

# “Differentiation of employers as potential partners of higher educational institutions”

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## DIFFERENTIATION OF EMPLOYERS AS POTENTIAL PARTNERS OF HIGHER EDUCATIONAL INSTITUTIONS

### Abstract

Employment of graduates of higher educational institutions (HEIs) is an important task worldwide. The main problems of employment are due to the existing discrepancy between the education received by graduates and the needs of business environment. The modern world should focus on the formation of graduates' competencies in accordance with the demands of employers, which will provide greater access to practical skills for students throughout the entire period of university studies. The purpose of the article is the differentiation of employers, analysis of their needs for graduates of economic specialties, readiness for partnership with HEIs. A survey of experts among employers and HEI professors allowed us to reveal the advantages of their social and professional partnerships and possible problems hampering the process of forming partnership relations. Discriminant analysis became the basis for classifying employers by the degree of their readiness to cooperate with HEIs. Three groups of employers are singled out: "business-focused", "optimists" and "flagships". Analysis of employers, taking into account their readiness to form partnership relations with HEIs, will contribute to improving the quality of training personnel in business structures and HEIs.

### Keywords

differentiation of employers, partnership relationship, discriminant analysis, graduates of economic HEIs, competencies

### JEL Classification

A20, C15, I25

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## ДИФЕРЕНЦІАЦІЯ РОБОТОДАВЦІВ ЯК ПОТЕНЦІЙНИХ ПАРТНЕРІВ ЗАКЛАДІВ ВИЩОЇ ОСВІТИ

### Анотація

Працевлаштування випусників закладів вищої освіти (ЗВО) є важливим завданням у всьому світі. Основні проблеми працевлаштування обумовлені існуючою невідповідністю між освітою, що одержується випусниками, та потребами бізнес середовища. Сучасний світ повинен орієнтуватися на формування компетентностей випусників відповідно до запитів роботодавців, що забезпечить більшу доступність до практичних навичок для студентів протягом усього періоду навчання в університеті. Мета статті – диференціація роботодавців, аналіз їх потреб у випусниках економічних спеціальностей, готовності до партнерства з ЗВО. Опитування експертів з середовища роботодавців і викладачів ЗВО дозволило виявити переваги від їх соціального і професійного партнерства та можливі проблеми, які гальмують процес формування партнерських відносин. Дискримінаційний аналіз став основою для класифікації роботодавців за ступенем їх готовності до співпраці з ЗВО. Виділено три групи роботодавців: «зосереджені на бізнесі», «оптимісти» і «флагмани». У статті отримав подальший розвиток аналіз роботодавців з урахуванням їх готовності до формування партнерських відносин з ЗВО, що сприятиме підвищенню якості підготовки кадрів в бізнес структурах і в ЗВО.

### Ключові слова

диференціація роботодавців, партнерські відносини, дискримінаційний аналіз, випусники економічних ЗВО, компетентності

### Класифікація JEL

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## INTRODUCTION

Under the conditions of the fourth industrial revolution, lifelong learning, on the one hand, and forecasting the requirements for the competences of workers, on the other hand, becomes necessary. According to the World Economic Forum, in five years more than one third of the skills that are considered important for today's workforce will change (World Economic Forum, 2016). Today universities are the main resource of innovation, which is designed to maintain the stability and success of business and, consequently, economic prosperity. This can be achieved only as a result of close cooperation and mutual understanding of partners.

In Ukraine, a study was conducted by the World Bank Ukraine's STEP Employer Survey. Employers have indicated that the gap between the required level of personnel skills and real-life ones has the following consequences for their companies: loss of efficiency and increased wastage, loss of service quality, loss of existing clients or markets, loss of new clients or markets, increased recruitment costs, loss of innovations opportunities. Overcoming a possible gap in the existing and necessary skills of personnel requires the use of new approaches to formation of interaction of HEIs and employers (World Bank, 2015).

Today in the labor market of Ukraine there is a decrease in the level of unemployment, at the same time, there is a shortage of workers of technical and blue-collar professions. According to the State Employment Service, about 80% of school graduates are trying to enroll in higher educational institutions and less than 30% receive secondary vocational education (Ukrinform, 2018; The State Employment Service of Ukraine, 2018).

Employment of graduates is an important task worldwide. The main problems of employment are due to the existing discrepancy between the education received by graduates and the needs of business environment. A modern HEI should focus on the formation of competencies of graduates in accordance with the demands of employers, which will ensure greater accessibility to practical skills for students throughout the entire period of study at university (World Economic Forum, 2016). Studies of employers' opinions in various countries (FICCI, 2017) show that business prefers future employees who are ready to work, demonstrate skills to solve practical problems. These results emphasize the feasibility of introducing additional ways to assess a graduate: not only on the basis of a diploma. This will allow the employer to assess the graduate in the process of his training, to select the most promising candidates. The student, in turn, receives the motivation to learn in the form of demand in the labor market.

Employers face a lot of problems connected with the necessity to teach graduates of HEI how to adapt their competences formed during the period of studying at HEI to real situations in business. Generalization of these problems demonstrates the necessity of urgent cooperation of HEI and employers. Graduate attempts to overcome or solve business problems reveal good theoretical knowledge of graduates and lack of practical skills, which employers who represent different areas of business expect from graduates of HEIs. In this connection, the partnership of HEIs and employers becomes relevant.

## 1. LITERATURE REVIEW

The problems of business partnership with educational institutions in general, and especially with HEIs, are widely highlighted in the works of Ukrainian scientists. Among them are Piatnytska (2016), Denezhnikov (2016), Sibirtsev (2016), who studied the theoretical and methodological foundations of educational clusters functioning, features of scientific and educational clusters, innovative educational clusters (Dieniezhnikov, 2016; Piatnytska, 2016; Sybirtsev, 2016).

Ilich (2017) studied the socio-economic mechanism of interaction between labor markets and education, suggested an approach to building such a mechanism, substantiated the principles of interaction between labor markets and education (Ilich, 2017). Pokidina (2016), Tarasenko and Demchenko (2017), Shcherbata (2016) considered the essence and forms of partnerships between enterprises and HEIs, international experience, the prospects for such relations and advantages for Ukraine (Pokidina, 2016; Shcherbata, 2016; Tarasenko, 2017).

Drazhnitsa and Drazhnitsa (2016) analyze dual education as a concept (Drazhnytsia, 2016), Postoyan (2015) considers the advantages of using the dual system of vocational training in conditions of sectoral clustering (Postoian, 2014). Oleksin and Yakubovskaya (2018) studied the conditions and prospects for the introduction of dual education in Ukraine, distinguish pedagogical supervision as an element of individualization of such education (Oleksin, & Iakubovska 2018).

Endovitsky and Kommendenko (2016) proposed a methodology for monitoring the interaction of enterprises and HEIs in order to identify active participants of such interaction, which can be used for the state, business associations to support them (Endovitskiy, & Komendenko, 2016). Saginova and Maksimova (2017) analyzed the prospects and problems of HEI partnership with entrepreneurial structures in Russia, considered the project of attracting students to work on the implementation of real orders of small and medium businesses (Saginova, & Maksimova, 2017). Tikhonova (2016) studied the links between institutions of higher education and industrial enterprises, offered recommendations on the formation of a “cluster” interaction of HEIs and business spheres (Tikhonova, 2016).

The urgency of the problem of partnership between HEIs and employers is evidenced by the large amount of research conducted by foreign experts and research companies. “The State of University-Business Cooperation in Europe” project (Davey, Meerman, Muros, Orazbayeva, & Baaken, 2018), which was conducted by the Science-to-Business Marketing Research Center, for the DG Education and Culture, European Commission, is worthy of attention. The goal of the project was to gain a deeper, more comprehensive and up-to-date understanding of the state of university business cooperation (UBC) in Europe from the point of view of both HEIs and business. The results of the study showed that European enterprises are beginning to realize the advantages of partnership or working with HEIs as a source of future-oriented innovations, as well as the development of talents that can provide a competitive advantage. 14 UBC activities in the field of research, education, training and management were identified, but in most of these areas, the level of cooperation is low, which provides opportunities for improvement. According to European experts, there is insufficient awareness of how HEIs and businesses can cooperate.

A study conducted in the UK, *A Review of Business – University Collaboration*, Wilson (2012), highlights factors hindering the development of partnership between business and universities: discrepancy between the university’s mission and strategies and business needs, discrepancy between time and financial capacities of universities and businesses, and lack of skills among universities, meeting the needs of business, bureaucratic issues, financial constraints, inconsistencies in the expectations and goals of partners (Wilson, 2012).

Boccanfuso (2010) considers various options for increasing the effectiveness of partnerships between HEIs and employers, such as developing partnerships with fewer universities and establishing deeper and more comprehensive relationships based on long-term commitments, focusing on the relative importance and value of partnerships that will enhance the enthusiasm of professors and business interests in partnerships (Boccanfuso, 2010).

Studies “Closing the skills gap: companies and colleges collaborating for change” show that in the US, the actual nature of partnerships and cooperation between higher educational institutions and companies varies greatly and may be different (TEIU, 2014). Among the most common options for cooperation are internship and tutoring programs, which allow students to gain work experience in companies, often getting credit for the course they have attended. Mentoring programs are also common, in which company employees are enlisted for use as a resource for students. In many cases, employees of the company even take on the duties of a professor at HEI. Another common practice is short courses offered by university, or specialized academic programs for company personnel. University academic personnel, in turn, can intern at companies to get first-hand information about the needs of the industry.

Considerable attention is paid to the creation of an integrated and comprehensive conceptual structure of UBC for HEIs, the UBC ecosystems in the works of Galán-Muros and Davey (2017). The UBC structure illustrates the components present in the environment for HEIs, such as input data, actions, results, output data, supporting mechanisms, circumstances and context, defining a wide range of sub-elements for each of them (Galan-Muros, & Davey, 2017).

According to the State Statistics Service of Ukraine in the 2018-2019 school year, 282 institutions provide educational services, including universities, academies, institutes (The State Statistics Service of Ukraine, 2019). Higher economic education can be obtained in most of them, while the choice of economic specialties is very wide.

Analysis of the demand for specialists with economic education, according to the data of the job search site Work.ua, indicates the existing demand for such specialists (Table 1).

**Table 1.** The demand for specialists with economic education according to the job search site Work.ua

Source: compiled by the authors on the basis of work.ua.

Specialist	Number of job vacancies	Number of resumes posted in the last 3 months	Average proposed salary, UAH
Accountant	2,733	11,945	11,000
Marketer	833	2,698	14,300
Economist	491	4,234	10,700
Financier	174	1,431	16,400
Total	4,231	20,308	-

The professional sphere “beginning of career, students” takes the second place in the rating of spheres with a high level of competition in the labor market. The level of competition in the category “career start, students” is 10 people per one vacant place. At the same time, the level of competition in all professional fields is 4 persons per place. Interestingly, there is a tendency to increase the number of applicants who place resumes in the “beginning of career” category, but already have work experience (sometimes even more than 6 years) and are looking for their place in another industry (HeadHunter, 2019).

## 2. AIM OF THE RESEARCH. METHODOLOGY

The aim of the article is to differentiate employers based on their needs for graduates of economic specialties, readiness for partnership with HEIs.

To achieve the aim, the method of interviewing experts and the method of content analysis of employers' announcements about vacancies for graduates of economic universities were used. A survey of employers and professors of economic universities was conducted. Criteria for the selection of experts among employers: at least 5 years of experience in business, higher education (preferably economics, technology), awareness of the need for partnership between business and HEIs, belonging to one of the management levels in business (higher, middle and lower) and active participation in recruitment. Criteria for selecting experts among university professors: at least 5 year experience at university, having a scientific degree as a basis for delivering lectures, not only conducting practical training, at least 5 years of working with employers, internship at enterprise, recognizing the need for partnership of employers and HEIs. The results of the processing of employers' ads served as the basis for formulation of a questionnaire for employers. The questionnaire was offered to 80 employers and ten experts in the field of higher economic education in January-February 2019.

## 3. RESULTS

In order to determine the advantages and problems in formation of partnerships between employers and HEIs in one of the blocks of the questionnaire, the question was asked “What influenced/could influence your decision to

build social and professional partnership with HEIs?”. The following variants of answers were offered: improving reputation/image of employer-enterprise; own convictions; expanding markets with the possibility of further increasing profits; possibility of selecting potential employees; attracting professors and students to solve production problems; opportunity to participate in the development of curricula of HEIs in order to adjust competencies that are obtained by students and will meet the expectations of employers. The respondent could single out several answers important for him.

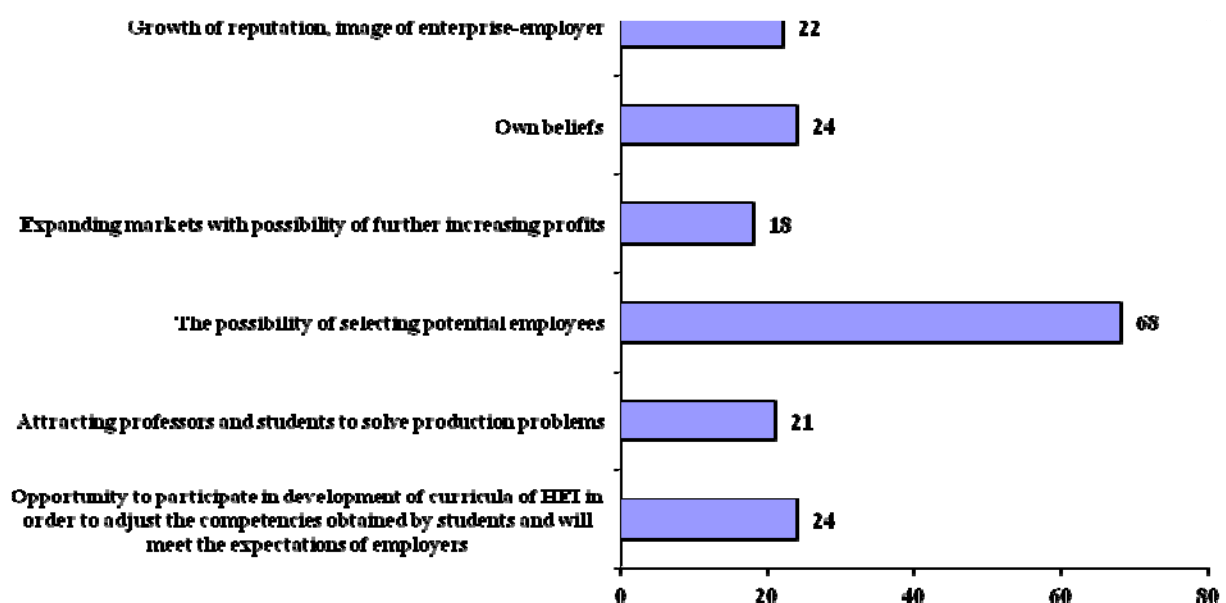
The analysis of the results of employers’ answers showed that the biggest influence on making decision about the necessity of partnership has the opportunity to select potential employees by 85% of employers (Figure 1).

The results of the survey of employers let us assume the possible advantages for their partnership with HEIs, namely:

1. formation of reputation of professionals on the basis of information passed by graduates from mouth to mouth;
2. demonstration of mentoring, which, as a consequence, ensures loyalty of the public;
3. filtration of young, capable graduates with a view of offering them employment;
4. free search of new ideas, as a result of “brainstorming” at “round tables”;
5. testing the tolerance of future employees by giving them difficult assignments during practical training and internship at enterprises;
6. saving money.

The survey of employers has also revealed problems that can slow down the process of forming partnerships:

1. diverting personnel from performing their main duties;
2. need to prove the status of professionals in the academic environment of students and university professors;
3. obligations to HEI that must be fulfilled, otherwise there will be a threat of loss or deterioration of reputation, which requires additional efforts and time;
4. risk of negative influence on the authority of employers in social networks, in case if the information about requirements for graduates of HEIs does not correspond to the actual state of affairs.



**Figure 1.** Results of the survey of employers on the motives for forming partnerships with HEIs

Professors of HEIs, ready for active partnership with employers, are also aware of the potential advantages of partnership:

1. emergence of a real opportunity to adjust the work programs to the needs of modern business;
2. creating an atmosphere of professional activity through the organization of “round tables” with practitioners of business;
3. formation of models of potential career growth of graduates on the example of joint projects of employers, students, professors of HEIs;
4. fixing the skills of team work among graduates when performing a real business task;
5. development of communicative competency among graduates in the field of professional activity during the period of internship and practical training;
6. possibility of creating a database of prospective graduates as future employees and a database of professors willing to cooperate and share experience.

The problems that can slow down partnership with employers in the academic environment, as shown by a survey of experts from among professors and associate professors, can be summarized as follows:

1. isolation of obvious problems in the academic environment from the professional activities of employers and, as a consequence, misunderstanding of partners due to different interpretations of the degree of their significance;
2. concentration of graduate students on work during internships at enterprises under the influence of career prospects, skipping lectures and practical classes;
3. decrease in the authority of university professors if they do not offer real cases from the practice of modern business;
4. demotivation of bachelors regarding the necessity of admission for a master’s degree, as a consequence of their successful practices, participation in joint projects with employers.

In the framework of this research, the authors carried out a classification of employers on the degree of their willingness to cooperate with HEIs. The classification was performed on the basis of discriminant analysis, in which a prediction model is created to determine belonging to a group. This model constructs a discriminant function (or, when groups are more than two, a set of discriminant functions) in the form of a linear combination of predictive variables (features characterizing the objects under consideration), which ensures the best separation of the sample into groups. These functions can be applied in the future to new observations with known values of predictive variables, but unknown group affiliation (IBM Knowledge Center, 2019).

As variables assessing the willingness of employers to cooperate with HEIs, the following forms of social and professional partnership were proposed:

- var1 – practical training of students at enterprises, with further employment;
- var2 – participation of enterprises in “vacancies fairs” held by HEIs;
- var3 – inviting practitioners to deliver lectures and conduct practical classes;
- var4 – attracting experts from enterprises to participate in “round tables” with students and university professors;
- var5 – joint projects of practitioners from enterprises, professors and students;
- var6 – exchange of internships by practitioners and instructors;
- var7 – participation of specialists of enterprises in creation of curricula at HEIs.

Based on the answers given by employers about the possible forms of cooperation with HEIs, the following groups were identified:

1. with a low degree of readiness for cooperation;
2. with an average degree of readiness for cooperation;
3. with a high degree of readiness for cooperation.

As a result of the discriminant analysis, a classification matrix (Table 2) was constructed, on the basis of which it can be concluded that respondents are correctly assigned to the selected groups (the total percentage of sample correctness is 100).

Analysis shows that 46 employers (57.5% of the total sample) were assigned to the group with a low degree of readiness for cooperation, 21 employers (26.25%) with an average degree of readiness and 13 employers (16.25%) with a high degree of readiness for cooperation.

**Table 2.** Classification matrix of division of employers into groups

Groups of employers according to the readiness to cooperation	Percent correct	Classification matrix Rows: observed classifications Columns: predicted classifications		
		Low, p=57,500	Average, p=26,250	High, p=16,250
Low	100	46	0	0
Average	100	0	21	0
High	100	0	0	13
Total	100	46	21	13

The readiness of employers to form partnerships with HEIs can be seen after analyzing the descriptive characteristics of employers, representatives of the three identified groups (Table 3).

**Table 3.** Descriptive characteristics of selected groups

Characteristics of employers' groups	1 group "focused on business"	2 group "optimists"	3 group "flagships"
The percentage of respondents	57.5%	26.25%	16.25%
Sphere of activity of the enterprise	production – 37%; trade – 13%; services – 52%	production – 19%; trade – 9.5%; services – 71.5%	production – 38.5%; trade – 23%; services – 38.5%
Organizational and legal form of the enterprise	private enterprise – 69.6%; business partnership – 13.1%; state enterprise – 15.2%; individual entrepreneur – 2.1%	private enterprise – 85.7%; business partnership – 4.8%; state enterprise – 9.5%	private enterprise – 46,15%; business partnership – 30.8%; state enterprise – 23.05%
Rating of established forms of partnership with HEIs	an agreement was signed with HEI for the passage by students of various types of internships at enterprise; participation of the enterprise in "job fairs" held at HEI; inviting company employees to deliver lectures and conduct practical exercises; joint projects of practitioners from enterprises, professors and students; attracting experts from enterprises to participate in «round tables» with students and professors of HEI; the exchange of internships for practitioners and professors	an agreement was signed with HEI for the passage by students of various types of internships at enterprise; participation of the enterprise in "job fairs" held at HEI; inviting company employees to deliver lectures and conduct practical exercises; attracting experts from enterprises to participate in «round tables» with students and professors of HEI; joint projects of practitioners from enterprises, professors and students; the exchange of internships for practitioners and professors	an agreement was signed with HEI for the passage by students of various types of internships at enterprise; inviting company employees to deliver lectures and conduct practical exercises; attracting experts from enterprises to participate in «round tables» with students and professors of HEI; participation of the enterprise in "job fairs" held at HEI; joint projects of practitioners from enterprises, professors and students; the exchange of internship for practitioners and professors

**Table 3 (cont.).** Descriptive characteristics of selected groups

Rating of factors influencing the decision about the organization of social and professional partnerships with universities	possibility of selecting potential employees; own convictions; improving reputation, image of enterprise-employer; expanding markets with possibility of further increasing profits; opportunity to participate in development of curricula of HEI in order to adjust competencies that are obtained by students and will meet the expectations of employers; attracting professors and students to solve production problems	possibility of selecting potential employees; opportunity to participate in the development of curricula of HEI in order to adjust competencies that are obtained by students and will meet the expectations of employers; own convictions; attracting professors and students to solve production problems improving reputation and image of enterprise-employer; expanding markets with possibility of further increasing profits	possibility of selecting potential employees; attracting professors and students to solve production problems opportunity to participate in the development of curricula of HEI in order to adjust competencies that are obtained by students and will meet the expectations of employers; improving reputation and image of enterprise-employer; own convictions; expanding markets with possibility of further increasing profits
Internship abroad	yes – 10.9%; no – 89.1%	yes – 23.8%; no – 76.2%	yes – 38.5%; no – 61.5%
Level of management	the lowest level – 10.9%; average level – 54.3%; top management – 34.8%	the lowest level – 4.8%; average level – 33.3%; top management – 61.9%	low level – 15.4%; average level – 53.8%; top management – 30.8%
Gender	women – 65.2%; men – 34.8%	women – 66.7%; men – 33.3%	women – 61.5%; men – 38.5%
Total work experience	up to 5 years – 2.2% 6-10 years old – 37% 11-15 years old – 19.6% 16-20 years old – 15.2% 21-25 years old – 8.7% over 25 years old – 17.3%	up to 5 years old – 0% 6-10 years old – 47.6% 11-15 years – 19% 16-20 years old – 4.8% 21-25 years old – 14.3% more than 25 years – 14.3%	up to 5 years – 15.4% 6-10 years old – 15.4% 11-15 years – 7.7% 16-20 years – 0% 21-25 years old – 15.4% more than 25 years old – 46.1%
Education	economic – 74%; technical – 22%; humanitarian – 11%	economic – 71.4%; technical – 28.6%; humanitarian – 4.7%; psychological – 4.7%; law – 4.7%;	economic – 92%; technical – 30.8%; humanitarian – 7.7%

We give a description of the selected groups based on the analysis of the respondents' answers to the questions asked in the questionnaire.

In the group with a low degree of readiness to cooperate with universities, “focused on business” top-management and average management representatives dominate who are not directly involved in work with young professionals, however, they track ways of building and maintaining the company's reputation, are ready to use the possibilities of selecting talented and promising employees focused on learning in the workplace. The employers, representing this group, are mainly focused on such forms of cooperation as entering into contracts with HEIs for students to undergo various types of internships at enterprise and participate in “job fairs” that take place at HEIs. These forms of cooperation do not oblige employers to invest, actively use time, and demonstrate their professional skills.

The second group, which is characterized by an average degree of readiness to cooperate with HEIs - “optimists”. These are mainly employers belonging to the average level of management and top management. They are confident that partnership with HEIs in the form of agreements on student practice, lecturing by practitioners, holding “round tables” with students and HEI professors will bring the process of teaching students to the practice of real professional activity. In addition, such forms of partnership will allow them to formulate problems that require a decision in a situation of risk and uncertainty, which contributes to the manifestation of creativity and ability to take responsibility. The representatives of this group, by virtue of the acquired professional experience, are distinguished by desire to overestimate self-esteem, which justifies, from their point of view, the exaggerated demands to young professionals.

The third group with a high degree of readiness to cooperate with HEIs is the “flagship”. These are employers who are most advanced in professional activity, self-confident, ready to control the process of cooperation and transfer experience, participate in the process of developing practical skills and abilities that are necessary in their professional field. In this group, heterogeneity is observed regarding the forms of partnership, which is explained by experience in the profession (over 46% of the representatives of this group have more than 25 years of work experience), the influence of foreign experience (the percentage of foreign internships in this group is the highest). They do not exclude any possibility of choosing a partnership, as they realize the need for a flexible personnel policy due to changes both in the higher education system and in the labor market.

Discriminant analysis allows us to determine whether new objects belong to selected groups, in our case new employers, on the basis of their assessment of the importance of forms of cooperation with HEIs. For this purpose, you can use the classification functions built for each class. The data for the construction of classification functions for each of the three groups of employers according to the results of the discriminant analysis carried out by the authors are presented in Table 4.

**Table 4.** Data for the construction of classification functions

Variable	Classification functions grouping		
	Low readiness, p=57,500	Average readiness, p=26,250	High readiness, p=16,250
Var1	2.7851	3.6191	4.6697
Var2	3.0591	4.4009	6.1766
Var3	1.9103	3.0592	4.3467
Var4	2.9721	5.2533	6.6968
Var5	2.8755	4.1426	5.8393
Var6	2.2607	3.9498	4.1637
Var7	1.4958	2.4379	3.7806
Constant	-18.9859	-44.0821	-77.4503

Classification function for the first group of respondents with a low level of readiness to cooperate with HEIs (Y<sub>H</sub>) is:

$$Y_H = 2,7851 \cdot \text{var1} + 3,0591 \cdot \text{var2} + 1,9103 \cdot \text{var3} + 2,9721 \cdot \text{var4} + 2,8755 \cdot \text{var5} + 2,2607 \cdot \text{var6} + 1,4958 \cdot \text{var7} - 18,9859. \quad (1)$$

Classification function for the second group with an average level of readiness to cooperate with HEIs (Y<sub>cp</sub>):

$$Y_{cp} = 3,6191 \cdot \text{var1} + 4,4009 \cdot \text{var2} + 3,0592 \cdot \text{var3} + 5,2533 \cdot \text{var4} + 4,1426 \cdot \text{var5} + 3,9498 \cdot \text{var6} + 2,4379 \cdot \text{var7} - 44,0821. \quad (2)$$

Classification function for the third group with a high level of readiness to cooperate with HEIs (Y<sub>B</sub>):

$$Y_B = 4,6697 \cdot \text{var1} + 6,1766 \cdot \text{var2} + 4,3467 \cdot \text{var3} + 6,6968 \cdot \text{var4} + 5,8393 \cdot \text{var5} + 4,1637 \cdot \text{var6} + 3,7806 \cdot \text{var7} - 77,4503. \quad (3)$$

So, in the case when it is necessary to determine the affiliation to a certain group of a new employer, a representative of the HEI can use the classification functions proposed by the authors. On the basis of assessments the importance of possible forms of cooperation with HEIs for a given employer, which are indicated in Table 5, one can conclude about his level of readiness for a partnership and propose a solution that most satisfies him/her.

Affiliation of employers to the group is determined by the maximum classification value. This employer belongs to the second classification group (medium level of readiness).

The main reasons for the refusal of partnership are different motivations and values of partners. Business is interested in making profit with minimal time, money and diverting personnel from their direct duties. HEIs are interested in the compliance of graduates with the requirements of modern business and expectations of employers, ensuring the demand for educational services of HEI. Cooperation will allow you to adapt to modern values.

**Table 5.** Determination of group membership of a new respondent

Forms of cooperation							Employers group		
var1 - internship of students at enterprise, with further employment	var2 - participation of enterprise in «job fairs» held by HEIs	var3 - invitation of practitioners to deliver lectures and practical classes	var4 - attract experts from enterprises to participate in «round tables» with students and professors	var5 - HEIs - joint projects of practitioners from enterprises, professors and students	var6 - internship exchanges for practitioners and professors	var7 - participation of enterprise professionals in the creation of HEI curricula	low level of readiness	medium readiness	high level of readiness
5	3	5	5	2	1	1	38,04	43,46	38,67

Note: Assessment is presented in points (1 is the least important form, 5 is the most important).

HEIs are more interested in forming permanent partnerships with business. Reasons for the interest are as follows:

- preservation of specialties at HEI;
- reputation, HEI image;
- jobs for professors.
- attracting applicants through advertising of partners from business environment.

While business in the framework of a partnership, in most cases solves its current problems, such as an urgent search for personnel for open vacancies. Thus, the initiative from business is periodic and requires urgent solution, which does not lead to any effective cooperation. The initiative must be constant and systematic. One of the possible solutions of the problem would be creating a database of prospective students that meet the requirements of employers. In addition, it may be realistic to create a database of professors involved in the training of competent professionals that meet the needs of employers and are interested in cooperating with business structures.

Internships for students at enterprise provide an opportunity to adapt to the particular area of business where the internship is taking place. In addition, for students it is possible to understand whether this field of activity is suitable for them from the point of view of professional interests. Are the existing competencies relevant to those required by the employer? In the course of the internship, students' knowledge and expectations are going through the process of filtering, which should correspond to the formed competencies and the expected career prospects.

The above mentioned information suggests that cooperation is realistic and it is reasonable to start with local employers, since it is possible to track their expectations and needs in the process of conducting marketing research.

## CONCLUSION

A study conducted by the authors showed that in order to develop an effective partnership between universities and employers, it is necessary to focus the efforts of both parties on the factors that motivate cooperation, and not on the existing barriers.

The article further developed the analysis of employers, taking into account their relationship to partnership and readiness to form partnerships with HEIs. Based on discriminant analysis, differentiation of employers was proposed, which will allow HEIs and employers to choose real forms of partnership on terms that are beneficial for them, and will contribute to improving the quality of training and their development in accordance with modern requirements.

The classification functions built as a result of discriminant analysis make it possible to predict the behavior of employers depending on the degree of their readiness for different forms of cooperation, use the benefits of partnership and take into account the problems in the process of forming partnerships and their possible consequences. Marketing research of educational services in general and economic educational services in particular will help to highlight the factors hindering the potential partnership between business and HEIs. The results of such research will be the basis for reducing discrepancy between expectations of employers and graduates of HEIs. Prospects of further research of economic educational services may be connected with discovering peculiarities of specific demands of employers of different areas of business. These demands will be the stimuli for improving economic education and development of partnership of employers and HEIs.

## REFERENCES

1. Boccanfuso, A. M. (2010). Why university-industry partnerships matter. *Science Translational Medicine*, 2. <http://dx.doi.org/10.1126/scitranslmed.3001066>
2. Davey, T., Meerman, A., Muros, V. G., Orazbayeva, B., & Baaken, T. (2018). *The State of University-Business Cooperation in Europe (final report)* (180 p.). Luxembourg: Publications Office of the European Union. <http://dx.doi.org/10.2766/676478>
3. Dieniezhnikov, S. S. (2016). Теоретико-методологічні запити створення інноваційних освітніх кластерів [Teoretyko-metodolohichni zapyty stvorennia innovatsiinykh osvıtnikh klasteriv]. *Filosofia nauky: tradytsii ta innovatsii*, 1-2(13-14), 156-165. Retrieved from <http://repository.sspu.sumy.ua/bitstream/123456789/1340/1/Teoretyko-metodolohichni%20zapyty.pdf>
4. Drazhnytsia, S. A., & Drazhnytsia, O. M. (2016). Дуальне навчання, як інтерактивна форма організації навчального процесу [Dualne navchannia, yak interaktyvna forma orhanizatsii navchalnoho protsesu]. *Zbirnyk naukovykh prats Khmelnytskoho instytutu sotsialnykh tekhnolohii Universytetu «Ukraina»*, 12, 17-20. Retrieved from [http://nbuv.gov.ua/j-pdf/Znpkhist\\_2016\\_12\\_5.pdf](http://nbuv.gov.ua/j-pdf/Znpkhist_2016_12_5.pdf)
5. Endovitskiy, D. A., & Komendenko, S. N. (2016). Предприятия и вузы: мониторинг сотрудничества [Predpriyatiya i vuzyi: monitoring sotrudnichestva]. *Vyisshie obrazovanie v Rossii*, 2(198), 5-14. Retrieved from [https://vovr.elpub.ru/jour/article/view/373?locale=ru\\_RU](https://vovr.elpub.ru/jour/article/view/373?locale=ru_RU)
6. FICCI (2017). *Leapfrogging to Education 4.0: Students at the core* (80 p.). Retrieved from [https://www.ey.com/Publication/vwLUAssets/ey-leap-forgging/\\$File/ey-leap-forgging.pdf](https://www.ey.com/Publication/vwLUAssets/ey-leap-forgging/$File/ey-leap-forgging.pdf)
7. Galán-Muros, V., & Davey, T. (2017). The UBC Ecosystem: Putting Together a comprehensive Framework for University-Business Cooperation. *Journal of Technology Transfer*, 44(4), 1311-1346.
8. HeadHunter (2019). *Ринок праці у I кварталі 2019 року: роботодавці взяли паузу, а пошукачі перекваліфікуються [Rynok pratsi u I kvartali 2019 roku: robotodavtsi vsiali pauzu, a poshukachi perekvalifikovuiutsia]*. Retrieved from <https://hh.ua/article/24483>
9. IBM Knowledge Center (2019). *Дискриминантний аналіз [Diskriminantnyy analiz]*. Retrieved from [https://www.ibm.com/support/knowledgecenter/ru/SSLVMB\\_25.0.0/spss/base/idh\\_disc.html](https://www.ibm.com/support/knowledgecenter/ru/SSLVMB_25.0.0/spss/base/idh_disc.html)
10. Plich, L. M. (2017). Соціально-економічний механізм взаємодії ринків праці та освіти [Sotsialno-ekonomichni mekhanizm vzaemodii ryнкiv pratsi ta osvity]. *Ekonomika promyslovosti*, 2 (78), 97-116. <http://dx.doi.org/10.15407/econindustry2017.02.097>
11. Oleksin, Yu. P., & Iakubovska, S. S. (2018). Педагогічна супервізія як елемент індивідуалізації дуального навчання [Pedagogichna superviziia yak element individualizatsii dualnoho navchannia]. *Molody vchenyi*, 4.1(56.1), 102-105. Retrieved from <http://molodyvchenyi.in.ua/files/journal/2018/4.1/24.pdf>
12. Piatnytska, H. T. (2016). Науково-освітні кластери: відмінні характеристики та передумови розвитку [Naukovo-osvitni klastery: vidmitni kharakterystyky ta peredumovy rozvytku]. *Marketynh i menedzhment innovatsii*, 3, 191-207. Retrieved from [http://mmi.fem.sumdu.edu.ua/sites/default/files/mmi2016\\_3\\_191\\_207.pdf](http://mmi.fem.sumdu.edu.ua/sites/default/files/mmi2016_3_191_207.pdf)
13. Pokidina, V. (2016). Університети та бізнес: міжнародний досвід співпраці та перспективи для України [Universytety ta biznes: mizhnarodnyi dosvid spivpratsi ta perspektyvy dlia Ukrainy]. *Proekt: "Populiarna ekonomika: tsina derzhavy"*, 41, 1-25. Retrieved from [http://cost.ua/files/Universities%20and%20business\\_report.pdf](http://cost.ua/files/Universities%20and%20business_report.pdf)
14. Postoian, T. H. (2015). Дуальна система навчання в умовах галузевої кластеризації [Dualna systema navchannia v umovakh haluzevoi klasteryzatsii]. *Pedahohichni nauky: teoriia, istoriia, innovatsiini tekhnolohii*, 2(46), 374-382. Retrieved from <http://repository.sspu.sumy.ua/handle/123456789/1466>
15. Saginova, O. V., & Maksimova, S. M. (2017). Опыт взаимодействия вузов и предпринимательских структур [Opyt vzaimodeystviya vuzov i predprinimatelskikh struktur]. *Rossiyskoe predprinimatelstvo*, 3, 377-387. <http://dx.doi.org/10.18334/rp.18.3.37304>
16. Shcherbata, T. S. (2016). Теоретичні аспекти налагодження партнерських відносин із ВНЗ [Teoretychni aspekty nalahodzhennia partnerskykh vidnosyn iz VNZ]. *Visnyk Natsionalnoho universytetu "Lvivska politekhnika"*. *Problemy ekonomiky ta upravlinnia*, 847, 193-197. Retrieved from [http://nbuv.gov.ua/UJRN/VNULPP\\_2016\\_847\\_31](http://nbuv.gov.ua/UJRN/VNULPP_2016_847_31)
17. Sybirtsev, V. V. (2016). Освітній кластер як інституціональна основа розвитку регіонального ринку праці [Osvitnii klaster yak instytutsionalna osnova rozvytku rehionalnoho rynku pratsi]. *Ekonomika i orhanizatsiia upravlinnia*, 3(23), 282-292.
18. Tarasenko, S. I., & Demchenko, M. Ie. (2017). Партнерство університетів та бізнесу: форми та перспективи розвитку в умовах підвищення інноваційності економіки [Partnerstvo universytetiv ta biznesu: formy ta perspektyvy rozvytku v umovakh pidvyshchennia innovatsiinosti ekonomiky]. *Ekonomika ta upravlinnia natsionalnym hospodarstvom*, 13, 302-308. Retrieved from [http://www.economyandsociety.in.ua/journal/13\\_ukr/49.pdf](http://www.economyandsociety.in.ua/journal/13_ukr/49.pdf)
19. The Economist Intelligence Unit (2014). *Closing the skills gap: companies and colleges collaborating for change* (a report from the economist intelligence unit) (28 p.). Retrieved from [https://www.luminafoundation.org/files/publications/Closing\\_the\\_skills\\_gap.pdf](https://www.luminafoundation.org/files/publications/Closing_the_skills_gap.pdf)

20. The State Employment Service of Ukraine (2018). *Найбільш затребувані професії в Україні [Naibilsh zatrebuvani profesii v Ukraini]*. Retrieved from [https://espreso.tv/news/2018/07/31/naybilsh\\_zatrebuvani\\_profesiyi\\_v\\_ukrayini\\_dani\\_derzhsluzhby\\_zaynyatosti](https://espreso.tv/news/2018/07/31/naybilsh_zatrebuvani_profesiyi_v_ukrayini_dani_derzhsluzhby_zaynyatosti)
21. The State Statistics Service of Ukraine (2019). *Заклади вищої освіти [Zaklady vyshchoi osvity]*. Retrieved from [http://www.ukrstat.gov.ua/operativ/operativ2005/osv\\_rik/osv\\_u/vuz\\_u.html](http://www.ukrstat.gov.ua/operativ/operativ2005/osv_rik/osv_u/vuz_u.html)
22. Tihonova, A. D. (2016). Сотрудничество вузов и промышленных предприятий для обеспечения регионального развития [Sotrudnichestvo vuzov i promyishlennyih predpriyatiy dlya obespecheniya regionalnogo razvitiya]. *Journal of Economic Regulation*, 7(4), 117-129. <http://dx.doi.org/10.17835/2078-5429.2016.7.4.117-1290>
23. Ukrinform (2018). *Основні тенденції та виклики ринку праці у 2018 році [Osnovni tendentsii ta vyklyky rynku pratsi u 2018 rotsi]*. Retrieved from <https://www.ukrinform.ua/rubric-presshall/2506257-osnovni-tendencii-na-rinku-praci-v-umovah-stabilizacii-ekonomiki.html>
24. Wilson, T. (2012). *A review of business-university collaboration* (89 p.). Retrieved from <https://www.gov.uk/government/publications/business-university-collaboration-the-wilson-review>
25. Work.ua (n.d.). Retrieved from <https://www.work.ua>
26. World Bank Group (2015). *Skills for a modern Ukraine* (36 p.). Retrieved from [http://www.ipq.org.ua/upload/files/files/03\\_Novyny/2015.11.17\\_Skills\\_for\\_Modern\\_Ukraine/Skills%20for%20a%20Modern%20Ukraine\\_Launch\\_Final%20Nov%2017.pdf](http://www.ipq.org.ua/upload/files/files/03_Novyny/2015.11.17_Skills_for_Modern_Ukraine/Skills%20for%20a%20Modern%20Ukraine_Launch_Final%20Nov%2017.pdf)
27. World Economic Forum (2016). *The future of jobs. Employment, skills and workforce strategy for the fourth industrial revolution* (global challenge insight report) (167 p.). Retrieved from [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf)