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## INTERNATIONAL COOPERATION IN COMPETITION FOR HUMAN CAPITAL

## МІЖНАРОДНА ВЗАЄМОДІЯ У КОНКУРЕНЦІЇ ЗА ЛЮДСЬКИЙ КАПІТАЛ

The substantive characteristics of competition for human capital are studied. The positive and negative global effects of competition for human capital are researched. The mechanism for establishing international cooperation in competition for human capital is presented. The determinants of the impact of globalisation and technological changes on competition for human capital are identified. To implement innovative ideas and business models, modern companies need highly skilled personnel. Competition for human capital can have a certain impact on innovative development, macroeconomic stability, social aspects, etc. It is precisely because of the existence of such competition that certain countries invest in education, introduce innovative human resource management technologies. Increased competition for human capital is caused by the migration of skilled workers from one country to another. This is because such workers are looking for better living conditions, opportunities for their own professional development. Technological changes have radically reformatted the requirements for employee qualifications. Through systematic international cooperation, it is possible to create a balanced mechanism of competition for human capital that will be beneficial for many global market participants. In the course of analysing the impact of globalisation and technological change on competition for human capital, determinants were identified. In order to reduce the negative effects of competition for human capital, countries should create certain tools to manage such competition. Relevant management requires an integrated approach that ensures effective adaptation of individual entities of competitive relations to new conditions in the global labour market. In the context of this research, the instruments for managing competition for human capital in the face of global instability were grouped into two main directions: strategic human resource management, technological and organisational adaptation. The proposed groups of tools for managing competition for human capital in the face of global instability allow to create a balanced approach to managing such capital.

**Keywords:** competition, human capital, globalisation, digitalisation, international interaction, global effects, mechanism, establishing.

Вивчено змістовні характеристики конкуренції за людський капітал. Досліджено позитивні та негативні глобальні ефекти конкуренції за людський капітал. Наведено механізм налагодження міжнародної взаємодії у конкуренції за людський капітал. Виокремлено детермінанти впливу глобалізації та технологічних змін на конкуренцію за людський капітал. Для реалізації інноваційних ідей та моделей бізнесу сучасним компаніям необхідні високваліфіковані кадри. Конкуренція за людський капітал може здійснювати певний вплив на інноваційний розвиток, макроекономічну стійкість, соціальні аспекти тощо. Саме через існування такої конкуренції ті чи інші країни інвестують в освіту, впроваджують інноваційні технології управління людськими ресурсами. Посилення конкуренції за людський капітал обумовлює міграція кваліфікованих працівників з одних країн до інишх. Це пояснюється тим, що такі працівники шукають більш кращі умови життя, можливості для власного професійного розвитку. В сучасних умовах технологічні зміни кардинально переформатовали вимоги до кваліфікації працівників. Завдяки системній міжнародній співпраці  $\epsilon$  можливим створення збалансованого механізму конкуренції за людський капітал, який буде вигідним для багатьох учасників світового ринку. У ході аналізу впливу глобалізації та технологічних змін на конкуренцію за людський капітал виокремлено детермінанти. Для зменшення негативних ефектів конкуренції за людський капітал країни повинні створювати певний інструментарій для управління такою конкуренцією. Відповідне управління потребує застосування комплексного підходу, який забезпечить ефективну адаптацію окремих суб'єктів конкурентних відносин до нових умов на світовому ринку праці. В контексті даного дослідження було згруповано інструменти управління конкуренцією за людський капітал в умовах глобальної нестабільності за двома основними напрямами: стратегічне управління персоналом, технологічна та організаційна адаптація. Запропоновані групи інструментів управління конкуренцією за людський капітал в умовах глобальної нестабільності дозволяють створити збалансований підхід до управління таким капіталом.

**Ключові слова:** конкуренція, людський капітал, глобалізація, цифровізація, міжнародна взаємодія, глобальні ефекти, механізм, налагодження.

**Problem statement.** Human capital is a resource of strategic importance. It provides opportunities to achieve certain competitive advantages at different levels (national,

international). At the same time, human capital is a basic factor of economic development in the current economic environment. Entrepreneurial entities in the market compete

for highly qualified specialists. At the same time, such competition is intensifying not only between entrepreneurial entities but also at the interstate level. Special programmes are constantly being developed to attract highly qualified specialists. This is particularly relevant for those countries that are experiencing a brain drain to more economically developed countries. The corresponding trend leads to a shortage of qualified specialists in the market, which causes a corresponding slowdown in economic development and increased imbalances of a socio-economic nature.

The active development of digitalisation technologies and the ability to perform certain functional duties remotely create new opportunities for international cooperation in the field of human capital. In this context, it is relevant to develop strategies that will allow a country to compete for qualified specialists and integrate them into the economy in an appropriate way.

A detailed study of the aspects of international interaction in competition for human capital is particularly important in the current environment. This, in turn, provides certain opportunities for developing strategies for managing labour resources at the macro- and microeconomic levels.

Analysis of recent research and publications. International interaction in competition for human capital, to some extent, encompasses the study of both global migration trends and individual policies for attracting and retaining qualified professionals. Domestic and foreign scholars also pay attention to aspects of the impact of digitalisation on international labour migration.

The scientific works of V. Prokhorova [1], O. Mnykh [1], I. Huzenko [1], V. Antoniuk [2], and O. Pavlova [3] consider the phenomenon of a brain drain and its consequences for developing countries. The researchers emphasise that developed countries are actively using the policy of a talent drain by introducing simplified visa regimes, tax incentives and integration programmes for highly qualified professionals. Scientific papers [4; 5] indicate that individual countries apply different approaches to human capital management. For example, countries such as Canada and Germany implement programmes for immigrants aimed at IT professionals, engineers, scientists, etc. Some countries are trying to retain their existing human capital by creating a favourable business environment, increasing wages, improving working conditions, etc. Scientific publications of A. Kolot [6], O. Herasymenko [6], A. Shevchenko [6], T. Perehiniak [7] emphasise the importance of digitalisation in changing traditional models of personnel mobility. At the same time, the rapid development of remote work reduces the need for physical migration, allowing specialists to work in the global market without moving. This, in turn, provides certain additional opportunities, as individual countries will be able to adapt to new labour market realities.

International interaction in competition for human capital is generally defined as a certain process. At the same time, this process is characterised by complexity and can be

multidimensional. It should be noted that individual countries of the world may use their own strategies both to attract and retain qualified specialists in the markets. At the same time, digitalisation and globalisation are aimed at changing the existing approaches to the mobility of highly skilled professionals. Accordingly, it is necessary to develop certain strategies that will take into account the interests of a particular country and global labour market development trends.

The goal of the article is to study the substantive characteristics of competition for human capital, as well as to research the global effects of such competition and to develop a mechanism for establishing international cooperation in competition for human capital in modern conditions.

Presentation of the main results of the research. Competition for human capital, acting as a mechanism, can have a certain impact on innovative development, macroeconomic stability, social aspects, etc. It is precisely because of the existence of such competition that certain countries invest in education, introduce innovative human resource management technologies.

It should be noted that such competition is dynamically intensifying in the context of globalisation. Accordingly, competition in the market for highly qualified specialists in information technology, biotechnology, renewable energy sources, etc., is being monitored. The need for specialists who are able to implement innovations, work with the latest technologies is growing dynamically. It is also worth noting that the intensive development of new economic sectors (fintech, green energy, robotics, etc.) is creating demand for new professions. Accordingly, the demand for intellectual capital (researchers, managers, engineers, etc.) is growing. For the successful implementation of innovative ideas and business models, modern companies need highly qualified personnel. It is worth highlighting some of the factors that determine success in the global labour market in today's conditions (fig. 1).

Increased competition for human capital is caused by the migration of skilled workers from one country to another. This is because such workers are looking for better living conditions, opportunities for their own professional development. Certain countries of the world (the USA, Canada, the UK, etc.) are constantly improving their policy (through

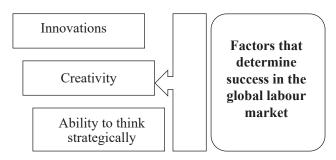


Fig. 1. Factors that determine success in the global labour market

Source: developed by the author based on [1;2;3;6;7;8;9;10]

the creation of special programmes, certain simplification of visa procedures) to attract skilled professionals from other countries. The EU, Japan, and South Korea are actively attracting qualified young professionals to address existing demographic problems. The integration of the global labour market provides certain opportunities for qualified specialists to work remotely (anywhere in the world). This, in turn, reduces barriers for companies and, to some extent, increases competition for highly skilled personnel who can work at the global level (remote workplaces and free access to them, the creation of global networks for freelancers, etc.).

In general, changes in the structure of economies force certain countries to compete in some way for skilled professionals who are able to work in new areas. Changing expectations from the workplace, social values also affect competition for human capital. Accordingly, modern companies must constantly and dynamically change their HR policy, create appropriate conditions for qualified professionals (to retain them).

Labour shortages can occur due to population ageing. This, in turn, intensifies competition for skilled professionals in the context of a decrease in the number of the working-age population.

To summarise the above, it is worth outlining the substantive characteristics of competition for human capital at the global level (fig. 2).

Entities directly involved in competition for human capital must constantly adapt own strategies to attract and retain qualified personnel in the markets.

It is worth highlighting the global effects of competition for human capital (fig. 3). It is important to outline its positive and negative consequences for the global economy, social sphere, etc. At the same time, attention should be paid to the impact of globalisation and technological changes (automation, artificial intelligence (AI), remote employment, etc.) on such competition and its transnational nature should be taken into account.

It should be noted that the relevant technological changes have fundamentally reformatted the requirements for employee qualifications. Through systematic international cooperation, it is possible to create a balanced mechanism of competition for human capital that will be beneficial for many global market participants.

Fig. 4 shows the author's development of a mechanism for establishing international cooperation in competition for human capital.

When analysing the impact of globalisation and technological changes on competition for human capital, several determinants should be identified:

- the role of artificial intelligence in competition (AI replaces some professions, creates a new level of competition between humans and machines);
- the formation of "digital states" and "virtual market segments" (conditions are created for remote work of qualified professionals without physical immigration);
- inequality in access to knowledge at the global level (the gap between developed countries in the context of digitalisation and those lagging behind is widening).

In order to reduce the negative effects of competition for human capital, countries should create certain tools for managing such competition. Relevant management requires an integrated approach that ensures effective adaptation of individual entities of competitive relations to new conditions in the global labour market.

The tools for managing competition for human capital in the context of global instability can be divided into groups of tools: strategic human resource management, technological and organisational adaptation. It is worth describing these groups in more detail.

The group of tools "Strategic human resources management" is focused on developing human capital by improving working conditions, employee loyalty and organising the company's internal processes:

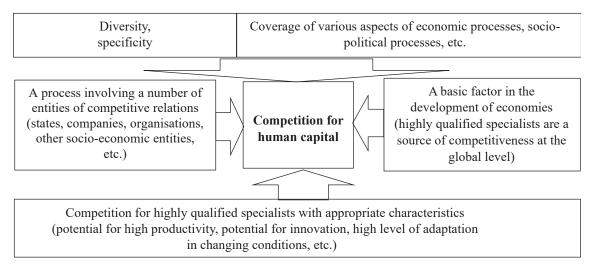


Fig. 2. Substantive characteristics of competition for human capital at the global level

Source: developed by the author based on [1;2;3;6;7;8;9;10]



Fig. 3. The global effects of competition for human capital

Source: systematised by the author based on [8; 9; 10]

- staff mobility and flexibility of working conditions (in the context of global instability, employers may face problems of job instability. To ensure competitiveness, it is important to develop flexible forms of employment that allow for a quick response to changing conditions. This includes such tools as temporary contracts for rapid adaptation; flexible work schedules; freelancing and project contracts, which allow engaging specialists for a short period to perform specific tasks. The advantages of this tool are reduced costs for permanent employment; attracting highly qualified personnel for short periods, etc.);
- investing in skills development and training (in the face of constant change and rapid evolution of technologies, companies must constantly invest in training and retraining of their employees. This may include professional development programmes for existing employees; online courses and certifications

in the most relevant areas for the industry; corporate training and workshops to increase knowledge in specific industries. The benefits of such a tool include enhancing the qualifications of employees; improving adaptive capabilities in the face of technological change, etc.);

– improving the company's brand (competition for human capital may require entities of competitive relations to actively work on their reputation in the global labour market. A recognisable company brand attracts the best specialists, reduces staff turnover. The tools include: development of corporate culture, the programme of loyalty and motivation (bonuses, awards, participation in decision-making), transparency and communication about development and career opportunities. The benefits of this tool include attracting highly qualified employees, reducing staff turnover, improving the moral climate in the company, etc.);

# The main objective of a mechanism for establishing international cooperation in competition for human capital

Creating a harmonious international environment for talent development, reducing a brain drain, fostering global knowledge exchange and ensuring equal access to opportunities

## Countries ↔ Educational and scientific institutions

#### **⊘** Mechanisms of interaction:

State funding of international exchange programmes (Erasmus, Fulbright).

Recognition of diplomas and certifications in different countries. Joint scientific and research initiatives and the creation of international technology hubs.

### **Countries** ← **Transnational corporations**

#### ✓ Mechanisms of interaction:

Create favourable conditions for attracting foreign specialists (visas, preferential taxation).

Partnership in education and personnel training (state orders for IT specialists, doctors, engineers).

Joint technology initiatives that attract global talents.

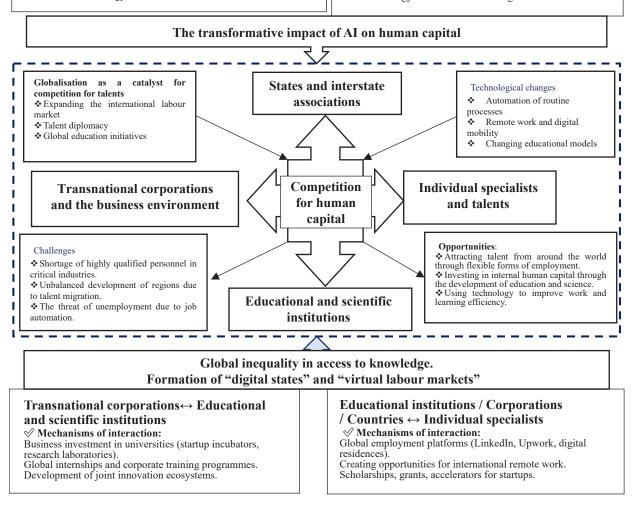


Fig. 4. A mechanism for establishing international cooperation in competition for human capital in the context of globalisation and technological changes

Source: the author's development

- adaptive leadership and teamwork (tools in this area include: leadership training for managers at all levels; creation of cross-functional teams to solve complex current problems; tools to support collective motivation and communication (online platforms, interactive feedback tools, etc.). The benefits of such a tool include increasing the efficiency of teamwork; engaging and motivating employees to innovate, etc.);
- motivation, compensation (the system of compensation and rewards should be adapted to the current con-

ditions in order to retain and motivate qualified specialists. This may include: flexible bonus programmes that depend on labour performance; a share in the company's profits to encourage employees to work efficiently; social packages (insurance, pension programmes, medical services, etc.). The benefits of this tool include increasing employee loyalty; stimulating high performance through financial motivational tools, etc.);

 partnerships between universities and companies for joint training of specialists (allows companies to provide themselves with highly qualified personnel adapted to the specific requirements of the labour market and promotes the development of training programmes that take into account the latest trends, thereby stimulating the flexibility and competitiveness of employees. This may include: development of joint curricula, practical training and internships, joint research and innovations, retraining and certification programmes, etc. The benefits of such a tool include matching skills with labour market requirements, rapid adaptation to changes, improving the quality of personnel, stimulating innovations, etc.);

The group of tools "The technological and organisational adaptation" focuses on implementing technologies and improving organisational processes to increase efficiency and adapt to global changes:

- automation and digitalisation of business processes (effective human capital management involves the use of innovative technologies. Automation and digitalisation of work processes can free up specialists from routine tasks and allow them to focus on more important aspects. This includes the implementation of human resource management systems to optimise HR processes; AI and machine learning for recruitment and performance evaluation; business process automation to increase productivity, etc. The benefits of such a tool include increased work efficiency; reduced costs for routine processes, the growth of innovation and productivity, etc.);
- analysis of the state of the labour market and forecasting of development trends (helps companies respond in time to changes in demand for certain professions. Tools include: HR analytics to determine staffing needs; monitoring

competitors and the labour market to predict future changes; risk assessment through the study of macroeconomic factors and possible changes in the market, etc. The benefits of such a tool are forecasting human resource needs; rapid adaptation to changes in the labour market, etc.).

The above groups of tools for managing competition for human capital allow for a more balanced approach to managing such capital, where strategic HR initiatives are combined with effective organisation and technological solutions.

**Conclusions.** Globalisation and technological progress are changing the format of competition for human capital, making it even more intense and transnational. Traditional methods of attracting talent are giving way to new approaches: digital mobility, immigration incentives for specialists, automated recruitment systems.

Tools for managing competition for human capital should be flexible, adaptive and innovative. Modern companies that actively invest in employee development, constantly improve their working conditions, use innovative technologies, etc., can maintain their competitive advantages.

The substantive characteristics of competition for human capital are presented. The positive and negative global effects of competition for human capital are considered. A mechanism for establishing international cooperation in competition for human capital is determined. The determinants of the impact of globalisation and technological changes on competition for human capital are identified. The tools for managing competition for human capital in the context of global instability are grouped into two main directions.

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