# BR10965247 «STUDY OF FACTORS, CHARACTERISTICS AND DYNAMICS OF DEMOGRAPHIC PROCESSES, MIGRATION, URBANIZATION IN KAZAKHSTAN, DEVELOPMENT OF DIGITAL MAPS AND FORECASTS»

#### PROGRAM IMPLEMENTATION IN 2023

#### The objectives of second stage (2023):

- Study the scale and intensity of demographic processes in the country and by region; assess the risks of demographic imbalance, determine the demographic profile of the regions of Kazakhstan;
- Study the features of spatial mobility of the population, models, directions, vectors of migration flows and the main characteristics of migrants (gender, age, professional).
- Study the relationship between the urbanization level and social and economic development, to develop recommendations for improvement of policies in the field of urbanization in Kazakhstan and models of spatial development of cities.
- Develop a medium-long-term population forecast, identify demographic risks in Kazakhstan, taking into account the demographic burden and reproductive potential.
- Develop recommendations for the concept of demographic and migration
   policy, regulatory documents in the field of demography and migration.
- Develop digital models of maps of demographic development of Kazakhstan
   as a whole and also at a territorial level.
- Provide support, update information, post information about research results, program events, publications, and implementations.

#### Stage 3 Results (2023):

- Extranal and intranal factors that determined the scale of cause-and-effect relationships of demographic processes in the country for 1990-2022 were identified, and the time perspectives during which the influence of these factors on demographic processes will manifest itself;

An analysis of demographic processes by region for 1990-2022 was performed according to the intensity of changes in the main indicators in relation to the national average level, the correlation dependence of the birth rate of children by order and age group of the mother was determined, the change in the proportion of births of the third

child due to internal rural-urban migration, a decrease in the number of women at the age of 25-29 years, the share of the intensity of births in order of 3, 4, 5 or more children in rural areas and in cities.

- Clustering of regions was performed according to three characteristics in three options for the republic, for the city and the village, based on which groups of regions were identified with a profile of high, medium and low intensity of development of demographic processes in terms of the coefficient of natural increase; infant mortality rate; share of the third, fourth, fifth or more children.
- The main approaches to determine spatial (territorial) mobility were studied, and a description of its main factors was given. Population migration was identified as the main factor in the mobility of labor resources, which has a great influence on the dynamics of the population size and structure, and the state of the labor market.
- It was determined that spatial (territorial) mobility influences the state of the country's labor potential, determines the situation in the national and regional labor markets, and directly contributes to increasing the efficiency of the use of labor resources.
- Two main directions of research into the relationship between migration processes and ensuring territorial mobility of the population were identified. The first direction is related to ensuring the sustainability of regional life support systems and the life of the population, which creates the basis for consolidating the local population and attracting persons from other regions. The second direction is related to the study of the quality of the resource potential of the retiring population. The positive trend of migration is the desire to improve professional and educational levels and improve their financial situation.
- An assessment was made of the quality of the qualification and educational potential of the population of regions with high dynamics of migration flows as the most important resource for successful adaptation and improvement of economic and social status. A group of professionals with a high educational and professional level was identified.
- The social and economic problems of adaptation and integration of migrants into the social society of the host country were studied as the most important condition for ensuring territorial mobility of the population. The main directions of the integration program for ethnic repatriates (kandas) are proposed. The integration program should cover legal, economic and socio-cultural issues of integration.

- It was recommended to implement a targeted migration policy aimed at the adaptation of migrants, including groups by age, educational and professional level, and low-income families to reduce the social and economic risks of migration.
- A theoretical review of the theories of evolution and the optimal urbanization level was performed, the objectivity of the historical perspective of changing the urbanization model was shown, which required a balanced approach to the development of large cities and efforts to preserve the infrastructure of medium and small cities to avoid the "urbanization trap";
- An analysis of the dependence of social and economic indicators on the urbanization level was performed using the example of 134 countries, and it was concluded that the growth of urbanization did not lead to an improvement in social and economic development in all countries;
- An analysis was performed of the trends and features of the development of different types of cities in Kazakhstan, their role as a framework for the territory and in the integration of rural settlements and demographic processes;
- New trends and opportunities for urban development were identified as a factor in the rational settlement of the population and improving the development of the territory of Kazakhstan;
- An assessment is given of the prospective population of Kazakhstan until
   2100 by 5-year age groups;
- Complete life tables and forecast options have been developed for closed and open populations for 1-year age groups in Kazakhstan and regions of Kazakhstan until 2050;
- Recommendations were developed for a balanced urbanization policy in Kazakhstan, not limited only to the growth of the largest cities, the need to take into account the prospects for changing stages of urbanization, the role of different types of cities and settlements, the gradual evolution of large rural settlements and the consistent transformation of the structure of their economy and space in order to develop nonagrarian employment.
- Factors that have a significant impact on the natural reproduction of the population in Kazakhstan, such as: a prosperous traditional family, an effective health care system and a sufficient level of well-being were identified.
- The political and legal framework regulating family and marriage relations, the development of the health care system and social support for families and children were

considered. These tools were determined to have limited impact on stimulating fertility and ensuring the well-being of families.

- An analysis of priority areas of migration policy aimed at strengthening the demographic potential and human resources in the country was performed. These areas include stimulating the migration of highly qualified specialists, as well as measures to integrate migrants into Kazakh society.
- An assessment was made of the compliance of demographic indicators with the target parameters of government programs. The opportunities, risks and threats of Kazakhstan's demographic policy were identified, which is important for formulating strategic decisions and adapting policies to changing conditions.
- Proposals were developed to improve the institutional foundations of Kazakhstan's demographic policy, including amendments to regulations and the creation of a state body for the implementation of demographic policy.
- Digital maps of the demographic development of Kazakhstan and the regions were developed, a list of maps was compiled, a set of techniques and methods for their optimal display, an Internet resource for the demographic development of regions was developed, which provides loading and processing of data, generation of maps based on a set of indicators, identification of users and delimitation of their powers, implementation interactive interaction of users with indicators and maps of the atlas of social and demographic development. (http://maps.ieconom.kz)
- information was posted on the program website <a href="https://project.ieconom.kz/">https://project.ieconom.kz/</a> about research results, program activities, publications, and implementations.

#### Research methods.

Methods of retrospective analysis, logical and comparative analysis, analogies and generalizations, economic statistics, index, graphical and Pearson correlation analysis, Spearman and Kendall rank regression based on models in SPSS were used. Methods of structural and institutional methodology. Its essence is in assessing how adequately the data and information contained in normative legal documents (NLA) reflect the processes and phenomena in the field of regulation of migration flows in Kazakhstan. Cohort methods, longitudinal and cross-sectional demographic analysis, methods for standardizing demographic coefficients, relative and average values, indices), geoinformatics methods.

#### Information base.

The empirical basis of the study consisted of data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of

Kazakhstan, the World Data Atlas, government programs and regulations on the problem under study, materials and methodological recommendations of the Bureau of National Statistics, international programs and organizations (IOM, ILO, UNFPA, UN-Habitat, Department of Economic and Social Affairs Population Division), assessment results obtained through an expert survey and focus groups.

Scientific novelty of the third stage results. Areas and time horizons that should be taken into account in demographic policy were identified based on the analysis of the influence of extranal and intronal factors. Clusters of regions with high, medium and low intensity of demographic processes were identified. An assessment was made of the quality of the qualification and educational potential of the population of regions with high dynamics of migration flows as the most important resource for successful adaptation and improvement of economic and social status. Recommendations were developed for the adaptation and integration of migrants into the society of the host country as the most important condition for ensuring territorial mobility of the population and reducing the social and economic risks of migration. Justification of the historical perspective of changing the urbanization model, the phenomenon of the "urbanization trap" is substantiated. Based on an analysis of the dependence of social and economic indicators on the urbanization level using the example of 134 countries, it was concluded that the growth of urbanization did not lead to an improvement in social and economic development in all countries. Recommendations for policies in the field of urbanization, family, demographic and migration policies were developed based on an assessment of the compliance of demographic indicators with the target parameters of government programs, proposals and amendments to regulations on the implementation of demographic policy were developed.

The practical significance of the study lies in the fact that the results and conclusions obtained in the work can be used by government authorities involved in the development and implementation of programs for social and economic development and migration regulation.

Potential consumers of the results obtained: Administration of the President of the Republic of Kazakhstan, Security Council of the Republic of Kazakhstan, Ministry of National Economy, Ministry of Investments and Development; Ministry of Labor and Social Protection, Ministry of Health, Ministry of Education of the Republic of Kazakhstan, Ministry of Science and Higher Education, local, regional and republican authorities, universities, public organizations, researchers, students.

Scope of application of the research results. The obtained systematized knowledge about demographic processes is the basis of the state's social policy and provides important information about social and demographic risks in various regions of Kazakhstan, the impact of demographic processes on the quality of the economic space. The knowledge gained can contribute to the development and adoption of effective measures by government authorities to improve demographic policy, assess demographic risks and imbalances, and monitor the current social and economic situation in the regions of the country. The results of assessing the prospective population by age group can be important information for planning the need for educational institutions and the need for jobs.

#### Testing and implementation of research results.

For the period from August 10, 2021, to October 30, 2023, the following were published:

- 1 monograph, 1 Lecture course;
- 37 articles in foreign publications, including: 5 articles in publications indexed in the SCOPUS database (Q1-Q3); 3 articles in other SCOPUS publications, 1 article in a publication indexed in the WOS database (Q4), 9 articles indexed in other foreign databases, 17 articles in materials of foreign conferences.
- 57 articles in domestic publications, including 19 articles in publications recommended by the Committee for Quality Assurance in Science and Higher Education of the Republic of Kazakhstan (CQASHE), 38 articles in other publications and in materials of domestic international conferences.

Including 34 publications published in 2023. There are 26 domestic publications, including 1 monograph, 8 articles by KOKSNVO, 17 articles in the proceedings of domestic international conferences. Foreign publications - 8, including 3 articles in SCOPUS publications (Q1-Q3), 1 in the WOS database (Q4), 3 articles in other foreign publications, 1 article in the proceedings of a foreign conference.

(Author's certificate).

- Certificate of entry of information into the state register of rights to objects protected by copyright (composite work) / No. 25328 dated April 21, 2022 (Modeling and forecasts of social and demographic changes in the quality of life and health of the population in the context of the introduction of digital technologies in Kazakhstan).

Act on the implementation of the results of research work in the educational process Budapest Metropolitan University, Hungary, 2023)

Applications for registration of copyrights for digital maps of demographic development, a database of demographic statistics, and a concept of policy in the field of demography, migration, and urbanization were prepared.

2 articles were prepared and are being reviewed in publications, indexed in the SCOPUS database (Q1, Q2).

Researchers from the Institute of Economics (Almaty, Astana branch), the Faculty of Geography and Environmental Management of Kazakh National University took part in the implementation of the program in 2021-2023. Al Farabi (Almaty), Higher School of Economics and Business of Al Farabi KazNU (Almaty), Suleyman Demirel University (Kaskelen), Turan University (Astana, Almaty), KIMEP University (Almaty), Asfendiyarov KazNMU (Almaty), Institute of Socio-Economic and Energy Problems of the North of the Komi Scientific Center of the Ural Branch of the Russian Academy of Sciences (Russia, Syktyvkar), Intelligent Data Solutions (Almaty).

The final report was prepared by an interdisciplinary group based on the team of the Institute of Economics of the Kyiv Science Ministry of Education and Science of the Republic of Kazakhstan in the following composition:

1 program director, D.Sc. in Economics; 7 task managers, including 3 D.Sc. in Economics, 1 D.Sc. in Geographical Sciences, 3 Ph. D. in Economics; performers - 8 D.Sc. in Economics, 7 PhD (Economics), 1 PhD (Geography), 1 PhD (Logistics), 4 Ph. D. in Economics, 1 Ph. D. in Law; 7 masters of social sciences (economics, world economy, sociology), 2 masters of geography, including 6 doctoral students; 2 bachelors, including 1 master's student.

Inventory number of the interim report of the 1st stage (2021) - No. 0221PK00573. Inventory number of the interim report of stage 2 (2022) - No. 0222PK00355. Inventory number of the final report (3 stage 2023) - No. 0223PK00531.

Research period: January 3 – October 30, 2023. The report is given in a brief version.

# Foreign publications

Nº	Author, Title, Edition
	SCOPUS, WOS (Q1-Q3)
	2021 year
1.	<u>Kireyeva A. A., Kredina A.</u> , Vasa L., <u>Satpayeva Z. T.</u> (2021). Impact of financial technologies on economic development: theories, methods and analysis. <i>Journal of International Studies</i> , 14(4), 286-303. https://doi.org/10.14254/2071-8330.2021/14-4/19. (SCOPUS, Q2, Social Sciences 90%).
2.	2022 year
3.	Tatibekov B., Dana L. P., Alzhanova F. (2022). Revisiting Theoretical and
	Methodological Aspects of a Scientific Inquiry of Migration in the Era of Digitalisation.  Migration Letters, 19(5), 709-715. https://doi.org/10.33182/ml.v19i5.2135 (SCOPUS, Q2, Demography 67%)
4.	<u>2023 year</u>
5.	NyussupovaG., AidarkhanovaG., KenespayevaL., & Kelinbayeva R. (2023). Gender features of the Kazakhstan labour market in the context of sustainable development. Hungarian Geographical Bulletin, 72(1), 59-74. <a href="https://doi.org/10.15201/hungeobull.72.1.4">https://doi.org/10.15201/hungeobull.72.1.4</a> (Q1, 71%)
6.	<u>Tatibekov B., Chulanova Z.K. Alzhanova. F.</u> (2023) Factor model for the migration processes development in Kazakhstan. <i>Migration Letters</i> , 20 (5), 84-94, <a href="https://doi.org/10.47059/ml.v20i5.2954">https://doi.org/10.47059/ml.v20i5.2954</a> (SCOPUS, Q2, Demography 67%).
7.	Mukayev A., <u>Satpayeva Z., Kangalakova D.,</u> Doskeyeva G., Pedro E.M. (2023). Assessment of the quality of life of the population of Kazakhstan during the COVID-19 pandemic: the effectiveness of public policy // <i>Problems and Perspectives in Management</i> , <i>21</i> (3), 69-83. http://dx.doi.org/10.21511/ppm.21(3).2023.06 (Scopus, Q2, 81%,)
	Articles in indexed databases (SCOPUS, WOS (Q4), RSCI, etc.)
	2021 year
8.	Nurlanova, N. K. (2021). Modern trends of urbanization worldwide and in Kazakhstan. The Scientific Heritage, 2(76), 22-25, <a href="https://doi.org/10.24412/9215-0365-2021-76-2-22-25">https://doi.org/10.24412/9215-0365-2021-76-2-22-25</a> (In Rus)
9.	Chulanova, Z. K. (2021). Socio-economic factors of external migration in the population of Kazakhstan. The Scientific Heritage, 2(76), 37-45 <a href="https://doi.org/10.24412/9215-0365-2021-76-2-37-45">https://doi.org/10.24412/9215-0365-2021-76-2-37-45</a> (In Rus)
10.	Rakhmetova, R. U. (2021). Dynamics of demographic structure of the population of Kazakhstan. Paradigmata Poznání, 4, 63-68 <a href="http://sociosphera.com/files/conference/2021/pp 4-21.pdf(In Kaz">http://sociosphera.com/files/conference/2021/pp 4-21.pdf(In Kaz)</a>
11.	Urdabaev M. T., Rysbek E. U (2021). SWOT analysis of smart city projects in capital cities of Russia and Kazakhstan. // R-Economy. – 2021. – 7(4) P. 235–243. https://doi.org/10.15826/recon.2021.7.4.021. (SCOPUS)
12.	Panzabekova, A. Zh., & Khalitova, M. M. (2021). Institutional foundations for regulating demographic processes in Kazakhstan. Economics and Finance, 11(47), 38-45. <a href="https://cyberleninka.ru/article/n/institutsionalnye-osnovy-regulirovaniya-demograficheskih-protsessov-v-kazahstane">https://cyberleninka.ru/article/n/institutsionalnye-osnovy-regulirovaniya-demograficheskih-protsessov-v-kazahstane</a> (Uzbekistan, RSCI) (In RuS)
13.	Nyussupova, G., Aidarkhanova, G., Kenespayeva, L. Kelinbayeva, R. Analysis of
13.	Human Capital in the Republic of Kazakhstan through GIS: Regional Aspect .//

	International January of Operinformation 2000 40/4\ D.45.05
	International Journal of Geoinformatics 2022 18(1), P.15-25.
	https://doi.org/10.52939/ijg.v18i1.2099 (SCOPUS Q4)
14.	Fauzer, V. V., Smirnov, A. V., Lytkina, T. S., & Fauzer, G. N. (2022). Challenges and
	contradictions in the development of the North and the Arctic: demographic dimension.
	Arctic: Ecology and Economy, 12(1), 109-120. https://doi.org/10.25283/2223-4594-
	2022-1-109-120 (Arctic: Ecology and Economy, SCOPUS 62% Social Sciences)
15.	Usoltseva, A. A., & Panzabekova, A. Zh. (2022). Dynamics of demographic indicators
	of the subjects of the Ural Federal District in the conditions of the COVID-19 pandemic.
	Traditional National-Cultural and Spiritual Values as the Basis for Innovative
	Development of Russia, 1(21), 48-51. <a href="https://www.elibrary.ru/item.asp?id=48760191">https://www.elibrary.ru/item.asp?id=48760191</a>
	(Russia, RSCI). (In Rus)
16.	Satpaeva, Z. T. (2022). Analysis of the intensity and quality of urbanization in
	Kazakhstan. The Young Scientist, 36(431), 46-53. https://moluch.ru/archive/431/94765/
	(Russia, Google Scholar) (In Rus)
	2023 year
17.	Fauzer, V. V., & Smirnov, A. V. (2023). International and Russian approaches to the
17.	study of sustainable urban development: from theory to practice. Economic and Social
	Changes: Facts, Trends, Forecast, 16(1), 85–102.
	https://doi.org/10.15838/esc.2023.1.85.5 (Economic And Social Changes - Facts
10	Trends Forecast, <b>WOS</b> , <b>Q4</b> ) (In Rus)
18.	Nyussupova, G., Kalimurzina, A., Kelinbayeva, R., Kairova, S., Kenespayeva, L. (2023).
	Regional Features of Agglomeration and the Antidote to Almaty's Landlocked Condition.
	In: Zaman, Q.M., Hall, G.G. (eds) Border Urbanism. The Urban Book Series. Springer,
	Cham. <u>https://doi.org/10.1007/978-3-031-06604-7_12</u>
19.	Rafikov, T. K., Mukaliev, Z. K., Kenespaeva, L. B. (2023). Influence of interactive
	visualization of maps on public perception and understanding of geographical data. The
	Young Scientist, 16(463), 83-88. <a href="https://moluch.ru/archive/463/101817/">https://moluch.ru/archive/463/101817/</a> (In Rus)
20.	Kenespaeva, L. B., Rafikov, T. K., Karmenova, N. N., Musagalieva, A. N. (2023).
	Problems and prospects of development of transport infrastructure in the city of Almaty.
	Bulletin of Voronezh State University. Series: Geography. Geoecology, 1, 44-53.
	https://doi.org/10.17308/geo/1609-0683/2023/1/44-53 (In Rus)
	Publications in the materials of foreign conferences (2021-2023)
	2021 year
21.	Rakhmetova R.U. Ethnodemographic Independence of Kazakhstan's Regions. Socio-
	economic, sociopolitical and sociocultural development of regions: materials of the IX
	international scientific conference on October 25-26, 2021 Prague: Scientific
	Publishing Center "Sociosféra-CZ", 2021. – 50 p. (P.17-20).
	http://www.sociosphera.com/files/conference/2021/k-10 25 21.pdf (In Rus)
22.	Nyussupova G., Aidarkhanova G., Kadylbekov M., Kenespayeva L., Kelinbayeva R.,
	Kozhakhmetov B. Nationalization of Indicators for Sustainable Development Goals in
	the Republic of Kazakhstan through Geoinformation Technologies. GI_Forum 2021, 9
	(1), 158 – 168 https://doi.org/10.1553/giscience2021 01 s158
23.	Nyussupova G., Kelinbayeva R., Aidarkhanova G. Research on Migration of
23.	Kazakhstan's Population as a Factor of Economic Security of the Country, p. 410.
	Abstract Book 34th International Geographical Congress, 16-20 August, 2021, Istanbul,
0.4	438 p. ISBN Number: 978-975-6686-09-6
24.	Kerimkhulle S., Spankulova L., Saliyeva A., Koishybaeva M. Creation and Realization
	of a Demographic-Mathematical Population Model for a Small City. Modern Problems
	of Applied Mathematics and Information Technologies al-Khwarizmi 2021: Abstracts of

the International Scientific Conference (15-17 November, Fergana, Uzbekistan). -Fergana. 2021. – 301p. https://www.researchgate.net/publication/358022140 ABSTRACTS OF THE VII IN TERNATIONAL SCIENTIFIC CONFERENCE CONFERENCE MODERN PROBLE MS OF APPLIED MATHEMATICS AND INFORMATION TECHNOLOGIES AL-KHWARIZMI 2021 (P.44) (In Rus) 2022 year 25. Nurlanova N.K. Features of Urbanization in Kazakhstan: Territorial-Sectoral Approach. Social and Economic Geography in the XXI Century: New Realities and Practical Opportunities [Electronic resource]: materials of the international scientific-practical conference, Republic of Belarus, Minsk, November 19-20, 2021 / Belarusian State University; editorial board: E. A. Antipova (editor-in-chief), A. P. Bezruchenok, A. V. Dydyshko. - Minsk: BSU, 2022. - 317 p. - 1 electronic optical disc (CD-ROM). - ISBN https://elib.bsu.by/handle/123456789/277241 (P.193-196) (In 978-985-881-260-7. Rus) Alzhanova F.G., Alibekova G.Zh. Demographic Consequences of the COVID-19 26. Pandemic in Kazakhstan. Social and Economic Geography in the XXI Century: New Realities and Practical Opportunities [Electronic resource]: materials of the international scientific-practical conference, Republic of Belarus, Minsk, November 19-20, 2021 / Belarusian State University; editorial board: E. A. Antipova (editor-in-chief), A. P. Bezruchenok, A. V. Dydyshko. - Minsk: BSU, 2022. - 317 p. - 1 electronic optical disc (CD-ROM). - ISBN 978-985-881-260-7. https://elib.bsu.by/handle/123456789/277232 (P. 169-171) (In Rus) 27. Tleuberdinova A.T. Urbanization Process: Factors and Consequences. Social and Economic Geography in the XXI Century: New Realities and Practical Opportunities [Electronic resource]: materials of the international scientific-practical conference, Republic of Belarus, Minsk, November 19-20, 2021 / Belarusian State University; editorial board: E. A. Antipova (editor-in-chief), A. P. Bezruchenok, A. V. Dydyshko. -Minsk: BSU, 2022. - 317 p. - 1 electronic optical disc (CD-ROM). - ISBN 978-985-881-260-7. Link (P. 222-225) https://elib.bsu.by/handle/123456789/277249 (In Rus) 28. Nyussupova, G. N. Kelinbayeva, R. Zh. Aidarkhanova, G. B. Features of Migration of the Population in the Republic of Kazakhstan during the Independence Period. Social and Economic Geography in the XXI Century: New Realities and Practical Opportunities [Electronic resource]: materials of the international scientific-practical conference, Republic of Belarus, Minsk, November 19-20, 2021 / Belarusian State University; editorial board: E. A. Antipova (editor-in-chief), A. P. Bezruchenok, A. V. Dydyshko. -Minsk: BSU, 2022. - 317 p. - 1 electronic optical disc (CD-ROM). - ISBN 978-985-881-260-7. https://elib.bsu.by/handle/123456789/277242 (P. 197-201) (In Rus) 29. Alzhanova F.G., Satpaeva Z.T., Alibekova G.Zh. Modern Urbanization Trends and Demographic Development of Cities in Kazakhstan. Greater Eurasia: Development, Security, Cooperation. Yearbook. Issue 5. Part 1 / RAS. INION. Department of Scientific Cooperation; Responsible editor V.I. Gerasimov. - Moscow, 2022. - 1182 p. ISBN 978-5-248-01021-9 (P. 1127-1129) https://cyberleninka.ru/article/n/sovremennyetendentsii-urbanizatsii-i-demograficheskogo-razvitiya-gorodov-kazahstana. (In Rus) Alzhanova F.G., Satybaldin A.A., Alibekova G.Zh. Socio-Economic Problems and 30. Challenges of Urbanization in Kazakhstan. Regional Policy, Political Geography and Geopolitics: History and Modernity. Materials of the international scientific conference dedicated to the 20th anniversary of the Department of Regional Policy and Political Geography of St. Petersburg State University, St. Petersburg State University. April 22-

	23, 2022 / Ed. N.M. Mikheeva, N.V. Kaledin, — St. Petersburg: VVM Publishing, 2022.
	— 768 p. (P. 488-494) https://www.elibrary.ru/item.asp?id=49439380 (In Rus)
31.	Alzhanova F.G., Chulanova Z.K., Moldabekova A.T. International Migration Processes
	in Kazakhstan: Trends and Challenges. Transboundary Territories of Central Asia and
	Adjacent Regions: Opportunities and Challenges of Cooperation. Part I. Materials of the
	International Scientific-Practical Conference (Samarkand, May 5-6, 2022). –
	Samarkand, 2022. – 244 p. (P.39-42) (In Rus)
32.	Nurlanova N.K. Problems of Depressed Border Areas of Kazakhstan and Ways to Solve
	Them. Transboundary Territories of Central Asia and Adjacent Regions: Opportunities
	and Challenges of Cooperation. Part I. Materials of the International Scientific-Practical
	Conference (Samarkand, May 5-6, 2022). – Samarkand, 2022. – 244 p. (P.224-228)
33.	Alzhanova F.G., Alibekova G.Zh., Umarova D.T. Problems of Demographic Stability and
	Urbanization in Kazakhstan. Current Issues, Directions, and Mechanisms of
	Development of Productive Forces of the North – 2022: Collection of Articles of the
	Eighth All-Russian Scientific-Practical Conference (with international participation) (September 21-23, 2022, Syktyvkar): in 2 parts. – Irkutsk, 2022. – Part I. 368 p. (P. 80-
	84) https://iespn.komisc.ru/pub/726-konferencia-2022-9-3) (In Rus)
34.	Fauzer V.V., Alzhanova F.G. The Role of Northerliness in Demographic Dynamics:
	Arctic, North, Kazakhstan (International Comparisons). Current Issues, Directions, and
	Mechanisms of Development of Productive Forces of the North – 2022: Collection of
	Articles of the Eighth All-Russian Scientific-Practical Conference (with international
	participation) (September 21-23, 2022, Syktyvkar): in 2 parts. – Irkutsk, 2022. – Part I.
	- 368 p. (P. 58-67) https://iespn.komisc.ru/pub/726-konferencia-2022-9-3 (In Rus)
35.	Spankulova L.S. Demographic Forecast Considering Mortality Rate Dynamics and Age-
	Gender Structure of Kazakhstan's Population. Current Issues, Directions, and
	Mechanisms of Development of Productive Forces of the North – 2022: Collection of Articles of the Eighth All-Russian Scientific-Practical Conference (with international
	participation) (September 21-23, 2022, Syktyvkar): in 2 parts. – Irkutsk, 2022. – Part I.
	- 368 p. (P. 92-98) https://iespn.komisc.ru/pub/726-konferencia-2022-9-3) (In Rus)
36.	Chulanova Z.K. Influence of External Migration on the Development of Labor Potential
	in Kazakhstan. Current Issues, Directions, and Mechanisms of Development of
	Productive Forces of the North – 2022: Collection of Articles of the Eighth All-Russian
	Scientific-Practical Conference (with international participation) (September 21-23,
	2022, Syktyvkar): in 2 parts Irkutsk, 2022 Part I 368 p. (P. 145-154)
	https://iespn.komisc.ru/pub/726-konferencia-2022-9-3 (In Rus)
37.	Nyussupova G.N., Tazhieva D.A., Kenespaeva L.B. Urban Settlement in Kazakhstan:
	Formation History and Current Situation Analysis. Current Problems of Urbanization:
	Continuity and Innovations. Collection of Articles of the International Conference (Moscow, MSU, March 22-23, 2022) Compiled by A.G. Makhrova. – Moscow:
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### Kazakhstani editions

No.	Author, Title, Edition
	Monographs and lecture course
	2021 year
1.	Lecture Course: Chulanova Z.K. Labor mobility. Lecture course. – Almaty: Institute of Economics of the Ministry of Education and Science of the Republic of Kazakhstan. – 2022. – 424 p.) (In Rus)
	2023 year
2.	Monograph: Demography, migration, urbanization in Kazakhstan: factors, structure, dynamics, mapping and forecast / Doctor of Economics Alzhanova F.G. – Almaty: Institute of Economics of the SC MSHE RK, 2023500 p. ISBN 978-601-7079-47-5) (In Rus)
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3.	Nyusupova G.N., Aidarkhanova G.B., Tokbergenova A.A. Geography of human capital in the Republic of Kazakhstan: comparison of regions. // Economics: strategy and practice 2021 16(4). – P.160-173. <a href="https://doi.org/10.51176/1997-9967-2021-4-160-173">https://doi.org/10.51176/1997-9967-2021-4-160-173</a> ) (In Kaz)
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00	2022 year
22.	<u>Chulanova ZK</u> Facteurs de migration externe de la population du Kazakhstan. International scientific journal "Global science and innovations 2022: Central Asia", 2022. No. 3(17). – P. 32-36 ( RSCI , Kazakhstan ) (In France)
23.	<u>Spankulova LS</u> , Bazarbekova MM, Features and dynamics of demographic processes in Kazakhstan. Materials of the I X International Conference on Education and Research in Tourism and Hospitality. November 18-19, 2021, Almaty, Kazakhstan. – Almaty: Kazakh University, <b>2022.</b> – (103-107 pp) ISBN 978-601-04-5961-8 (In Rus)
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25.	Alzhanova F.G. Modern trends in the development of urban systems, analysis of factors, intensity and quality of urbanization in Kazakhstan. Regional economics and vectors of demographic and socio-economic development / Ed. Academician of NAS. RK Satybaldina A.A. – Almaty: Institute of Economics of the KN MES RK, 2022. – 375 p. (P.92-100) (In Rus)
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36.	Alzhanova F.G., Alzhanova S.A. Alternative methods for measuring urbanization. International scientific and practical conference. Economic reconstruction of Kazakhstan in the context of the global geopolitical crisis / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2022 T.1. – 251 pp. (P. 114-120) (In Rus)
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45.	Tleuberdinova A.T., Nurlanova N.K. Kazakhstani urbanization trends and negative
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49.	Chulanova Z.K. Some aspects of stimulating internal mobility of the population.  Collection of proceedings of the conference "Socio-demographic problems of our time and national interests of Kazakhstan" / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics KN MNERO RK, 2023. – 381 p. – (P. 155-165.) (In Rus)
50.	Spankulova L.S. Demographic well-being in the national security system of the Republic of Kazakhstan. Collection of proceedings of the conference "Sociodemographic problems of our time and national interests of Kazakhstan" / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2023. – 381 pp. (P.197-202) (In Rus)
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52.	Umarova Dinara. The main demographic trends of Kazakhstan Collection of proceedings of the conference "Social and demographic problems of our time and national interests of Kazakhstan" / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2023. – 381 pp . (P.247-252) (In Rus)
53.	Kangalakova D. M., Satpayeva Z. T. The intellectual potential of the country: definition, foreign experience and Kazakhstan // Social and demographic problems of our time and national interests of Kazakhstan / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2023. – 381 p. (pp. 253-258). (In Rus)
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55.	Kalieva S.A., Rakhmetova R.U. Demographic development of Kazakhstan in the context of the COVID-19 pandemic. Collection of proceedings of the conference "Socio-demographic problems of our time and national interests of Kazakhstan" / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2023. – 381 p. (325-330). (In Rus)
56.	<u>Dzhumashev N.M.</u> Educational potential of regional society and migration. Collection of proceedings of the conference "Socio-demographic problems of our time and national interests of Kazakhstan" / Ed. Academician of the NAS RK Satybaldin A.A. – Almaty: Institute of Economics of the KN MNERO RK, 2023. – 381 pp. (P.331-334.) (In Rus)
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59.	Panzabekova A.Zh., Alaeva G.T. Main directions of migration policy of Kazakhstan in
	the interests of strengthening demographic potential and human resources // "Family,
	demographic and gender policy at a new stage of development of Kazakhstan" -
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	"Kazakhstan Institute of Social Development": 2023. – 380 p. (101-108). (In Rus)

## Implementations, copyright

	Author, Name of the material, Number of the security document
	<u>2022</u>
1.	Spankulova L. S., Alzhanova F. G., Abylkair N. A.  Modeling and forecasts of socio-demographic changes in the quality of life and health of the population in the context of the introduction of digital technologies in Kazakhstan.  Certificate of entry of information into the State Register of rights to objects protected by
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