations of various stakeholder groups,
- imprecise measures of academic achievements,
- imprecise measures of educational achievements,
- unclear relations between university and external spheres,
- multiplicity of forms of education.

J. Huisman emphasizes the difference between two concepts: of diversity and differentiation[29]. Diversity is a static concept, and it describes the level of diversity in the system at a given point in time. The concept of differentiation, however, describes a variety of changes, or a dynamic process in which the diversity is increased. Diversity may be reflected in categorization, while differentiation should be shown by indicating changes in time or by simulating a dynamic process and comparing observations with forecast figures[30].

[29] J. Huisman, Differentiation and diversity in higher education systems, "Research in Higher Education", Vol. 13. 1998, Vol. 13, pp. 75–110.

[30] A. Bonaccorsi, C. Daraio, Characterising the European university system: a preliminary classification using census microdata," Science and Public Policy", 2009, Vol. 36, No. 10, p. 763.

In the academic context there are several aspects of diversity[31]:

- research or education of students' orientation,
- academic and vocational education,
- lifelong learning offer,
- the management / academic governance,
- financial means,
- size.

It is possible to define several types of diversity:

- internal,
- external,
- institutional, program diversity,
- horizontal,
- vertical.

External diversity relates to differences between individual units in the system. Internal diversity refers to differences within the units in the system. In terms of institutional diversity new types of private, transnational and virtual universities can be distinguished. The concept of program diversity describes the level of differentiation offered by educational institutions. Vertical diversity reflects differences in hierarchy (entitlements) of HEIs. According to this criterion, one could distinguish: training colleges, academies, polytechnics, universities, technical universities, etc. Horizontal diversity means differentiation in each of these categories.

According to F. van Vought, there are the following advantages of diversity in higher education[32]:

- increasing access to education for a wide range of students;
- increasing social mobility through multiple ways of entry into the study system, and various forms of transfer;
- a more adequate response to the needs of the labour market;
- the ability to meet the needs of larger number of stakeholders (social stability);
- increasing the efficiency of higher education through specialization;
- increased opportunity to experiment.

In a system demonstrating a large degree of diversity and differentiation, there is a need for grouping or classification, resulting from the natural need to organize the chaos, the need for placement in accordance with the principle of similarity, that is "apples to apples, oranges to oranges" and the desire to compare own achievements with those of others.

Increasing transparency of the system will serve to facilitate the recognition of a HEI and the proper identification of its profile by the prospective students, re-

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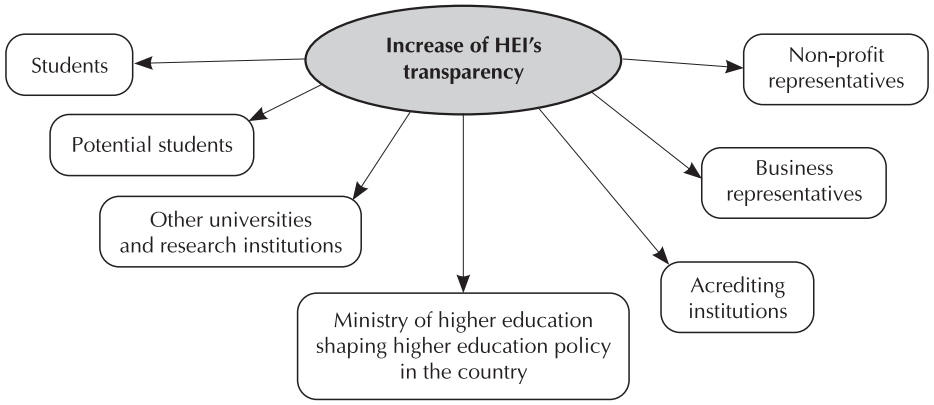
[31] S. Kyvic, Structural chancges in higher education systems in Western Europe, Higher Education in Europe, 2004, Vol. 29, No. 3 pp. 393–409; CHEPS, Center for Higher Education Policy Studies, Mapping Diversity: developing a European Classification of Higher Education Institutions. The Netherlands: CHEPS, 2008.

[32] F. van Vought (et al.), Insittutional Profiles – towards a typology of higher education institutions in Europe, 2005, http://doc.utwente.nl/53776/, as at 26.02.2013.

searchers seeking employment, other universities and research centres in search of partners for cooperation, institutions shaping policy in the field of higher education in a given country, accrediting institutions, business representatives and non-profit sector cooperating with universities (Figure 2).

Figure 2. Beneficiaries of increasing transparency in the functioning of HEIs



Source: author's own model.

3. Tools shaping transparency in the system of higher education

The tools shaping transparency in the system of higher education include rankings, classifications, typologies and benchmarking. Rankings are applied for positioning of HEIs. Their credibility and integrity subject to controversy in the academic environment, because they are often based on subjectively selected criteria[33]. Despite this, it should be emphasized that they are of a significant importance in creating the competitiveness of a given university[34]. As G. Federkeil[35] indicates, such broad application of ranking in assessing the position of universities often takes place due to lack of an alternative evaluation system. This is particularly the case in Europe. Classification means a comprehensive and mutually exclusive universities division by a specific rule. Typologies of universities are defined by universities or groups of universities, characterized by a specific feature, without the need for a comprehensive and exclusive division; thus, they promote transparency

[33] K.A. Kuźmicz, Benchmarking procesowy jako instrument doskonalenia zarządzania uczelnią, non-published PhD thesis.

[34] P.G. Altbach, The dillemas of ranking, "International Higher Education", Vol. 42, pp. 2–4, https://htm-ldbprod.bc.edu/pls/htmldb/f?p=2290:4:0::NO:RP,4:P0_CONTENT_ID:100222, retrieved: 27.02.2013.

[35] G. Federkeil, Rankings and quality assurance in higher education, "Higher Education in Europe", Vol. 33, Nos. 2/3, pp. 219–231.

in the higher education system, allow for organizing its elements, i.e. universities. Classifications of universities, although focused on the similarities between them, rather than on their numerical sequencing, are closely related to rankings. A connection may be direct, e.g. similar structure, content or procedures; or indirect, e.g. their perception in the academic environment[36].

Benchmarking, however, apart from the function of shaping transparency, aims to teach and systematically improve universities, as well as extend their knowledge of best practices and creative adaptation to the specifics of the institution. The systematic use of benchmarking increases the transparency of the institution[37]. Benchmarking is seen as a tool for imitating market processes and thereby enhancing competitiveness. A side effect of rankings can be universities and the management action aimed only at improving the indicators. The real benchmarking, according to the authors of the *European Network for Quality Assurance in Higher Education* (ENQUA)[38], contains the elements of negotiating, cooperation and mutual understanding. The dialogue, through which organizations learn, is also very important. False benchmarking, on the other hand, is defined as rank-oriented, and its aim is not to improve or develop, but to position a HEI. The ranking is only the carrier of information about the position in a league of universities, and it allows for answering the question: "How is it?", instead of "Why?". The essence of benchmarking is to learn how to achieve a result, but not the result exclusively, like in case of rankings.

However, the notions of ranking and rating should be distinguished. Ranking is the classification of persons, objects or events according to a certain order (numerical value) in accordance with the established criteria. Rating, however, is the result of the assessment of persons, objects or phenomena, with the use of scale. Evaluation is usually presented in non-numeric symbols.

In view of the multitude of dimensions of HEIs differentiation and multitude of the criteria of their assessments, the arbitrary attribution of weights, and mistakes made at measurement, it should be noticed that rankings based on many criteria are burdened with high arbitrariness. The differentiation of positions of universities with a similar score in the ranking is statistically non differentiable or even accidental. Another deficiency of a ranking is the probability for a HEI to be ranked high, even though the institution is well developed in just one dimension that is being assessed. Ratings group universities with similar features (in each dimension) in descriptive categories. They reflect in much more objective and reliable way the position of a HEI in the rating scale.

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[36] A.C. McCormick, The complex interplay between Classification and Ranking of Colleges and Universities: should the Berlin Principles Apply Equally to Classification?, "Higher Education in Europe", 2008, Vol. 33, No. 2/3, p. 210.

[37] Ibidem.

[38] K. Hämäläinen et al., Benchmarking in the improvement…, op. cit., p. 8.

An example of university rating is *the QS Stars university rating* [39]. The authors point out that in spite of the growing interest in university rankings, higher education entities show the need for assessment, which will be based solely on their merits / properties, rather than on their comparison in relation to other HEIs.

The project covers more than 70 universities from 12 countries, including Australia, the UK and the U.S., which are subject to rating. The system awards are the stars granted, from one to five. The system takes into account student satisfaction surveys, which are not addressed in rankings of universities. The total number of 30 criteria is considered, a university can award up to 1000 points. The criteria are divided into eight categories: research, employability, education, infrastructure, innovation, commitment to obtain positions in specialized subjects. Separate ratings for the eight categories and the overall rating are published afterwards.

According to the authors of the system, a typical one-star university operates for less than 20 years and offers a good standard of education in the local community. Universities rated with five stars are world-class entities in many aspects of university activities, enjoying an excellent reputation, a very good educational and science facilities, as well as outstanding research and teaching staff with a global renown.

Stars are awarded on the basis of an audit conducted by *the QS Intelligence Unit*. The system provides an international comparison, which is particularly important for individual universities striving to achieve internationalization and increased recognition abroad.

4. Dilemmas in the classification of universities

The above mentioned features of higher education system cause great difficulties in making comparisons and grouping universities, which is the result of, inter alia, a multitude of features and their fuzziness. Another factor is the dynamics of changes taking place in higher education. Many typologies of universities applied so far in the world lose their significance, due to the blurring distinctions between defined types, e.g. between universities and colleges.

Creating a typology or classification of schools appears then to be so problematic that it requires a multi-faceted task analysis. In particular, the following dilemmas should be considered:

- Should a typology serve a single or multiple targets (stakeholders)?
- How to avoid the risk for a typology of being read as stratification and ranking of universities, which would be reflected in political decisions or financing?
- What to opt for: a priori typology (established by the government / legislature (universities, polytechnics)), or a posteriori (based on the "behaviour" of a HEI)?

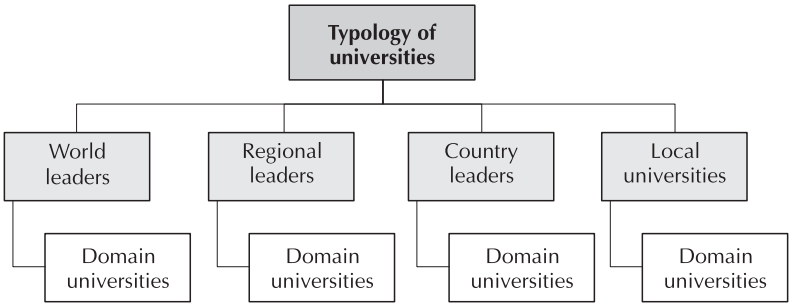
[39] Website: Top Universities. Worldwide university rankings, guides and events, http://www.topuniversities.com/qs-stars/qs-stars-new-university-rating, retrieved: 26.02.2013.

- By definition, a typology should not be hierarchical, although hierarchical connotations seem to be unavoidable.
- A typology should be based on reliable data.

Typology should assist schools in developing their mission and profiling activities. It should also ensure that the higher education stakeholders can enjoy greater transparency of individual facets of university's activity[40].

Due to the recognition and positioning of HEIs, the most important division should take into account the significance of a given institution in the world's science education, academic education and values contributed to the economic and social life. This criterion enables creating college types indicated in Figure 3.

Figure 3. Typology of universities according to their recognition



Source: author's own model.

World leaders are universities excelling in the world, defined in literature as *world-class universities*, *leading universities*, or *top-ranked universities*. Regional leaders are the best universities in Europe, Asia, or the United States, with country leaders as their equivalents at national level. Local universities (*peripheral universities)* are universities of hardly any significance in national or international academic spheres.

This typology can also be applied to universities of domain (for example, humanities, engineering, medical, arts). Leaders can be defined by HEIs rankings. There are two global academic rankings, regarded as the most important in the world: *Academic Ranking of World Universities*, developed by the Shanghai Jiao Tong University (Shanghai ranking) and the *THE-QS World University Rankings*, prepared by the magazine "The Times Higher Education" (a supplement to the daily newspaper "The Times ") and the organization of QS Quacquarelli Symonds. It is assumed that 50 (100) of the top universities, distinguished in these rankings, can be categorized as world leaders.

Unfortunately, none of the Polish universities was included in this category, and what is worse, none of them appears among the first hundred of European

[40] F. van Vought (et al.), Insitutional Profiles – towards a typology of higher education instituions in Europe, 2005, http://doc.utwente.nl/53776/, retrieved: 26.02.2013.

universities (and hence regional leaders), or universities of domain. In the Shanghai ranking, since 2003 when it was established, there have been only two Polish universities among the 500 best in the world: the Jagiellonian University and the University of Warsaw, ranking in the range from 301st to 400th positions)[41].

In the THE-QS ranking of World University Rankings Polish universities also occupy very distant places. The best result over 2006-2009 was 287th place of the Jagiellonian University in 2006.

The reasons for low positions of Polish universities in the world rankings can originate from the system of higher education in Poland. According to the Report of the European Commission, *Education and Training* 2010, important indicative factors of its weakness are[42]:

- a low percentage of people with higher education (Poland – about 10%, EU – 20%),
- very low percentage of people studying science and new technologies (Poland – 20%, EU – 35%),
- relatively low budget expenditures on education (Poland – 5% of GDP),
- low rate of Poles aged 25 – 64 in follow-up study (Poland – 4%, EU 12%),
- underdeveloped vocational education compared with other EU countries.

Moreover, another very important factor is the low level of internationalization of Polish higher education, which virtually eliminates national universities from the global competition for prestige, the best staff and the best students, and as a consequence – this leaves the universities in the isolation of national level and reduces knowledge exchange in the international environment[43].

5. Examples of classifications of universities in the world

The most common classification of universities is the one developed in the United States by the Carnegie Foundation (*The Carnegie Foundation for the Advancement of Teaching*)[44]. For many years, it has been classifying U.S. institutions of higher education, taking into account the criteria related to the levels of education and the range and intensity of scientific research. The basic classification distinguishes:

- Associate's colleges,
- Doctorate-granting universities,

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41 M. Jarocka, E. Glińska, Miejsce polskich uczelni w wybranych rankingach światowych – uwarunkowania i perspektywy, Zeszyty Naukowe Politechniki Rzeszowskiej, Zarządzanie i Marketing, Zeszyt nr 17, Wydawnictwo Politechniki Rzeszowskiej, Rzeszów 2010, s. 204.

42 M. Pluta-Olearnik, Koncepcja Life Long Learning – wyzwania dla kształcenia na poziomie wyższym, www.fundacja.edu.pl/organizacja/_referaty/33.pdf, stan z dnia 22.02.2013; M. Jarocka, E. Glińska, Miejsce polskich…, op. cit., s. 206.

43 M. Jarocka, E. Glińska, Miejsce polskich…, op. cit., s. 206.

44 Carnegie Foundation website, http://classifications.carnegiefoundation.org/, retrieved: 24.02.2013.

- Master's colleges and universities,
- Baccalaureate colleges,
- Domain-schools (special-focus institutions),
- Tribal colleges (Indian).

In parallel, the Carnegie Foundation is developing several other classifications of universities based on the following criteria:

- degree courses, proportions of education and types of degree programs (undergraduate instructional program),
- degree courses, proportions of education and types of degree programs (postgraduate instructional program),
- enrolment profiles,
- undergraduate profiles,
- the size of the university and student accommodation (size & setting).

Over the years, Carnegie Classification has been modified numerous times. The changes were accompanied by the question of whether the classification causes the university to shift "up"?. Although the official statement of Carnegie Foundation confirms that the quality is not reflected in individual leagues, such grouping relies on the use of objective measures which are often associated with prestige[45]. One of the most frequently cited examples is the classification relating to research on the basis of doctoral degrees awarded on an annual basis, according to which there were subcategories created of Research I, Research II, Doctoral I and Doctoral II. The term "R1", as a synonym for prestigious, research-oriented university, has become part of the lingua franca in the United States.

In the course of modifications of the classification there were attempts to remove the elements carrying the connotation of the rankings (less emphasis on science, more on the study, the eradication of Roman ordinals).

The UK applies a historical division of universities. In accordance with this division, there are the following groups of schools[46]:

- Oxford and Cambridge
- University of London
- "Old civics" established in the Victorian era
- "Redbrics" established at the end of the 19th and the beginning of the 20th century
- The new universities built on the greenfield sites in the 1960s.
- Technical universities or formerly: "colleges of advanced technology"
- The new universities (formerly polytechnics).

M. Tight [47] introduces another division, based on the number of students and information on research grants acquired by a university. It classifies HEIs as follows:

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[45] A.C. McCormick, The complex interplay…, op. cit., p. 210.

[46] P. Scott, Concussion: trumph and retreat, in: D.Warner, D. Palfreyman (eds.), The state of UK higher education. Managing change and diversity, SRHE, Open University Press Buckingham 2001, , pp. 186–204.

[47] M. Tight, Institutional typologies, "Higher Education Review", 1988, Vol. 20 No. 1, pp. 27–51.

- University of London
- Oxford and Cambridge
- Civic institutions
- Technological institutions
- Campus universities
- Unclassified institutions

Currently four general categories of higher education institutions in UK are distinguished[48]:

- Ancient Universities
- Red Brick Universities
- New Universities
- Open University.

Ancient universities in the United Kingdom and Ireland were established before the 19th century. Red Brick Universities are named after the buildings they were housed in, which were usually built of red brick. They were founded in the industrial parts of the cities during the Victorian era and before the Second World War. They are also sometimes called civic universities. New Universities is the term describing two types of universities. First of all, the academic institutions founded in the 1960s after the Robins Report. Beside recommending immediate expansion of universities, the Report also suggested elevating Colleges of Advanced Technology to university status[49]. Due to their modern architecture and the predominant use of large stretches of plate glass in steel or concrete frames, the institutions founded in the 1960s are often called Plate Glass Universities[50]. The second group are the so called Post-1992 Universities. A separate category comprises the Open University, which is Britain's single distance-learning institution. It is one of the largest institutions of higher education in the UK by studAn interesting initiative aiming at classification of European universities is *U-Map* [51].

The result of the project under the U-Map, ended in 2010, are two tools for enhancing the transparency of European higher education system:

- Profile Finder – creating a list of institutions of higher education (HEIs) that are comparable, on the basis of user-defined characteristics;
- Profile Viewer – provides activity profile of a university, enabling the comparison of three schools;

By statutory definition U-Map[52]:

- is based on empirical data,

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48 Sprachmodul "Berufungsverfahren website", http://www.smbv.sz.uni-erlangen.de/course/szfausmbv/handbook/uk/section1/page2_en.html.

49 Ibidem.

50 Ibidem.

51 Website of the project U-map, http://www.u-map.eu, as at 26.02.2013.

52 Ibidem.

- assumes multifactor and multidimensional perspective,
- is not hierarchical,
- applies to universities in Europe,
- is descriptive, not prescriptive,
- is based on reliable and verifiable data,
- is cost-effective for the collection of additional data.

U-Map's consists of:

- Profile of education
- Student profile
- Involvement in research
- Exchange of knowledge
- International orientation
- Regional involvement

On behalf of the European Commission, a consortium under the name of *Consortium for Higher Education and Research Performance Assessment Network CHERPA* is developing the U-Multirank, a tool for creating charts, which also allows to define the profile of higher education institutions. The consortium consists of the Centre for Higher Education, CHE) in Germany and the Centre for Higher Education Policy Studies, CHEPS in the Netherlands.

The facets mentioned in the ranking will include: education and learning, research, knowledge transfer, internationalization and engagement in the region. Based on empirical data by using U-Multirank it will be possible to make comparisons between the institutions with a similar profile. This will allow the users to create personalized rankings, based on preferred criteria. The first ranking will be published in early 2014 and will involve 500 universities. This will be the ranking of universities and rankings of domain universities for civil engineering, business and physics. In subsequent years the ranking has to be extended by other higher education schools[53].

U-Multirank is going to be integrated with the U-Map. The role of the U-Map is a description of the mapping of higher education institutions in different aspects of activity. U-Map is designed to help identify schools comparable with each other by Multirank[54].

World Higher Education Database (WHED)[55] is a project aiming at developing a classification of universities in the world. WHED Online is published by the International Association of Universities (IAU), in partnership with the Palgrave Macmillan – publishing house. WHED contains detailed information on more than

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[53] Website of the project U-map…, op. cit.

[54] F. van Vught, F. Ziegele (eds.), Design and Testing the Feasibility of a Multidimensional Global University Ranking. Final Report, Consortium for Higher Education and Research Performance Assessment CHERPA-Network, 2011, p. 45.

[55] World Higher Education Database (WHED) website, http://www.whed-online.com/, retrieved: 26.02.2013.

17,000 higher education institutions from 180 countries that offer a Master's degree or professional degree after four years of education. The schools are grouped according to the criterion of ownership: public and private. In addition, the information is included on the higher education system in all the countries represented in the database; there is also contact information for national, regional and international institutions of higher education. Up to 250 addresses of institutions of higher education can be exported; additional exports are enabled by purchasing a license.

6. The situation in Poland

Institutions of higher education are characterized by significant qualitative and quantitative differences, and therefore it is possible to distinguish many of their typologies referring to the different characteristics of these institutions, such as the type of property, the rights of academic subjects and activities.

In Poland, most schools are classified according to[56]:

- type of ownership (public and private);
- possessing the right to award doctoral degree (universities and vocational schools);
- substantive scope of the right to award doctoral degrees (universities, technical universities, other "adjectival" universities, polytechnics, academies and other higher education schools);
- possessing the power of enacting statutes and launching courses of study (autonomous and non-autonomous colleges);
- supervisory authority (schools subordinate to the Ministry of Higher Education, military, public, medical and marine universities).

Typologies presented above indicate that in the national higher education system the basic differences between universities are due to their academic competence. Typologies referring to the quality of research, education and the value added to the economic and social life did not evolve. Thus, there are no significant differences between universities, pointing to their specific approach to the way of education, responding to different needs of society and the economy, or the determination of the leading competences. In fact, all universities understand their development strategies as obtaining consecutive academic rights, causing their excessive inward orientation.

Many typologies of universities used so far in the world lose their significance, due to the blurring of distinctions between defined types, e.g. between universities and colleges. The division into world leaders, regional leaders, country leaders and local schools currently dominates in international typology of universities and is based on the positions achieved by universities in the global rankings. The

[56] M. Dąbrowa-Szefler, J. Jabłecka J., Szkolnictwo wyższe w Polsce. Report for OECD, MNiSW, Warszawa 2007.

introduction of a similar typology of Polish universities allows for assessing their actual competitive position on the domestic and international education market. Referring only – in the absence of this kind of typology – to the previously mentioned types, obscures the real relationship between Polish universities and world, regional, national, and domain leaders.

Ranking szkół wyższych (Higher education schools ranking) by "Perspektywy" and "Rzeczpospolita" is currently the most popular Polish universities ranking. It first appeared in 2000 and has since been published annually on the website of "Perspektywy", an educational foundation (www.perspektywy.pl), in the monthly magazine "Perspektywy" and in daily newspaper "Rzeczpospolita". The Chapter House, which is composed of the representatives of academia and employs graduates, is responsible for developing the methodology for ranking and the supervision of the procedures. Each year, the Chapter, with regard to the changing academic, social and economic reality, modifies the existing criteria and evaluation system. Initially, Polish academic institutions were evaluated according to 4 criterion groups: academics, employers, and scientific potential along with study conditions.

Over the years, changes were made to the ranking methodology, and as a result the ranking list in 2012 was constituted, with the use of 33 criteria divided into six groups: prestige, scientific potential, the effectiveness of science, innovation, and internationalization of studying and conditions of studying. There is also the ranking of a weekly "Wprost", "which, due to unclear and controversial methodology is often overlooked in substantive debate. The Ministry of Science and Higher Education is currently working on the creation of an information system for higher education in Poland - *POL-on*. Its primary purpose is to develop a global database of scientific institutions and science in Poland[57]. The information collected will support the decision-making process of the Ministry, mainly at universities. However, among stakeholders of the system there are also companies and organizations which publish national and international rankings, potential students, employers, business and public administration[58]. The idea of the system has been presented in a document entitled: *The concept of structure, content and organization of the monitoring system, ranking tangible and intangible resources of higher education in Poland*, prepared by the Foundation Perspektywy, Antares Group, Pentor Research Int. and the Centre for Higher Education Development. The completion of the system is scheduled for 2013. An attempt to classify Polish universities is undertaken by the Committee for Academic Entities Evaluation (KEJN – Komitet Ewaluacji Jednostek Naukowych), established in 2010 by the Ministry of Science and Higher Education. It is a consultative and advisory body of the Minister. The

[57] POL-on website: https://polon.nauka.gov.pl/o-systemie, as at 02.01.2012.

[58] *Koncepcja budowy, zawartości i organizacji systemu monitoringu, rankingowania, zasobów materialnych i niematerialnych szkolnictwa wyższego w Polsce*, Fundacja Perspektywy, Grupa Antares, Pentor Research Int. i Centre for Higher Education Development., MNiSW, Warszawa 2010, pp. 84–85.

main task of the Committee is to conduct a comprehensive evaluation of scientific research and development or academic entities in relation to international standards[59]. As a result of the evaluation, academic entities will be classified into one of four categories:

- A+ – the level of lead in the country,
- A – a very good level,
- B – acceptable level with the recommendation to strengthen scientific activity,
- C – unsatisfactory level.

The KEJN is composed of 30 members, working in 4 groups:

- Science and Engineering
- Life Sciences
- Humanities and Social Sciences
- The Art and Science of Artistic Creativity

Another entity which groups Polish higher education istitutions in categories is National Research Leading Centre (plural: Krajowe Naukowe Ośrodki Wiodące, KNOW)[60]. In accordance with the ministerial agenda, each of the entities of Higher Education which is granted the status of KNOW centre, within five years will receive up to PLN 50 m of auxiliary financing to strengthen academic and research potential, to build a strong and recognizable brand, create more attractive conditions for research, as well as to raise scientists' salaries and employ foreign scholars in Poland.

7. Conclusions

Lack of national typology of universities, e.g. similar to the Carnegie Foundation, contributes to a difficulty concerning a proper diagnosis of the nature of the university, both by candidates and the labour market, and consequently, this allows for many abuses of interpretation, often seen in promotional materials of individual universities. The introduction of a clear typology of Polish universities would facilitate the assessment of their actual competitive position on the domestic and international education markets.

It is therefore necessary to develop the principles and criteria of the typology of universities, appropriate for Polish higher education system, based on the position of universities in the world and in national academic rankings. It would also be highly advisable to establish an independent institution that could develop a typology of Polish universities. Additionally, it would be desirable to publicize annually (especially on the Internet) classification of university consistent with those typologies.

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[59] Ministerstwo Nauki i Szkolnictwa Wyższego, http://www.nauka.gov.pl/nauka/organy-opiniodawczo-doradcze-ministra/komitet-ewaluacji-jednostek-naukowych, as at 26.02.2013.

[60] Ministerstwo Nauki i Szkolnictwa Wyższego, http://www.nauka.gov.pl/ministerstwo/inicjatywy/krajowe-naukowe-osrodki-wiodace/, as at 26.02.2013.

2.2. Evolving Model of Public Funding of Higher Education in England

Roman Z. Morawski

1. Introduction

This paper is devoted to an overview of the role of the Higher Education Funding Council for England (HEFCE) in funding English higher education institutions (HEIs) in the period 2010–2013, when the system of funding has undergone a significant change. The choice of HEFCE for this study has been motivated by several distinctive features of higher education in England, which is characterised by[61]:

- high level of student satisfaction (the National Student Survey results in 2010 showed 82% of students were satisfied with their course);
- a strong showing in international recruitment (the UK accounts for around 12% of the international student market);
- a research base which is second in the world for excellence and is the most efficient in the G8 countries in terms of the number of publications and citations per pound of public funding);
- significant support for a growing innovation economy, with income from knowledge exchange activity between UK universities and colleges, business and other users having increased by 35% over the last decade);
- a strong contribution to regional and national economic development.

HEFCE was established by the Further and Higher Education Act promulgated by UK Parliament in 1992. It is empowered to fund teaching, research and related activities of English HEIs, and so-called prescribed courses of higher education at further education colleges. The latter are defined in separate legislation; roughly speaking, they relate to courses of at least one year's duration when studied full-time and which lead, on successful completion, to the award of certain higher-education qualifications. HEFCE is also empowered to fund other organisations that are carrying out work for the benefit of the higher education sector by paying them (recoverable or non-recoverable) grants in relation to expenditure that they incur. In any case, HEFCE does not fund students but the activities of institutions.

HEFCE is the largest single source of public funding for higher education in England, but a number of other public bodies have broader responsibilities to fund certain aspects of higher education, *viz.* research, medical and dental education

[61] "Opportunity, choice and excellence in higher education", *HEFCE Bulletin,* July 2011, No. 22, *http://www.hefce.ac.uk/about/howweoperate/strategystatement/* [2013.02.25].

and research, teacher education and training, and higher education in further education colleges. In particular:

- The Research Councils – supervised by the Department for Business, Innovation and Skills (BIS) and other government departments – distribute public funds for research to universities and colleges to support specific research projects and some postgraduate students, while HEFCE supports the maintenance of research capacity and infrastructure in institutions on an on-going basis.
- The government funding for medical and dental education and research is distributed through a partnership between the National Health Service (NHS) and HEFCE: NHS supports the clinical facilities needed to carry out teaching and research in hospitals and other parts of the health service, while HEFCE supports teaching and research in university medical schools.
- The Training and Development Agency for Schools provides funding for education and training courses aimed at school teachers, while HEFCE funds other teacher education and training provision outside the schools sector.
- The higher education in further education colleges is mainly funded by the Skills Funding Agency, while empowered to fund only 'prescribed' courses as defined in the first paragraph of this section.

Most of the HEFCE budget goes to 130 universities and higher education colleges.

2. HEFCE mode of operation

The information provided in this and the following sections is mainly based on the HEFCE *Guide to funding*[62], which seems to be the most comprehensive document on how HEFCE had operated just before the recent reform of funding (outlined in Section 4), and how it allocated money in 2011–2012. As far as allocation of funds is concerned, the HEFCE mode of operation has not changed significantly; so, the contents of the *Guide* remain valid in this respect. For the sake of the reader's convenience, no quotations are indicated although the major parts of this text are paraphrased paragraphs and sentences form the *Guide*.

The UK Government operates a rolling three-year process to set public expenditure across all departments. Every year the Secretary of State confirms the funding available to HEFCE for the following year and provisional funding for the remaining years of the spending review period, along with policy priorities; then HEFCE may determine the grants to individual institutions. The annual funding cycle for the 2011–2012 grant comprised eight steps:

1) HEFCE receives grant letter from the Department for Business, Innovation and Skills, announcing total grant and spending priorities for 2011–2012 (November to December 2010).

[62] "Guide to funding – How HEFCE allocates its funds", *HEFCE Bulletin,* September 2010, No. 24, *http://www.hefce.ac.uk/about/howweoperate/strategystatement/* [2013.02.25].

2) HEIs submit to HEFCE data, giving an early indication of student numbers in 2011–2012, which inform funding calculations for 2011–2012, and are used to monitor funding in 2010–2011; HEIs also submit data on research activity used for calculation of research funding in 2011–2012 (December 2010).
3) HEFCE announces final grant adjustments for 2011–2012 based on the surveys data (February 2011).
4) HEFCE announces provisional distribution of 2011–2012 grant to institutions (March 2011).
5) HEIs requesting adjustments, report changes in the surveys data, or additional student number changes for 2011–2012 (April 2011).
6) HEFCE issues funding agreements for 2011–2012 and announces revised distribution of 2011–2012 grant to institutions (July 2011).
7) HEFCE announces any final changes to 2011–2012 grant where late changes have been made (October 2011).
8) HEIs submit data from individualised learner record surveys which are used to inform funding for some targeted allocations (November 2011).

The breakdown of HEFCE funding available for 2011–2012 is shown in Table 1. The meaning of special terms used there is the following:

- Higher Education Innovation Fund – a fund for projects in which HEIs engage, in a variety of ways, with businesses and the community;
- Special funding – a part of non-recurrent funding used to secure change or fund activities that cannot be secured through core teaching or research funding;
- Earmarked capital – additional funding provided by the Government over and above the annual budget it allocates for general higher education funding;
- University Modernisation Fund – a fund for 2010–2011 established by the Government to enable more young people to enter higher education to gain skills that the economy needs, and to support institutions undertaking actions, aimed at the increase of efficiency and reduction of costs;
- Moderation funding – funding provided to institutions for one year only to smooth significant year-on-year reductions in teaching and research grant.

Table 1. The breakdown of HEFCE funding available for 2

Teaching	63.5%
Research	21.6%
Higher Education Innovation Fund	2.0%
Special funding	4.2%
Earmarked capital funding	7.2%
University Modernisation Fund	1.2%
Moderation funding	0.3%
Total = GBP 7 426 M	100.0%

Institutions which receive the HEFCE funding are expected to be accountable for it, and to be able to demonstrate the value they provide. HEFCE influences the behaviour of institutions **through the funding method itself, through conditions of grant, and through providing information. In particular:**

- The way in which the funding is calculated is encouraging institutions to concentrate their efforts on those activities that may increase their income.
- **The conditions of grant are** requirements imposed on institutions to behave in a particular way, or provide something specific, in return for the grant; if they fail to meet those requirements, their grant is reduced.
- Publishing information – such as the performance indicators – can be also an effective means of providing accountability, **since the** institutions' behaviour may also be influenced by factors affecting their reputation.

The conditions of grant and the scope of responsibility of institutions funded by HEFCE are defined in a so-called Financial Memorandum being a formal instrument of HEFCE for providing assurances to UK Parliament that:

- the funds are being used for the purposes for which they were given;
- risk management, control and governance in the sector are effective;
- value for money is being achieved.

Recurrent grant comprises the funding for teaching, research and moderation, as well as the Higher Education Innovation Fund. This is a "block grant" that institutions may spend as they choose; they are not expected to mirror HEFCE calculations in their own internal spending. On the one hand, the block grant allows institutions to target spending towards their own priorities, as long as these relate to teaching, research and related activities; on the other hand, it reduces the institutions' burden of accounting in detail for their expenditure. The recurrent grants are almost entirely allocated by a formula referring to:

- measures of volume, such as number of students or research-active staff;
- measures of cost, such proportions among the costs of running studies in various areas;
- special measures related to particular policy priorities, such as a national need to give higher priority to some activities than others.

As far as the measures of volume are concerned, it should be stressed that they do not in themselves define what the funding is for – the funding is intended to support the institution as a whole, including, for example, its library and central administration, not just the students or research-active staff of academic departments. Consequently, the HEFCE volume measures are selected, taking into account the following factors:

- the extent to which the necessary data may be acquired reliably;
- the accountability burden on institutions in providing those data;
- the extent to which a particular volume measure may or may not influence the distribution of grant;
- the messages and incentives that any particular volume measure may give to institutions and the behaviours (both desirable and undesirable) it might therefore encourage.

The relative costs of different types of academic activity are periodically reviewed by HEFCE on the basis of data provided by HEIs – the data characterising their expenditure in academic departments and/or the full costs of their teaching; from time to time, HEFCE may also commission separate studies on particular aspects of provision, such as the additional costs of institutions' activities aimed at widening participation. The main variation in costs relates to subject: teaching medicine costs more than chemistry, which in turn costs more than geography, which in turn costs more than history. Cost-related measures include also indicators characterising other than HEFCE sources of institutions' income. For teaching, the UK Government expects that the beneficiaries of higher education – students themselves and, increasingly, employers – should also contribute. HEFCE, therefore, makes certain assumptions about the contributions from those other sources.

As far as particular policy priorities are concerned, the following methods are applied by HEFCE:

- providing additional funding for subjects that are deemed important to the country but that are in relatively low demand from students, or in short supply from institutions;
- targeting additional funding towards geographical areas where access to higher education may currently be limited;
- prioritising research funding to those departments and units that have demonstrated that they have the capacity to undertake research of the highest quality;
- targeting funding more towards teaching for students who are new to higher education, rather than those studying for qualifications that are equivalent to, or lower than, ones they already have (although some qualifications are exempt from this policy).

3. Recurrent grant for teaching

General methodology of allocation

Over 80% of HEFCE teaching funds are allocated through the mainstream teaching funding method; the remainder consists of targeted allocations, such as funds for widening participation, teaching enhancement and student success. The methodology of funds allocation is based on the following general principles:

- similar teaching activities should be funded at similar rates;
- institutions seeking to increase their student numbers should do so through allocations agreed by HEFCE of additional funded places.

This methodology is designed to guarantee **transparency, predictability, fairness, efficiency and flexibility of the procedure of** funds allocation. In particular:

- Transparency means that the rules of funding are clear and public, and the data on which allocations are based are auditable and, wherever possible, also public.
- Predictability means that the outcome of the procedure is predictable, so that an institution knows how decisions it might take, and changes in its circumstances, may affect its funding.

- Fairness means that differences in funding between institutions appear only for justifiable reasons.
- Efficiency means that the execution of the procedure imposes as small an administrative burden as possible on institutions.
- Flexibility means that the procedure is flexible enough to respond in a strategic manner to external policy changes, and particularly to developments in HEFCE's own policies.

Full-time undergraduate students of English HEIs, being citizens of the UK or any other EU country, may receive assistance with their tuition fees. Postgraduate students on taught courses pay fees to institutions mostly from their own funds. Students from outside the EU are generally expected to meet the full costs of their courses. HEFCE takes account of the expected income from tuition fees when calculating recurrent teaching grants. The combined total of grant and tuition fees is referred to as 'teaching resource' or simply as 'resource'.

The volume measure for the teaching funding method is based on the number of students at the institution, being citizens of the UK and other EU countries. Postgraduate research students are not counted because research is funded through the research funding method. There are some other corrections to the number of students (as specified in the paragraph 68 of the *Guide*). In general, students are only fully counted if they complete their full year of study; students reported as non-completions are taken into account with a special weighting factor. Students are counted in terms of full-time equivalents (FTEs):

- a full-time is counted as 1 FTE;
- a students on a sandwich year-out (a work experience placement in business or industry) is counted as 0.5 FTE;
- a part-time student is counted with a coefficient depending on the intensity of his/her study.

The data for determination of teaching grants are provided by HEIs in two documents: ***The Higher Education Students Early Statistics (HESES) survey*** and *The HESA individualised student record*.

The formula for calculation of the mainstream teaching grant comprises determination of the standard resource, the assumed resource and the tolerance band, followed by the final adjustment (so-called **migration)**. The **standard resource** is a kind of benchmark of what an institution's share of the resources available for the sector should be, based on the numbers of students that they have, while the **assumed resource** is what that institution actually receives through the HEFCE mainstream teaching grant increased by assumed fee income (at sector average rates). The **tolerance band is** a margin of 5% around standard resource, within which the target resource of that institution is expected to fall. If it does, no adjustment is necessary; if not, then an adjustment of the amount of funding or of the numbers of students to be recruited is made.

Determination of the standard resource

The standard resource for a HEI is calculated in proportion to its weighted student numbers, expressed in FTE terms. The weights depend mainly on the subject

of studies in a way shown in Table 2. Those weights are slightly increased for HEIs operating in London to recognise the higher costs of operating there: in general, the institutions located in inner London receive an increase of 8% while those in outer London – 5%. However, variations to this may apply for individual institutions to reflect the mix of their activity that takes place across the inner, outer or outside London regions. Further, less important, correction of weights is related to the activity of students who are reported as non-completions, but who nevertheless complete at least one-sixth of a full-time year of study.

Table 2. Subject groups and their weight

Subject group	Code	Weight
The clinical stages of medicine and dentistry courses and veterinary science	A	4
Laboratory-based subjects (science, pre-clinical stages of medicine and dentistry, engineering and technology)	B	1.7
Subjects with a studio, laboratory or fieldwork element	C	1.3
All other subjects	D	1

The basic amount of resource for an FTE student is obtained by dividing the sum of the total HEFCE budget for the mainstream teaching grant and the assumed tuition fees by the total number of weighted FTE students in the sector. This basic rate of resource (grant plus fee) is called the *base price*, and is the rate for a standard FTE student in subject group D (before the application of London correction and the partial completion correction). For the academic year 2010–2011, the base price was GBP 3 951; consequently, the resource rates for the other subject groups were: GBP 15 804 for price group A, GBP 6 717 for price group B, and GBP 5 136 for price group C.

Determination of the assumed resource

The assumed resource is the sum of the actual mainstream teaching grant that HEFCE is going to pay an institution and an estimate of their fee income (the estimate determined on the basis of sector-level rates, rather than of actual institutional fee rates per student). The HEFCE justification for the inclusion of that estimate into the assumed resource is referring to the general principle providing that because of the shortage of public money *"students and, increasingly, employers are also expected to contribute"*. Since the HEFCE grant is not sufficient to meet all tuition costs, the priorities for areas that are not adequately funded from other sources are needed. Of course, making fee assumptions in the calculations does not affect the total budget of HEFCE, but only helps to distribute it in a more effective and efficient way. The same assumptions about fees are made by HEFCE for any category of student, for all institutions in the sector – regardless of what individual

institutions charge is taken – in order to target the funding towards particular types of courses where it is most needed, without disadvantaging those institutions that are able to charge higher fees, or subsidising those that may seek a competitive advantage by charging lower fees.

The actual grant, the first component of the assumed resource, is the equivalent grant that the institution received from HEFCE in the previous year, adjusted for several factors, among which the institutions' recruitment in the previous year and the inflation are most important. The first of them is related to the fact that HEFCE – when allocating teaching grant – sets institutions' targets concerning the numbers and types of recruited students, and next adjusts funding (either up or down), reflecting how these targets have been met.

The second component of the assumed resource, the estimate of the fee income, is based on the following assumptions:

- The fees for full-time undergraduates are assumed to reflect the basic amount of fees that institutions are able to charge, rather than the higher amounts that have been permissible under the variable fee regime since 2006.
- The fees for part-time undergraduates are assumed to be the same, *pro rata*, as for full-time undergraduates.
- The fees for most postgraduate taught students are set to match the base price in the resource calculations.

The assumed fee rates per FTE student for 2010–2011 were at the level of GBP 1,310 for the vast majority of the students categories.

Determination of the mainstream grant

The determination of the mainstream grant is based on the analysis of the relative difference between the assumed resource and the standard resource. If this difference falls within the ±5% tolerance band, then the grant value determined according to the described methodology remains unchanged; otherwise, HEFCE may take action to bring it within the band. This may be done by expecting the institution to increase or reduce their student numbers, or by adjusting funding. The HEFCE intention behind such a practice is to give institutions flexibility and to minimise their "accountability burden", *i.e.* the work they must do to demonstrate they are spending money appropriately. The flexibility is both in the nature of the provision institutions offer to students within broad subject areas (for example, in terms of course content, staffing structures and methods of delivery), and in allowing them to make some changes to the mix and volume of student numbers without financial implications. The principle of the funding method has been to have similar resources for similar activities, not the same resources for the same activities, because this broad-brush approach to funding helps to keep the accountability burden down.

Targeted allocations

The targeted allocations have been introduced by HEFCE periodically to support important or vulnerable features of higher education in accordance with key

policy initiatives. Because they are not part of the mainstream grant, and therefore fall outside the tolerance band calculation, these allocations will reflect more directly any changes in student profile. Institutions can more easily determine how much of their grant is associated with a particular policy priority – although all the activities involved are likely to be supported by the mainstream teaching grant as well. Targeted allocations can be either variable or fixed: variable allocations recognise costs that vary according to the volume of learning and teaching activity; fixed allocations recognise largely fixed costs.

In 2010–2011, for example, the following variable targeted allocations were applied by HEFCE:

- ″widening participation″ – to recognise the additional costs of recruiting and supporting students from disadvantaged backgrounds and students with disabilities;
- ″teaching enhancement and student success″ – to recognise the additional costs of supporting students who may be more likely not to continue their studies;
- ″foundation degrees″ – to recognise that there can be higher costs involved in setting up and maintaining foundation degrees because of costs associated with partnerships between institutions and employers;
- ″part-time undergraduates″ – to recognise extra costs associated with part-time students;
- ″accelerated and intensive provision″ – to recognise extra costs associated with some courses which are taught over longer periods than others (*e.g.* 45 weeks).

Moreover, the following fixed targeted allocations were applied:

- ″institution-specific costs″ – to recognise that some institutions face higher costs due to the nature of the provision they offer and their institutional circumstances and characteristics;
- ″non-exempt students aiming for ELQs[63] in strategically important and vulnerable subjects″ and "additional funding very high-cost and vulnerable science subjects″ – to help institutions to maintain student numbers in strategically important and vulnerable subjects.

4. Recent reform of the system of funding

The white paper, published by the UK Government in June 2011[64], announced major changes to the way the higher education system in England will be funded and regulated – the changes provoked by "enormous deficit"[65] of the State budget.

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[63] ELQ = Equivalent or Lower Qualification. Most students who are studying for a qualification equivalent to, or lower than, one they already hold are not counted for HEFCE funding purposes.

[64] Department for Business Innovation and Skills, ″Higher Education – Students at the Heart of the System″, *White paper,* July 2011, *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32409/11-944-higher-education-students-at-heart-of-system.pdf* [2013.02.25].

[65] Ibidem., p. 5.

In particular, more public funding for teaching will be routed through the student loan system and less through HEFCE, and HEFCE will have a greater role in regulation and protecting the interests of students. Currently HEFCE is supporting a smooth transition to the introduction of these new arrangements in the academic year 2012–2013. According to the HEFCE strategy statement of 2011[66], the transition to the new financial arrangements means a move away from the present system of allocating block grants for teaching to a funding system targeted on public benefit objectives. As the largest single funder of research, HEFCE will continue to sustain and strengthen the research base by allocating funding through the dual support system. Thus, the new system will target public investment for:

- learning and teaching (mainly provision for widening participation and retention, support for small specialist institutions and funding for teaching high-cost subjects at undergraduate and postgraduate level and for vulnerable disciplines);
- research (funding for the institutions that have demonstrated the greatest capacity to undertake internationally excellent and world-leading research, support for charity- and industry-funded research and Ph.D. supervision);
- knowledge exchange (providing performance-based allocations to support academic and business/community interactions, and staff and student enterprise).

The reform has been introduced after a broad consultation with academic milieus, in spite of the protests organised by student organisations, especially the National Union of Students. In response to their objections, related to possible increase of the costs of studying, the UK Government issued the white paper entitled "Higher Education – Students at the Heart of the System"[67]. As one may gather from this paper, the new system is going to be more student-oriented, but without going away from the principle that HEFCE is not funding HEIs individual students. In general, the new system should give more support to students for their living costs, ensure that no first-time undergraduate student will have to pay fees up-front, and ensure graduates will only be expected to pay a portion of their salary towards the cost of their education once they are earning over GBP 21 000 per year. Many part-time and distance-learning students will become entitled to tuition loans to cover full tuition costs for the first time. In short, people are to be only ever asked to contribute towards the cost of their education, once they can afford to do so. On the other hand, the access to higher education will be slightly broadened by relaxing HEFCE control over the numbers of students, *viz.* the best students (those with grades AAB and above) will be exempted from this control.

66 "Opportunity, choice and excellence in higher education", July 2011.

67 Department for Business Innovation and Skills, "Higher Education – Students at the Heart of the System", July 2011.

According to the document published by HEFCE in February 2013[68], the total recurrent funding of GBP 5 520 for 2013–2014 will be structured as follows:

- recurrent grant for teaching: GBP 2,881 M (*ca.* 39% less than in 2010–2011);
- recurrent grant for research: GBP 1,573 M (*ca.* 2% less than in 2010–2011);
- Higher Education Innovation Fund: GBP 113 M (*ca.* 25% less than in 2010–2011).

Thus, the implementation of the new policies concerning the withdrawal from block funding of teaching is quite effective. It is more difficult to assess how far the promises of HEFCE, concerning "protecting and promoting the student interest", are fulfilled. On the website of HEFCE one may find the following declaration[69]: *"We can:*

- *support the development of good practice in:*
  - *outreach work to raise attainment and aspiration to study in higher education,*
  - *learning and teaching practices,*
  - *providing information for students and employers,*
  - *helping students to stay on their course and succeed, once they have entered higher education,*
- *help to give students more choice and flexibility by promoting a broad range of courses and, subjects;*
- *encourage policy makers to consider the student interest;*
- *champion and raise the profile of student interest issues;*
- *use evidence to promote and protect the student interest;*
- *publish information that is in the student interest."*

5. The funding system and its reform as perceived by a university

In this section an attempt is made to look at the HEFCE funding system and its reform from the perspective of a medium-size university (called "MSU" hereinafter) selected among *ca.* 130 English HEIs. The organisational units of MSU carry out research and offer teaching in the fields of arts, business, law, health sciences and social sciences, as well as in the fields of engineering, informatics and mathematical sciences; the numbers of MSU students, academic and non-academic staff, expressed in FTE, are *ca.* 13,000, *ca.* 800 and *ca.* 1,000, respectively. The total income of MSU was at the level of GBP150 M in the academic year 2006–2007, and it had grown to *ca.* GBP 180 M in 2010–2011. MSU belongs to a group of English HEIs which have been least dependent of HEFCE funding: in that period the share of the HEFCE teaching funds in the income decreased from *ca.* 16% to *ca.* 13%,

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68 "Funding for universities and colleges for 2012–13 and 2013–14: Board decisions", *Circular letter,* February 2013, No. 4, *http://www.hefce.ac.uk/pubs/year/2013/cl042013/name,76487,en.html* [2013.02.25].

69 Available at: *http://www.hefce.ac.uk/faq/informationforstudents/whatdoeshefcedoforstudents/* [2013.02.25].

and the share of the HEFCE research funds increased from *ca.* 4% to *ca.* 6%. The average "bureaucratic burden", related to the handling of funds received by MSU from HEFCE may be characterised by the following figures: less than 1% of the time of non-academic staff, and *ca.* two hours of each member of academic staff (per three-year cycle).

The level of the HEFCE funding is expected to further diminish in the years to come. What are the follow-ups of this situation? Obviously, MSU – like other English HEIs – is getting less dependent on direct public funding and more dependent on other sources of their income, mainly on tuition fees and research contracts with industry. The tuition fees for undergraduate students have been already raised to the new limit established by the Government, *i.e.* to GBP 9,000 per year, which is *ca.* 2.5 times more than the limit in force just before the reform; the tuition fees for postgraduate students have been growing as well, and they will grow in the future, since there is no legal limit of their level. This process of fee increase is, however, subject to important constraints imposed by the Office for Fair Access (OFFA)[70], and it is monitored by both OFFA and HEFCE. The increase of fees is, in particular, conditioned by the corresponding increase of financial support for students. More systemic measures counteracting the possible negative impact of the reform on access to higher education, as well as measures aimed at broadening this access, have been currently developed within National Strategy for Access and Student Success[71].

In response to the reform challenges, MSU has developed a five-year strategic plan for increasing its attractiveness on the educational market. This plan contains two basic elements:

- significant investments in the university infrastructure and facilities;
- increase of the academic staff by *ca.* 50 new staff with nationally and internationally recognised records of research and academic achievements.

The latter means in practice the employment of *ca.* 120 replacement members of academic staff, and creation of 50 brand new posts. An important objective to be attained in this way is the increase of the MSU potential for generation of research income. This, in turn, should imply an improvement of its position in the rankings of HEIs, and – consequently – attract more students from England and other parts of UK, as well as from abroad, further enhancing global reputation and generating more tuition fee income. The increase of the MSU potential for generation of money from research contracts with industry seems to be feasible, as universities are very attractive R&D partners for companies; first of all, because HEIs – as a rule – do not bankrupt. The open question – currently under debate not

[70] The website of OFFA is located at the internet address: *http://www.offa.org.uk/.*

[71] *cf.* "National Strategy for Access and Student Success", Interim report to the Department for Business, Innovation and Skills by the Higher Education Funding Council for England and the Office for Fair Access, 18 January 2013, *http://www.offa.org.uk/national-strategy-for-access-and-student-success/interim-report/* [2013.03.15].

only in UK, but also in Switzerland and Germany – is: how the increased dependence of HEIs on industry will influence the future of Western *academe*? Therefore, some more resolute endeavours, aimed at extending research funding from public sources (both Research Councils and HEFCE), are also planned.

The reaction of MSU to the new situation seems to be characteristic of medium-size English HEIs which are under highest pressure of the reform challenges. This is because the largest and the best HEIs will survive without significant changes due to their reputation, while the smallest and weakest will be subject to merging processes reducing the number of HEIs in England. Only the medium-size HEIs must redefine their missions and strategies to survive.

6. Concluding remarks

The HEFCE story seems to be an abundant source of inspiration concerning various approaches and policies of public funding of higher education. For many reasons, however, it should not be considered as a thesaurus of patterns ready for implementation outside of England. On the one hand, the HEFCE system of funding has been quickly evolving since its establishment 20 years ago, and its recent reform has even accelerated this evolution; it means that at least some solutions failed or got outdated. On the other hand, the tradition and conditions of HEIs functioning outside UK may be very different from those in England, and – consequently – the solutions positively verified there may fail elsewhere. So, a thorough critical analysis of the HEFCE experience must precede any attempt to copy its patterns.

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Part III

Financing and Deregulation in Higher Education – Summary

3.1. Some Comments on Financing Higher Education

Witold Jurek

The main aim of this study is to review public funding of public higher education institutions, with special attention being paid to the method of distributing public money among such institutions. We will be mainly looking at financial means intended for teaching full-time first and second cycle students, doctoral students, as well as academic staff and facility maintenance, including renovation funds.

The study consists of three parts including:

1. general comments on the ways of financing services with public funds,
2. selected characteristics of how public funds are allocated among public tertiary education institutions (distribution algorithm),
3. guidelines for future concerning the method of financing.

1. Methods of financing services using public funds

Generally speaking, one may define two such methods (which I refer to as 'pure'):

1. direct, meaning **direct** funding of defined services provided by both public and non-public sector entities,
2. indirect, meaning financing selected services **indirectly** through financing public finance sector institutions providing such services.

Of course, in reality it is possible to imagine plenty of 'mixed' methods of financing a given set of services, where a defined subset covers services financed directly and its supplement dealing with those subsidized indirectly.

In the first case, service-providers may but do not have to belong to the public finance sector.

If financial means are allocated among service-providers by means of specific public offering, usually valuation of services provided takes place. In this way, for example, public funds are distributed among public and non-public healthcare entities.

Such method is used, for instance, in allocating public money among public and non-public higher education institutions intended for non-returnable financial assistance for full-time regular and doctoral students.

Certainly, the entities taking part in public offering or receiving public funds as a result of a (formalized) distribution process, obtain financial means for their activities also from other non-budgetary titles/sources.

In the second way public funds are distributed among public higher education institutions, especially the subsidy intended for educating students, doctoral stu-

dents; academic staff and also facility maintenance – the topic dealt with in more depth further on.

If funds are distributed among service-providers in this way, the cost of services provided constitutes a resultant quantity.

Subsequently, two types of allocating public funds among service providers will be compared: public offering and a contract for providing services with the intensity and at the cost specified in the contract, as well as fund distribution among institutions providing given services. The former method will be referred to as **contractual,** the latter – **institutional** way of allocating public funds for service provision.

Both methods possess certain characteristics worth a closer analysis. Namely, we should consider the relation linking these two ways of providing services with the effectiveness of managing the corresponding funds by the institutions (public and non-public) receiving them.

- In case of financing institutions under contractual provisions, it is easier to secure the minimum standard of services – in the medium perspective at any rate- than in case of financing institutions where it is hard to find such 'enforced' standard[72]. Such standard in the latter case is guaranteed in a different way (e.g. in case of higher education the standard of service is enforced by the State Accreditation ComIn case of financing institutions in the form of a lump sum, it is easy to secure an institution's autonomy, i.e. independence of making decisions, also financial ones; it is difficult to achieve such autonomy with all the services provided (and assessed) by the controlling body, under the contract.
- Financing services through contracts is typically easier in case of shorter cycle of services provided (e.g. some medical services) and more difficult, but still possible in case of longer-cycle service (e.g. long-lasting educational services)
- Contractual service financing enables direct impact on (maximum acceptable) cost of service, since cost is subject to periodic negotiations.
- On the other hand, with this type of financing, it is generally rather difficult to achieve a significant 'cost-effectiveness' (the cost of providing a service below the maximum cost, given the quality remains unchanged); as for the provision of particular services an institution is given a certain sum, there is no reason to provide them at a cheaper rate.
- In case of financing services through institutional financing, it is at least possible to indirectly influence the intensity of provided services and also the directions and institutions' effectiveness in resource management. It is secured by the criteria, according to which public funds are distributed among institutions.
- On the other hand, in case of service funding through institutional financing, the cost of service is a resultant quantity and may vary (in certain cases significantly) across the institutions providing the same service.

[72] In the short-run in both types of service financing difficulties may arise, which, however, remain beyond the main field of this study.

- Contractual service financing requires cost estimate of single services, whenever an intention of signing such contracts is announced.

2. Selected characteristics of the current public funds distribution algorithm applied in case of public higher education institutions, dedicated for education and facility maintenance[73]

A public higher education facility receives funds generally dedicated for: educating full-time regular and doctoral students, as well as academic staff and facility maintenance, with renovation funds included[74]. A separate method is used to receive financial resources, among others, those dedicated for investments, as well as non-returnable financial assistance provided for regular and doctoral students[75]. Some higher education institutions, for the sake of this study called 'professional', receive certain additional funds for special purposes – e.g. maritime universities – for training ship maintenance, aviation universities educating civilian aviation staff – for training aircraft maintenance; the above-mentioned universities receive also financial means dedicated for maintenance of specialized training centres.

Funds for statutory research and development activities are defined and distributed according to separate regulations and methods and in fact support basic organizational units (departments).

This part will focus mainly on the fund distribution between education and facility maintenance, which in our country is performed in a specific way, where a special algorithm is used.

The purpose of this article is not to discuss the details of the algorithm, but to present the nature of the algorithmic distribution of financial means. Therefore, there will be no mention of the value of given parameters indispensable for allocating funds among higher education institutions; in particular, we will not discuss cost ratios defining relations of educational costs of certain faculties as versus educational costs of the least expensive faculties. Instead, we will focus on the way in wchich certain parameters or sets of parameters influence the amount of subsidies and the behaviour of higher education institutions.

As it was mentioned above, the distribution of subsidies for educating full-time regular and doctoral students, for academic personnel, facility maintenance, with renovation funds included, is accomplished according to a certain scheme (algorithm), based on the following (most significant) six groups of indices constituting parameters for six subsidy components:

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[73] The comments formulated below are universal, since they refer not only to the distribution of budget funds among public higher education institutions, but – generally – to the method itself.

[74] See art. 94 of 'Higher Education Act', announcement of the Marshal of the Sejm of the Republic of Poland 26 March 2012.

[75] The latter source of financial means is divided among public and non-public higher education institutions.

- the number of regular and doctoral students (divided by the number of faculties and characterized by different cost ratios); regular student-doctoral student component parameters,
- the number of higher institution staff (divided into groups of posts); staff component parameters,
- a certain index 'smoothing' any annual subsidy fluctuations (so-called balanced development index); sustainable development component parameter,
- the number of realized research projects; research component parameters,
- the number of academic rights to confer doctor's and habilitated doctor's degrees; authorization component parameters,
- the number of foreign students arriving to study, and the number of Polish students leaving to study abroad; student exchange component parameters.

In the funds distribution algorithm different subsidy components have different significance; in fact, the components can be divided into three groups, two components per one group. First group components is of the greatest significance; those from the second one are three times less significant; the components of the third group are seven times less important than those most important.

In view of the fact that:
- education requires a few years' time,
- and funds are distributed annually

the so-called transfer constant (showing the percentage of last year's subsidy guaranteed by the algorithm in the current year) was introduced, whose role is to eliminate any excessive (below the transfer constant) drops in subsidies[76].

Generally speaking, the idea of the algorithm can be characterized as follows: on the basis of six index groups (and plethora of internal parameters enabling the indices evaluation) and the assigned weights, structural indexes are defined, determining the position of a given higher education institution in the higher education system. The budget amount designed for distribution across public higher education institutions is divided according to structure indices. This is the way in which the amount of subsidy is determined for a given institution.

The features of the presented algorithm specified below may be pointed out, where the order of their appearance does not reflect the 'significance' that a given feature has in the algorithm assessment.
- The algorithm was designed mainly with the intention of financing 'higher education institutions base', educating regular and doctoral students, academic staff, and mainly teaching staff and facility maintenance, including renovations.
- Subsidy components of the greatest significance are regular student-doctoral student components and staff component. The variables in the above-mentioned components depend on: the number of regular students and doctoral students, whereas staffing levels have the greatest impact on the amount of the subsidy established for a given institution.

[76] Transfer constant and its influence on the amount of the subsidy are beyond the scope of this study.

- These are generally quantitative components.
- Components defining the scope of academic authority (to confer the degrees of habilitated doctor and of doctor) and the level of student exchange are of correctional nature, because their influence on the amount of subsidy awarded is marginal.
- These components and perhaps also the research component, which depends on the number of realized research projects, may be regarded as quality-related symptoms. (It is reasonable to presume that more foreign students will visit the institution enjoying a better reputation than the one with a less favourable evaluation).
- The algorithm is very complex, it requires an extensive database.
- In order to define the amount of subsides assigned to particular higher education institutions we need to have access to the values of the variables referring to all higher education institutions, and plenty of other parameters[77].
- On the other hand, algorithmic distribution of financial resources among higher education institutions is a precisely defined method, which does contribute to the impression that distribution is discretionary by nature.
- The amount of subsidy granted to a certain institution depends on its position in the higher education system. Without knowing the values of the variables of all higher education institutions it is virtually impossible to assess the impact of particular variables characterizing a given institution on the amount of subsidy dedicated[78].
- Naturally, higher education institutions are interested in the level of subsidy.
- Typically, they pay more attention to the activities influencing the components of greater significance in fund distribution (regular student-doctoral student component, staff component), and less attention to those of minor significance (research component, academic rights component, students exchange component).
- It is worth noting that the first group of components constitutes quantitative indicators, the second one – quantitative indicators of the activities of higher education institutions.
- The distribution of funds according to the analyzed algorithm used to be conducive to increasing student enrolment and, to some extent, to an increase in the number of staff members.
- The increase in enrolment numbers did not influence the level of subsidy directly, it merely prevented a significant drop in its value in case other institutions increased enrolment figures more rapidly.

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[77] Only some of the parameters have been characterized in the study and in a very general way. Indices forming the basis of fund distribution among higher education institutions depend on many different parameters.

[78] E.g., an increase in the number of full-time students may imply an increase in the level of subsidy dedicated for educating students. However, since specially formulated structure indices form the basis for fund distribution, in some cases the subsidy for that purpose may decrease, whereas the increase in the number of students in other higher education (on average) can be higher than in this particular HEI.

- The focus observed on the increase in student admission in public higher education institutions, to a certain extent, corresponded with the increased demand for tertiary education in the community.
- It is also noteworthy that a subsidy-based competition for students among higher education institutions which occurred beforehand, has recently become evident, due to demographic slump.
- As was mentioned above, the algorithm was conducive to the increase in staffing levels; however, the numbers reached previously were definitely much less spectacular than student enrolment figures. In this relation two factors seem to have had a prevailing impact:
- (1) a relatively long time span between graduation and reaching scientific and didactic independence,
- (2) a relatively low mobility of academic staff in Poland.
- The remaining subsidy components, applied in the algorithm, had a minor influence on the performance of higher education institutions.
- For instance, 'sustainable development' component is based on the number of students and academic personnel; it plays a similar role to that of the first two components of the highest significance: regular student-doctoral student component and staff component.
- The component defining the scope of academic authority to confer the habilitated doctor's, and doctor's degrees does not change significantly on the year-to-year basis, although there is a supposition that also for algorithmic reasons there exists a strong urge among higher education institutions to increase the scope of academic authority.

It is worth mentioning that some higher education institutions have created their own internal (financial) management systems in the area of didactics adopting the analyzed algorithm as the benchmark.

3. Some comments on the prospects of public fund distribution among higher education institutions

Any method of distributing public funds among services providing entities (including the institutions of public finance sector) involves their specific performance; this is observed, in particular, in case of HEIs, which enjoy a certain degree of autonomy.

It may be argued that the algorithm discussed above played a positive role in the period of a rapid growth in demand for tertiary education and a relative shortage of academic staff. The authors of the algorithm, whether deliberately or not, proposed a system of distributing funds among higher education institutions, which made them respond to social needs, thus introducing, an additional element of competition (for students).

A few years ago Poland entered the period of demographic depression. At a particular (fairly high) enrolment ratio, it is relatively easy to precisely determine the demand for higher education didactic services in the future. This demand

will determine the number of academic staff required to satisfy those needs. Consequently, considering whether the distribution algorithm should 'highlight' the enrolment and staffing levels (in short: quantitative indices), or whether financial resources should be distributed according to different criteria, e.g. those enhancing quality of teaching, seems to be of crucial importance.

Prior to the discussion over the details of financing higher education institutions in the future, a fundamental issue concerning the model of financing must be resolved. The main controversy should be addressed; whether the current approach to education funding is to be maintained (with several factors defining HE strategic objectives over a several years' time span), or altered, (for instance, based on a contractual system mentioned above).

Apparently, one could also envisage a mixed system, with certain specified education services provided under contracts, and others – according to the institutional system. (Certainly, the contractual system means financing education services provided both by public and non-public sector of tertiary education).

In this case, the distribution of funds dedicated for public higher education facility maintenance would require a separate approach.

Putting aside the question of which system of financing will prevail in the future, several other issues arise in connection with the currently used algorithm for distributing funds among public tertiary education institutions.

- With declining enrolment levels, how justified is it to maintain the fund distribution based on the number of students? Perhaps only selected groups should be considered, e.g. undergraduates or postgraduates?
- With decreasing overall demand for educational services, should the distribution of financial means be based on staffing levels? Perhaps, apart from the number of staff members, also the number of students should be considered?
- Will the sustainable development index of an institution be of any merit in the future, whereas, for obvious reasons, such development is bound to be unbalanced? [79]
- The index defining the scope of academic authority for conferring doctor's and habilitated doctor's degree is of questionable quality, since any alterations in this respect require a long period of time.
- If this index is to eliminate subsidy level fluctuations, such role will be better performed by so-called transfer constant.
- One may doubt whether (1) the number of research projects realized should determine the distribution of funds for education and maintenance, (2) if so, whether this number is a proper indicator of an institution's research activity. (Perhaps the value of undertaken R&D projects or the number of projects of certain characteristics, e.g. of a defined minimum value would serve as a better indicator)?

[79] I leave it open whether this index has any bearing currently and whether it safeguards higher education institutions against excessive fluctuations in the level of subsidies.

It is also noteworthy that the alterations in the method of financing proposed by the Ministry of Science and Higher Education reflect a quality enhancing approach in the field of didactics.

Firstly, in the distribution of research funds more emphasis is put on competition, rather than on subsidising (e.g. statutory subsidies) received by basic organizational units (departments).

Until recently research funds received in the form of statutory subsidies were distributed among research staff on the basis of competition; however, at a departmental level; today they are distributed by means of nationwide competitions.

(This makes a huge difference, since funds are distributed to the best research entities in the country, thus ensuring their better use, and advancement in research findings).

Secondly, part of subsidies designated for educating regular and doctoral students, for academic staff, and facility maintenance has taken the form of individual unit subsidies aimed at quality enhancing activities. Such a method promotes, among others, basic organizational units enjoying the status of Leading National Research Centres (Krajowe Naukowe Ośrodki Wiodące - KNOWs), the units which were assessed 'with distinction' by the State Accreditation Committee (Polska Komisja Akredytacyjna – PKA), the units implementing National Qualification Frameworks (Krajowe Ramy Kwalifikacji – KRK). The funds for the implementation of KNOWs and KRK are distributed among organizational units by means of nationwide competition.

4. Conclusions

The grants received by higher education institutions are generally divided into funds for R&D activity and funds for education and facility maintenance. Because the infrastructure of an education institution is used both for research and educational purposes, the question arises regarding the proportion (and the method) to be applied in the process of fund distribution between the research and education-designated funding.

While distributing subsidies for facility maintenance one must first consider the question whether the whole higher education infrastructure remains within the scope of their interest, or perhaps only its part exploited for teaching[80].

(A conclusion can be made that the maintenance of the infrastructure used in research of various advancement should be financed from the funds obtained and allocated for research).

While distributing financial resources for teaching regular and doctoral students, for remunerating academic staff one has to take into consideration the set of

[80] Despite the simplicity of such a postulate in theory, its implementation may pose certain difficulty. For instance, infrastructure application forms may serve as the basis, where the main function of the infrastructure is specified;, it is possible then to establish the extent to which a particular part of infrastructure is used for research and for teaching.

objectives for tertiary education institutions as regards teaching. Such objectives within a short perspective should be defined by some strategy or projection of the desired higher education development. In an optimum situation, the specification of those objectives may further determine the definition of fund distribution parameters, and stimulate (qualitative) competition among institutions, thus functioning similarly to the currently applied algorithm, which enhances competition among tertiary education institutions for students.

Regardless of which system of financing will be adopted in the future – the system in which contractual financing prevails, or the one with institutional financing playing the key role – it is necessary, due to the long time orientation of the educational process, to establish some assumptions concerning the continuity of financing.

In the algorithm used nowadays, so called transfer constant reflects the maximum acceptable decline in subsidies, which can be tolerated by a particular higher education institution. Once this matter is settled, the formalization of the continuity of financing seems to be trivial.

Appendix

2010–2020 Development Strategy for the Higher Education System The Academic Community's Proposal

Jerzy Woźnicki

1. Introduction

A national debate was held in Poland concerning two draft strategies for the development of the higher education system in this country: (1) the one to be discussed here, commissioned by a consortium comprising the Conference of Rectors of Academic Schools in Poland and the Conference of Rectors of Polish Vocational Schools (CRASP–CRPVS), the Polish Rectors Foundation (PRF) and the Conference of Rectors of Vocational Schools in Poland (CRVSP), and (2) the strategy proposal commissioned by the Ministry of Science and Higher Education (MSHE) from the consortium of Ernst & Young (E&Y) with the Gdańsk Institute for Market Economics (GIME). As declared by the Minister of Science and Higher Education, the purpose of this debate was to indicate which of the two proposals would serve as the basis for the future national strategy for the development of the higher education system for the 2010–2020 decade. At the time of writing this (June 2010) the major representative institutions and organizations, including all the conferences of rectors operating in Poland, the Chief Council of Higher Education (CCHE) and the National Representation of Doctoral Students, have published their positions, unequivocally pointing to the proposal put forward by the academic community as the one to be the starting point for further work on the strategy. Support for this proposal is also coming from external stakeholders.

Various resolutions adopted by representative organizations and institutions active in the sphere of higher education in Poland are indicative of the expectation that the academic community's proposal will be selected by the government as the basis for its future work on the higher education system development strategy in the years 2010.

2. The Diagnosis

The work on the strategy proposal was preceded by a detailed diagnosis of the issues involved. Given the constraints imposed on this paper, we will focus only on the principal challenges faced by Poland's higher education system.

The international ranking of Polish HEIs is far from satisfactory[81] and the persons responsible for the operation of these institutions may be blamed for this.

[81] Only two Polish universities are listed in the 2009 Shanghai Ranking of the top 500 higher education institutions worldwide: Warsaw University and the Jagiellonian University (both ranked in places 303–401). There were 456 higher education institutions operating in Poland in 2009.

That said, the situation we are dealing with is also determined by at least two other factors, for which Polish HEIs cannot bear blame: firstly, the emphasis in state policies over the past two decades on expanding the availability of higher education, which was necessary in the light of the catastrophic scholarization figures, following the demise of communist Poland, and, secondly, the dismally low – and diminishing, in relative terms – public outlays on scientific research and development work throughout the last two decades. The international rankings take into account research potential and results. One might say that the Polish higher education institutions were competing in the "offering of higher education studies" discipline, while being evaluated internationally in an entirely different discipline – that of "scientific resources, studies and achievements".

A radically new approach to scientific research is now called for. The situation we have today must be changed fundamentally which is why in our Strategy we proclaimed the years 2010–2020 as the "decade of science".

The 2007 OECD report on the higher education system in Poland highlighted several major problems[82]. Most importantly, the Polish HEIs responded to the massive surge in educational aspirations of the public by focusing on teaching, while at the same relegating research efforts to a marginal role. This had an adverse impact on the quality of education. Further, there was a clearly insufficient involvement in the so-called "third mission" activities, notably in cooperation with the environment, which is evidenced by, among other things, deficiencies in innovativeness and implementations. The structure of the graduates' group and the graduates' qualifications are inconsistent with the needs of the labour market – and this had been noted by the OECD as early as in 1995. The OECD points out that, "teaching (both programme offerings and curricula) is supply-dominated and links with the labour market are weak".[83]

A cardinal sin in the implementation of the Bologna Process is the restriction of vertical mobility (the availability of second-degree studies in a field of studies different from that of the first-degree studies). Another problem which will be having a major impact on Poland's higher education system in the coming years, has to do with demographic forecasts: OECD is estimating that in 2015 the number of people aged 18–24 will be 80% of the figure in 2005, and that by 2025 this figure will go all the way to down 55%![84] The decline in the number of study applicants, which we are already seeing, will eventually force many HEIs to modify their respective profiles and focus more on research activities and diverse forms of lifelong education (also those involving e-learning solutions). There will also be fewer higher education institutions, as a result of consolidation processes and liquidations.

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[82] OECD Reviews of Higher Education – Poland, OECD, Paris, 2007.

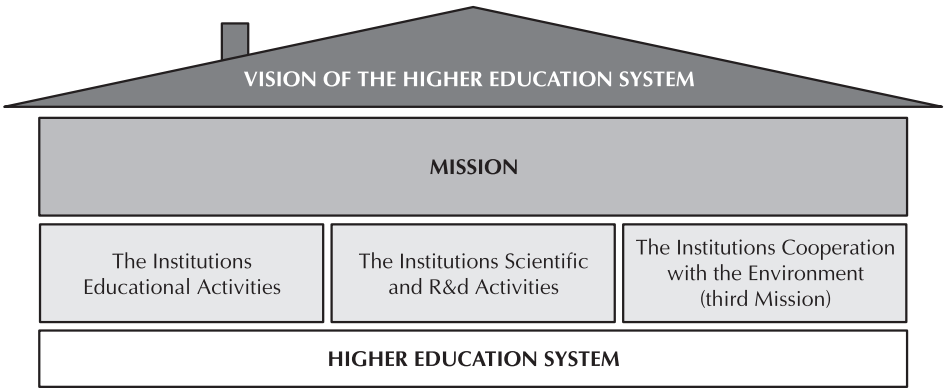
[83] OECD Reviews…, op. cit. p. 196.

[84] Higher Education to 2030 – Volume 1: Demography, OECD, Paris, 2008, p. 43.

3. Strategic House, Vision, Mission and Priorities

We present the vision and mission together with the functionality spheres thereof in graphic form – as what we call the Strategic House (Fig. 1), "roofed" with the vision, resting on the foundations of the mission. We distinguish four principal functionality spheres in higher education, with three of them being mission-related: educational activity, scientific and R&D activity, and cooperation with the environment. The higher education system serves as the mission's foundation in all the mentioned spheres of activity of higher education institutions.

Figure 1. Strategic House



Our strategy envisages a total of 7 strategic goals – two in each of the mission's functionality spheres and one of an instrumental nature, having to do with the tools required to achieve progress in all the mentioned areas. The goals are as follows:

1. Adaptation of the education system to the evolving social needs
2. Improvement of education quality in conditions of mass-scale education
3. Increased productivity of scientific research efforts in the higher education system
4. Increased effectiveness of scientific research activities of research staff at higher education institutions
5. Greater degree of service provided to society
6. Increasing internationalization of Poland's higher education system and improved international standing of Polish higher education institutions
7. Improvement of systemic solutions in place in the higher education system

Our vision of the higher education system, based on a detailed analysis of the prevailing conditions and the current state of Polish higher education institutions described in six reports, was developed with the assumption that the increasing demographic constraints, which Poland's higher education system is already facing, will be successfully turned into a development opportunity if we manage to implement, in a planned manner, a set of well thought-through and far-reaching systemic and institutional changes

We should aim for internationalization, mainly because of the rising significance of scientific research, but also in view of the need to reduce the number of existing higher education institutions through consolidation processes and by letting the market eliminate those of their number which lack resources of their own and attract few students. We should also strive to diversify the missions of various higher education institutions, to better adapt their respective offers to expectations in their environments. This task will be facilitated thanks to competition pressures, generated by reduced demand. We should also achieve a substantial increase in per-student outlays in higher education. What we need, however, is a set of advanced and effective tools to help us attain these goals.

The academic community's proposal reads: "The mission of the higher education system is to create and disseminate knowledge, to use knowledge for the benefit of man and society. This is entailed by the traditional idea and identity of the university as an autonomous and self-governing institution, entrusted with universal tasks in the sphere of teaching and scientific research. In our times the mission of the higher education institution must be redefined. A new meaning must be given to the concepts of mission and servient role of the university. When realizing the social mission of the higher education system we invoke values associated with the academic ethos, but must also have regard for the requirements imposed by the state acting in public interest, by the needs of the higher institutions' environment, including the labour and education markets, as well as by other external factors impacting on the institutions' operations. Strategies for the development of the higher education system and the institutions comprising it must also take these factors into account".

Our vision is consistent with this position and we propose three priorities. Firstly, we want to preserve the existing resources of the higher education system in the current conditions of demographic slump. We must strive to retain these resources rather than to maintain the current number of institutions. We need to expand, develop and enhance the potential and material resources of the higher education science system in order to constantly improve the availability of higher education, equal chances in access to education on this level and the universal availability thereof, and also to improve its quality. This is a domestic priority. The second priority, this one of a global character, is to ensure a high international status of Polish higher education institutions reflecting Poland's development potential and confirmed by foreign ranking classifications, a status making the higher education system a valuable asset and a source of prestige for our country, a situation we are yet to achieve. The third priority, systemic in nature, is to implement tools enabling the achievement of the other two priorities.

Our vision relies on OECD's higher education development scenarios and is based on the "New Public Responsibility" scenario, calling for a diversified performance of the mission on both the national and local level; on the international level this concept also provides for the "Open Networking" scenario.

4. Major Mission-related Proposals for Higher Education

In principle, we all know what needs to be done in the area of teaching so we should not be expecting to see any novel or heretofore unheard of propositions at the strategic level. The essential solutions are either indisputable or have been under discussion for quite some time now. They are all well known, given that discussions of the relevant education models are nowadays conducted jointly in Europe and because decisions as to the direction of future changes are overseen by the relevant ministers or by international organizations. What we need to do in these circumstances is to adapt the educational offer and the measurable effects of teaching to the requirements of the labour market, and also to improve the quality of educational activities and lend them a greater international dimension. We also need to develop and proliferate life-long learning schemes, improve access to higher education and strive for greater equality in educational opportunities.

The productivity and effectiveness of research work is in need of improvement, both in the institutional and personal dimension. Also, the existing infrastructure must be consolidated and outlays on R&D (including non-public funding) increased substantially. As regards the rationalization of career paths, we are in favour of retaining the classical path with the postdoctoral habilitation degree and the title of professor, in line with the proposals adopted by CRASP and the Polish Academy of Sciences. We also propose an alternative, parallel career path for doctorate holders boasting outstanding professional and/or scientific achievements, who could be employed as associate professors without the prior consent of the Central Commission for Academic Titles and Degrees, which is required today. This promotion process should, however, be compliant with the rules and procedures specified by the Central Commission. The duly appointed associate professors could apply to the Central Commission for the right to supervise doctoral dissertations. This solution extends the promotions system to cover doctorate holders, especially those engaged in practical activities and with superior professional track records, who would now be eligible also to the independent position of associate professor.

We propose a 1:2 ratio in the institutional grant vs. grant for projects financing of scientific research in place of the current 2:1 ratio, and call for new tools and procedures to grant the status of flagship or research higher institutions to associations of institutions with the optional participation of scientific institutes (more on this below). The task of these new federation universities would be to achieve an improved international status confirmed by tangible indices, including high positions in international rankings, thanks to their scientific achievements, which no institution is currently capable of producing. A comprehensive set of ancillary tools is needed in the area of scientific research, including tax policies and regulations governing private-public partnerships. Also a private business foundation is needed, and efforts must be intensified to counteract pathologies in sciences.

We would like the rectors' conferences to publish and implement a declaration describing the new mission and new social responsibility of the higher education

system, outlining, among other things, the new servient role of higher education institutions.

Polish higher education institutions must become more recognizable, both in Poland and abroad. We propose a greater and institutionalized involvement of external stakeholders, the introduction of principles of international legibility, and the development of recognizable higher education institution brands, including the acquisition of prestigious accreditations to bolster the degree of internationalization of Poland's higher education system.

5. Selected proposed new systemic instruments

The proposed package of systemic and institutional changes comprises a consistent set of new solutions (their novelty being either formal or ideas-related), intended as tools for the attainment of the envisaged goals.

The scope of activity of the ministry and other central-level institutions must be modified to facilitate the attainment of goals in the higher education system, and especially to ensure the effective implementation of the new government strategy for the coming decade, which we are currently working on. We believe that in order for these goals to be attained, the higher education institutions/public authorities relationship must be remodelled, to ensure respect for the values such as good governance in HE, accountability, servient role and public interest – but also autonomy, partnership and predictability in politics. The trust generated within the new relationship will go a long way towards the fulfilment of the difficult tasks envisaged within the various strategic goals, including consolidation, aggregation and synergy of the dispersed resources of the higher education system. The Ministry of Science and Higher Education must acquire a more strategic and command-centre role, and the first steps towards just such a transformation had already been taken when the Ministry's structure was modified.

We propose to introduce a uniform system of ministerial supervision of higher institutions involving trustee boards – generally optional but obligatory in some cases – acting as supervisory boards – not as social or advisory boards, but precisely as supervisory boards. As a minor departure from this rule, we also suggest retaining the solution, whereby various relevant ministers are responsible for given industry-related tasks, performed by specialized institutions. The system currently in place relies on a decentralized supervision of the higher education system by not just the minister with responsibility for higher education, but also by several other ministers involved in supervising the system. This prevents effective control over the system as a whole.

New intermediary institutions ought to be set up, relieving the Ministry of non-strategic tasks and thereby enabling it to focus on programming and coordinating strategy implementation processes. We thus propose to establish the Government Agency – The National Fund for Higher Education, the National Coordination Centre for the Qualifications Framework and the Polish Agency for Academic Exchange.

We propose to introduce a system of universal sharing of full-time study costs, with tuition fees amounting to around 25% of the average cost of education in the public sector, alongside a system of equally universal access to student loans and credits. Students not wishing to pay the fee should have the option to take out a bank credit to be repaid once they graduate and find employment (with remuneration equalling at least the average national wage, for example). The banking sector is by now sufficiently developed to offer such credit which will require less state involvement.

We propose to introduce equal rules for competition among public and non-public higher education institutions under generally applicable legal conditions, in order for the institutions or faculties lacking achievements, the required resources and development potential to be eliminated from the system. This will promote the convergence of the public and non-public sectors, the first step towards which would be the satisfaction of the premises in the Higher Education Law. As part of the second stage, to commence in 2015, we propose to introduce symmetric financing of public and non-public institutions, which could be implemented alongside the universal study costs sharing scheme. Public institutions would be receiving funding from the State Agency[85] to cover the costs of roughly the same tasks as covered by the current subsidies for full-time studies, and additional funding from the obligatory tuition fees amounting to about 25% of the average cost of education in the public sector. Non-public institutions would be financed with tuition fees and would receive additional public funding. Both types of higher institutions would have to compete on an equal footing for tasks-related subsidies. Public institutions would be receiving additional grants to finance the public education infrastructure, for which the state is responsible. The State Agency funding would be provided for three- to five-year periods to give the institutions ample opportunity to implement their policies and develop their strategies. The State Agency must be a professional body, immune to political pressures, as should be two other agencies operating in the scientific research system: the National Centre for Studies and Development, and the National Centre for Science, the former already operational and the other yet to be launched.

We propose to add flexibility to the process of institutional changes by introducing clear-cut procedures for non-public institutions acquiring public status and vice-versa, and providing for the new status of State Treasury-owned non-public higher institution. The latter is an important new solution, which makes for a complete set of systemic options, with regard to institution status changes, for greater efficiency of systemic solutions, and for greater development opportunities and possibilities of higher institutions, regardless of the current status thereof.

As regards governance at public higher institutions, the key issue is the appreciation of the need to harmonize the two principal spheres of authority, viz. the realization of the mission, which requires the rector to cooperate with the deans

[85] A solution similar to that of the Higher Education Funding Council for England (HEFCE).

(professors), and the management of resources, in which case the rector cooperates with the chancellor. The rector, a single-person authority, harmonizes the tasks performance in both these spheres, and must therefore display professorial qualifications which are nowadays well defined and which must continue to be required of rectors. The supervision over the executive authority thus defined may be the responsibility of a single body, namely the senate performing self-government tasks. This is the solution in place today but perhaps it would be a better idea to divide this responsibility among the senate and a new supervisory body – we call it the trustee council. We propose to give public higher education institutions the option to provide in their statutes for a trustee council supervising the management sphere, to operate alongside the academic senate supervising the rector's activities in what would rather be described as the area of governance in higher education. The trustee councils would be appointed by the minister responsible for higher education, comprising a representative of this minister, a representative of the State Treasury minister and, in case of specialized institutions, also a representative of the relevant minister, as well as a group of members, indicated by the senate and recruited from outside the given institution, including also external stakeholders. All the council members would have to meet demanding qualification requirements. We assume that the senate-appointed member would not be a minority in the council.

In general, the trustee councils would be optional, obligatory only in certain circumstances. For example, in a public higher education institution transformed into a State Treasury-owned non-public higher education institution, the trustee council would have to be created to protect public assets and public interest. Councils of this kind would also have to be established by federation universities – associations of institutions, including flagship and research institutions – to supervise integration processes subsidized by European programs, assisting the development of new structureAs already mentioned, the increased outlays on higher education that we are calling for must go hand in hand with more effective allocation of resources by the special Government Agency. This professional and independent institution ought to have at its disposal a variety of public funding streams dedicated to specific task areas, with special eligibility rules to be met by funding applicants. What we have in mind here are task-related funding streams intended for, among others, the specialized, flagship and research higher institutions and also for non-public institutions, Agency grants to finance the maintenance of public resources, and also competitions for task-related subsidies, three- to five-year contracts, and competitions for additional funding of an institutions' modernization and transformation schemes. The Agency would also be handling funds earmarked for development projects (including investments) and financial assistance provided to students.

6. Financing

We propose the 4 x 1% rule to be applied to financing the higher education system (Table 1).

Table 1

	Public funding		Non-public funding	
	current	proposed	current	proposed
higher education	0.88%	1%	0.4%	1%
science	0.34%	1%	0.2%	1%

As can be seen, a greater effort will be required in science, which is consistent with the priority we have accorded to scientific research. Is this proposal realistic, state budget-wise? It is indeed, because all we are proposing is what Poland's prime minister announced on 16 April 2008, namely, that by 2013 the government will have increased the public financing of higher education and science to 2% of GDP. We propose the earmark 1% for higher education and 1% for science. Let us add that the government proceeded to reach this target, something that required outlay increases of about 0.156% of GDP per annum over the period from 2009 to 2013. Regrettably, this process had to be put on hold because of the recent economic crisis. However, the crisis will not last forever and so the program will have to be resumed at some point.

We propose to introduce a system of universal cost sharing in respect of full-time studies at public higher institutions, to be introduced only in 2015, while realizing that it will take time to prepare the launch of this scheme. Many issues will first have to be dealt with in the years 2011–2015; for example, constitutional constraints that must be eliminated, a public debate must be held, an agreement reached with the Parliament of Students, etc. It seems though that if the right kind of political will were to materialize after 2011, this change will become realistic. Otherwise, alternative solutions will have to be contemplated.

7. Flagship and research institutions

One crucial move we propose in our draft Strategy is the creation of flagship and research higher institutions. There are none of these in Poland today, and the problem is not merely their indication, but in fact their creation – or in other words, the encouragement of specific development processes causing selected institutions to acquire this status. The situation today is that there are no institutions of this kind and none will appear unless planned action is taken. And we need institutions of this kind. The situation to aim for is a group of 15 to 20 entities obligated to embark on development schemes serving to elevate scientific research to a priority status in their respective missions, at the expense of teaching tasks. These institutions would be expected to radically intensify their research activities and arrive at scientific achievements that will markedly improve their standing among European higher institutions, including also their positions in international rankings.

The interested institutions would have to take the following steps to achieve the envisaged goals:

- consolidation (through associations or mergers of institutions) supervised by the trustee council – we need much more powerful entities, conducive to aggregation and synergy of research resources; potential participants in the consolidation process could represent interested scientific institutions, such as institutes of the Polish Academy of Sciences;
- participation in a competition for development projects financed by the relevant operational program of the next European Union agenda (2013–2020);
- conclusion of a contract setting forth obligations, including a reversal of the mission priorities and the successful completion of the consolidation scheme.

As a result of all these activities, some institutions would be accorded, for a specific period of time, the desired status and provided with access to a separate, dedicated financing stream for particular tasks. The status would be verified after some time and either extended or reversed. There should also be introduced a competition procedure for basic organizational units – not for the already existing ones, but only for those which would emerge, following consolidations of faculties, as intra- or inter-institutional research schools conducting research of an appropriate scale. The concentration of potentials and the aggregation of resources would be a necessary prerequisite for grants eligibility and, consequently, for the accordance of the status of basic scientific unit.

The consequences of this solution for the system would be serious and highly positive. Over time, we would see a kind of redistribution of students among various higher institutions, one would expect given the goals of the envisaged strategy. We can assume that approximately 10–20% of the current students at the future flagship and research institutions will move to other higher institutions, due to the fact that the staff of their current institutions focuses more on scientific research. This development would also boost the mobility of some of the faculty who would seek employment in other institutions, following the shift in the mission of their current employing institution – thus, making space for young and ambitious research workers. We would thus create powerful scientific university centres, since an association of higher institutions is not a consortium or a chain of scientific entities, but a permanent structure elevated to the rank of university by statutory law. This entity would gather higher education institutions interested in forming an association but retaining their respective identities. No entity would be barred by definition from joining a project of this kind. By embracing this solution we will achieve a significant improvement of the international standing of Poland's higher education system, a radical improvement of its prestige and a much better standing in ranking classifications. In some countries projects of this kind are referred to as the creation of super-universities.

8. Final remarks

Our draft Strategy was presented for public debate. Some of the solutions we propose require supplementation or more detailed elaboration and we are stand-

ing by to go ahead with this work – in case our Strategy becomes a significant part of government strategy. In particular, we intend to dwell on the place of the humanities in our Strategy and on the opportunities faced by the relevant institutions and faculties, as well as on integration and consolidation paths available to non-public higher education institutions.

In the period from December 2009 to April 2010 we staged presentations and debates in academic centres. We treated these events as a form of social consultations and as the fulfilment of our obligation to report to the institutions, which authorized us to develop the Strategy on the progress of our work and on the results achieved.

Now that these meetings are over, we can sum up the debates which turned out to be very interesting and productive. The authors of the draft Strategy have reason to be pleased with the general support expressed by the debate participants and their satisfaction that – notwithstanding the various a priori reservations that were being put forward – we managed to jointly develop, in a short stretch of time, a number of original programs of profound changes which were found to be acceptable, although requiring all of us to put in a terrific effort. We proved that we can trust each other and unite in pursuit of a common cause. The course and outcome of all the debates is documented in reports compiled by the host institutions and the Steering Committee proposed to forward them to the Ministry of Science and Higher Education, once the various conferences of rectors adopt the relevant resolutions. We also succeeded in preserving the confidentiality of our Strategy up to the date of its publication, despite many internal consultations that were taking place.

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Institute of Knowledge Society and Polish Rectors Foundation

POLISH RECTORS FOUNDATION

Origin of the Polish Rectors Foundation

The idea of the Polish Rectors Foundation (PRF) arose as a result of discussions among members of the Conference of Rectors of Academic Schools in Poland (CRASP), based on a belief that there was no sufficient conceptual support for transformation of higher education and scientific research system in Poland. Such a support is necessary to prepare analyses and documents by higher education institutions and other bodies obliged to state their opinions and to make decisions in area of education and scientific research. Support is also essential for activities carried out by the Polish Conferences of Rectors on international level, especially their contribution to the development of the European Higher Education Area, as well a s of the European Research Area.

Since the widening of existing conceptual support for transformation of education system in Poland through the establishment of a research institution which would have adequate authority seemed desirable, the work on a concept of such an institution was initiated. Research was carried out within a project financed by Leopold Kronenberg Foundation, with support of CRASP and UNESCO European Centre for Higher Education Studies (CEPES).

The Presidium of CRASP, after being introduced to results of this research study, on December 2000 adopted a resolution in which it is stated:

"a proper way for an implementation of this concept would be to establish a Research Institute – the Polish Rectors Foundation, founded by those rectors, members of CRASP, who will recognise this initiative as worthy of their support". Rectors also stated that *"founding such an institute, as a non-governmental institution, would be an important step in the process of creation of a new deal in the area of education and science, less susceptible to political changes."*

As a result of further discussions, a decision on the establishment of the Polish Rectors Foundation (PRF), with a scientific research unit, was taken. PRF was founded on 7 June 2001.

Considering the interest which an initiative to establish a research institute has drawn among rectors of non-public higher education institutions and the need for providing for the institute as wide support as possible, i.e. support from public and non-public sector of higher education, the Polish Rectors Foundation initiated activities intended to set up the institute – together by the Foundation and its partners representing non-public higher education institutions.

INSTITUTE OF KNOWLEDGE SOCIETY

Origin of the Institute of Knowledge Society

The idea of the Polish Rectors Foundation (PRF) was closely related to that of an independent research institute. Considering an interest which an initiative of establishing such an institute has drawn among rectors of non-public higher education institutions, the Board of the Polish Rectors Foundation decided that PRF and its partner representing non-public higher education institutions will set up together the Institute of Knowledge Society (IKS), as an non-governmental research institution acting in the area of higher education. The Consortium of Non-State Higher Education Institutions, founded on 2 April 2003 by representatives of 16 most renowned private institutions, has become the partner of the Polish Rectors Foundation in order to create the Institute of Knowledge Society.

Goals of the think tank

The main goal of the Institute of Knowledge Society and Polish Rectors Foundation is to carry out research on higher education and scientific research system as well as on educational policy of the State and the development of information society, in particular:

- supporting the development and improvement of the national education system in Poland, especially of higher education system
- acting for the benefit of the development of scientific research system, especially in area particularly important for an acceleration of social, economical and civilizational development of the country
- presenting and promoting solutions supporting applications of scientific research results in economy
- searching for sources of financing and financing or co-financing of expertise, research studies and analyses in the area of higher education.

Forms of activity of the think tank

- carrying out, organizing and supporting research on strategic problems of education and science, with special attention paid to European integration
- carrying out research and making expertise for academic community in Poland
- collecting and exchanging scientific information in form of electronic databases
- initiating and organizing public debates in the area of science, education and culture, as well as dissemination of its results
- organizing conferences, training programs and seminars
- cooperation with national and international institutions, research institutes, and other organizations acting in area of higher education and science
- issuing regular and occasional publications on higher education and science.