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Human Resource Development Management in the Context of Current Migratory and Security Threats

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ABSTRACT

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In today's realities and under pressure from global migration processes, security threats and economic instability, the issue of human capital development management is of particular importance, as the ability of business structures to adapt to changes in the external environment, demographic transformations and technological challenges depends on the level of competence and flexibility of labor resources. The study is based on the method of multidimensional scaling, which allows the assessment of the professional level of human capital by transforming quantitative indicators into qualitative ones on a five-point scale. The author's own formula is used for the assessment, taking into account the weighting coefficients, and the consistency of expert assessments is determined through the coefficient of multiple concordance. An econometric model for assessing the level of human capital development, taking into account professional indicators, has been developed. The model uses weighting coefficients determined through expert ranking and contains an analysis of consistency by the concordance coefficient, which ensures high reliability of the results, confirmed by statistical criteria. The model creates conditions for transforming quantitative assessments into qualitative levels, which contributes to a more accurate analysis of human capital in the context of both migration and security challenges. Further research can be aimed at improving methods for assessing universal skills, developing programs for integrating migrants into the system of continuous learning and creating tools for forecasting competence needs in the context of digital transformation and geopolitical changes, which will help to improve the efficiency of human capital management at all levels of the country's economy.

In the context of dynamic transformations of the global economy driven by digitalization, innovative development, and the aggravation of migration and security challenges, the issue of effective human capital management is becoming particularly relevant. The current scientific literature lacks a single unified concept of human resource management that would take into account radical changes in the forms and methods of interaction between labor market participants in the digital economy and growing migration flows (Tokio Marine Holdings, Inc., 2024). Instead, there is a wide variety of approaches to revealing the role of human capital based on a multifactorial analysis of socio-economic processes, the transformation of employment patterns, and the impact of globalization risks. One of the main problems that complicates the formation of an effective model of human capital management is the difficulty of collecting, systematizing and analyzing relevant information on the implementation of modern human resource management technologies (Abubakar et al., 2024). Also important is the issue of quantifying their impact not only on the productivity and final results of economic activity of enterprises but also on the social and psychological climate in labor collectives, which in the context of global instability and migration processes plays a key role in ensuring the sustainability of the labor market and the social integration of migrants.

The concept of human capital is seen as one of the main forms of social wealth based on the accumulation, preservation and efficient use of knowledge, which is a crucial resource in the period of digital transformation and the development of the knowledge economy. At the same time, it is important to take into account that human capital, which includes professional skills, competencies and creativity, is not only a component of production activities but also a determining factor in socio-economic development at the local, regional and national levels (Shavkun & Dybchinska, 2022).

Thus, we state the relevance of the study in terms of the fact that it is in the context of the formation of a global information environment, the introduction of innovative management models and the intensification of migration challenges that effective human capital management is becoming a priority area of public policy and national security. The management of human capital development should ensure not only its quantitative growth but also its qualitative renewal through educational and professional programs, adaptation of employees to the conditions of the digital economy and integration of migrants into the labor market.

Literature Review

For a long period of time, the scientific community has been actively discussing the essence, content and characteristics of the concept of “human capital”. In the course of scientific research, numerous definitions of this term have been proposed, each of which reflects a specific aspect of its nature and functional significance. In particular, Arokiasamy et al. (2023) consider human capital as the ability of a person to produce goods and provide services, focusing on their economic capacity, which directly affects the efficiency of other investment resources. Bryson and White (2024) define human capital as a set of intellectual abilities acquired both in the process of learning and in practice. At the same time, Giamos and Stroehle (2024) interpret this term as a separate component of the production process that ensures the creation of added value for the final product.

Among modern researchers, special attention should be paid to the works of Al-Nakeeb and Ghadi (2024) and Kucharcikova et al. (2024), who consider human capital as a set of knowledge, professional skills, motivational factors and abilities accumulated by a person that are used in social production, contributing to increased productivity and income growth. An important contribution to the development of the concept of human capital was made by Devassia et al. (2024) and Leontes and Hoole (2024), who defined it as a functional element of innovation, including knowledge, professional skills, practical experience, as well as intellectual abilities to generate new knowledge, which ultimately allows for intellectual rent and competitive advantage.

The studies by Metelenko et al. (2019) and Peruffo et al. (2024), which focus on an innovative approach to human capital management, deserve special attention. The main idea is to create favorable conditions for the formation of innovative activity and increase the ability of employees to perceive and implement the latest technologies. This is especially important in the context of ensuring the sustainability of the national economy and strengthening its competitiveness in an unstable environment.

Otoo and Rather (2024) and Zhai et al. (2024), in their studies, consider the process of high-quality human capital development through the effective implementation of the cyclical process of intellectualization, which includes the stages of planning, formation, development, transformation, and use of human potential. Particular emphasis is placed on the process of transforming the accumulated intellectual potential into intellectual capital, which contributes to the so-called intellectual rent. In turn, Shiri et al. (2023) emphasize the role of health as an integral part of the qualitative characteristics of human capital, which is crucial for ensuring sustainable socio-economic development. Studies in this area show that the level of public health affects labor productivity, social stability and competitiveness of the region in the context of increasing security threats.

One of the most common approaches to assessing human capital at the regional level is the methodology proposed by Rathaba and Naong (2024), which involves analyzing the intellectual component as a key element that determines the effectiveness of innovative development. The researchers have developed a human capital index based on an expanded system of indicators that reflect the level of research and development (R&D), the intellectual potential of the population, educational and cultural aspects, and activity in the field of entrepreneurship and innovation.

Nazneen (2024) proposes an alternative approach focused on ranking regions based on the efficiency of human capital use. Her methodology is based on a comprehensive analysis of the technological, innovative, and knowledge-intensive potential of regional economies, which allows to determine the level of competitiveness of the territory in the context of global challenges. Additional contributions to the development of the human capital assessment methodology were made by Ibarra-Olivo et al. (2024) and Laundon et al. (2023), who developed an approach to an integrated human capital assessment that takes into account both professional skills and competencies and the socioeconomic conditions for their implementation. Their research emphasizes that the effective use of human capital directly depends on access to professional development opportunities, innovation activity, and the level of adaptability of the population to transformational processes in society (Cai et al., 2024; Deloitte Development LLC, 2024). In this regard, approaches to human capital

management based on the concept of flexible development, digital transformation and integration of security strategies into the system of training and retraining are becoming increasingly relevant.

The purpose of the article is to develop methodological approaches and practical recommendations for managing human capital development in the context of migration and security challenges, taking into account the need to adapt to changes in the external and internal environment, the impact of demographic transformations, labor mobility and the risks of economic instability.

Method

The human capital assessment will be based on the method of multidimensional scaling, which is a qualitative method that allows you to move from quantitative values of the signs of the professional level of human capital to qualitative ones to ensure the compatibility of indicators. To do this, it is necessary that all indicators take values from the same range of change, which is the number of quality categories (Kudaktin & Nazarenko, 2023). To conduct the assessment, we will introduce five levels of quality and the corresponding quantitative values presented in Table 1.

Table 1

Correspondence of Qualitative Values of Human Capital Development Indicators on the Basis of Quantitative Assessment of Professional Level Development

Quantification of x_i	Qualitative values of the indicators x_i
5	High level
4	Significant level
3	Medium level
2	Below average level
1	Low level

To estimate the professional level of human capital, we will use the following formula (1) developed by the author:

$$p = \sum_{i=1}^n k_i \times x_i \quad (1)$$

where x_i – is the value of the i-th indicator of the employee's professional level;
 k_i ($\sum k_i = 1$) – weighting factor that determines the importance of the indicator.

However, before ranking, it is necessary to determine the level of consistency using the concordance coefficient. To determine the degree of consistency of the assessment, to determine the ranks of professional level indicators, we use the coefficient of multiple concordance. The formula for calculating the coefficient of concordance for several values is as follows:

$$w = 1 - \frac{\sum_{i=1}^m \sum_{j=1}^m \sum_{k=1}^n |x_{ik} - x_{jk}|}{nm(m-1)(k-1)} \quad (2)$$

m – number of matrix rows (number of experts);

n – number of columns in the matrix (indicators of professional development);

k – number of quality levels (we have adopted 5 quality levels);

x – is a qualitative analog of the professional development indicator.

The degree of consistency of multiple assessment components in determining the significance of the components of an employee's professional level is determined in accordance with the value of the multiple concordance coefficient presented in [Table 2](#).

Table 2

Degree of Consistency of Assessment Components

Quantification of w	Qualitative indicators
0	no coherence
$w < 0.65$	weak
$0.65 \leq w < 0.75$	moderate
$0.75 \leq w < 0.85$	good
$0.85 \leq w < 1$	high
1	full consistency

Multidimensional scaling methods form the basis for assessing both the degree of quality of the professional level of human capital and the practice of ranking human resources according to the selected indicator in the assessment.

Results

Ensuring the Quality of Human Capital Development Management to Ensure National Security

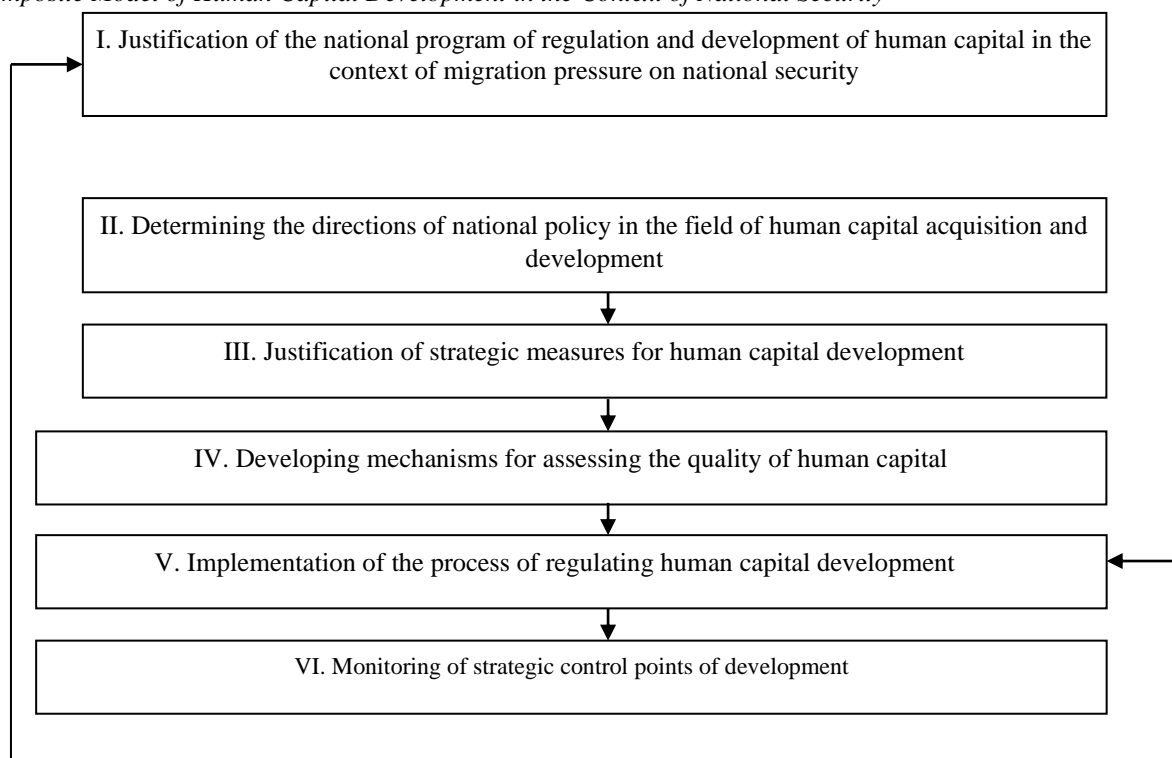
A separate aspect of modern research is the changing requirements for human capital in the digital economy and the instability of the global environment. Traditional approaches to assessing labor potential are gradually changing, as professional competencies and technical skills (the so-called “hard skills”) are losing their dominant importance, giving way to universal skills (“soft skills”). In today's world, special attention is paid to communication skills, leadership qualities, teamwork, the ability to function effectively in a multitasking environment, as well as critical thinking and creativity (Harney & Gubbins, 2024).

One of the key elements that determine the need for continuous development of human capital is the rapid obsolescence of knowledge and information, which, in turn, necessitates the need for constant adaptation of employees to new labor market requirements, as well as the updating of professional competencies. In this context, it is important to apply the concept of the life cycle of systems, which allows us to consider the process of formation and

development of human capital in terms of its evolutionary renewal, reflecting the processes of ensuring national security and responding to modern migration processes (Figure 1) (Bar-El et al., 2020; Cummins Inc., 2024).

Figure 1

Composite Model of Human Capital Development in the Context of National Security



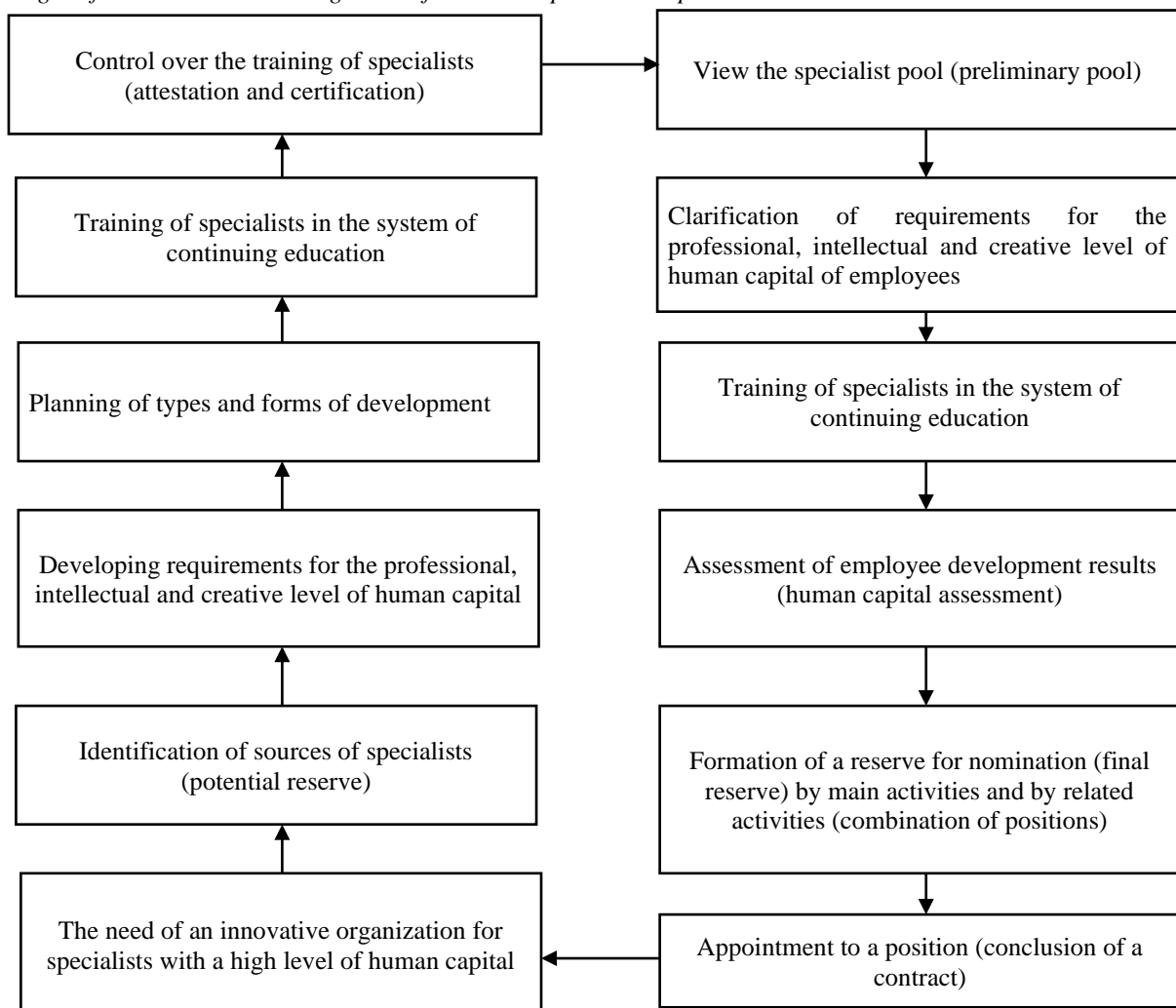
The practical application of this concept in the field of human capital management makes it possible to conduct a systematic analysis of the evolutionary development of organizations, assessing the compliance of their human resources potential with the strategic goals of innovative development. In particular, this applies to the processes of professional development and career growth of highly qualified employees, which is the basis for the effective functioning of the continuing education system. The use of life cycle methods allows for optimizing competence management processes, foreseeing the need for additional training or retraining of personnel in accordance with the dynamics of changes in the socio-economic environment, especially in the face of pressure from both migration processes and security risks (Biswas & Chaudhuri, 2023).

The tasks of managing human capital development in the context of modern challenges cover a wide range of activities, among which the key ones are the formation of individual career trajectories in the field of innovation, the organization of effective mechanisms for continuous professional development, as well as the development and implementation of corporate training, retraining and advanced training programs for employees (Macke & Genari, 2019). Formation and development of human capital in the current environment involves not only the training of new personnel but also their adaptation to changing working conditions, which is especially important in the context of global migration processes and the need to integrate displaced persons into the labor market of host countries.

One of the effective tools for managing human capital is a system of continuous education, which allows not only to update employees' knowledge but also to form their readiness to work in a changing economic and security situation. The systematic career advancement of employees should be aligned with both the needs of the organization and their personal interests, which will ensure the effective use of their potential (Makedon et al., 2019). In addition, the career development of employees requires not only clear planning but also systematic monitoring and control, which allows timely identification of the need for additional training or adjustment of the professional trajectory (Figure 2).

Figure 2

Stages of Formation and Management of Human Capital Development



It is clear that unlocking the professional potential of specialists is possible provided that an enabling organizational environment is created based on the principles of unity of goals of professional training and development, consistency and gradual complication of tasks, career orientation and targeted funding of training and retraining programs (Griep et al., 2024; Neboha et al., 2024). Given the increase in global security risks, it is especially important not only to increase the qualifications of employees, but also to ensure their stress resistance, adaptability to crisis conditions and ability to mobilize quickly in the event of changes in the geopolitical environment.

Econometric Modeling of Assessing the Level of Human Capital Development in the Context of External Challenges

One of the most common approaches to determining the level of professional training of human resources is to assess the significance of key indicators of professional level based on expert methods in order to determine the level of competence and to determine the weight of individual indicators (Minbaeva et al., 2025). The number of experts (four specialists) was chosen to ensure an optimal balance between statistical reliability and practical manageability of the study. According to the expert evaluation methodology, four participants allow for sufficient consistency of opinions. The choice was made due to their high qualifications, experience in human resource analysis, and knowledge of the specifics of the European Union labor market and the machine-building industry, which has specific indicators for assessing the professional level of workers. We will model the significance of professional-level indicators based on expert assessment, summarize the results in rank matrices, calculate the Kendall's concordance coefficient to determine the consistency of expert opinions and assess the overall level of competence of existing employees. All experts independently assess the significance of the professional-level indicators, after which all the scores are summarized in a single table. The summary rank matrix is presented in Table 3.

Table 3

Consolidated Rank Matrix for Assessing Human Capital Development at the Sectoral Level

Professional level indicators	Experts			
	1	2	3	4
Education (x1)	2	2	2	2
Specialty and specialization (x2)	3	4	3	3
Length of service and work experience (x3)	4	5	6	4
Professional achievements (x4)	7	8	7	8
Professional advantages and qualifications, creativity (x5)	8	6	8	7
Professional and practical knowledge and skills (x6)	5	7	5	6
Intellectual level (x7)	6	3	4	5

Ranks are used to assess the importance of indicators. The indicator to which the expert gives the highest rating is assigned number 1. A summary rank matrix is compiled from the expert assessments. Based on the assigned ranks, a new rank matrix is constructed, presented in Table 4.

Table 4*Rank Matrix for Assessing the Current Level of Human Capital*

Indicators / Experts	1	2	3	4	Sum of ranks	d	d ²
x1	2	2	2	2	5	-11	145
x2	3	4	3	3	10	-6	50
x3	4	5	6	4	16	0	2
x4	7	8	7	8	27	11	101
x5	8	6	8	7	26	10	82
x6	5	7	5	6	20	4	10
x7	6	3	4	5	15	-1	5
Σ	29	29	29	29	113	1	389

The distribution of the professional level of indicators by significance is presented in Table 5.

Table 5*Ranking of Evaluation Indicators by Level of Significance*

Professional level indicators	Sum of ranks
x1	5
x2	10
x7	15
x3	16
x6	20
x5	26
x4	27

We will conduct a full calculation of the Kendall's concordance coefficient to determine the degree of consistency of the opinions of all involved experts on the allocation of the level of importance of each of the assessed indicators of professional level. For the calculation, we use the following improved formula:

$$W = \frac{12 \times S}{m^2(n^3 - n)} \quad (3)$$

S – is the square of the sum of the ranks;

n – number of assessed professional level indicators;

m – number of experts.

$$W = \frac{12 \times 289}{4^2(7^3 - 7)} = 0,871$$

The obtained value of the concordance coefficient $W = 0.871$ indicates a high level of consistency of expert opinions. Let's assess the significance of the concordance coefficient. Let's calculate the Pearson's concordance criterion using the following formula:

$$\chi^2 = \frac{12 \times S}{m \times n(n+1)} \quad (4)$$

S – is the square of the sum of the ranks;

n – is the number of assessed professional level indicators, m is the number of experts.

$$\chi^2 = \frac{12 \times 389}{4 \times 7(7+1)}.$$

The resulting final value of the χ^2 criterion was compared with the table value for the corresponding number of degrees of freedom, which is determined by the formula $K=n-1$, where n is 7. Thus, with six degrees of freedom and the established significance level of $\alpha=0.05$, the calculated value of χ^2 (20.81) exceeds the table value (12.61), which confirms the statistical significance of the results. This means that the found value of Kendall's concordance coefficient ($W = .87$) is not accidental and indicates a high level of consistency in the opinions of experts on assessing the significance of professional-level indicators. The high degree of concordance allows us to conclude that the data obtained are reliable and can be further used in the study.

Taking into account the results of the ranking of professional-level indicators presented in [Table 6](#), the next stage of the study is to determine the weighting factors that will allow a more accurate assessment of the importance of each of the studied factors in the process of human capital development (Makedon et al., 2024). To do this, the expert assessment matrix is transformed into a matrix of transformed ranks according to formula (3), which is presented in the scientific literature and adapted to the specifics of human capital analysis in the context of changing socio-economic conditions caused by migration processes and security risks.

$$S_{ij} = X_{\max} - X_{ij} \quad (5)$$

where:

$$X_{\max} = 7.$$

The resulting matrix of transformed ranks is presented in [Table 6](#).

Table 6
Matrix of Converted Ranks During Evaluation

Indicators / Experts	1	2	3	4	Σ	K_i
Education (x1)	7	7	7	7	25	.28
Specialty and specialization (x2)	6	5	6	6	20	.22
Length of service and work experience (x3)	5	4	3	5	14	.15
Professional achievements (x4)	2	1	2	1	3	.02
Professional advantages and qualifications, creativity (x5)	1	3	1	2	4	.03
Professional and practical knowledge and skills (x6)	4	2	4	3	10	.10
Intellectual level (x7)	3	6	5	4	15	.16
Total	-	-	-	-	85	1

Employees are tested, and off-the-shelf professionalism tests are used. Employee questionnaires and internal information on their participation in intellectual and innovative activities are analyzed. The assessment procedure is presented in [Table 7](#).

Table 7
Assessment of the Professional Level of Human Capital

Indicators	Evaluation procedure
Education (x1)	Based on questionnaire data. If the education meets the needs of human capital management in the context of security challenges – 5 points, if not – 0 points.
Specialty and specialization (x2)	Based on questionnaire data. If the specialty and specialization correspond to the profile of work in the context of security challenges – 10 points, if not fully correspond – 0 points.
Length of service and work experience (x3)	Based on questionnaire data. Work experience in human capital management with regard to security aspects for more than 5 years – 5 points, less than 5 years – 0 points.
Professional achievements (x4)	Analysis of the employee's contribution to improving human capital management in the context of security challenges. For each proposal to improve security or adapt processes – 1 point, up to a maximum of 20 points.
Professional advantages and qualifications, creativity (x5)	Based on questionnaire data (expert evaluation). If the employee's professional preferences and creative abilities contribute to solving security challenges, 20 points, if no relevant interests are indicated, 0 points.
Professional and practical knowledge and skills (x6)	Assessment through testing. The test takes into account the specifics of human capital management in the security context. It consists of 20 questions, with 1 point for each correct answer.
Intellectual level (x7)	Assessment of intellectual abilities required to analyze and adapt to security challenges in human capital development. The maximum number of points is 20.

The scores for each indicator obtained during the assessment of the professional level of an employee's human capital are transformed into qualitative analogues and corresponding quantitative values using the developed interval scale.

- 0-19 points: “extremely low level of human capital development” – 1;
- 20-39 points: “low level of human capital development” – 2;
- 40-59 points: “an average level of human capital development” – 3;
- 60-79 points: “good level of human capital development” – 4;
- 80-100 points: “high level of human capital development” – 5.

As a result of the assessment of the indicators characterizing the level of development of human capital of employees, taking into account the weighting coefficients, the following results were obtained, presented in Table 8.

Table 8

Matrix for Assessing the Level of Human Capital Development

Specialist	x_1	x_2	x_3	x_4	x_5	x_6	x_7	P
P1	1.57	0.74	0.68	0.07	0.15	0.47	0.73	4.44
P2	1.57	0.99	0.51	0.11	0.15	0.35	0.55	4.24
P3	1.57	0.49	0.34	0.05	0.07	0.35	0.55	3.44
P4	0.94	0.99	0.34	0.11	0.19	0.47	0.55	3.59
P5	1.25	1.24	0.68	0.13	0.12	0.23	0.73	4.4
P6	0.94	0.99	0.85	0.11	0.19	0.70	1.28	5.08
P7	0.62	0.74	0.68	0.13	0.19	0.47	0.73	3.58
P8	0.94	0.99	0.85	0.07	0.15	0.59	0.55	4.16
P9	1.25	1.24	0.68	0.11	0.12	0.35	0.73	4.49
P10	0.62	0.99	0.85	0.11	0.07	0.35	0.73	3.75

In the process of assessing human capital development, it turned out that out of ten specialists who participated in the study, four demonstrated a high level of development of their competencies and abilities, while six other employees were at an average level, which indicates the diversity of human resource potential. Thanks to this study, which provided a deeper understanding of human capital management, it was possible to identify the main components of the human capital development management system model and describe their characteristics, which are presented in detail in Table 9, helping to understand how these elements contribute to the strategic goals of business structures.

Table 9

The Main Elements of a Meaningful Model of Human Capital Management Taking into Account the Migration Factor and Security Challenges

The main elements of the model	Types and functions of elements	Characterization of element types
External environment		
Institutional environment	The impact of institutions on human capital and innovation	Education, science, and innovative production eliminate conflicts, counteract opportunism, and develop professional and creative components of human capital
The state as a supporting subsystem	Financial and organizational support	Direct support: spending on education, healthcare, and migration. Indirect support: subsidies for research and development, incentives for innovation, support for venture capital financing
Internal environment		
Supporting subsystem	Managing human capital for innovation	Ensuring through forecasting, planning, development and utilization of human capital and corporate culture
Supporting subsystem	Management innovations as tools	Implementation of innovations in the structure, processes and methods of human capital management, change of evaluation methodology
Internal organizational mechanism	Management influence on innovation development	The mechanism is based on the principles of activity, flexibility, and openness; it influences through organizational, economic, and social methods

The developed model is of particular importance since its components create conditions for a business structure to accelerate its innovative development, as a rapid transition of the socio-economic system to a state where the introduction of innovations and improvement of the quality of production factors ensure intensive growth and increase the efficiency of resource use in the process of managing human capital development.

Discussion

The results of the study are in line with modern scientific approaches to managing human capital development, but at the same time have unique aspects that emphasize their novelty and contribution to the scientific discussion. The study has shown that, taking into account the threats posed by migration processes and the country's security, human capital management should be aimed not only at developing professional competencies, but also at creating adaptive mechanisms that will ensure increased professional development, sustainability and competitiveness of the workforce.

Our findings are in line with the ideas expressed in Arokiasamy et al. (2023), who emphasize the key role of human capital in economic development. In particular, the results confirm that the quality of human capital directly affects the efficiency of production and investment processes. In addition, studies by Bryson and White (2024) and Giamos and Stroehle (2024) confirm that human capital is an integral part of the production process that creates added value, which is consistent with our findings on its role in maintaining economic security and supporting the professional development of the labor force in the face of economic crises and migration challenges.

The findings also confirm the conclusions of Al-Nakeeb and Ghadi (2024) and Kucharcikova et al. (2024), who define human capital as a set of knowledge, skills and motivational factors that stimulate labor productivity. The findings of the current study emphasize that in the context of intensified migration flows and growing security risks, it is necessary to develop comprehensive human capital management strategies that provide for both the integration of migrants into the national labor market and further professional development.

On the other hand, the studies by Devassia et al. (2024) and Leontes and Hoole (2024) focus on the special importance of human capital as an instrument of innovation. We support this position, but our research shows that in order to realize this potential, additional governance mechanisms are needed, such as flexible educational programs, retraining, and social support for migrants, which minimizes the impact of security threats.

A component aspect of the study was the confirmation of the ideas expressed in Otoo and Rather (2024) and Zhai et al. (2024) regarding the cyclical nature of human capital development. We agree that high-quality human capital development includes the stages of planning, formation, development, transformation, and utilization of potential. However, the study additionally proved that the very mechanism of effective human capital management takes into account not only the internal adaptation of employees, but also their ability to integrate into new socio-economic conditions, which necessitates flexible management approaches. In addition, the conclusions of the article are consistent with the research of Shiri et al. (2023), which emphasizes the importance of health as a component of human capital. The results directly point to the subsequent expediency of expanding HRM strategies, in

particular by taking into account the impact of employees' physical and mental health on their productivity and adaptability, which is especially important for migration and security challenges.

In terms of human capital assessment methods, our results confirm the effectiveness of the approaches proposed by Rathaba and Naong (2024) and Nazneen (2024), which use indices and rankings to analyze the level of human capital development. We have improved these methods by integrating multidimensional scaling, which allows for a deeper study of the qualitative characteristics of human capital and adapting them to specific processes related to migration and national security aspects.

The practical significance of the study lies in the possibility of using its results to develop public policies in the field of human capital management, as well as to create effective corporate strategies for human resource management in conditions of level instability. The proposed measures and models can be applied both at the level of individual business structures and within national and regional human resource development programs, which will contribute to the country's stable economic growth in the long term.

Conclusion

The study identified the leading methodological approaches to assessing the professional level of human capital. Among them are such methods as ranking the indicators of employees' competencies, determining the degree of consistency of expert assessments and using econometric modeling tools. The use of Kendall's concordance coefficient confirmed the high level of agreement among experts on the importance of certain aspects of professional development, which is key to the development of effective management strategies.

A number of factors were identified that influence the level of professional development of human capital. These include educational level, specialization of activity, length of service, professional achievements, intellectual abilities, as well as the availability of theoretical and practical knowledge. Based on the analysis, a human capital management model was developed based on the integration of technological, social and economic factors, taking into account security risks and the need to adapt to migration processes.

A substantive model of the human capital management system of an innovative organization has been developed and filled with content, which includes the institutional environment, a supporting subsystem (financial and organizational state support), a subsystem for reproducing human capital for the innovation process; an accompanying subsystem based on managerial innovations and an internal organizational mechanism for human capital management. The factor element of the model is scientifically based criteria and indicators of the efficiency of human capital management in an innovative organization, the calculation and analysis of which are necessary to control the process of human capital management.

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