ABSTRACT

of the dissertation for the degree of Doctor of Philosophy (Ph.D)
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Assessment of social and demographic indicators of human capital in the Republic of Kazakhstan

Relevance of the research topic. In the conditions of modern development, human capital plays a key role in competitiveness, economic growth and government efficiency. Kazakhstan has a growing demographic potential, which is a "demographic dividend". However, this demographic potential can turn into a serious danger to sustainability if thoughtful management of the social development of regions, taking into account modern challenges, is not developed in a timely manner to transform this demographic potential into human capital.

At the same time, the socio-economic and demographic situation, the way of life in the regions of the republic are not the same, and therefore the role of human capital development is increasing, taking into account territorial characteristics, differences in both socio-demographic, and economic, environmental-geographical and other factors to ensure sustainable development of the country as a system of interacting regions.

Since, in geographical science, the concept of human capital appeared relatively recently and remains less studied in comparison with sociological and economic research, the role of assessing the human capital of the Republic of Kazakhstan within the framework of geographical science is increasing.

The problem of quantitative and qualitative assessment of human capital development, taking into account the characteristics of the regions of the Republic of Kazakhstan, and, in particular, its socio-demographic factors, is complex, poorly understood and requires additional research.

The relevance of this problem, its scientific and practical significance, the presence of controversial issues in this area predetermined the choice of the topic of the dissertation, its purpose and objectives, the subject and object of the study.

Degree of scientific study of the problem. Theoretical understanding of the processes of formation and development of "human capital" originated and was carried out mainly within the framework of economic science. There is a lot of economic research on the theory of human capital in the works of W. Petty, A. Smith, G. Becker, T. Schultz, J.S. Mill, L. Dublin, I. Fisher, S.H. Forsyth, Y. Ben-Porat, S.A. Dyatlov, A.I. Dobrynin, R.I. Kapelyushnikov, Yu.A. Korchagin and others.

Sociologists (P. Bourdieu, J. Coleman, V.V. Radaev, Yu.G. Bychenko) considered human capital as the sum of innate abilities, general and special education, acquired professional experience, creative potential, providing the opportunity to generate income, explaining its differentiation the influence of institutional variables such as family, community, social network, etc.

Psychologists (B. Kiker, N. Mishuchkova, A. I. Yuryev, H. J. Kell, S. B. Robbins, R. Su, M. Brenneman, etc.) when explaining human capital, give priority to people's abilities, their internal mental resources.

The political science approach studies whether political institutions influence the accumulation of human capital. Political scientists such as D. Baum, D. Lake, Y. Feng, D. Brown and W. Hunter, P. Veira, A. Teixeira and others identified political factors influencing development and accumulation of human capital.

Human capital is a concept that has long attracted the attention of geographers, who focus on assessing human capital as a source of uneven development. The basis for the study of human capital and its components was the work of R.M. Kabo, N.V. Zubarevich, N.M. Rimashevskaya, T.V. Gavrilova, A.G. Bazarova, M. Chani, M. Hassan and M. Shahid, W. Liang and M. Lu, A. Pagano, M. Flückiger, M. Ludwig and others.

Research has also been conducted in Kazakhstan on various aspects of human capital. However, the assessment of human capital from a geographical point of view remains insufficiently studied by domestic geographers. In the works of Abilova A.B., Shkurinsky B.V., Nyussupova G.N. and other researchers only considered some components of human capital, as well as related concepts such as "human development", "quality of life" and "standard of living" of the population.

The purpose of the dissertation research is to spatially assess the level of human capital development in the Republic of Kazakhstan with an emphasis on its socio-demographic indicators.

To achieve this goal, the following **tasks** were set and solved during the study:

– analyze the scientific and methodological foundations of the study of human capital based on the analysis of foreign and domestic research experience;

– systematization and classification of indicators of the level of human capital development in the regions of the Republic of Kazakhstan based on the factors determining it and assessment methods;

– analysis and assessment of socio-demographic indicators of human capital in the regions of the Republic of Kazakhstan;

– development of recommendations to improve the social security of the population, taking into account the demographic situation;

– development of the author's methodology for geographical assessment of the level of development of human capital in the region, modified and adapted to the conditions of the regions of the Republic of Kazakhstan;

– determining the level of development of human capital in the regions of the Republic of Kazakhstan, both component-by-component and integrally, and conducting their typology;

– development of proposals on the main directions of development of human capital in the regions of the Republic of Kazakhstan.

The object of the study is the human capital of the regions of the Republic of Kazakhstan.

The subject of the study is social and demographic processes that influence the formation and development of human capital in the regions of the Republic of Kazakhstan.

The dissertation research methodology is based on the use of general and specific methods of scientific research: theoretical analysis of scientific literature, methods of systemic, analytical, statistical analysis, typology, grouping, comparison, forecasting, as well as index, cartographic and GIS methods.

The information base was the official data of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, the Ministry of Education of the Republic of Kazakhstan, the Ministry of Science and Higher Education of the Republic of Kazakhstan, the Ministry of Health of the Republic of Kazakhstan, RSE "Kazhydromet", monographs, articles in scientific journals, Internet resources, regulatory legal acts of the Republic of Kazakhstan.

The scientific novelty of the study lies in a comprehensive geographical assessment of the level of human capital development in the regions of the Republic of Kazakhstan, as well as its components using GIS technologies. As a result of the study, recommendations to improve the social security of the population of the Republic of Kazakhstan were developed using the example of preschool and primary education using Microsoft Power BI tool.

The theoretical significance of the study lies in the development and expansion of the system of scientific knowledge about human capital, the factors influencing its formation and their development within the framework of geographical science. A systematic approach to assessing the level of human capital development in the Republic of Kazakhstan is proposed based on selected 26 key indicators using GIS technologies in dynamics for 2000-2020.

The proposed recommendations for the development of socio-demographic aspects of human capital will help determine the load on social infrastructure using the Microsoft Power BI.

Practical significance. The results of this study are of practical importance for authorities and public administration involved in the development and implementation of regional socio-economic development policies, as well as for the formation and development of human capital. The materials and conclusions can be applied in further research on human capital within the framework of geographical science and used in the educational process.

Main provisions submitted for defense:

- the author’s system of indicators of human capital based on the demographic, social, economic and environmental factors characterizing it will allow us to obtain a more accurate and comprehensive assessment of the level of development of human capital, taking into account both its tangible and intangible aspects;
- based on forecasting the birth rate in the regions of the Republic of Kazakhstan, a tool has been developed to calculate the load on the social infrastructure of human capital in order to prevent it in a timely manner;
- the application of the proposed comprehensive geographical assessment of the level of development of human capital in the regions of the Republic of Kazakhstan

using GIS technologies will allow for scientifically based monitoring of the state of human capital;

- the typology of regions according to the level of human capital development will make it possible to determine priority directions for the development of each group of regions, taking into account their competitive advantages in order to select the most effective measures for the further development of human capital.

Based on the results of the study, the following conclusions were obtained:

1. Based on the analysis of foreign and domestic research experience, the geographical meaning of the concept of "human capital" was clarified, which made it possible to formulate the methodological foundations of the study and select a methodology for assessing the level of development of human capital and its demographic, social, economic and environmental components, modified and adapted to the conditions of the regions of the Republic of Kazakhstan.

2. An assessment of the socio-demographic indicators of human capital in the Republic of Kazakhstan showed an existing demographic dividend, but at the same time, in regions with high birth rates, problems are found with the load on social infrastructure, which affects the quality of its human capital. In this regard, using the example of preschool and primary education, we offer a tool for assessing and forecasting the load on the social infrastructure of regions based on birth rates using Microsoft Power BI. A more accurate forecast of the upcoming load on the infrastructure of preschool and primary education will enable government agencies to prepare for it in a timely manner.

3. As a result of a comprehensive geographical assessment using GIS technologies of the main factors influencing the formation and development of human capital, carried out both component-by-component and integrally with a subsequent typology of regions, territorial differentiation in the level of development of human capital in the Republic of Kazakhstan was identified, which is determined by the economic structure of the region.

Analysis of the dynamics of the HDI of the Republic of Kazakhstan for the period 2000-2020 showed that the regions of the republic were not characterized by high human capital development indices. At the same time, positive changes are observed, the number of regions of the republic with low values of the human capital development index is decreasing.

The calculations made on the integral assessment of the level of development of human capital in the regions of the Republic of Kazakhstan for 2019 made it possible to distinguish the following groups of regions: "above average", "average", "below average", "low". The group above average includes the Almaty and Astana cities, where relatively high indicators are observed for all components of human capital, except for the increasingly tense environmental situation.

Atyrau, Aktobe, Mangystau, West Kazakhstan regions, united in the "medium" category, are distinguished by the raw materials specialization of the economy, high and average income levels, average demographic and social indicators for the republic. Also included in this category is the city of republican significance Shymkent.

Regions with a level of human capital development "below average" are characterized by medium and low income levels. These regions are home to both large

industrial facilities and developed agriculture. The social component of human capital in these regions is not very high.

4. The methodology for assessing the level of human capital development in the Republic of Kazakhstan developed within the framework of this study is based on publicly available official statistical data. This methodological approach will allow for interregional comparisons, monitoring and management of human capital indicators and developing recommendations for social development programs in the regions of the republic, taking into account the demographic situation in them.

Approbation of work. The main results of the dissertation research were presented and reported at the following scientific and practical conferences: International Scientific Conference «The Functions of Industry and Services in the Socio-Economic Development of Spatial Systems» (Krakow, 2019), International Conference «Digital Challenges for the World Economy: Eurasian perspective plus» (Moscow, 2020), International Scientific Conference «Structural Changes in Industry and Services» (Krakow, 2020), International Conference of Students and Young Scientists «FARABI ALEMI» (Almaty, 2021), International conference «Socio-economic geography in the 21st century: new realities and practical opportunities» (Minsk, 2022), International scientific conference «Family, demographic and gender policy at a new stage of development of Kazakhstan» (Astana, 2022), 39th Scientific Conference «Behavior of companies in the economic crisis».

Publication of research results. 16 works have been published on the topic of the dissertation, including 5 articles in rating journals included in the Scopus and Web of Science databases, 4 articles in publications recommended by the Committee for Quality Assurance in Science and Higher Education of the Ministry of Education and Science of the Republic of Kazakhstan, 7 articles in materials of international conferences, 1 monograph.

Work structure. The dissertation consists of an introduction, three chapters, a conclusion and 5 appendices, references consist 190 titles. The work is presented on 136 pages, contains 25 figures, 16 tables.