

# Internationalization of University Human Capital in the world market of educational services

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**Abstract**—In our research we consider the issues of internationalization of human capital of the University in the world market of educational services. At the present stage of the economic development of the educational services market, it is necessary to take into account the process of internationalization of universities. International experience helps to develop and increase such a strategic resource as human capital. Our research is based on the development of a universal model into the world educational space, as well as the calculation of the economic effect from the introduction of the model. A correlation analysis of the author's indicator HCS and GRP of the region was carried out. The analysis of the indicators revealed the close relationship of HCS in the region and GRP. This dependence gives a positive economic effect of adapting the model of internationalization of the university's human capital.

**Keywords**—internationalization, human capital, world market of educational services, higher education, university, investments in human capital, universal model of integration.

## I. INTRODUCTION

At the present stage of development of society, the world is moving to the economy of knowledge, especially in the world market of educational services in the field of higher education. In accordance with changes in the world economy, knowledge becomes a key resource for the development of countries, while the carriers of knowledge, its producers and consumers are people. In this regard, we can say that human capital is becoming a major factor in the effective functioning of the economic and social systems of all hierarchical levels: the world, the country and region. The main factor in the development of human capital is the education system. The main source of human capital is the University. The Bologna process opened the door to the internationalization of the human capital of Russian Universities. The process of internationalization of the University in the world educational space includes a process of interaction with the partner university - member of the Bologna Process. Forms of cooperation can be conferences, congresses, seminars, joint educational programs, programs "Double diploma", research, mobility of students and professors, etc. The process of internationalization of the University contributes to the development and increase of human capital.

Within higher education, the importance of learning outcomes has become well-established. They are expected to guide the teaching and learning process, assessment, and curriculum development, while at the same time act as

foundational elements to transitions towards national qualifications frameworks, competency-based education, and international partnerships such as the Bologna agreement [13].

## II. METHODS

Relevance in the global economic space solution to the problem of human capital associated with the following key points:

- In a crisis, human capital becomes strategic resource for economic growth of the world economy;
- Human capital has characteristics that are specific to a particular country or region;
- The main condition for achieving a dynamic balance between partner universities is the process of internationalization of higher education;
- The lack of a human capital management model in the context of the integration of higher education in Russia into the world educational space which allows realizing all the hidden opportunities to the maximum.

Currently in Russia: «The great importance of increasing the share of the knowledge economy in the GDP, which is currently 13% in Russia, compared to 30% in Western Europe and the United States. The accelerated growth in the fixed asset and investment in the knowledge economy at levels of 20–25% and 20%, respectively, by 2020 have been justified»[1].

In domestic and foreign literature there are different approaches to the concept and evaluation of human capital, but there is no single one.

A.I. Dobrynin and S.A. Dyatlov under human capital understand "a person's stock of health, knowledge, skills, experience, which are used in production in order to obtain a high level of earnings" [5].

Díaz-Fernández M., López-Cabrales A., Valle-Cabrera R. give the following definition: "Human capital is the knowledge, skills, and capabilities of individuals, which are often based on a person's education and experience (Hitt & Ireland, 2002). Drawing on their human capital, managers make decisions and take actions, and employees perform prescribed tasks to implement the firm's strategies (Greer, Lusch, & Hitt, 2017)" [7].

Other scientific opinion states that "human capital has been considered as a whole, with an absolute value (Subramaniam and Youndt, 2005), or as a variable with two dimensions, value and uniqueness of knowledge (Lepak and

Snell, 1999), several typologies of competencies have nevertheless been established” [4].

Many economists agreed that human capital is a new resource of the economy, for example «Although organizations need both tangible and intangible resources to formulate and implement competitive strategy, today’s knowledge-based and service-focused economy has underscored the pivotal role of intangible resources (e.g., human capital) in creating sustained competitive advantage (Barney & Wright, 1998; Hitt, Bierman, Shimizu, & Kochhar, 2001; Pfeffer, 1994; Skaggs & Youndt, 2004) » [14].

In our opinion, the human capital of any university is a transformed form of modern highly skilled labor in the form of a set of human-accumulated competences gained in the process of education and career. Carriers and observers of the university’s human capital are not only employees, but also students.

In the near future, the formation of a higher education system in Russia will depend on the process of formation of high-quality human capital, as well as the processes of internationalization of universities, which we have presented in the form of the developed author’s system “university — human capital” in Fig. 1.

Education is a determining factor in the development of human capital, which is formed at the university and is represented as a set of human capital – HC1- HCN (Fig.1). Such a set of human capital can be attributed to the faculties of the university, as well as other subdivisions that provide educational services to society. Each faculty is developing professional-oriented human capital which must be adapted to the world and national labor markets.

Our analysis takes account of the fact that the various qualities of human capital are complementary to the productivity of each other, hence turning human capital accumulation by the rich and the poor into choices that exhibit strategic complementarities. Such complementarities could potentially increase the productivity of labor at its micro and macro levels, promote growth, and contribute to reducing inequality in income distribution [8].

The process of university internationalization is very important.

To equip higher education students to become global citizens who can contribute to solutions, internationalization of the curriculum is essential [9].

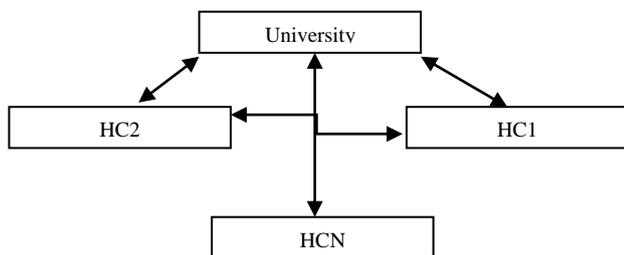


Fig. 1. System “University — Human capital”.

One of ways of internationalization of the university is the «Double Diploma» program together with a partner university in another country. In our scientific research, we rely on the program "Double Diploma" of Perm State University (Russia, Perm, PSU). The Faculty of Economics of Perm State University successfully cooperates with the Manchester Metropolitan University (MMU, Great Britain)

as part of the joint Master's program "International Business" (PSU) and "Project Management" (MMU). The program involves training in Perm and Manchester, as well as the re-entry of subjects for students of PSU. Together with the PSU Master's degree, graduates receive a Master's degree in MMU provided they successfully study and pass the thesis.

Benefits of the program:

1. Students are in the UK for only three months;
2. Students pay tuition in Manchester at a reduced rate, because they are re-read the subjects studied in PSU.
3. Students receive 2 diplomas.
4. Students simultaneously study in one of the best universities in Russia and in one of the best universities in the world.

Internationalization model is popular among European universities. «Policies on comprehensive internationalization are currently in the focus of discourses on the development of internationalization in European higher education» [10]. Russia is also trying to keep up with its European partners in the internationalization of higher education. The concept of internationalization of higher education has different interpretations.

Research collaboration is an important aspect of internationalization in higher education [6].

Bamberger A., Morris P., Yemini M. think that internationalization has three affects. One, humanitarian ideals coupled with neoliberal categories normalize inequalities, turning internationalization into a meritocratic global race, focusing on celebrating the possibility of the few who can achieve, instead of the embedded inequalities within the system, which disadvantage the many. Two, this allows neoliberal practices to be advanced through the discourse of internationalization and its association with progressive humanitarian values. Three, this neoliberal framing does not explain the nature of internationalization of HE in many nations; we demonstrate this by analyzing internationalization in China, Israel and Cuba [2].

In general, internationalization in higher education at the national, sectoral and institutional levels is commonly understood as the process by which the goals, functions and organization of the provision of educational services acquire an international dimension [11].

### III. RESULTS

The development of university human capital is impossible without taking into account investment processes. Investment in human capital is a process that is in constant motion and renewal. Investment - is the most important prerequisite for the production of human capital.

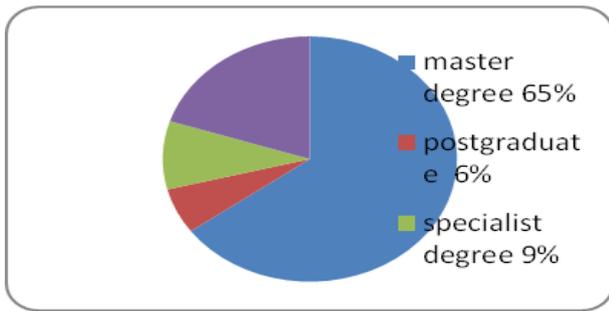


Fig. 2. Distribution of double degree programs by level of education in Russia [12].

“Investments in human capital include such factors as educational level, on-the-job skills training, health care, migration, and consideration of issues regarding regional prices and income” [3].

Most of the "Double Diplomas" programs in Russia are conducted at the master's level (65%), at the bachelor's level there are significantly fewer (20%). There are also double degree programs at the specialty level (9%).

In our scientific research, we have developed a universal model for integrating the human capital of a university into the world educational space.

Within the framework of the developed model, we see the process of formation of human capital of the University, taking into account the processes of internationalization. All departments of the University, as well as the partner University abroad participate in the formation. Graduates of the University, participants of the program "Double Diploma", will be able to realize their accumulated human capital in the global and national labor markets much faster and more efficiently. This model is universal for many Russian universities, and for the implementation of the program "Double Diploma" for one or more departments.

It is necessary to calculate the economic effect of the introduction of the model. We will offer the author's method of calculating the overall index of human capital for a particular region or country based on the number of births and the economically active population. In our scientific study, we proceed from the fact that the stock of high-quality human capital depends on the number of students with higher education and the number of students with a double degree, therefore, this indicator can be used to calculate the human capital of universities in the region as a whole.

This indicator is calculated for the year and characterizes the stock of human capital in a particular region or country for the year, the limits of the indicator value: [0 -1]

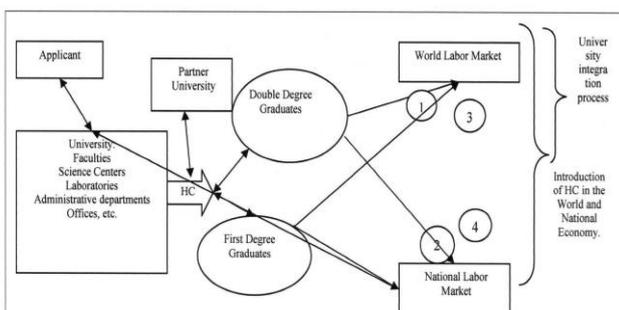


Fig. 3. Universal model of integration of human capital of the University into the world educational space.

HCS (human capital stock) =  $\frac{QSHi + NBi}{Epi}$ , where  
 QSHi – number of graduates with higher education in the region in i-thregion;

(including QSDDi - the number of graduates with a “Double Diploma” in the i-th region);

EPI – economically active population in the i-th region for the year;

NBi – number of births in the i-th region for the year.

We calculate the dynamics in the Perm Territory. The data is provided by the official statistics website and the PSU [15]. We got the result:

TABLE I. HSC FROM 2015-2017.PERM KRAI

Year	HCS
2015	0.08
2016	0.74
2017	0.75

We use correlation analysis.

TABLE II. HCS AND GRP IN PERM KRAI IN 2015-2017

Perm Krai (Russia)	HCS	Gross regional product (GRP)
2015	0.08	99.6
2016	0.74	96.7
2017	0.75	101.8

Thus, the correlation coefficient from 0 to 1 speaks of a directly proportional relationship (the more ... the more ...), and the coefficient from -1 to 0 speaks of the inverse proportion (the more ... the less ...). In our example, we have identified a directly proportional relationship between the stock of human capital and the GRP. The correlation coefficient is 0.23. We map the statistical relationship indicators HCS and GRP graphically (Fig. 4).

The analysis of the indicators revealed the close relationship of HCS in the region and GRP. This dependence gives a positive economic effect of adapting the model of internationalization of the university's human capital.

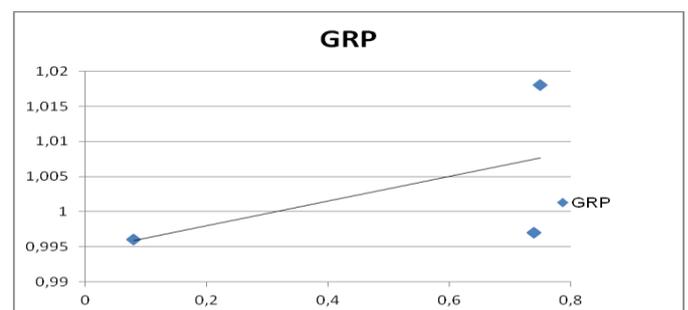


Fig. 4. Statistical relationship of HCS and GRP.

#### IV. CONCLUSION

Thus, we've come to the conclusion that it is necessary to manage the qualitative aspect of the university's human capital; the process of internationalization plays a huge role here.

The novelty of the article lies in the fact that the authors have developed the following key aspects:

1. System “University — Human capital”;
2. Universal model of integration of human capital of the University into the world educational space;
3. The analysis of the economic effect of the implementation of the model on the example of PSU and the Perm Krai;
4. The results obtained in the form of a correlation analysis. The linear trend of dependence of GRP and HCS indicator of the author's methodology of human capital assessment was constructed.

HCS is a kind of indicator and incentive for managing and adopting organizational and economic measures to stimulate and develop human capital. As a result, we came to the conclusion that in order to improve the qualitative characteristics of the university's human capital, it is necessary to develop an internationalization model, as well as a clear management decision-making algorithm to evaluate the economic effect of the results.

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