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METHODICAL APPROACHES TO ATTRACTIVENESS ASSESSMENT OF A HIGHER EDUCATIONAL INSTITUTION

The article develops the methodical approaches to assessing the attractiveness of higher educational institutions delivering training of specialists according to particular majors. Grouping for the categories of higher educational institutions are suggested according to majors and qualification levels.

Keywords: higher educational institution; bachelor; specialist; master; demand; proposition; attractiveness; image attractiveness.

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МЕТОДИЧНІ ПІДХОДИ ДО ОЦІНЮВАННЯ ПРИВАБЛИВОСТІ ВИЩОГО НАВЧАЛЬНОГО ЗАКЛАДУ

У статті розроблено методичні підходи до оцінювання привабливості вищих навчальних закладів, які здійснюють підготовку фахівців за певними напрямами підготовки (спеціальностями), запропоновано визначення категорій ВНЗ за напрямами підготовки (спеціальностями) і освітньо-кваліфікаційними рівнями.

Ключові слова: вищий навчальний заклад; бакалавр; спеціаліст; магістр; попит; пропозиція; привабливість; іміджева привабливість.

Табл. 5. Літ. 13.

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МЕТОДИЧЕСКИЕ ПОДХОДЫ К ОЦЕНКЕ ПРИВЛЕКАТЕЛЬНОСТИ ВЫСШЕГО УЧЕБНОГО ЗАВЕДЕНИЯ

В статье разработаны методические подходы к оценке привлекательности высших учебных заведений, которые ведут подготовку специалистов по определенным направлениям подготовки (специальностям). Предложено определение категорий ВУЗов по направлениям подготовки (специальностям) и образовательно-квалификационным уровням.

Ключевые слова: высшее учебное заведение; бакалавр; специалист; магистр; спрос; предложение; привлекательность; имиджевая привлекательность.

Problem statement. The development of market relations in Ukraine has dramatically changed economic conditions of educational institutions functioning. Nowadays a university is characterized by instability, increasing competition at the education market and often insufficient funding. Higher education institutions become themselves subjects of market economy and are trying hard to meet the needs of the consumer market. In this situation attractiveness of higher educational institutions for prospective students and the shaped image, its prestige are considered to be the most important conditions for universities' competitiveness.

Therefore, it seems necessary to explore marketing strategies of universities directed at school leavers, taking into account the information needs of potential students and their parents. In addition, strategy is important for shaping future students' idea not only on the learning process peculiarities at a university but of the university attractiveness in terms of its rank among other higher educational institutions in

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Ukraine. Therefore, the problem of improvement of methods for higher education attractiveness evaluation still remains paramount.

Latest research and publications analysis. At the Ukrainian market of educational services constant monitoring of educational establishments is being conducted and various rankings are applied. The application of ranking is an important and efficient tool for provision and improvement of the education quality. Hence rankings have become popular among students and their parents as well as among academic community as the tool of quality and reputation evaluation.

The development of various ranking methods has become a permanent process in Ukraine. There are, for instance, The Youthsport ranking, defined within the project "The National ranking system of higher educational establishments" (Youthsport ranking, 2012) under the Program of economic reforms of the President of Ukraine and the Ukrainian universities ranking "Top 200" within the project "Top 200" by UNESCO department "Higher engineering education, applied analysis and informatics" (Top 200, 2011). Quite popular is the general educational ranking "Compass", prepared under the terms of the program "The Modern Education" (Compass, 2012).

It is worth mentioning, that the rise of popularity of the world ranking is the reaction to competition sharpening between universities.

The most reputable world rankings are "Times" (Times QS), which defines 200 best universities and "Shanghai" (Academic Ranking of World Universities — ARWU), which ranks 500 universities and the equivalent world institutions (Babin et al., 2011). The method proposed by V. Ponomarenko (2012), taking into account the mono- and polycasual approaches to attractiveness estimation is interesting too.

Unresolved issues. Despite the number of different approaches to universities ranking, there is no single general (universal, generalized) indicator, which would allow consumers (students, parents, employers) assess a particular university. The analysis of the existing researches has shown that some aspects of evaluation of higher education institutions attractiveness are not reflected in scientific literature.

The aim of this research is to analyse and summarize the abovementioned issues and to develop the university attractiveness ranking mark along with their rating according to Universities' majors and qualification levels.

The main results of the study. The analysis of scientific papers on the ways higher education influences the national economy confirms the direct impact of human capital on productivity growth. The state of higher education is an important indicator of "human capital", its professionalism, competence and qualifications that consequently will result in the development and welfare of the society in general (Dubovicka and Wolowiec, 2012).

Various approaches to education, programs, qualifications and educational establishments represent essential difficulties for indicators development which could give the overall information on the educational system in general. Besides universities, which make the basis of any system, there are many state and private institutions — academies, institutions, colleges, centers of external education, technical schools, training schools and others. They give an opportunity to obtain relatively inexpensive education and train specialists.

According to the Law of Ukraine "On higher education" the following educational and qualificational levels are included into the structure of higher education (Table 1).

Table 1. **The qualificational levels of higher education in Ukraine**

Education levels	Qualificational levels
Undergraduate education	Junior Specialist
Basic higher education	Bachelor
Complete higher education	Specialist, Master

Law of Ukraine «About the higher education», 2002.

At the first stage, an applicant and his/her parents choose the profession which they want to get. At the second stage, they make a decision as for a university. But the amount of universities is rather big. Besides, the structure of higher education includes separate branches (Table 2).

Table 2. **The structure of education in Ukraine**

Qualificational levels	College	Institute	Academy	University
Junior specialist	+	–	–	–
Bachelor	–/+	+	+	+
Specialist	–	+	+	+
Master	–	–/+	+	+

In selecting a university, the authors propose the method of attractiveness of training specialists and educational institutions which is based on the correlation of the demand and supply for higher education.

The notion of "demand" is viewed as the presented need at the market, intention, request, desire and possibility for a consumer to buy a product or a service (to obtain higher education) at a certain price during a certain period of time and in a particular region.

The term "supply" means the total of goods and services offered at a market (Hryshchenko, 2009).

According to these definitions, in our view, "attractiveness" is the peculiarity of rational and emotional nature to cause interest of applicants to obtain higher education in a particular university as the result of their communicative comprehension of various university characteristics.

To evaluate the attractiveness the following indicators have been selected:

- *the % of the licenced places occupied (X1)* — the indicator which characterizes the demand side as applicants prefer studying in more prestigious universities;

- *the ratio of enrolment competition of a public contract to the maximum indicator (X2)* — shows the demand indicator as applicants and their parents submit applications to those universities which to their mind give education of a better quality;

- *the factual correlation between the students, enrolled for the first course financed by physical and legal entities and those financed by the government (X3).* This indicator represents the demand, as it shows that the applicant who is not enrolled due to government contract stays in the university by paying rather than goes to another university where he (she) could be enrolled by the government contract;

- *the correlation of factual price to the minimal multiplied by the percentage of the enrolled students financed by physical and legal entities in licenced volume minus government contracts (X4)* — shows the demand for a major because students stay at the most prestigious university despite its high prices;

- the factual correlation between the enrollment and the benchmark of certain major among universities (X5) — this indicator identifies the demand as applicants with higher rankings enter more prestigious universities;

- the correlation of the licenced demand to the benchmark (X6) — this indicator is included into the estimation as it characterizes higher education demand by higher education institutions;

- the correlation between the government contract to the benchmark (the benchmark is the biggest government contract among universities analyzed) (X7) — this indicator represents the supply as the biggest government contract is obtained by leading universities in a certain major.

As all the selected evaluation indicators are motivators, thus all indicators of attractiveness are obtained by dividing factual indicators to the benchmark.

The generalized indicator of attractiveness separated constituent (degree, program, major, university) are defined in 2 ways (Table 3).

Table 3. **The ways to calculate the attractiveness of certain constituents**

Variant 1. Not taking into account the coefficient of significance	Variant 2. Taking into account the coefficient of significance (α)
$$D = \sqrt[n]{\prod_{i=1}^{n} x_i}$$	$$D = \sqrt[\sum_{i=1}^{n}\alpha_i]{\prod_{i=1}^{n} x_i^{\acute{a}_i}}$$

Adler et al., 1976; Zharkov et al., 2004; Mencher et al., 1975; Tihomirov, 1974; Harrington, 1965.

In any educational institution the attractiveness of separate degree programs is evaluated and then the same for every qualificational level is found, and the level of overall attractiveness of the university is defined (Table 4).

Table 4. **The procedure of identifying the attractiveness of a university**

The code and the name of the degree program (major)	university												General indicator of attractiveness
	Junior specialist			Bachelor			Specialist			Master			
	$j=1$	...	$j=n$	$j=1$	...	$j=n$	$j=1$	...	$j=n$	$j=1$	...	$j=n$	
1.													
2.													
...													
n													
Average indicator according to the constituents	$\overline{R_1}$	$\overline{R_{...}}$	$\overline{R_n}$	$\overline{R_1}$	$\overline{R_{...}}$	$\overline{R_n}$	$\overline{R_1}$	$\overline{R_{...}}$	$\overline{R_n}$	$\overline{R_1}$	$\overline{R_{...}}$	$\overline{R_n}$	$\overline{R_i} = \dfrac{\sum_{i=1}^{m} R_j}{m}$
Average indicator of the qualificational level	$R_j^{\overline{MC}} = \dfrac{\sum_{j=1}^{n} R_i}{n}$			$R_j^{\overline{B}} = \dfrac{\sum_{j=1}^{n} R_i}{n}$			$R_j^{\overline{C}} = \dfrac{\sum_{j=1}^{n} R_i}{n}$			$R_j^{\overline{M}} = \dfrac{\sum_{j=1}^{n} R_i}{n}$			$R_i = \dfrac{\sum_{i=1}^{m} R_j}{m}$

On the basis of the obtained figures of the attractiveness the categories of degree program, qualificatinal levels and general attractiveness of a university can be defined (Table 5).

Table 5. **The indicators of attractiveness**

Estimation	The range of values	The university category	Description
excellent	1.00−0.80	A	The highest attractiveness
good	0.79−0.63	B	High attractiveness
satisfactory	0.62−0.37	C	Medium attractiveness
unsatisfactory	0.36−0.20	D	Low attractiveness
poor	0.19−0.00	E	Critical attractiveness

The meaning of the obtained overall indicator is influenced by: the level of attractiveness of a certain degree program, the level of attractiveness of branches, included into the structure of the educational institution.

Conclusions. University ranking is an important and effective tool to provide high qualitaty education. It is defined by 3 basic features: the effectiveness the enrollment policy, successful employment and career development. The developed program is based on the indicator of enrollment effectiveness, that is why it is oriented on the applicants and their parents' demand, as it leads to the substantial choice of degree programs and the choice of a university.

The suggested ranking can help eliminating the disadvantages of a university, namely unpopular majors and undertake actions to raise its ranking.

References:

Про вищу освіту: Закон України від 17.01.2002 №2984-III // zakon.rada.gov.ua.

Про затвердження Положення про національну систему рейтингового оцінювання діяльності вищих навчальних закладів: Наказ Міністерства освіти і науки, молоді та спорту України від 10.01.2012 №18/20331 // zakon.rada.gov.ua.

Адлер Ю.П., Маркова Е.В., Грановский Ю.В. Планирование эксперимента при поиске оптимальных условий. — М.: Наука, 1976. — 280 с.

Грищенко І.М. Комерційна діяльність посередницьких підприємств: Підручник для вищ. навч. закладів. — К.: Грамота, 2009. — 448 с.

Жарков Ю., Цициліано О., Макатьора Д. Оптимізація критеріїв роботи органів оцінки відповідності з використанням методу Харрінгтона // Стандартизація, сертифікація, якість.— 2004.— №4. — С. 36−38.

Менчер Э.М., Заславская Ю.Е., Минина Н.П. Некоторые методические вопросы применения обобщенной функции полезности при изучении и оптимизации технологических процессов // Сборник трудов ВНИИнеруд (Тольятти). — Вып. 39. — Тольятти, 1975. — С. 7−12.

Національний освітній глосарій: вища освіта / І.І. Бабин, Я.Я. Болюбаш, А.А. Гармаш й ін.; За ред. Д.В. Табачника і В.Г. Кременя. — К.: Плеяди, 2011. — 100 с.

Пономаренко В.С. Проблеми підготовки компетентних економістів та менеджерів в Україні: Монографія. — Х.: ІНЖЕК, 2012. — 328 с.

Рейтинг вузів від ЮНЕСКО «Топ-200 Україна» − 2011 // Вища освіта: Інформаційно-аналітичний портал про вищу освіту в Україні та закордонном // vnz.org.ua.

Сводный рейтинг украинских вузов «Компас-2012» // Компас: Рейтинг украинских высших учебных заведений по степени удовлетворённости образованием // www.yourcompass.org.

Тихомиров В.Б. Планирование и анализ эксперимента (при проведении исследований в легкой и текстильной промышленности). — М.: Легкая индустрия, 1974. — 262 с.

Dubovicka, L. Wolowiec, T. (2012). Contemporary tendencies in Higher Education. International Scientific Herald, 4(23): 76−81.

Harrington, E.C. (1965). The desirability function. Industrial Quality Control, 21(10): 494−498.

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