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## IMPROVING THE QUALITY OF LIFE FOR SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF GLOBALIZATION AND MODERNIZATION OF KAZAKHSTAN'S ECONOMY

Quality of life is a multifaceted concept that reflects the level of well-being and life satisfaction of the population. President K.K. Tokayev noted that 'in order to improve the quality of life of every Kazakhstani citizen, infrastructural issues that directly affect the quality of life will be in the centre of attention'. Indicators of the quality of life of the population are important indicators for assessing the specific socio-economic consequences of the ongoing transformations and the degree of social tension in society. Therefore, the quality of life of the population becomes relevant in the centre of attention of the state leadership.

The purpose of the article is to determine the actual assessment criteria for Kazakhstan and to propose measures to improve the quality of life in the conditions of globalisation and modernisation. An analysis is conducted based on existing approaches to assessing the quality of life and similar concepts of sustainable development. It is considered how improving the quality of life can contribute to the development of regions in the context of globalization and economic modernization, paying special attention to promoting sustainable development.

This article examines the relationship between economic growth and population well-being in Kazakhstan. It examines the dynamics of gross domestic product (GDP), the state of education and proposes measures to improve the education system in the country. The importance of cooperation between the government, business and the public in the implementation of these strategies is emphasized. Promoting and implementing these strategies requires open dialogue, support for project development efforts and attention to every aspect of development. These efforts will contribute to a stable and uniform improvement in the quality of life of the population of Kazakhstan.

**Key words:** quality of life, factors, sustainable development, welfare, income.

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### Қазақстан экономикасын жаһандану және жаңғырту контекстінде тұрақты даму үшін өмір сапасын жақсарту

Өмір сапасы – бұл халықтың әл-ауқаты мен өміріне қанағаттану деңгейін көрсететін көп қырлы ұғым. Президент Қ. Қ. Тоқаев «әрбір қазақстандықтың өмір сүру сапасын жақсарту мақсатында өмір сапасына тікелей әсер ететін инфрақұрылымдық сипаттағы мәселелер басты назарда болады», – деп атап өтті. Халықтың өмір сүру сапасының көрсеткіштері жүргізіліп жатқан өзгерістердің нақты әлеуметтік-экономикалық салдарын және қоғамдағы әлеуметтік шиеленіс дәрежесін бағалаудың маңызды индикаторлары болып табылады. Сондықтан мемлекет басшылығының назарында халықтың өмір сүру сапасы өзекті болып отыр.

Мақаланың мақсаты – Қазақстан үшін жаһандану мен жаңғырту жағдайында өмір сүру сапасын бағалаудың өзекті критерийлерін айқындау және жақсарту жөнінде шаралар ұсыну болып табылады. Мақалада өмір сүру сапасын бағалаудың қолданыстағы тәсілдері мен тұрақты дамудың ұқсас тұжырымдамалары негізінде талдау жасалды. Өмір сүру сапасын арттырудың тұрақты дамуға әсері ерекше назарға ала отырып, жаһандану және экономиканы жаңғырту жағдайында өңірлердің дамуына ықпалы қарастырылады.

Бұл мақалада Қазақстан халқының экономикалық өсуі мен әл-ауқаты арасындағы өзара байланыс қарастырылады. Онда жалпы ішкі өнімнің (ЖІӨ) динамикасы, білім беру жағдайы зерттеліп, елдегі білім беру жүйесін жетілдіру шаралары ұсынылады. Осы стратегияларды жүзеге асыруда мемлекеттік органдар, бизнес және жұртшылық арасындағы ынтымақтастықтың маңыздылығы көрсетілген. Стратегияларды ілгерілету және іске асыру ашық диалогты, инновациялық жобаларды әзірлеу бойынша бірлескен күш-жігерді және дамудың әлеуметтік аспектілеріне назар аударуды қажет етеді деп тұжырымдайды. Бұл күш-жігер Қазақстан халқының өмір сүру сапасын тұрақты және біркелкі арттыруға ықпал ететін болады.

**Түйін сөздер:** өмір сапасы, факторлар, тұрақты даму, әл-ауқат, табыс.

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### Улучшение качества жизни для устойчивого развития в контексте глобализации и модернизации экономики Казахстана

Качество жизни – это многогранное понятие, которое отражает уровень благосостояния и удовлетворенности жизнью населения. Президент К.К. Токаев отметил, что «в целях улучшения качества жизни каждого казахстанца в центре внимания будут вопросы инфраструктурного характера, непосредственно влияющие на качество жизни». Показатели качества жизни населения являются важными индикаторами оценки конкретных социально-экономических последствий проводимых преобразований и степени социальной напряженности в обществе. Поэтому в центре внимания руководства государства становится актуальным качество жизни населения.

Целью статьи является определение актуальных критериев оценки для Казахстана и предложение мер по улучшению качества жизни в условиях глобализации и модернизации. Проведен анализ на основе существующих подходов к оценке качества жизни и аналогичных концепций устойчивого развития. Рассматривается как повышение качества жизни может способствовать развитию регионов в условиях глобализации и модернизации экономики, уделяя особое внимание содействию устойчивому развитию.

В данной статье рассматривается взаимосвязь между экономическим ростом и благополучием населения Казахстана. В ней рассматривается динамика валового внутреннего продукта (ВВП), состояние образования и предлагаются меры по улучшению системы образования в стране. Подчеркивается важность сотрудничества между государственными органами, бизнесом и общественностью в реализации этих стратегий. Продвижение и реализация этих стратегий требуют открытого диалога, совместных усилий по разработке инновационных проектов и внимания к социальным аспектам развития. Эти усилия будут способствовать стабильному и равномерно повышению качества жизни населения Казахстана.

**Ключевые слова:** качество жизни, факторы, устойчивое развитие, благосостояние, доход.

## Introduction

Effective methods of improving the standard of living and quality of life of the population of any state, ensuring their sustainable growth in a complex dynamic and unstable environment are the core of the modern economy. The basis for ensuring a high quality of life of the population of Kazakhstan is a high degree of socialization of the processes of development of the economy and society. We consider the quality of life of the population at the stage of implementation of socially oriented innovative and digital development as a high degree of satisfaction of the material, social and spiritual needs of the population. Improving the quality of life for sustainable development in the context of globalization and modernization of the economy of Kazakhstan allows

us to provide additional jobs, develop all spheres of human activity, change its infrastructure, change the demographic situation, determine the need to form a decent standard of living for the population, reduce the ranking of society by income as a system of legal and socio-economic guarantees that ensure a decent and socially acceptable quality of life for society.

The quality of life of the population is a multifaceted and multidimensional concept that reflects the overall level of well-being and life satisfaction of individuals in a particular society or region. The term includes various aspects covering physical, social, economic and psychological well-being of people. Quality of life is measured not only by material parameters, but also takes into account a wide range of factors affecting daily life and the general condition of a person (Gaisina, 2022).

Improving the quality of life is a fundamental aspect of the sustainable development of society and the region. This task has a significant impact on various spheres of life, forming favorable conditions for progress, stability, and well-being.

The modern world is facing rapid and profound changes caused by globalization. The expansion of economic, technological and cultural ties between countries and regions creates new opportunities and challenges for each state. In this context, improving the quality of life becomes an important task for successful adaptation to global trends (Ponomareva, 2011).

Improving the quality of life directly affects the formation of highly qualified human capital. Taking care of health, education and professional growth creates a society capable of innovation and development. The level of quality of life is closely linked to economic development. Healthy and educated citizens with social protection are a productive resource for the economy. This contributes to sustainable growth and attractiveness of the region for investments. A high quality of life strengthens the social structure and reduces social inequalities. Satisfaction with life contributes to the formation of a stable society where people interact on the basis of trust and mutual assistance. It is also directly related to health and the quality of family relationships. Taking care of physical and mental well-being creates conditions for stable family ties, and this, in turn, has a positive impact on society. Supporting a high quality of life also includes care for the environment. Sustainable resource consumption and nature conservation are key elements of environmental sustainability. Regions with a high quality of life become a magnet for talented and skilled professionals. This promotes intellectual energy and innovative development. Life satisfaction is an important indicator of the psychological well-being of a society. The level of happiness and satisfaction is directly related to the quality of life.

Thus, the aim of this study is to determine the factors that contribute to enhancing the quality of life of the population. Improving the quality of life is not only a goal in itself, but it also acts as a driving force for achieving broader social, economic and environmental objectives. In the context of globalization and modernization of Kazakhstan's economy, it is of utmost importance to establish the foundation for sustainable and prosperous societies.

### Literature review

To date, quality of life (QoL), like well-being, has no generally accepted official definitions. At

least, they are not used in the world analytical practice and scientific literature in this direction, as evidenced by the great variety of relevant approaches and assessment indicators. T. Power, following the works of Wingo Jr, L. (Wingo, 1973; Wingo & Evans, 2013), proposes to interpret the concept of 'quality of life' as 'the quality of the social and physical (both man-made and natural) environment in which people seek to fulfil their needs. about their wants and needs' (Power, 2020, p.3).

The basis of modern research on the quality of life in the EU is an analytical report resulting from the work of one of the EU commissions – the Commission for the Measurement of Economic Performance and Social Progress, named after its key experts of the Stiglitz-Sen-Fitoussi Commission (Eurostat, 2017).

OECD countries use a similar approach to assess the quality of life as an index of life improvement. The components of this indicator are very similar to those used by Eurostat. The Better Life Index is based on an assessment of the quality of life on the following dimensions: Housing; Income; Jobs; Community; Education; Environment; Civic Engagement; Health; Life Satisfaction; Security; Work-Life Balance (OECD, 2020).

Modern research has shown that social equity, access to basic services, environmental and economic stability combine to create a quality of life that enables the achievement of sustainable development (Konobeeva, 2024).

The recognition of the relationship between sustainable development and quality of life indicators (Uysal & Sirgy, 2019) leads to an ongoing interest in quality of life studies and related indicators of socio-economic development at different levels. Such studies have consistently confirmed links with enterprise and industry performance (Černevičiūtė et al., 2019; Eslami et al., 2018), GDP and related indicators of well-being at the national level (Bilan et al, 2020; Kharazishvili et al., 2019; Malay, 2019; Mischuk and Grishnova, 2015; Oliynyk et al., 2021) and at the regional level (Horska et al., 2019; Kisechkova et al., 2018; Mazzanti et al., 2020).

Piotr Misztal investigated the relationship between 'sustainable development' and 'quality of life' in Poland. Using a comparative approach, the author analyses the key factors of sustainable development, such as economic well-being, social equity and environmental sustainability. Misztal notes that Poland performs moderately well in achieving the sustainable development goals, lagging behind only in environmental efficiency and innovation. However, the country is actively improving social indicators such

as educational attainment and access to infrastructure. The paper emphasises the importance of adapting Polish economic policy to OECD standards to ensure long-term sustainable growth. The study emphasises the need to balance economic progress, social equity and environmental protection.

BRK Sinha in 'Multidimensional Approach to Quality of Life Issues' provides a broad overview of quality of life issues covering a wide geographical area such as North America, Europe, parts of Africa, East Asia and South Asia. The authors focus on analysing spatial differences in well-being using mapping and geographic information systems techniques. The authors defined quality of life by the following factors: access to resources, social and environmental indicators, and physical location. The authors concluded that 'social equity' and 'quality of life' can be used as key indicators for achieving sustainable development. Our paper will analyse the indicators and criteria for assessing the quality of life for sustainable development in the context of globalisation and modernisation of Kazakhstan's economy.

### Methodology

This article examines how improving the quality of life can contribute to the development of regions in the context of globalization and economic modernization, with a particular focus on promoting sustainable development. To conduct this study, the methodology included scientific abstraction, analy-

sis of both domestic and foreign literature, statistical analysis of current data from state official sources, as well as the use of deduction and induction to identify patterns from the experiences of developed countries and to confirm the positive impact of improving the quality of life on sustainable development in the region within the context of globalization and economic modernization.

The methodology of the study was based on the approach to the content of the multifaceted socio-economic category "quality of life", as, in our opinion, the most complete reflection through the study of it as a system of the most important components and as a complex of conditions of human life. Quality of life is determined, first of all, by income, as the economic basis for the material and social well-being of various social groups and strata of the population. When constructing a system of the most important components of the quality of life of the population, we proceeded from the fact that the quality of life of the population includes all spheres of society – material, social, environmental.

### Results and discussion

Measuring the quality of life involves the use of indices and indicators such as the Human Development Index (HDI), the Happiness Index, and others to get a comprehensive view of the well-being and life satisfaction of the population. The important components of the quality of life are presented in Table 1.

**Table 1** – Important components of the quality of life

№	Components of quality of life	Description of the components of quality of life
1.	Health	Population health plays a fundamental role in determining quality of life. This includes access to health care, morbidity and mortality rates, physical activity and lifestyle.
2.	Material	The economic aspect includes income level, employment
3.	Education standard of living	The accessibility and quality of education determines the level of culture and intellectual potential of a society. This includes access to educational resources, professional development, and literacy rates. stability, housing affordability, purchasing power and overall economic security.
4.	Social relations	The quality of interpersonal relationships, including family ties, friendships and social interaction, is a key factor. A society where there is mutual understanding and support contributes to a higher quality of life.
5.	Ecological environment	The level of environmental sustainability and quality of the environment also affects the well-being of the population. Clean air, water and well-maintained natural environments promote health and comfort.
6.	Cultural and Entertainment Opportunities	Access to cultural events, arts, sports and other forms of entertainment affects emotional and psychological well-being.
7.	Safety	Safety as a factor includes not only physical, but also social and economic safety, creating conditions for confidence in the future.

Note – compiled by the author based on the source (Ursul, 2019)

In order to better understand the needs and direction of efforts to improve the quality of life in different societies, let's consider the main aspects and strategies aimed at improving the quality of life in the context of modern challenges (Borkova, 2022).

#### 1. Globalization and its influence:

Globalization induces changes in the economic structure, trading relations, and socio-cultural interactions. Competently adapting to the global changes for the sake of sustainable development of the region is of prime importance. If Kazakhstan is one of the key participants of the world economy, then it should, in terms of influence of globalization, give attention not only to economic but also to the social aspects.

#### 2. Economic Modernization:

Economic modernization plays a big role in forming favorable conditions for a better quality of life. Infrastructure development, innovation, and support of small business are realized, creating new jobs and improving the economic activity of the region.

#### 3. Education and Skills:

In a fast-changing world, the living standard would be increasingly dependent on education. There is an expansion of educational programs, support of research, and creation of systems needed to foster skills for the future with quality human capital.

#### 4. Health and Social Protection:

Strategies related to the improvement in the quality of life also include access and availability of quality health services. Stability and confidence in the citizen's future are provided by modern health and social programs, thereby affecting overall life satisfaction.

#### 5. Environmental Sustainability:

Considering the global environmental challenges, Kazakhstan has set an objective for sustainable use of natural resources. Programs on emission reduction, renewable energy source development, and improvement of environmental quality secure a healthy and sustainable living environment.

The relationship between economic growth and the well-being of the population is a complex and important aspect of societal development. Economic growth can have a significant impact on well-being, in particular Figure 1.

It is crucial to understand that the connection between economic growth and overall well-being is intricate and can be influenced by various factors. These factors include the effectiveness of government policies, income distribution, and the institutional structure of society.

In today's age of globalization and modernization, economic growth cannot be the sole focus. It is equally essential to promote social justice, as inequality and social disparities can impede sustainable development. One of the indicators of social stability and balanced development is improving the quality of life. With the emergence of global challenges such as pandemics and technological advancements, effective health and education systems have become more vital than ever before. In this context, focusing on these areas to improve the quality of life becomes even more critical during unstable times.

The world is currently facing critical environmental challenges that require immediate attention and comprehensive strategies to protect and conserve the environment. Therefore, it is crucial to promote environmental sustainability while enhancing the quality of life, in order to establish a healthy and safe environment for future generations.

In a globalized world, regions that offer a high quality of life are attracting more attention as competition for talent and investment intensifies. This is important for strengthening the region's position in the global economy. This is important for strengthening the region's position in the global economy.

In 2012, Kazakhstan adopted a long-term development strategy called "Kazakhstan-2050". The strategy aims to transform the country into a modern, industrial and innovative state by the year 2050. Its main objectives are to diversify the economy by creating a highly efficient industrial base, to increase competitiveness by actively introducing innovation and advanced technologies, and to ensure stability, security and social development (Strategies and Programs of the Republic of Kazakhstan, 2012).

The objectives for innovative development were:

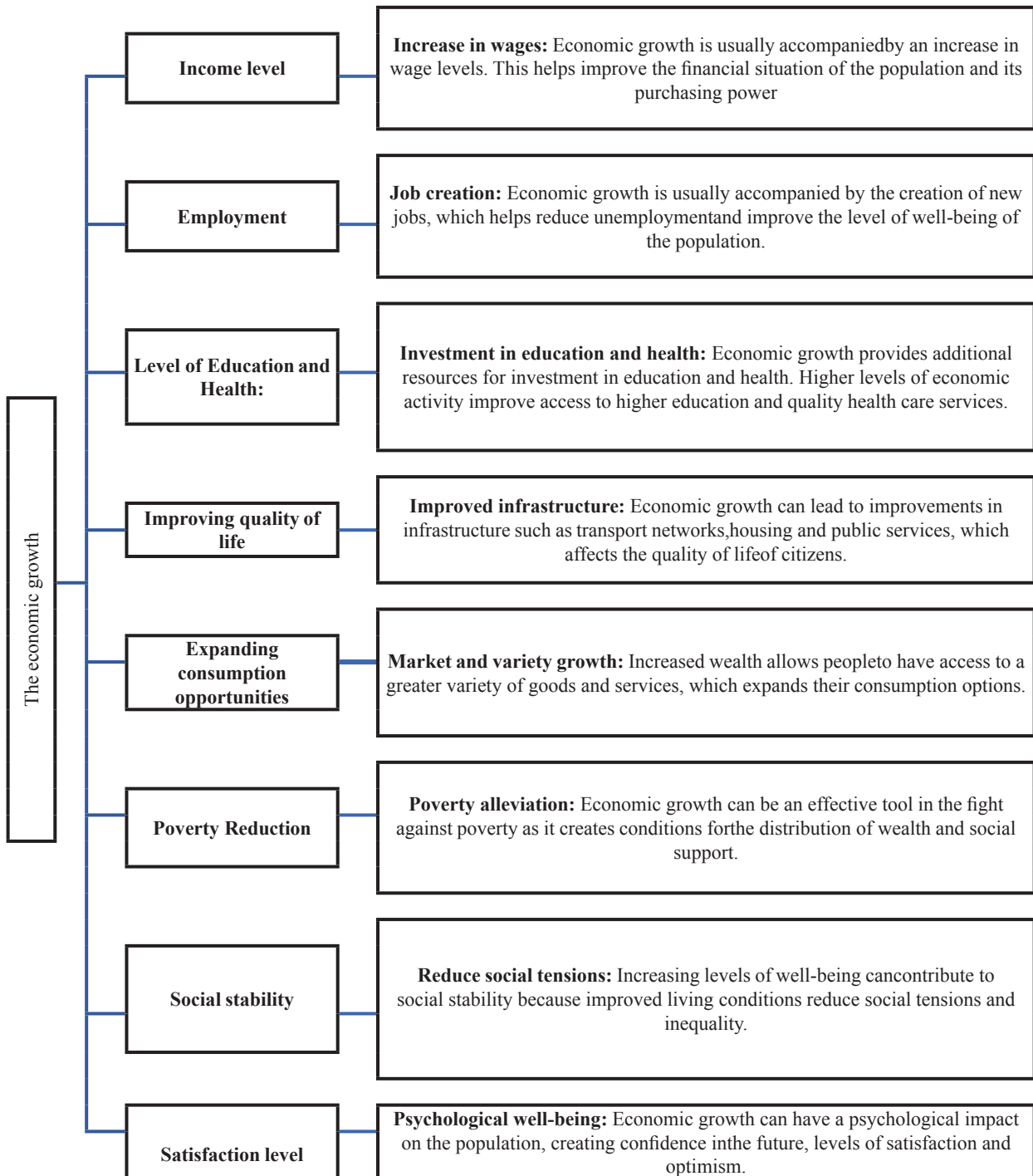
1. Scientific research: Investing in basic and applied research to support innovation.
2. Technology cluster development: Building technology clusters for companies and research centres to work together.
3. Supporting start-ups: Creating conditions for start-ups and innovative companies.
4. Reduce dependence on specific industries, develop non-resource sectors.
5. Transition to clean and energy efficient technologies.
6. Improving the quality of education, providing a highly skilled workforce.
7. Improving the health and social protection system.
8. Supporting and introducing world standards and best practices in business and management.

9. To improve the structure and efficiency of state institutions.

10. Improving legislation to ensure legal stability and investment attractiveness.

11. Establish and monitor key indicators to assess the progress of the strategy.

12. Introducing adaptive management mechanisms to adjust plans to changing conditions.



**Figure 1** – Relationship between economic growth and well-being of the population

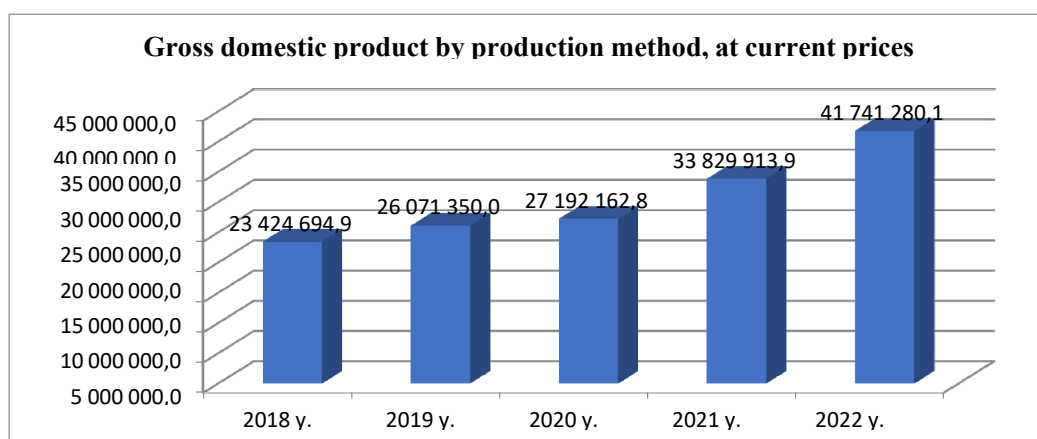
Note – compiled by the author based on the source (Strategies and Programs of the Republic of Kazakhstan, 2012)

The «Kazakhstan-2050» strategy aims to create a stable, diversely developed state that can successfully compete in the global economy and provide a high standard of living for its population (Strategies and Programs of the Republic of Kazakhstan, 2012).

The current state of the industrial- innovative development strategy can be revealed by analysing the main economic indicators, which are an important tool for understanding the current state of the

economy, anticipating future trends and making informed decisions in the field of economic policy and management.

The analysis of the GDP of the Republic of Kazakhstan is crucial in determining the economic state of the country. It serves as an indicator of the total volume of goods and services produced and is a vital measure of economic activity. In Figure 1, we can observe the GDP dynamics of the Republic of Kazakhstan for the last five years.



**Figure 2** – Gross domestic product by production method for 2018-2022, at current prices  
Note – compiled by the author based on the source (Bureau of National Statistics of the Agency).

From 2018 to 2022, Kazakhstan's GDP has shown consistent growth with significant acceleration in 2021 and 2022. This suggests promising progress in the economy. In 2020, there was a noticeable decline in economic activity due to the COVID-19 pandemic, which was experienced by many countries worldwide. However, in 2021, there was an impressive recovery in Kazakhstan, marked by notable GDP growth. Consequently, the government's programs and support measures in response to the pandemic played a significant role in the positive economic recovery.

To better understand the growth of an economy, it is essential to analyze the GDP growth pattern by economic sector. This helps identify the main drivers of growth, such as industry, agriculture, or services.

When assessing the well-being of the population, it is important to consider the inflation factor. The real GDP growth, which takes inflation into account, can give a more accurate picture of the impact of economic growth on citizens' incomes.

In addition, it is crucial to consider the stability of growth and compare it with global trends. Future

forecasts can also help anticipate potential challenges or opportunities.

Although the RoK has experienced positive GDP growth, it is imperative to ensure sustainable economic growth that promotes welfare and social development, as seen in many developed countries.

Modernization is an important process that involves renewing and developing social, economic, and cultural structures. Many regions across the globe have gone through successful transformations that have led to positive changes. Here are a few examples:

Singapore is a prime example of successful modernization. After gaining independence in 1965, the country implemented programs to industrialize, develop education, and create an innovative economy. They gave special attention to human capital development and technological advancement. Today, Singapore is a global center of finance, technology, and innovation.

South Korea underwent an impressive modernization phase after the Korean War (1950- 1953). The country focused on developing high-tech industries such as electronics and automobile manufac-

turing. Strategies of active support for innovation, human capital development, and export-oriented economic policies led to significant GDP growth and improved living standards (Klypin, 2023).

China has undergone a remarkable transformation in recent decades, transitioning from an agrarian society to a major player in the global economy. Starting in the late 1970s, China embarked on a series of economic reforms aimed at opening up to the world market and attracting foreign investment. This involved a focus on high-tech industries and a commitment to innovation and research and development. The success of this strategy has resulted in significant economic growth and improved living standards for the Chinese people (CGTN, 2023).

After the end of World War II, Germany underwent a successful modernization process, which led it to become a leader in innovation and technological development in Europe. The country prioritized engineering sciences and high-tech industry, which helped it to achieve its status as a technological powerhouse. Additionally, Germany is renowned for its effective education system, which has fostered the growth and development of highly skilled professionals (Ermolenko, 2023).

After World War II, Japan became a prime example of successful modernization, particularly in the fields of technology and innovation. The country prioritized quality manufacturing and knowledge-intensive industries by investing heavily in research, education and technological innovation. This focus led to a robust economy and a high standard of living in Japan (Shuvalov, 2024).

These examples from countries strongly underline the fact that strategic planning and investment in human capital, scientific research, and openness to innovation are some of the critical elements that will make modernization successful in society.

Education helps to increase income. The wages of people with education are high and, likewise, better opportunities for better placements are there. This works to improve the economic condition of the individual and his family. Educated people can get more skilled and higher-paying jobs, so their standard of living improves. Moreover, they have deeper knowledge concerning health maintenance and practice a healthier way of life, which facilitates better quality of life and longer life expectancy. Education also fosters greater social engagement in social life and political activity of the citizenry, thus reinforcing democracy and enhancing social stability. More crimes are not committed by persons who are educated since they are able to think critically, be culturally literate and be more tolerant. Moreover, the more educated

the nation, the more it will become a potential center of innovation and technological progress. This will boost the development of science, technology, and new solutions for all kinds of problems in society, ultimately strengthening international ties and creating favorable conditions to solve global problems.

Let's consider the current state of coverage of secondary education in the population of regions of Kazakhstan in Figure 3.

The following table shows the gross secondary enrollment ratio in different parts of Kazakhstan over the past five years. The results derived from the data are:

The gross secondary enrollment ratio of the Republic of Kazakhstan has been falling back in 2020 to 104.60 percent, with a slight recovery in 2021 to 105.42 percent and a further decline in 2022 to 104.43 percent.

Positive dynamics: Several regions, such as Akmola, Aktobe, Mangistau, Astana, and Almaty, demonstrate positive dynamics of gross secondary enrollment ratio increase in all years.

Some regions, such as West Kazakhstan, Zhambyl, Karaganda, Kostanai, North Kazakhstan, and East Kazakhstan, have a general trend of decreasing gross enrollment ratio.

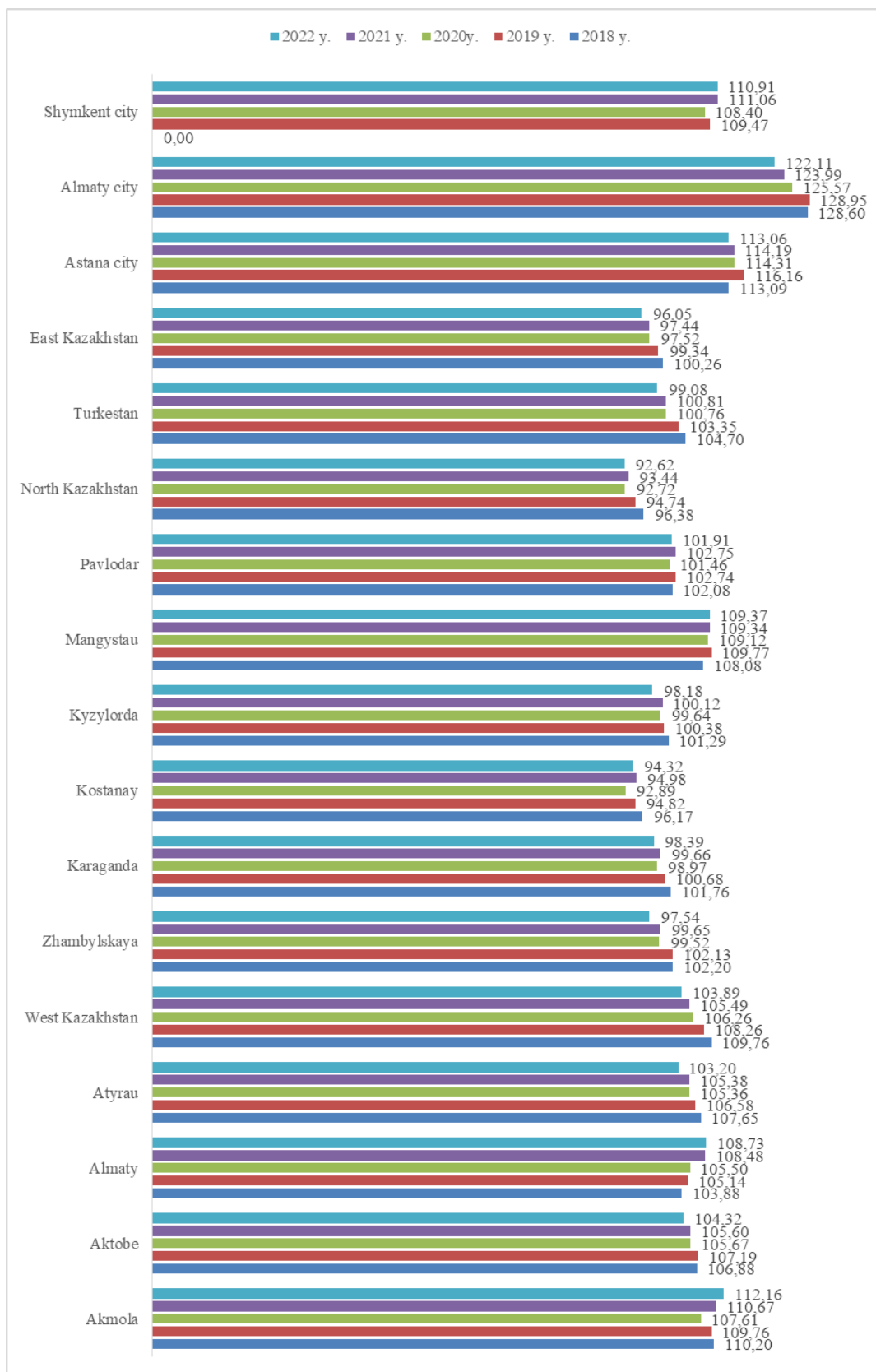
The cities of Astana and Almaty generally have higher gross coverage ratios than the regions surrounding them. However, there is a slight decrease in both cities in 2022.

Shymkent also shows an increase in gross coverage ratio in 2021 and 2022 after no data in 2018.

Overall, many regions and cities experience a decrease in gross enrollment ratio in 2022, which is the subject of further analysis and research.

The assessment of literacy and competencies among the population of Kazakhstan indicates a significant lag behind many other countries in the world. According to the OECD Program for International Assessment of Adult Competencies (PIAAC) for individuals between 16 to 65 years of age, Kazakhstan ranked 34th in reading literacy, 33rd in mathematical literacy (out of 39 countries), and 32nd in information and communication technology literacy (out of 36). Kazakhstan's results are far below the average of OECD countries and the Russian Federation, which ranked 9th in reading literacy and 15th in math literacy. If the current state of education and science in the country remains unchanged, it will inevitably lead to a further decline in the quality of the national human capital, deprofessionalization of personnel, and a decrease in the economic potential of the country in the foreseeable future (Borkova, 2022).





**Figure 3** – Gross enrolment rate in secondary education in the 2018–2022 academic year at the beginning of the period  
 Note – compiled by the author based on the source (Bureau of National Statistics of the Agency).

Education plays a crucial role in the formation of not only economic but also social and cultural well-being, which forms the foundation for sustainable and progressive development of society. Improving the educational system of any country is a challeng-

ing and intricate process that demands collective efforts from the government, educational institutions, educators, students, and the society at large. We have suggested a few measures in Table 2 that can aid in enhancing the educational system in Kazakhstan.

**Table 2** – Measures for the improvement of the education system in Kazakhstan

Measures	Description of measures
Modernization of training programs	Revising curricula and programs to introduce modern technologies and emphasize practical skills. Strengthening the components of STEM education (science, technology, engineering, mathematics) to prepare students for modern challenges.
Professional development of teachers	Conducting systematic trainings and courses to improve the qualifications of teachers. Introduction of support programs for young teachers and incentives for experienced teachers.
Development of digital technologies	Integration of modern educational technologies and electronic resources into the educational process. Creation of accessible electronic platforms for remote learning and self-study.
Strengthening research activity	Support for research programs at universities and research centers. Creating incentives for students and teachers in the field of scientific research.
Development of the assessment system	Introduction of modern methods of knowledge assessment, including portfolios, project assignments and practical exams. Stimulating creative thinking and independence in the educational process.
Increasing access to education	Development of financial support programs for students, especially those from low-income families. Creating conditions for the education of people with disabilities.
The international cooperation	Strengthening cooperation with foreign universities and exchange of experience. Involving foreign experts and teachers to improve the level of education.
Assessing and adapting changes	Introduction of a system of regular assessment of the effectiveness of implemented changes with subsequent correction of approaches.
Note – compiled by the author based on the source (On the Approval of the State Program for the Development of Education and Science of the Republic of Kazakhstan for 2020–2025).	

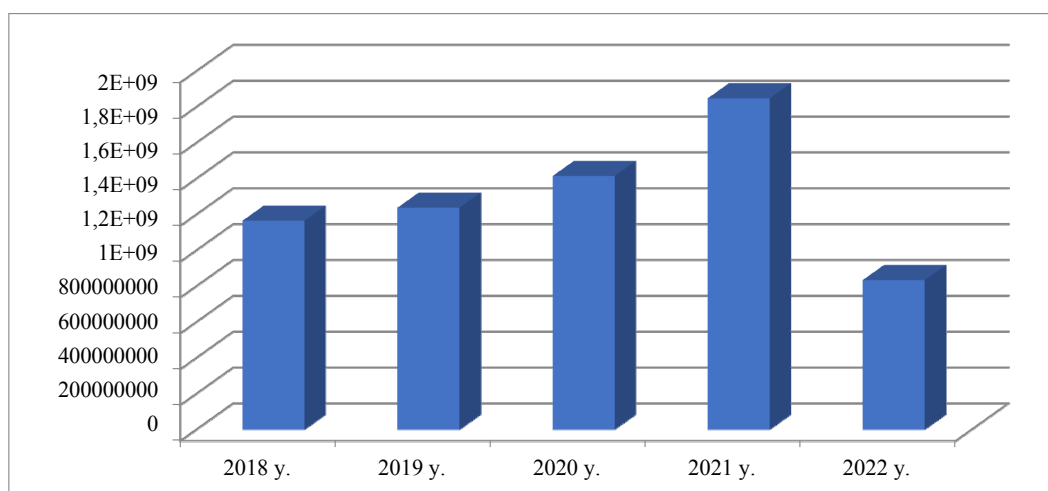
Improving the education system is a long-term process that requires constant attention, investment and renewal of approaches to learning and learners (Markov, 2021).

An important factor in creating sustainable and favorable conditions for the development of the region and improving the living standards of its population is the indicator of health care and provision of social services in the Republic of Kazakhstan, which is presented in Figure 4.

From the data provided on the volume of health and social services provided in the Republic of Kazakhstan over the last five years, the total volume of health and social services provided shows a significant increase from 2018 to 2021, from KZT 1,165,626,963 thousand in 2018 to

KZT 1,848,066,339 thousand in 2021. In 2022, there is a sharp decline in the total value of services provided to KZT 834,338,850 thousand. The decrease is due to factors such as changes in the economic situation, budget constraints, epidemiological factors and changes in the structure of services provided.

Reducing the budget requires consideration of the efficiency of the services provided, the search for potential sources of savings, the optimization of processes and other measures to maintain the quality of health and social services. In order to identify the factors influencing the dynamics of changes in the volume of services provided, it is necessary to develop effective strategies for improving the situation in this area.

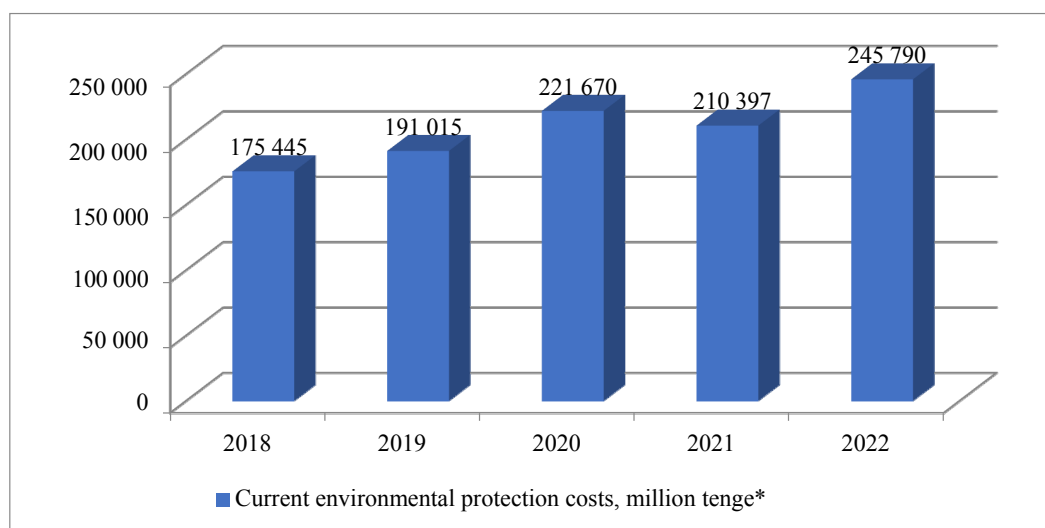


**Figure 4** – The volume of services provided in the field of healthcare and social services in the Republic of Kazakhstan for 2018-2022, thousand tenge.

Note – compiled by the author based on the source (Bureau of National Statistics of the Agency)

Environmental protection plays an important role in creating sustainable and favourable conditions for the development of the region and improving the living standards of its population. Environmental sustainability has a significant

impact on the quality of life at many levels, affecting the environment, human health, social and economic aspects. What are the efforts of the RK today in dynamics over 5 years, let us consider in Figure 5.



**Figure 5** – Environmental protection in the Republic of Kazakhstan for 2018-2022 at the beginning of the period

Note – compiled by the author based on the source (Bureau of National Statistics of the Agency)

Environmental protection costs in the Republic of Kazakhstan generally increased from 2018 to 2020, reaching a maximum in 2020 with an increase of 16.03% compared to the previous year. However, in 2021 there is a decrease of 5.09% compared to 2020 due to various factors such as changes in budget priorities, economic situation or reorganisation of programmes and projects. In 2022, there is a new increase of 16.83% compared

to 2021. This is due to increased environmental efforts, new projects or increased budgetary resources.

The overall analysis shows that environmental spending in the Republic of Kazakhstan is on an upward trend, but fluctuates downward in 2021 due to increased spending on pandemic control.

We have researched and listed some of the key environmental issues and challenges in the table.

**Table 3** – Description of environmental problems and challenges

№	Environmental Issues and challenges	Description of environmental problems and challenges
1.	Changing of the climate	Emissions of greenhouse gases such as carbon dioxide and methane are driving climate change, causing global warming, changing weather patterns and an increase in extreme events.
2.	Loss of biodiversity	Deforestation, pollution and modification of natural environments, as well as misuse of natural resources, lead to loss of biodiversity and extinction of species.
3.	Water pollution	Emissions of industrial waste, chemicals and domestic wastewater pollute water sources, which affects the health of humans, animals and plants.
4.	Air pollution	Industrial and vehicle emissions, as well as fuel combustion, lead to air pollution, which can cause respiratory and other diseases.
5.	Lack of clean drinking water	Growing populations, climate change and water pollution are reducing access to clean drinking water, becoming a major health problem.
6.	Accumulation of waste and garbage	Increasing production and consumption are leading to increased volumes of waste, including plastic and chemical waste, which poses challenges to ecosystems and human health.
7.	Unsustainable use of natural resources	The use of natural resources such as forests, water and minerals without their sustainable reproduction leads to resource depletion and a threat to future generations.
8.	Waste management issues	Insufficient waste management and recycling infrastructure leads to waste accumulation and environmental pollution.

Note – compiled by the author

In order to address the environmental challenges we face today, we need to work together on a global scale. We should also implement effective strategies and policies at the national and local levels. Raising awareness about environmental issues, promoting efficient use of resources, and transitioning to sustainable technologies are the key factors in tackling these challenges.

Environmental issues need to be addressed at all levels, from global to local, through a comprehensive and coordinated approach. Some strategic directions that will help wrestle down these challenges effectively are hereby outlined:

1. Transitioning to sustainable energy sources – producing and consuming renewable energies such as solar and wind power not only can reduce greenhouse gas emissions but also help break the stranglehold of oil and coal.

2. Resource efficiency: Diffuse the concept of a circular economy by means of recycling and reusing resources to bring forth little or no wastes.

3. Water and air pollution control: Establish rigorous criteria ensuring that no pollutants reach the water and air. Develop technologies that ensure cleaning the water and the air. Make sure these technologies are applied.

4. Waste management: Establish infrastructure for collection, recycling and waste use. Encourage separation of wastes and material reuse systems.

5. Protection of biodiversity: Establishment and extension of areas for nature conservation, especially national parks and nature reserves; the recovery and conservation programs for jeopardized species.

6. Promotion of ecologically oriented lifestyle: This would mean making those ways of life stron-

ger and more supported where preservation happens on its own easily – for instance, green dietary habits, use of public transport, or low consumption of throwaway products.

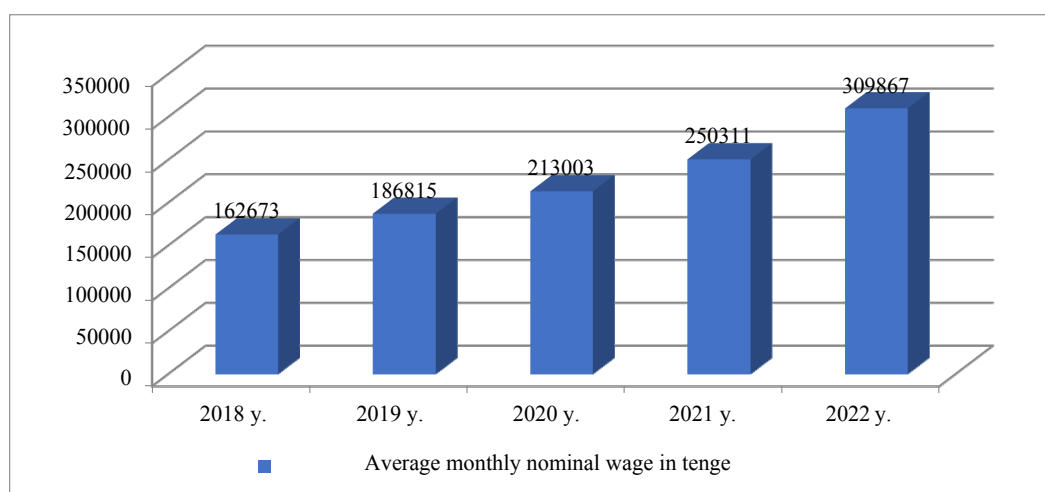
7. Education and awareness: Educational programmes on ecology and sustainable development to enhance environmental awareness. The public shall be informed about the effects and causes of environmental problems.

8. International cooperation: Full participation in international agreements and initiatives on environmental conservation. Sharing of technologies and best practices from other countries and organizations.

9. Legal regulation: Development and implementation of laws and standards aimed at improving the environment. Effective legislation and enforcement of laws protecting the environment.

According to these report authors, the success of such measures is that they are taken at regional levels and encompass the interaction of all actors in civil society: governments, business, citizens, and nongovernmental organizations.

Sustainable solutions require constant attention and joint efforts, as improving the quality of life is a multifaceted process that includes various aspects such as physical health, psychological well-being, social relationships and professional development.



**Figure 6** – Dynamics of the average monthly nominal wage of the Republic of Kazakhstan for 2018-2022.  
Note – compiled by the author based on the source (Bureau of National Statistics of the Agency)

From the data provided on the average monthly nominal wage in tenge for the period 2018-2022, we can see a steady increase in the indicator. Here are some key findings:

*Consistent wage growth:*

The average monthly nominal wage has been increasing from 2018 to 2022, reflecting an upward trend in household income.

*Dynamic wage growth:*

Wage growth has been particularly strong in 2021 and 2022, which can be attributed to various factors such as inflation, changes in the economy, employment rates, etc.

*Economic development:*

An increase in wages can indicate positive trends in the country's economy. It can be the result of productivity growth, improvements in the labour market and other factors.

*Standard of living and consumption opportunities:*

Wage growth contributes to an increase in the population's standard of living and consumption opportunities. This can have a positive effect on the consumption of goods and services.

*Impact on inflation:*

It is also important to consider the rate of inflation, as nominal wage growth can shift due to changes in the price level.

*Real income must be taken into account:*

For a more accurate assessment of welfare, it is necessary to consider not only nominal wages but also real wages, which take into account the impact of inflation.

In general, growth in average monthly nominal wages can indicate positive changes in the economic and social sphere, but it is also important to

analyse additional factors to fully understand the situation.

Let's consider the GDP per capita for 2022 in the Republic of Kazakhstan – about 9100 USD per capita, for example, 60000 USD, European Union from 80000 USD.

Despite the dynamics of growth of all indicators of economic growth in Kazakhstan, there are very low indicators in comparison with developed countries, which means that the emerging problems in the context of globalisation and sustainable development require their immediate solution. Having accumulated the problems and challenges in improving the quality of life listed above in the article, we have developed recommendations for the development of a strategy in improving the quality of life for sustainable development of the region in the context of globalisation and modernisation of the economy of Kazakhstan, in particular:

- Develop human capital by investing in education, including higher education and vocational training, to ensure the availability of highly qualified specialists.

- Promote training in new technologies and skills that meet the modern needs of the labour market.

- Encourage entrepreneurship and innovation by providing financial and infrastructural support for entrepreneurship and new technology start-ups.

- Investing in research and development, encouraging innovation in different sectors of the economy.

- Environmental sustainability and energy saving technologies by switching to energy saving and environmentally friendly technologies to reduce environmental impact.

- Social infrastructure and health care requires the development and accessibility of medical services for all segments of the population.

- Social security through the creation of effective social support programmes aimed at reducing poverty and improving social well-being.

- Developing modern transport systems to improve the region's mobility and connectivity,

as well as high-speed internet connections and digital technologies to support digital transformation.

- Supporting and preserving the region's cultural heritage, including traditions, language and arts.

- Transparency and risk management, i.e. developing a transparent governance and monitoring mechanism to reduce risk and corruption.

- Establishing partnerships with businesses to jointly implement projects and improve the business environment.

Implementing the recommendations will require a concerted effort by government, business and society to ensure the sustainable and balanced development of the region in the context of modern challenges.

## Conclusion

In the context of globalization and modernization, improving the quality of life in Kazakhstan has become an integral element of a sustainable development strategy. Focusing on solutions that balance economic growth with social well-being will help create favorable conditions for the prosperity of the region and its people. Effective coordination of efforts to modernize the economy, provide quality education, support healthcare and create an environmentally sustainable environment will enable Kazakhstan to successfully adapt to the challenges of the modern world.

Promoting and implementing such strategies require cooperation between the state, business, and the public. Open dialogue, joint efforts to develop and implement innovative projects, as well as attention to social aspects of development will help ensure sustainable and uniform improvement in the quality of life in the region.

Ultimately, striving to improve the quality of life becomes not only a priority for Kazakhstan but also an important element of the global movement to create a sustainable and prosperous future for all.

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*Received: 18 April 2024  
Accepted: 10 December 2024*