



# THE IMPACT OF POPULATION GROWTH AND THE LABOR MARKET ON ECONOMIC DEVELOPMENT

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Article history:	Abstract:
<b>Received:</b> 10 <sup>th</sup> February 2025 <b>Accepted:</b> 7 <sup>th</sup> March 2025	This article analyzes population growth and the labor market, as well as their impact on economic development. Various theoretical approaches, particularly the views of Malthus, Keynes, Becker, and Piketty, are examined to highlight both the positive and negative aspects of demographic growth. Methodologically, a mixed-method approach is employed, using statistical data from Uzbekistan for the period of 2013–2023. The analysis shows that while population growth has contributed to the increase in labor resources and GDP volume, employment rates have demonstrated varying dynamics. Furthermore, it is emphasized that economic growth is not solely driven by population increase, but is also closely linked to factors such as productivity, technological advancement, and investment.

**Keywords:** Population growth, labor market, economic development, employment rate, gdp (gross domestic product), demographic change, economic policy, labor resources, quality growth, infrastructure, technological advancement, investments, economic inequality, Uzbekistan's economy

## INTRODUCTION

Population growth is considered an important factor influencing economic development. It shapes labor markets, resource allocation, and social dynamics. With the global population projected to reach 9.7 billion by 2050, it remains one of the pressing issues facing policymakers and economists. A thorough study of the impact of population growth on economic development, an analysis of its positive and negative consequences, and the development of effective policy measures in this area are crucial tasks.

In most cases, high demographic growth in any country—manifested through rapid increases in population and marriage rates—puts pressure on economic indicators and may lead to various problems. When analyzing the impact of demographic processes on social sectors, it becomes evident that many of them are closely linked to the development of a country's economy. In particular, the creation or improvement of social infrastructure is largely driven by population growth, which ultimately has a significant impact on the national economy.

Economic and demographic data are compiled from sources such as the World Bank, the United Nations, and various national statistical agencies. Key indicators include gross domestic product (GDP) growth rates, employment statistics, and figures related to resource consumption.

Population growth typically leads to an increase in the labor force, which in turn acts as an important factor influencing economic development. At the same time, a growing population increases the demand for new jobs and affects the level of resource utilization—together creating both new opportunities and challenges for a country's economy.

## LITERATURE REVIEW

A number of scholars have proposed theories regarding the impact of population growth on economic development. Among them, English economist Thomas Robert Malthus (1766–1834) is one of the most well-known figures who analyzed the relationship between population growth and economic development. In his work [1], he introduced the Malthusian theory. According to his theory, while population grows geometrically, food production increases only arithmetically. Without natural or artificial constraints, excessive population growth would lead to famine and poverty.

In contrast to Malthus, other scholars argue that population growth can expand markets and encourage innovation.

One of the founders of modern macroeconomics, John Maynard Keynes, viewed the relationship between population growth and economic development from a more positive perspective than Malthus. He believed that an increase in population leads to higher consumer demand, which in turn



stimulates economic activity through the creation of new production and jobs. Moreover, population growth increases the demand for capital, meaning producers invest more in building new factories and enterprises, which can accelerate economic growth.

Another researcher who studied the labor market and population issues is Gary Becker. He emphasized that population growth does not always directly benefit economic development. In his research, he highlighted that *qualitative* population growth—meaning improvements in education and health—positively impacts a country's economic progress, while growth in numbers alone does not necessarily yield effective outcomes.

#### METHODOLOGY

This study aims to identify the relationship between population growth and labor market dynamics, as well as to assess the impact of these processes on economic development. It analyzes the composition of the labor market, including employment levels, unemployment rates, and labor shortages.

A mixed-method approach is employed in this research, combining both quantitative and qualitative data. Additionally, the study examines ten years of national data related to population growth, employment, and GDP growth.

#### DISCUSSION AND RESULTS

As of 2023, the world population reached 8.062 billion people. In the same year, global gross domestic product (GDP) amounted to approximately 106.2 trillion USD. GDP per capita stood at 13,169.6 USD [3]. Between 1913 and 2010, growth in per capita GDP and total population contributed to global economic growth, exceeding 3% annually.

From 1960 to 2015, economic growth accelerated significantly in China and other developing countries. In contrast, growth rates in Western Europe and North America were below the global average, while Asian countries achieved higher-than-average economic growth. In Africa (excluding Sub-Saharan Africa), population growth rates were high, contributing

nearly half of the global economic growth between 1990 and 2015.

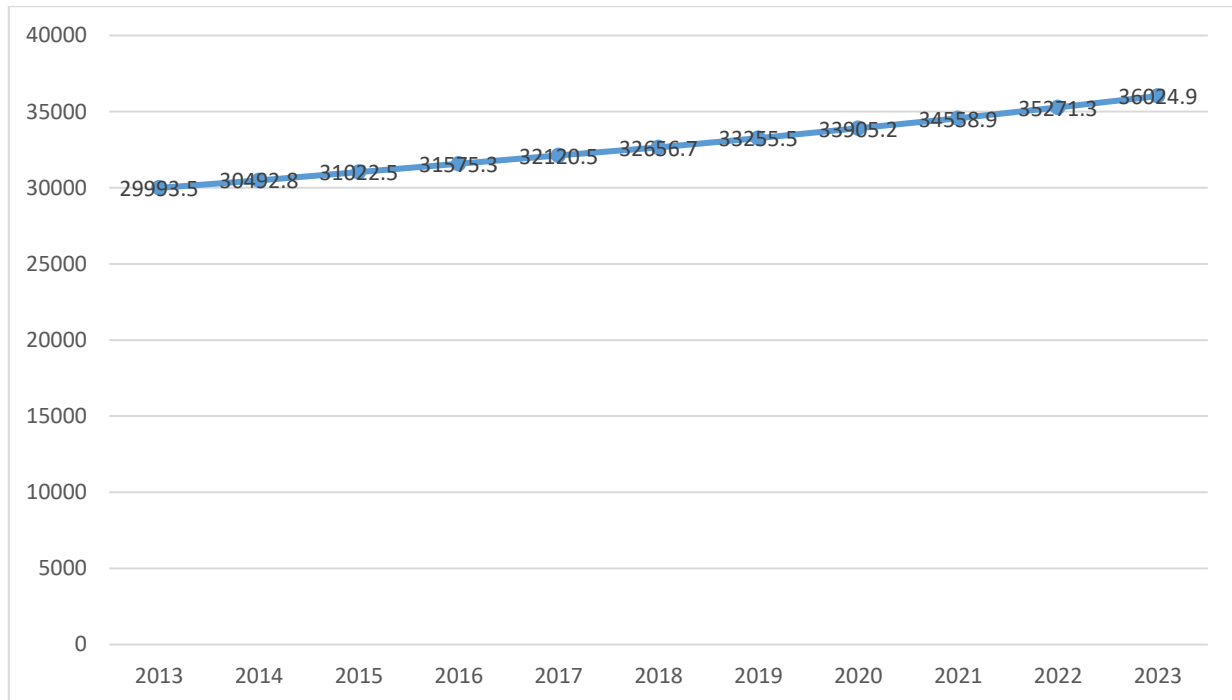
In China, population growth between 1990 and 2015 was only 0.76%, while per capita GDP growth reached 9.48%. This may be attributed to the country's one-child policy. India and Indonesia also achieved high levels of economic growth, although their population growth rates were higher than China's. Overall, developing Asian countries have significantly increased their per capita GDP and are approaching high-income country status [4].

Population growth influences various factors such as the age structure of the population, international migration, economic inequality, and the size of the national labor force. These factors, in turn, affect overall economic growth [1].

Currently, Uzbekistan's population is steadily increasing year by year. According to the data from the last 10 years, the population was 29,993.5 thousand in 2013, and by 2023, it had reached 36,024.9 thousand. During this period, the population increased by 6.0314 million people (more than 6 million).

Although the natural population growth rate in Uzbekistan has shown a declining trend in recent years, it still remains higher than in many countries around the world. High demographic growth rates typically place additional pressure on the economic system. This is particularly relevant to the need for developing infrastructure and improving the quality of social services.

According to Thomas Piketty, population growth does not automatically resolve economic inequality. On the contrary, within a capitalist system, the distribution of wealth and income tends to be unequal, meaning the results of economic growth do not affect all layers of society equally. To address this issue, Piketty proposes strengthening the role of the state in the economy. In particular, he advocates for the introduction of progressive taxation for the wealthy, increasing investment in education and healthcare, and enhancing social protection in the labor market as measures to improve economic equality.



**Figure 1. Population of Uzbekistan, 2013–2023 (in thousand people) [11].**

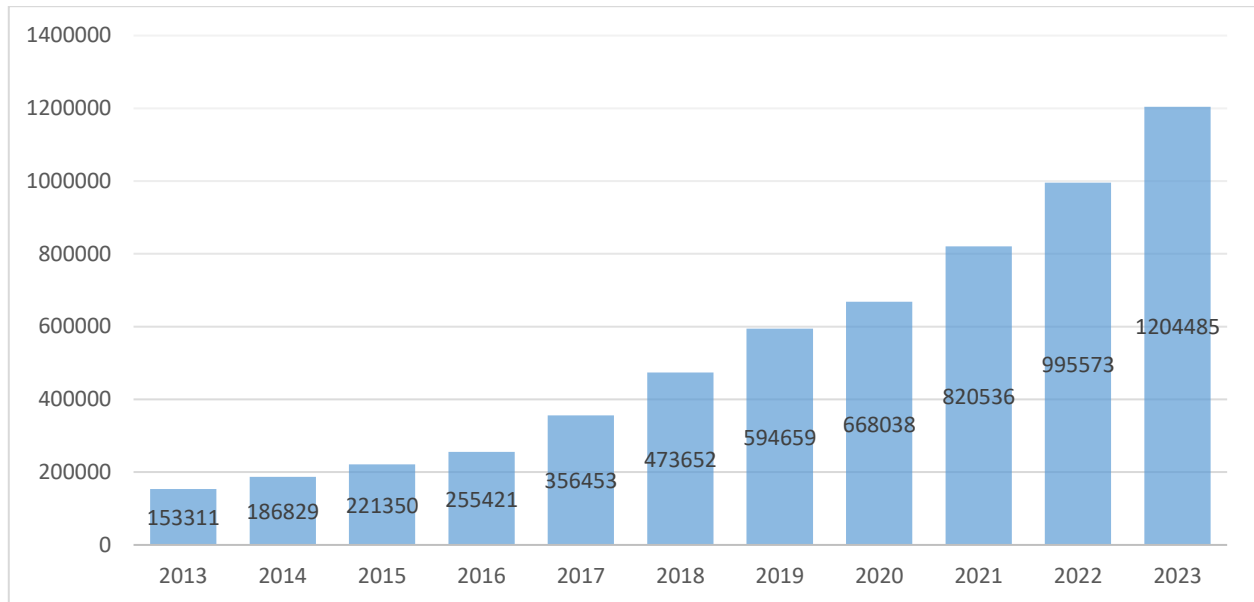
From this figure, we can observe that Uzbekistan's GDP increased by 1,051,174 billion UZS between 2013 and 2023. While the GDP has consistently grown over the years, annual growth rates have been variable, with some years showing a slowdown.

If population growth influences the increase in per capita output, then the rate of population growth can contribute to either higher or lower overall economic growth depending on its effect on per capita GDP. On a global scale, between 1990 and 2015, the correlation between population growth and real per

capita GDP growth was -0.1849, based on data from the World Bank (2017). This indicates that during that period, the two variables were not strongly correlated [4].

Below, we will examine how Uzbekistan's population and GDP have changed over time. These analyses allow for comparison with the views of economists discussed earlier.

There is a strong relationship between population size and economic growth; however, the primary drivers of economic growth may be technological advancement and production efficiency.



**Figure 2. Uzbekistan's GDP in Current Prices, 2013–2023 (in billion UZS) [11].**

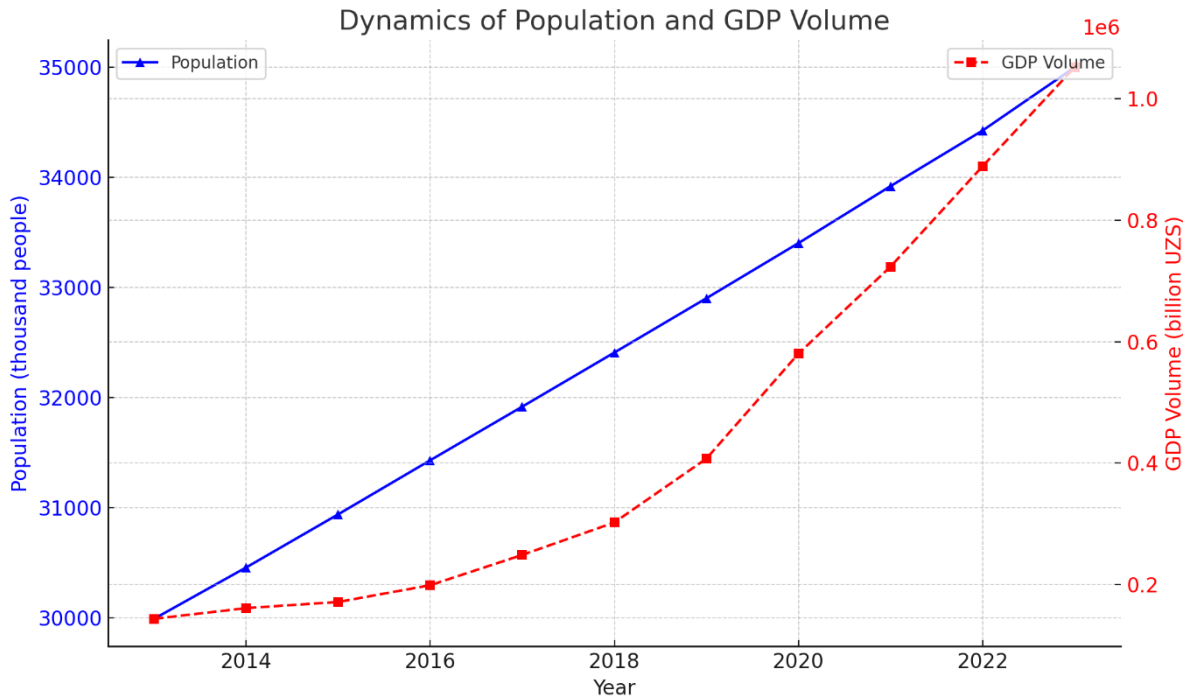
Per capita income has also increased, indicating that economic growth has contributed to improvements in overall welfare.

It would be beneficial to analyze which sectors are contributing to GDP growth, how inflation affects real incomes, and trends in employment. Notably, GDP growth rates have accelerated significantly since 2017. This suggests that economic growth may not solely depend on population growth, but also on productivity and various other factors.

Population growth profoundly impacts the economy of every country, simultaneously creating both

new opportunities and challenges. To maximize the positive effects of a growing population and mitigate the negative consequences, it is essential to implement comprehensive policies focused on resource management, educational development, and infrastructure improvement.

From 2013 to 2023, Uzbekistan's labor resources increased by 1.9255 million people. On average, labor resources grew by 1.03% annually, demonstrating a steady upward trend. This indicates a continuous inflow of new labor force participants into the market.



**Figure 3. Population and GDP Volume in Uzbekistan, 2013–2023 [11].**

The highest employment rate was observed in 2017 at 69.2%, marking one of the most active years for the labor market. The lowest rate, 66%, occurred in 2020, likely due to the COVID-19 pandemic or related economic downturn. After 2020, the employment rate began to recover, reaching 67.9% in 2023

**Table 1**  
**Labor Resources and Employment Rates in Uzbekistan, 2013–2023 [11].**

Year	Labor Resources (thousand people)	Employment Rate (%)	Labor Resource Growth Rate (%)	Employment Rate Growth (%)
2013	17814,1	67,1		
2014	18048	67,7	1,31	0,89
2015	18276,1	68,2	1,26	0,74
2016	18488,9	68,7	1,16	0,73
2017	18666,3	69,2	0,96	0,73
2018	18829,6	67,4	0,87	-2,60
2019	18949	68,1	0,63	1,04
2020	19158,2	66	1,10	-3,08
2021	19334,9	67	0,92	1,51
2022	19517,5	67,2	0,94	0,30
2023	19739,6	67,9	1,14	1,042

The consistent growth in labor resources supports economic expansion. Variations in employment rates reflect the economic environment and labor market conditions. The decline in 2020

highlighted labor market challenges, though stability was restored in subsequent years.

### CONCLUSION



Population growth has a complex and multifaceted impact on economic development. The results of this study show that an increasing population contributes to the expansion of labor resources, which can support economic growth. However, high demographic growth also puts pressure on infrastructure, social services, and resource distribution.

An analysis of demographic trends in Uzbekistan between 2013 and 2023 indicates that significant population growth has directly influenced the country's economic development trends.

Although labor resources have increased annually, employment rates have fluctuated. The decline in 2020 may be attributed to the global pandemic, but the labor market began to recover thereafter. While GDP growth and economic development are linked to labor force expansion, it is evident that technological advancement, production efficiency, and investment are the key drivers of this growth.

When examining the relationship between population growth and economic development, the *quality* of population growth, rather than the quantity alone, should be prioritized. Education, healthcare, and workforce skills are among the main factors that influence the sustainability of economic growth.

Therefore, economic policy must adopt a diversified approach to effectively address the challenges of population growth while leveraging its potential. Overall, population growth represents both an opportunity and a challenge for economic development. With effective policy and management, its negative consequences can be mitigated, and its positive impacts can be enhanced. In the case of Uzbekistan, achieving economic progress will require focused attention on labor market dynamics, education, and innovation, taking into account the country's demographic trends.

## REFERENCES

1. Peterson, E. Wesley F. (2017). "The Role of Population in Economic Growth." SAGE Open, January-March 2017: 1–15.
2. Malthus, T. R. (1798). An Essay on the Principle of Population. London: J. Johnson.
3. <http://datatopics.worldbank.org/world-development-indicators>
4. <https://journals.sagepub.com/doi/full/10.1177/2158244017736094>
5. Keynes, J. M. (1936). The General Theory of Employment, Interest and Money. London: Macmillan.
6. Becker, G. S. (1993). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education (3rd ed.). Chicago: University of Chicago Press.
7. Piketty, T. (2014). Capital in the Twenty-First Century. Cambridge, MA: Harvard University Press.
8. World Bank. (2023). World Development Indicators. Retrieved from: <https://databank.worldbank.org>
9. United Nations (UN). (2022). World Population Prospects. Department of Economic and Social Affairs. Retrieved from: <https://population.un.org>
10. Statistics Agency under the President of the Republic of Uzbekistan. (2013–2023). Official Statistical Data. Retrieved from: <https://stat.uz>
11. Jia, X., Cui, Y., Patro, R., Venkatachalam, S., Kanday, R. & Turayevich, J. (2023). Application of fractional-order nonlinear equations in coordinated control of multi-agent systems. Nonlinear Engineering, 12(1), 20220335. <https://doi.org/10.1515/nleng-2022-0335>
12. Abdullaev Aybek Nazarbaevich, Jumaniyazov Inomjon To'raevich, Sabirov Mirza Qilichbayevich, & Gulomov Ibrokhim Rustam ugli. (2024). Development Of China's Sovereign Wealth Funds. Wire Insights: Journal of Innovation Insights, 2(1), 1–8.
13. Sovereign wealth funds of the Republic of Uzbekistan in the post-pandemic period. (2023). Pedagogical Cluster-Journal of Pedagogical Developments, 1(2), 355-372.
14. Mirza Qilichbayevich Sabirov, Ibrokhim Rustam ugli Gulomov, Inomjon To'raevich Jumaniyazov, & Aybek Nazarbaevich Abdullaev. (2023). Relevance and Application of Compulsory Health Insurance in Republic of Uzbekistan. Journal of Intellectual Property and Human Rights, 2(11), 71–76.
15. Aybek Nazarbaevich Abdullaev, Shavkat Bayramovich Babaev, Mirza Qilichbayevich Sabirov, & Inomjon To'raevich Jumaniyazov. (2024). TAX RELATIONS IN BUSINESS ENTITIES PROVIDING NON-STATE EDUCATIONAL SERVICES. American Journal of Interdisciplinary Research and Development, 25, 123–134.
16. Aybek Nazarbaevich Abdullaev, Inomjon To'raevich Jumaniyazov, Shavkat Bayramovich Babaev, & Mirza Qilichbayevich Sabirov. (2024). PROSPECTS OF ORGANIZING RENTAL OPERATIONS IN NON-GOVERNMENT EDUCATIONAL ORGANIZATIONS ON THE



- BASIS OF INTERNATIONAL STANDARDS OF FINANCIAL REPORTING. Galaxy International Interdisciplinary Research Journal, 12(2), 104–114.
17. Shavkat Bayramovich Babaev, Aybek Nazarbaevich Abdullaev, Mirza Qilichbayevich Sabirov, & Inomjon To'raevich Jumaniyazov. (2024). SOME ISSUES OF THE DEVELOPMENT OF BANKING INNOVATIONS IN THE COMMERCIAL BANKS OF UZBEKISTAN. Academia Repository, 5(03), 31–37.
18. Shavkat Bayramovich Babaev, Aybek Nazarbaevich Abdullaev, Mirza Qilichbayevich Sabirov, Inomjon To'raevich Jumaniyazov, & Inomjon To'raevich Jumaniyazov. (2024). CONCEPTUAL REFLECTION OF THE CHANGING ROLE OF THE STATE EXPORT POLICY IN THE DEVELOPMENT STRATEGY OF THE NEW UZBEKISTAN. European Scholar Journal, 5(3), 5–8.
19. Jumaniyazov Inomjon To'raevich, Abdullaev Aybek Nazarbaevich, Sabirov Mirza Qilichbayevich, & Shavkat Bayramovich Babaev. (2024). Importance of social principles of sovereign wealth funds. Global Scientific Review, 26, 46–54.
20. Jumaniyazov Inomjon To'rayevich. (2024). ESG IN SOVEREIGN WEALTH FUND INVESTMENTS. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 41(2), 117–124.
21. ZM Shaikh, S Ramadass, B Prakash, JI Turayevich Data-Driven Decision Making in Stock Portfolio Management: LSTM and Monte Carlo Simulation in Action- Fluctuation and Noise Letters, 2023
22. To'raevich, J. I., Nazarbaevich, A. A., Qilichbayevich, S. M., & Babaev, S. B. (2024). Importance of social principles of sovereign wealth funds. Global Scientific Review, 26, 46–54.
23. Jumaniyazov, I. T. (2019). The impact of Uzbekistan Reconstruction and development fund's expenditure on GDP growth. Science, research, development № 16. Monografiya pokonferencyjna.
24. Inomjon To'raevich Jumaniyazov, Aybek Nazarbaevich Abdullaev, Mirza Qilichbayevich Sabirov, & Shavkat Bayramovich Babaev. (2024). METHODOLOGICAL BASIS FOR FORECASTING THE TAX POTENTIAL OF THE RUSSIAN FEDERATION. Spectrum Journal of Innovation, Reforms and Development, 27, 100–107.
25. Abdullaev, A. N., Jumaniyazov, I. T. R., Sabirov, M. Q., & Babaev, S. B. (2024). DIRECTIONS FOR IMPROVING THE PROCESS OF PERSONAL INCOME TAX FORECASTING. American Journal of Interdisciplinary Research and Development, 28, 233–243.
26. ESG PRINCIPLES IN INVESTMENT PROJECTS FINANCED BY SOVEREIGN INVESTMENT FUNDS. (2024). Ustozlar Uchun, 1(4), 1096–1102.
27. THE SOCIAL IMPORTANCE OF SOVEREIGN WEALTH FUNDS. (2024). Ustozlar Uchun, 1(4), 1028–1034.
28. TARGETED PLANNING OF BUDGET EXPENDITURES AND IMPACT ON SOCIAL POLICY. (2024). Ustozlar Uchun, 1(4), 1442–1444.
29. Jumaniyazov, I. T. (2021). The Progressive Foreign Experiments in the Activity of Sovereign Wealth Funds. Annals of the Romanian Society for Cell Biology, 109–116.
30. Jumaniyozov, I. (2018). Impact of Development Finance Institutions on Economic Growth: Implications for Reconstruction and Development Fund of Uzbekistan. International Journal of Management Science and Business Administration, 4(2), 84–88.
31. Jumaniyozov, I. (2020). ISSUES OF ENSURING THE TRANSPARENCY OF SOVEREIGN WEALTH FUNDS. International Finance and Accounting, 2020(5), 1.
32. Jumaniyazov, I. (2020). FOREIGN EXPERIENCE IN THE ACTIVITIES OF SOVEREIGN FUNDS. International Finance and Accounting, 2020(2), 1.
33. Jumaniyazov, I. T. (2021). Transparency Is A Key Indicator Of The Activity Of Sovereign Wealth Funds. The American Journal of Management and Economics Innovations, 3(05), 30–37.