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Human Capital Management in the Context of the International Labor Migration Phenomenon

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The information society are increasingly developed in the XXI century in the world. It is characterized by the prioritization of information and knowledge among the production factors, the growing role and extension of information and communication technologies in all economic spheres, the reorientation of labor to intellectual and creative, growth of employment in services and technologies, etc. All these factors lead to the necessity for employees who have not only got appropriate education and qualifications, but also have developed cognitive skills, learning skills (lifelong, independent) and innovation, and, accordingly, a high level of human capital.

Nowadays, an essential feature is the intensification of globalization trends that have led to the internationalization and interdependence of national economies, the universalization of cultural and educational spheres, «blurring» borders that greatly facilitate the movement of goods and services, capital, people etc. In

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this regard, all the prerequisites are created to strengthen migration processes not only nationally and internationally, but also globally since a person ceases to be related to a particular state, and becomes a citizen of the world.

Traditionally, migration is a purposeful movement of the population outside a certain administrative-territorial unit, region, country or even continent. The reasons for such movements can be various factors of economic, social, political, environmental nature. However, labor migration is considered to be the most common type. It is related to finding a more financially lucrative job and employment abroad.

The scale of international labor migration is constantly growing. According to statistics from The International Labor Organization (ILO), as of 2017, labor migrants accounted for 164 million people (63.5% of all migrants). This is 9% more than it was recorded in 2013. The largest regions that attract labor migrants are Europe (23.9%), North America (23%) and Arab countries (13.9%) (ILO, 2018).

Such international population movements have a significant impact on the demographic, socio-economic development of cities and countries, and on the state and national human capital level. That is why in this paper we propose to explore the essence of the human capital, its peculiarities and features of management, taking into account the international labor migration phenomenon.

Today, the human capital theory is a general scientific and economic field, which is widely used in many disciplines and scientific works. The official date of its origin is the 60s of the XIX century, although most scholars agree that this concept appeared much earlier - in the works of representatives from classical political economy W. Petty, A. Smith, D. Ricardo and others. The human capital theory is closely connected with the works of Nobel laureates T.W. Schultz and G.S. Becker.

T.W. Schultz defined human capital as «an additional source of income provided by human knowledge, skills and abilities», and that investing in human capital, and even more so in education, is more profitable than in physical capital. At the same time, he identifies the following priority areas for investing in human capital: the medical field, education in both schools and the workplace, migration of people due to job changes (Schultz, 1961).

G.S. Becker noted in his study that «human capital is formed

through investment in people,» to which he included «education, training, health, migration, the search for information on prices and incomes, etc.» He devoted his work to studying the relationship between investing in human capital (including education) and the citizens' income (Becker, 1962). Thus, he did not separate human capital from the direct human worker who owns it. In his later work (Becker, 2003), he identifies three forms of human capital:

- ❖ General knowledge (or general human capital) is formed as a result of upbringing in the family, environment, and in the secondary and higher education institutions. It can be identified with the general worldview of man, universal and theoretical knowledge;
- ❖ Special knowledge (or special human capital) is formed as a result of practical work in the workplace, it can be identified with practical skills and experience;
- ❖ Other types of knowledge (or other human capital) is formed as the ability to work with information products and services used in the search for alternatives to the current type of activity».

Their research formed the basis for numerous further studies in this area, the selection of individual trends and approaches in the human capital theory and consideration of its role in other economic and non-economic doctrines. Thus, once, the human capital theory was a progressive concept that emphasized the importance of labor in the triad with capital and land. It means that numerous scientific papers have shown that productivity is significantly affected by the human resources quality, motivation and the nature of use.

Human capital is a complex and dynamic system, the composition of which has the ability to transform and change according to the requirements of time, the state of economic development and social order. The emergence of this concept is explained by the rapid scientific and technological progress, which changed the state of the social and labor relations sphere and increased the importance of a human and his abilities in the factors of production. In addition, the most important factors that caused the main ideas of the human capital theory include the revolution in management methods (thanks to F.W. Taylor) and the financial revolution (Melnychuk, 2015).

According to the World Bank, in the structure of the countries' national wealth, human capital occupied a dominant position during

1995-2014: details in Figure 1.

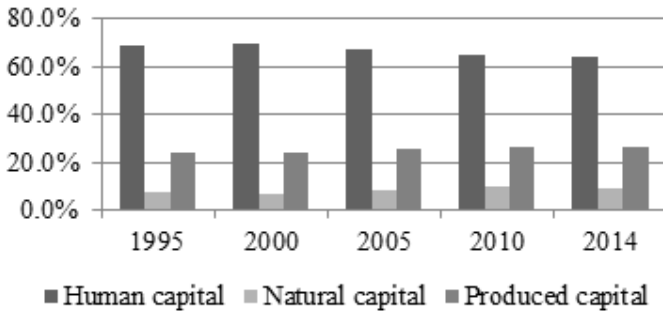


Fig 1. – Distribution of the national wealth structure by asset type in the world as a whole for 1995-2014,% Source: Lange et al.,2018.

Analyzing the above graph, we observe a tendency to the prevalence of human capital in the national wealth structure in the world as a whole. Its share in 1995 was 68.9% and decreased to 64.5% in 2014. The produced capital increased to 26.5% in 2014 compared to 23.8% in 1995, and natural capital - to 9.4% compared to 7.6% respectively.

At the same time, the distribution of national wealth in the world by geographical regions and income level attracts attention (Figs. 2 and 3).

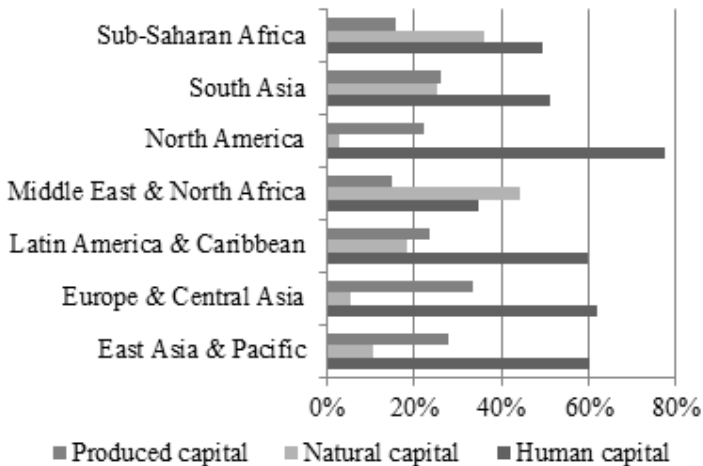


Fig 2. – Distribution of the national wealth structure by geographical regions in 2017, % Source: Lange et al.,2018.

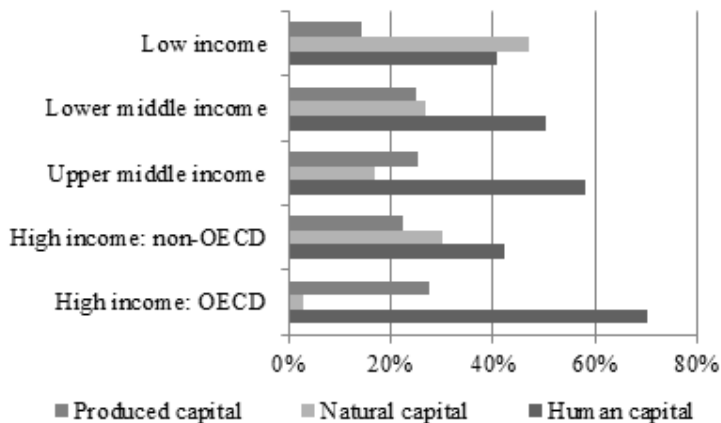


Fig 3. – Distribution of the national wealth structure by level of income in 2017, % Source: Lange et al., 2018.

These graphs enable to identify the following global trends. The Middle East & North Africa region - 34.5% and Sub-Saharan Africa - 49.6% have the smallest share of human capital in the geographical structure of national wealth as of 2017. The highest share of human capital was observed in North America - 77.3% and Europe & Central Asia - 61.8%. At the time of the analysis, they had the lowest share of natural capital (2.7% and 5.3%).

In terms of income, the situation as of 2017 is as follows. For Low-income countries, the human capital share in the national wealth structure was 40.8%, which is the lowest in the analyzed structure. At the time of the analysis, natural capital prevailed in them (47.1%). The highest share is observed in High-Income (OECD) countries - 70.4%

The given analysis enables to confirm the scientific researches claiming influence of a human capital development level on the country's economic development level and quality of the citizens' life. The we consider the general essence and basic peculiarities of human capital according to various scientists' studies.

The World Bank gives the following definition of human capital: «consists of the knowledge, skills, and health that people accumulate throughout their lives, enabling them to realize their potential as productive members of society» (World Bank. 2018).

Most scientists (Dzhumayeva and Mukhutdinova, 2012) agree

that human capital can be viewed through in terms of the following general components:

- ❖ Innate or vital component (qualities acquired at birth - health, talent, charisma, natural abilities);
- ❖ Acquired component (qualities that a person receives throughout life: from society through upbringing, education, training; independently through self-education and self-development).

As we can see, human capital is a rather complicated category, because it includes many qualitative features that are quite difficult to measure. Nevertheless, various approaches to its calculation have been constantly developed in scientific circles and at the world community level. One of the most modern and relevant is the World Bank's Human Capital Project (HCP).

According to the World Bank, there is a rather innovative definition of the human capital, which means: "the human capital that a child born today can expect to attain by age 18, given the risks to poor health and poor education that prevail in the country where she lives »(World Bank, 2018). It means that this index takes into account a long trajectory of person's life development, during which his or her human capital is formed. It consists of the following components (scale ranges from 0 to 1):

- 1) The children's survival rate (based on data on the mortality rate of children under five years old), because, unfortunately, not all children reach the age when the process of formation and accumulation of human capital begins;
- 2) Study at school, measured as the expected duration of schooling (quantitative indicator, can range from 4 to 14 years), adjusted for quality learning outcomes - harmonized learning outcomes (HLOs, can range from 300-600 points according to the World Bank));
- 3) Health status, which includes the adults' survival rate (as a share of 15-year-olds who will live to their 60th birthday) and the prevalence of short stature among children under 5 years old (World Bank, 2018).

Quite interesting in the context of the proposed index is its relation to the level of income that the country will receive in the future (actually - to the level of GDP). Thus, if the human development index is 0.7, then the country with the appropriate investment in human capital (education and health), could receive 30% higher

productivity, and hence the level of economic development.

Due to the novelty of the proposed project, statistical information is rather limited and is presented only for October 2018, which complicates the conduct of the thorough research on its basis. However, the results show that the least developed states in terms of human capital development are the countries from the Sub-Saharan Africa region: Chad, South Sudan, Liberia, Mali, Niger (index in the range of 0.29-0.32). The highest rates (0.82-0.88) are typical for the East Asia & Pacific region countries: Hong Kong, Japan, Korea, Singapore. It should be noted that the most developed countries in the Europe & Central Asia region have human capital index at the level of 0.7-0.8 units. It means that the following relation is observed: low-income countries, i.e. those with limited resources for the development of such spheres as education, health care, etc., have the lowest human development index and, conversely, high-income countries have the highest ones.

The World Bank project and the approaches analyzed by scientists above, allow to state that the human capital formation and development processes are not uncontrolled or spontaneous. They should be subject to targeted influence and management at the various actors' level.

The performed theoretical analysis allows us to state that the human capital management process takes place at three interrelated levels, each of which is represented by a different entity and performs its own functions (Table 1):

- ❖ Macro-level - the state level, which ensures the implementation of national or local level issues, responsible for the development of the social sphere (education and science, health, culture and art, and regulate the labor market and its balance. All investments in human capital are made at public expense;
- ❖ Meso-level - the level of a particular business entity, i.e. an employer that operates in the country's labor market and provides primarily his or her own interests (profit, expansion of sales, increase competitive advantages, etc.). All investments in human capital are made at the enterprise's expense;
- ❖ Micro-level - the level of an individual or his/her family, who run a joint farm and make joint decisions. All investments in human capital are made at their own expense.

Therefore, human capital goes through various stages of its

establishment, starting with the formation (usually it includes the stages of education, tempering, training and preparation of a human for work), use (directly in the practical activities) and development (through lifelong learning, monitoring their health and physical activity, self-education and self-development, etc.). Here is another special feature of human capital - its inseparability from a human at all stages of its formation. It means that the human capital, like people, is not the subject of sale, but is the subject of rent for a certain period of time, the payment is wages and other income received by the human.

Table 1. – Features of the main stages in human capital management depending on the entity

Management entity	Stages of human capital management		
	Formation	Use	Development
An individual	Own expenses for formal education, maintaining the level of health, visiting cultural institutions to form a worldview, etc.	Implementation in education and in the workplace	Own costs for non-formal lifelong learning, self-education, cultural leisure, sports, etc.
Employer	Planning, selection and hiring of staff, its adaptation, targeted funding for training of necessary specialists. Provision of labor protection, medical examination, health workers' insurance, provision of a certain service; (transport costs, provision of a company car)	Direct activity of the business entity, which can be measured as labor productivity and performance, social and environmental responsibility of the business	Costs for vocational training and retraining, advanced training, participation in non-formal education activities, trips to share experience. Providing vacation vouchers, tickets for cultural leisure, activities to unite the team, increase motivation, etc.
State	Public expenditures for education, science, culture, health care, social protection. Development of effective labor and social legislation	Distribution of human capital according to the needs of the real economic sector and regulation of supply and demand in the labor market, which can be expressed by the country's economic and social development	Organization of non-formal education, vocational training and retraining, advanced training, social transfers and measures to maintain health and recreation, etc. at public expense

Source: compiled by the authors based on (Pozdnyakova and Sled, 2010; Pyshulina, etc, 2018)

Some scholars also add non-governmental and international organizations to the direct entities of human capital management,

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since they provide technical and financial assistance for educational, social, environmental activities and programs, support and sponsor gifted youth and scientists, etc.

Grishnova O.A. notes that, despite the level of governance at which human capital is invested, the return has a tripartite effect:

- ❖ For an individual - in the future growth of own income, quality of life, job satisfaction;
- ❖ For the enterprise - increase of labor productivity and competitiveness of the business entity, reduction of losses of working hours and cost savings;
- ❖ For the state - GDP growth, improving the citizens' welfare, their economic activity «(Grishnova, 2001).

Thus, one of the fundamental ideas or even the core in the human capital theory is the need to invest in people. Investments in human capital in scientific works are considered as:

- ❖ Any action that enhances the workers' skills and abilities and thus the productivity» (K. McConnell and S. Brew, 2005);
- ❖ Targeted expenditures on human development in money or other form, which contribute to the improvement of intellectual and professional growth, increase productive abilities, which brings future income to both the individual and society as a whole» (Pishchulina et al., 2018).

The analysis of scientific works regarding the classification of investment in human capital allows us to form the following Table 2:

Table 2. – Generalization of approaches to the classification of investment in human capital

Feature	Components and their brief description	Author/source
By orientation	- direct investment - investment in the development of particular person's human capital; - social and institutional investments - investments in the development of the institutional environment in which human capital will be formed	Nosyk O. M.

By the stage of the human life cycle	- initial, i.e. investments aimed at the formation of human capital (usually referred to the stages preceding the practical activities of people) - additional, i.e. investments aimed at the development, accumulation and sale of human capital (stage of practical human activity and aging)	Nosyk O. M.
By the purpose of orientation	- education costs; - health care costs; - costs of mobility (labor migration).	McCConnell K.R., Brew S.L., Vasylchenko V.S. and others, Grishnova O.
	The upbringing of children, education, industrial training, information training, health care, migration	Pyshchulina and others
	Expenditures on education, health care, information retrieval, on-the-job training, research and development of intelligence, migration, motivation, and on ecology and healthy living	Sokolova O.S.
	The generally accepted investments include investment in the formation and development of human ability to learn, mastering knowledge and skills, the transformation of information into useful knowledge that forms capital - "trainability"	Kapelyushnikov R.
	Investments in human security, training of an effective elite, in the formation and development of civil society, improving the efficiency of institutional services, in the environment of human capital, in improving the quality of life and the inflow of capital from outside the country or region	Korchagin Yu.
	Investment in mental and physical health Investment in general and vocational education (including the constant vocational training in the workplace) Investment in practical professional and life experience Investment in motivation and flexibility of thinking	Borodina O.

Every type of investment in human capital performs its function. Kapelyushnikov R. (2012) points out in his work «education and training in the workplace increase the amount of human capital, health care extends its service life, migration and information retrieval in the labor market contribute to higher prices for its

services, birth and upbringing of children reproduce it in the next generation.

At the same time, there are many risks from investing in human capital, which include the following:

- ❖ The need for a long period of investment (for example, obtaining higher education takes an average of 5-6 years, while for tangible assets this period involves their depreciation) and the effectiveness of one-time or temporary investments;
- ❖ The lack of guarantees and the difficulty to forecast the investment, because there is always the possibility to change jobs to more profitable, emigrating to another country, etc. ;
- ❖ Return on investment depends on a person's life expectancy and stage of his/her life cycle, and therefore there is no rapid and noticeable effect in a short period of time.

According to the research, different entities can carry out investments in human capital (Table 2) throughout a person's life, but direct control is performed mainly by a specific person and requires additional effort, motivation and financial investment.

Thus, one of the investments in human capital is the ability to mobility. The analysis of approaches to the definition of «mobility» allows us to consider it as follows:

- ❖ According to the dictionary it means «mobile, capable of rapid movement, action» (Ozhegov and Shvedova, 1997);
- ❖ Potential mobility, i.e. the individual's readiness to change their social or territorial status», the possibility to change the type of work (Tilikina, 2019);
- ❖ Realized mobility, i.e. synonymous with the word movement of the population, which is migration» (Tilikina, 2019).

In today's globalized world, the human capital mobility is not uncommon. It relates most often to a change of working place (labor migration) and, consequently, financial situation for the better. There are many other reasons, such as economic, political, social, environmental, etc. factors of influence. In the context of our study, we will focus on labor migration.

International labor migration has numerous advantages and disadvantages, which we propose to consider at three levels according to the subjects of human capital management (Table 3).

Table 3 – Positive and negative effects of labor migration on the main entities of human capital management

Management entity	Positive effects	Negative effects
Macro-level (country-donor) and meso-level (local business)	Reduction of tensions in the labor market Increasing household incomes through migrant transfers and poverty In case of migrants' return - receiving persons with a higher level of human capital and capital	Decrease in human capital in the country, the «brain drain» phenomenon, «staff shortage» The «aging of the nation» Illegal migration and human trafficking are popular Increasing the tax burden Negative dynamics of GDP
Macro-level (recipient country) and meso level (local business)	Increase in the human capital in the country due to the labor influx Reduction of the cost for employees' training/retraining, especially highly qualified Positive dynamics of GDP	Outflow of financial resources through immigrant remittances Increase in the social tension, criminogenic situation Growth of the shadow economy
Micro-level (individual family or person)	Increase in the income level, and the level and quality of life Development of own human capital at the expense of the received new knowledge and skills	Psychological and social pressure (lack of contact with family, friends, ignorance of language and traditions, partial social isolation) Financial pressure (during job search and adaptation to new conditions)

Certainly, the impact of migration is not restricted to these consequences since it is interconnected with all economic and non-economic processes in the country in all spheres of life. However, we have listed the most common and obvious results, which cannot be ignored.

Most often, investments in international migration are considered at the micro-level. It means that in the existing model of human capital, investment in the voluntary mobility consist in «short-term costs related to mobility are carried out to obtain long-term benefits» (Galenko and Plys, 2018). Provided rational decision-makers' behavior, if the potential benefits of mobility offset monetary and moral costs, the decision is most likely to be positive.

Thus, the net benefits will consist of the difference between the discounted utility estimate at new work (obtained as a result of migration) and the past place of work, taking into account related costs. Migration costs include not only financial costs for moving and settling in a new place, self-sufficiency for the period of job search, but also many non-financial ones: collecting information about

possible place of work and place of residence, diaspora, language and culture, psychological costs due to loss opportunities to communicate with family, friends, etc.

One should note that at this stage when talking about the cost of migration as an investment in the human capital mobility, we consider the level of individual's (family) management, who is directly interested in it and migration is voluntary.

Migration movements will be directed to regions or countries with better opportunities and where the human capital price will be higher. Therefore, they will bring there, the positive or negative effects listed in the table above. This thesis corresponds to the principles of the migration doctrines classics - the Ravenstein's theory of «pull- push factors». Moreover, based on the analysis of research in this area, there is a tendency that places with «better conditions» attract migrants more intensively than places with «bad conditions»; they push them out. It is due to the fact that people with low incomes and on the brink of poverty do not always have the means to cover the migration costs.

There is an opinion in the scientific literature that if we compare migrants and non-migrants, the former may have a larger stock of human capital. It is caused by the fact that more ambitious and purposeful individuals often migrate. They want to improve their lives and will make every effort in a new place. And although when they move they find themselves in a less favorable position than the locals, but over time they can achieve a better position (Moiseenko and Chudinovsky, 2000).

Summarizing the study, it is necessary to note the following key points. The human capital theory is a very relevant and important concept today, the essence of which is that a person throughout his/her life through education, practice, physical and cultural development forms own capital, the return of which has many positive externalities in economic and non-economic spheres. In conditions of low prices for human capital and its underutilization, crisis phenomena in the economic, social, cultural or political spheres, there are all grounds for international labor migration. That is why human capital management is an important strategic task that must be controlled not only at the individual's level, but also at business and the state levels. The effective formation of such human capital requires appropriate investments, considered as investments from various sources. The most common investment in human capital in academia

include expenditures for education, health care and mobility.

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