Autonomy of Higher Education System: In What Direction We Are Moving?

Volodymyr Ponomarenko [1], Olena Rayevnyeva [2] and Kostyantyn Stryzhychenko [3,*]

[1] DSc in Economics, professor, rector of Simon Kuznets Kharkiv National University of Economics
Kharkiv, Ukraine

[2] DSc in Economics, professor, chief of statistical and economical forecasting department, Simon Kuznets Kharkiv National
University of Economics
Kharkiv, Ukraine

[3] DSc in Economics, professor of statistical and economical forecasting department,
Simon Kuznets Kharkiv National University of Economics
Kharkiv, Ukraine

[*]*Corresponding author's email: Ukf.kendo [AT] gmail.com*

ABSTRACT— *In the current paper we analyze autonomy of high education. Main question what we ask: exist increase or decrease autonomy of high education in the world. We propose Autonomy Increase Hypothesis (AIH) that was provided with help of evolutionary analysis of phase development autonomy and cluster analysis by autonomy indicator. We analyzed four groups' indicators by 28 European countries and constructed five clusters with different level of autonomy. Also, we investigated economics sense of each cluster and make conclusion about supporting AIH.*

Keywords— autonomy, high education, indicators, evolution of autonomy, educational market, cluster analysis

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1. INTRODUCTION

The changing of the economics paradigm and the transformation of the modern economy to the economy of knowledge led to the educational market becomes more important in the triangular space "real economy" – "financial market" – "educational market". It contributes to increasing of economic competition between universities that request expending of the university's liberty and softening of the government's regulation.

The problem of the need to strengthen of autonomy of universities involved Myers (1998), Van Damme (2000), Ben Jong Bloed (2010), Maasen (2000), Rhoades, Sporn (2002) El-Khawas (1998) and others.

As, Myers (1998) and Van Damme (2000) say about increase the autonomy of universities to ensure the quality of higher education institutions and programs in Anglo-Saxon tradition of higher education [1]. The analysis of political, economic and social changes and changing of political system in Central and Eastern Europe led to hypotheses of the need to strengthen the autonomy in continental Europe (Rhodes and Sporn, 2002) [2]. Also, we can look marketisation of higher education - the application of the economic theory of the market to the provision of higher education (Williams, 1995, Brown, 2010) [3]. As noted by Ben Jong Bloed (2010) [3], higher education funding has multiple aspects: who pays for higher education (including the topics of cost-sharing in higher education and external funding to universities), how public funding is allocated to universities, what incentives the allocation mechanism creates, and how much autonomy universities have in decision-making over financial and human resources. El-Khawas (1998) investigates that world's higher education is going to increase of the universities autonomy. However, for each country there are specific ways to achieve autonomy [4].

Autonomy of higher education is complex definition that consists of two hierarchical parts: autonomy of higher education system and university's autonomy. Therefore, the main purpose of this paper is investigation of the analysis of autonomy of higher education of Ukraine. We propose to investigate following questions for supporting the purpose of this paper:

i) The analysis of the evolution of autonomy;
ii) Investigation of the indicators sets;
iii) Calculation of the autonomy and conclusion about direction.
Each task combines into a single methodological system.

2. METHODOLOGY

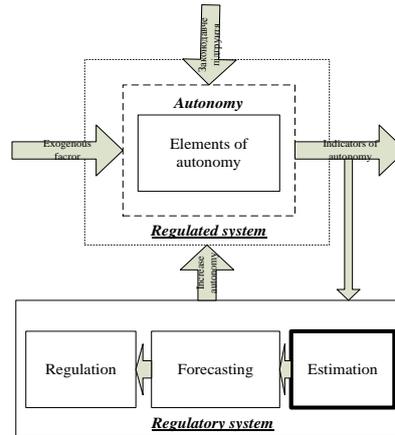The regulation of the autonomy can be represented as scheme by Fig. 1.

Figure 1. The regulation of the high education autonomy

In this paper, we make hypothesis about autonomy - Autonomy Increase Hypothesis (AIH): in the last decade autonomy of high education has increase tendency. The opposite hypothesis of AIH is Autonomy Decrease Hypothesis (ADH). To prove AIH we construction following algorithm which of two main blocks: B1 - Analysis of the evolution of autonomy; B2 – Investigation of the autonomy tendency. Each block helps to solve one of tasks of the paper and unites by a fig. 2.
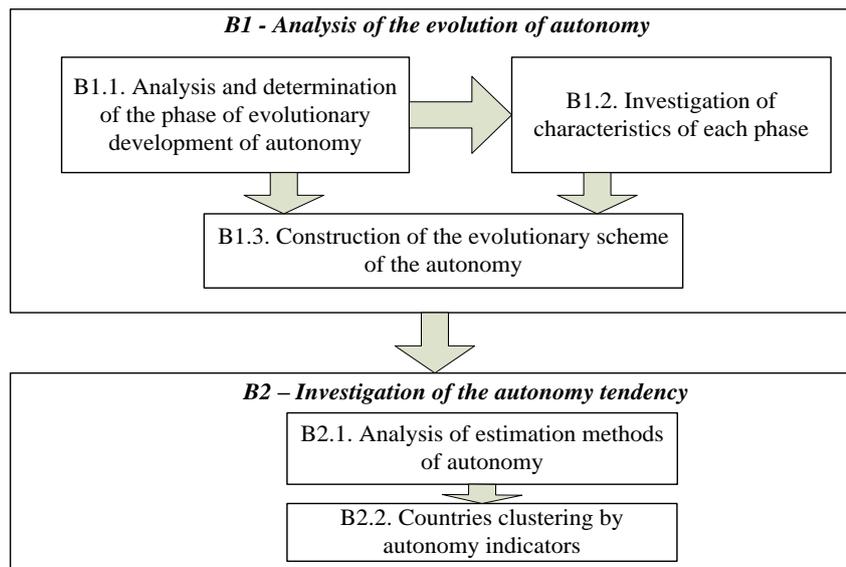

Figure 2. The algorithm of AIH investigation

The main idea of the block B1 is define the evolution phase of autonomy and determine of the characteristics of these phase. This block based onto the historical analysis of the evolution of autonomy, investigation of the development co integration process in high education. The aim of the block B2 is construction the autonomy indicators set by the experience of other scientific investigation. This set must be taking to the consideration of Ukrainian traditions in high education.

3. RESULTS

B1 - Analysis of the evolution of autonomy

There are two main approaches to investigation the autonomy of universities. From one hand, the government is main subject of the high education system and the universities must have agreement with the state concern the organizational

structure. From the other hand, exists business approach, the main ideas of it is the competition between universities. But the second approach requires increasing autonomy that enables the development of effective competitive action without restrictions by the state. Therefore the state has a dialectical question to balance between ensuring public demand for specialists with higher education and granting considerable autonomy to universities.

University's autonomy is the independence of the university to effectively fulfill its role in higher education, research and other services they provide to society. The degree of autonomy has different meanings in different national systems of higher education and depends from the national traditions and the relationship between government and society [5]. However, it is advisable to determine that autonomy has various forms which specifies the historical existence of different systems of higher education. Thus, in the French higher education system a significant influence of the Reformation led to Napoleon, in which was significantly limited institutional autonomy. While in Germany as the creation of the University of Humboldt in 1808 greatly expanded the role of autonomy.

Various aspects of autonomy are in the world. So Chiang Li (2000) identifies the following components: academic affairs, recruitment, finance and management [6]. Neave G. (2001) distinguished procedural and substantial autonomy [7].

Analysis of the historical evolution to define a following phases of the evolution.

Phase 1. Begin of academic freedom (XI-XIV centuries). This phase consisted of two sub phases (first sub phase - XI-XII century, the second sub phase - XIII-XIV century).

Phase 1.1. The emergence of academic freedom. The emergence of the first sub-phase correlated with a change in paradigm for the development of economic relations and the beginning of the transformation of feudalism into a new state of economic development.

Phase 1.2. Protect academic freedom. The second sub-phase was the protection of academic freedom received from institutions of the old paradigm. Within this sub-phase competitive status of universities began forming. Since universities on the basis of academic freedom represented by the new entity, which went counter to exist Enlightenment thought, which advocated curator church, for increased competition universities had to perform a number of conditions. Thus, an important aspect of autonomy is precisely advocated that academic freedom was the trend of our time, which provided a favorable environment. Another important feature of this phase performed availability of support from local governments.

Phase 2. The presence of the royal protectorate (XV-XVI centuries). Also, this phase consists of two sub-phases: Phase 1 - increasing protectorate of the authorities and the church (XV century); Phase 2 - decentralization of power, new countries and obtain bigger autonomy (XVI century).

Phase 2.1 - Increasing royal protectorate. Earlier, an important recognition at the university was the presence of a protectorate on the part of the authorities. However, these universities have two ways of development. So universities in Paris and Oxford received the royal support, but they are not defined fully universities without proper acts on the part of the Pope or the Emperor. At the same time as the University of Bologna was under the patronage of real power as Italy subordinate to the emperor.

Phase 2.2. Decentralization of power. Gradual development and decentralization of power in Europe created the preconditions for the creation of new universities and spreading their autonomy. The emergence of new countries and reduce the impact of the emperor was allowed to consider the educational market as part of increasing the competitiveness of the country, which led to the enabling environment for universities. Thus, within this phase identified the following main features of university autonomy:

universities were of international character, since their activities are carried out through the coordination of local authorities and the Pope;

availability of academic freedom did not provide university autonomy.

Phase 3. Plurality and uniformity universities (XVII-XIX centuries).

At this stage, formed a significant contradiction in the educational space, which is that strengthening the autonomy of universities led to a reduction in academic freedom within each university for teachers and students. This contradiction has led to the fact that the market started the educational crisis of universities (particularly in England and France).

Like every crisis, the crisis of universities has formed a new paradigm in the development of the education market, the main idea of which advocated the presence of university autonomy, which was a feature of just academic freedom within the university. A new wave of universities in the new paradigm emerged and began to develop intensively in Germany, Austria, Scotland and the Netherlands.

This educational transformation created new competitive market conditions for the functioning of universities that

highlighted the need for changes to the old tradition of universities .. The main areas of change were:

1) The transformation of universities in Multiversity, that formed complexes colleges and schools at the main university, which provided training for university students;

2) Developing direction of research. At this time began the rapid development of science in all areas and some universities have turned to research centers.

Thus, the concept of University Corporation in the medieval sense of the word evolved into a conglomerate that combines full functions on formation of students, their training, carrying out research studies and more.

Phase 4: Global Freedom (XX-XXI centuries).

At this stage of the evolution of the autonomy of universities academic freedom in the broadest sense is irrelevant issues as law concept of freedom is enshrined in the Constitution. However, investigations show that de facto increase state influence on academic freedom through universities. This is due to the fact that the state as the supreme body of university management through influence on him has impact on students and the public in general. This impact may run counter to the prevailing ideas and, in case of emergency, can destabilize society because the university prepares young people and future elite. Today political currents in the country is a threat to the university and objectivity of training in them, so it is important to achieve autonomy from state universities, allowing them to carry out internal competition within the trend of autonomy that exists in society.

The main characteristics of each phase we can find in table 1 and the graph of the evolution of high education was represented onto the fig 3.

In conclusion of this block of the algorithm we can say about rejecting ADH because we look formation ideas about increasing process of autonomy on high education in world. For the accepting the AIH need more quantities analysis of the autonomy tendency.

Table 1: The main characteristics of each evolutionary phase

| Phases		Academic Freedom	University Autonomy
Phase 1	Sub phase 1.1	The emergence of academic freedom, the formation of new ideas in society	The emergence of structures within church schools
	Sub phase 1.2	Academic freedom is threatened by the current society, so there is a need to limit it. From the educational institutions of the protection of that freedom.	Creating the of universities in the guild associations of citizens and corporations, and the formation of autonomy to implement the knowledge society
Phase 2	Sub phase 2.1	In society thriving decentralization of state, this is the driving force behind academic freedom.	Protectorate the monarchy and the Church restrict the autonomy of universities
	Sub phase 2.2		Increased international character of universities increase their autonomy
Phase 3		Weakening of academic freedom on the one hand and the creation of a liberal society in some countries (USA, Germany, Netherlands).	The creation of new universities, viewing traditions of higher education towards autonomy, universities need a conservative view of education paradigm towards Multiversity
Phase 4		Increased democratization of society.	Strengthening state control over universities, as they become a tool for the government to form elite and it needs to stimulate the necessary areas of expertise. However, further ideas for revitalizing the autonomy of universities.
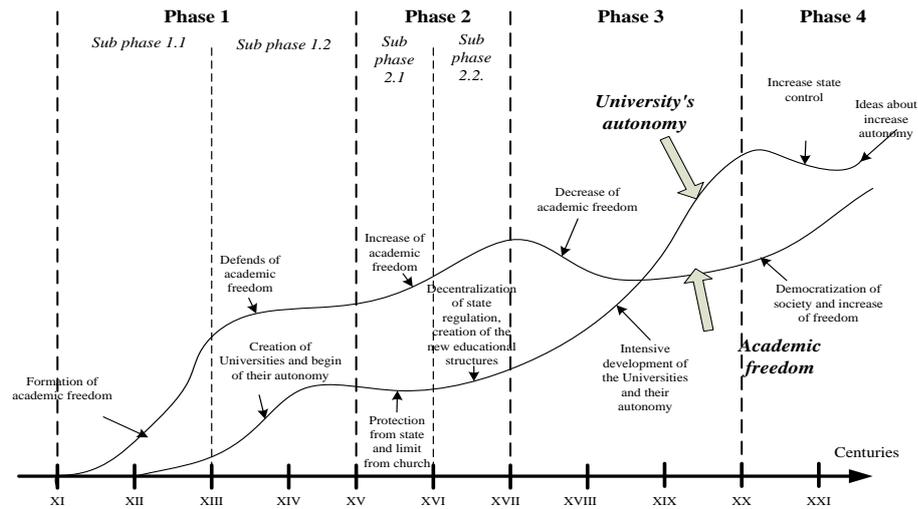
Figure 3. The scheme of the autonomy evolution

B2 – Investigation of the autonomy tendency

The analysis of the modern publication in the autonomy area shows that two opposite sides of the autonomy ranking are in the world. This indicates dualism of the ranking autonomy process. One side reflects the need to calculate the ranking for the monitoring of autonomy and the development of effective decisions in this area. The ranking shows the development of autonomy in the world and compares high education in different countries. But, other side of autonomy medal is increase threat institutional diversify of high education system. The ranking is very depending of the indicators set for the analysis and in this case high education system that received high ranking has most competition. Also Universities with most ranking are in the modern autonomy trend and receive more supporting from the governments and society. Therefore, the indicators set must be reflected clear autonomy without influence of the society.

The most famous and widespread indicators set for the estimation of high education autonomy in Europe is indicators of University Autonomy in Europe [8]. Four groups of indicators are in this set. These are organization autonomy, financial autonomy, staffing autonomy, academic autonomy. One of the important aspects of the estimation of autonomy is weighing of the indicators inside the groups. Two approaches of the construction the indicators sets exist: weigh of the indicator and without weight indicator. For example, weighing of the indicators in academic autonomy shows in the table 2 [9].

Table 2: The weighing of the indicator of academic autonomy

Indicator	Weights
Overall student numbers	14%
Admissions procedures at different level	14%
Introduction and termination of the programs at level	16%
Language of instruction at level	14%
Selection of quality assurance mechanisms	15%
Selection of quality assurance mechanisms	11%
Capacity to design content of degree programs	16%

For the investigation autonomy tendencies we will construction the clusters by the date of University Autonomy in Europe in 2011 year. We used k-means clustering method with five clusters. The means of each cluster we can look at fig. 4

The analysis of these dates can give economical sense of each cluster for us. Cluster 1 – High autonomy level with academic autonomy superiority (HL-AA); Cluster 2 - high autonomy level with financial autonomy superiority (HL-FA); Cluster 3 - very high autonomy level of with complex superiority in total (VHL-T); Cluster 4 - high autonomy level with staff autonomy superiority (HL-SA); average autonomy level (AL). The results of clustering are in the table 3.

Five countries included in the very high autonomy level cluster, there are Great Britain, Denmark, Estonia, Ireland and Finland. As, Great Britain has 100% organization autonomy level, Estonia has 100% staff autonomy level; Ireland has 100% academic autonomy level and Finland has more than 90% organize, staff and academic autonomy levels. Only

three countries included in average autonomy cluster with level around 40%, there are Greece, Turkey and France.

As we look, most of the countries join to clusters with very high or high level of autonomy, there we can accept AIH.
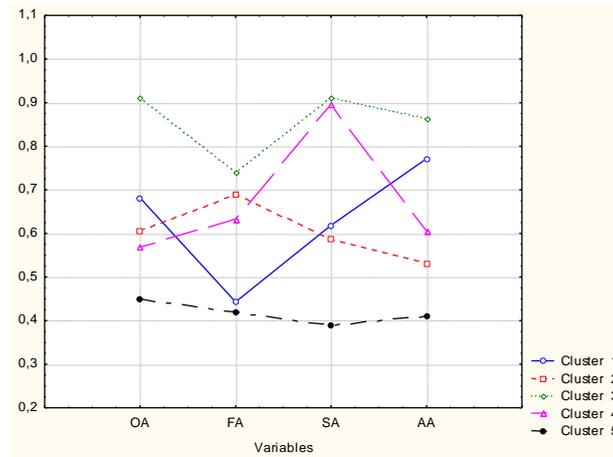

Figure 4. Means of each cluster

Table 3: The country clustering for four global indicators of autonomy

Clusters	HL-AA	HL-FA	VHL-T	HL-SA	AL
Countries	Austria	Spain	Great Britain	Latvia	Greece
	Brandenburg	Italy	Denmark	Lithuania	Turkey
	Hessen	The Netherlands	Estonia	Luxemburg	France
	Island	Portugal	Ireland	Poland	
	Cyprus	Slovakia		Czech Republic	
	Norway	Hungary	Finland	Switzerland	
	South Rein-Westphalia			Sweden\	

5. CONCLUSION

Thus, we have following main results in this paper:

1) Autonomy is one of modern characteristic of the development of high education system. In the paper we propose two opposite Hypothesis, there are Autonomy Increase Hypothesis and Autonomy Decrease Hypothesis. For the accepting one of them we constructed the algorithm of AIH investigation which included two blocks: B1 - Analysis of the evolution of autonomy; B2 – Investigation of the autonomy tendency.

2) The development of autonomy had four main phases. Last one was started in XX century. Strengthening state control over universities, as they become a tool for the government to form elite and it needs to stimulate the necessary areas of expertise. However, further ideas for revitalizing the autonomy of universities.

3) The cluster analysis showed that five clusters exist. What is more four of them represent high level of autonomy. These four clusters include 25 countries that are equal 89.2%. Great Britain, Denmark, Estonia, Ireland and Finland have very high autonomy level.

4) Autonomy Increase Hypothesis (AIH) was accepted by theoretical analysis of evolution and practical analysis of autonomy clustering. Autonomy is modern tendency of the development of high education system in majority European countries and Ukraine is in modern trend of high education.

Since autonomy is an important challenge in higher education in the world and in Ukraine, there are many discussion aspects to the investigation. As a discussion aspect is formation of the indicators autonomy sets, because incorrect formation will lead to the incorrect estimation and decisions. Second one is creating ensuring infrastructure for monitoring of autonomy and adaptation world autonomy ranking system for Ukraine. Third one is estimation autonomy process. For our opinion the estimation of autonomy of national high education must include two hierarchical level: basic level – University by University, advance level – complex analysis of high educational system.

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