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Urbana-Champaign, USA*e-mail: Tleuberdiyeva@yandex.ru**FINANCIAL SUPPORT FOR SUSTAINABLE ECONOMIC DEVELOPMENT OF
KAZAKHSTAN****Abstract**

This article examines the role of financial support and investment in achieving sustainable economic development in Kazakhstan. The purpose of the article is to identify structural imbalances and factors hindering productivity growth based on a comprehensive analysis of investment processes and financial infrastructure trends in Kazakhstan from 2000 to 2023, and to substantiate strategic investment priorities in agriculture, innovation, and "green" finance to ensure the country's sustainable economic development. Using statistical data and policy documents, a descriptive and comparative analysis of trends over the period 2000–2023 was conducted, revealing a structural imbalance in investment toward the extractive sector. Factor analysis also allowed for the classification of internal and external determinants of productivity. The study identifies key internal and external factors influencing productivity, including financial infrastructure, technological modernization, human capital, and governance quality. Particular attention is given to inefficiencies in agricultural fixed capital investments and the limited participation of commercial banks in long-term lending. The findings reveal that insufficient coordination of investment policy, depreciation of fixed assets, and weak institutional support constrain productivity growth, thereby slowing sustainable development. The paper argues that targeted investment in agriculture, innovation, and green finance, combined with stronger institutional frameworks, can mitigate external shocks, increase productivity, and support balanced economic growth in Kazakhstan.

Keywords: Kazakhstan, sustainable development, financial support, investment policy, productivity, institutional framework, economic growth.

Introduction

Sustainable economic development is a primary objective of the world economy. In 2015, the United Nations adopted 17 Sustainable Development Goals. These aims will lead to improvements in people's well-being by 2030, and they will be achieved through the efforts of all countries. Therefore, Kazakhstan's strategic objective is to achieve sustainable development across all key sectors of the economy, balancing social, economic, and environmental sustainability.

Sustainable development is a broad concept that depends on many factors. One of the main drivers of sustainable, long-term economic growth is increased productivity, and investment plays a vital role in boosting it. Financial resources and their effective use form the foundation for boosting productivity. "GDP per capita should reflect differences in productivity primarily. We learned over the twelve years that this is true broadly around the world" [1]. A country with high productivity can produce more goods and services, thereby increasing GDP per capita.

Many works by domestic and foreign scholars on this topic highlight the mining industry's dominant role in Kazakhstan and the economic dependence on the prices of its products. It primarily influences the living standards of the population and consumer purchasing power. As a result, the socially vulnerable segment of the population suffers as they lose their purchasing power for food products. Saturation of the domestic market with domestically produced food products would soften the impact of the external shock on the well-being of the population. Productivity growth in the agriculture sector is necessary. The role of agriculture in ensuring the country's food security contributes to its economic, social, and environmental development [2]. According to the Halyk Finance.kz report, labor productivity in the mining industry is twice that in the manufacturing industry and 20 times that in agriculture. Such a large difference between industries can lead to uneven economic growth and reduce economic sustainability. Differences among industries can be attributed to differences in human capital, physical capital and productivity [3]. What are the main reasons of a large difference?

For answering on this question were studied research works of domestic scientists and there are different conclusions: Significant difference in agricultural activity across regions of the country (Saparova D.A., 2023); lack of development and implementation of new investment projects, digital technology, lack of investment flow (Smagulova Sh.A., 2021, Kurmanova D.S., 2023); funding depends on the specifics of agriculture (Aitkazina M.A., 2017; A Aidarova, G Maulenkulova, M Daurbaev, 2022); insufficient efficiency of the lending system for agricultural enterprises (Abdulova T.G., Sultanova 3.Kh., Begenova M.K., 2022).

Summarizing the above, we can conclude that for developing sustainable agriculture, the essential factors are investment and its effective use. This study aims to examine how enhancing the efficiency of investment use and optimizing the structure of financing sources impact agricultural productivity, thereby contributing to sustainable economic development. Today, to ensure the efficient use of financial resources, scholars have recommended some approaches, such as increasing the efficiency of investments by investing in agricultural R&D (Thomas Bilaliyib Udimal, Zhiyuan Peng, Chaoxue Cao et al., 2022); efficient use of resources (financial) (Mehrdad Esfahani, John G. Fernald, Bart Hobijn, Dietrich Vollrath, 2024); an annual increase in the volume of agricultural credit guarantee investments in the sector is recommended (Obioma I. F., Ihemedje J. K. et al., 2021); the use of blockchain technology to improve farm operations (Mohannad Alobid, Said Abujoudeh and Istvan Szucs, 2022); the use of digital financial innovations to address financial and operational issues (Fathi Rufaida, Tuti Karyani, 2023).

All these authors mainly used the theories of sustainable development, financial technology and innovation, and digitalization, as well as financial inclusion. However, the impact of financial resources on agricultural productivity, considering the potential and growth points of regional agriculture, remains underexplored. This paper aims to explore the decline in the share of fixed capital investment and to identify existing factors influencing labor productivity. It presents an analysis of agricultural production dynamics and the use of investment in this sector.

Materials and methods of research

The research is grounded in a comprehensive analysis of both national and international data, combining quantitative approach. Official statistical information was obtained from the Bureau of National Statistics of the Republic of Kazakhstan, the National Bank of Kazakhstan, and the Ministry of National Economy, complemented by sectoral reports such as those published by Halyk Finance (2024) and the Concept of the Investment Policy of the Republic of Kazakhstan until 2029. To enhance the validity of the findings, international databases and reports of the World Bank and OECD, as well as scholarly literature, were also consulted.

The methodological framework of the study rests on descriptive and comparative analysis, which made it possible to trace the dynamics of investment in fixed capital, GDP and volume of agricultural product between 2000 and 2023, factor analysis allowed for the classification of internal and external determinants of productivity, including financial, technological, institutional, and social aspects. Furthermore, policy and document analysis of strategic state programs and presidential addresses provided insights into institutional constraints and systemic barriers affecting the efficiency of investments. An international comparative perspective was employed to situate Kazakhstan's experience within the broader global discourse on productivity and sustainable development.

In subsequent stages of the study, comparative analysis will be used to examine differences in agricultural productivity levels across Kazakhstan's regions and the impact of financial resources on agricultural productivity. Multivariate regression analysis will be used, with labor productivity as the dependent variable and funding sources as the independent variables. Finally, ways to improve the efficiency of financial resource use will be proposed, taking into account the potential and growth prospects for regional agriculture.

The study is primarily limited to macroeconomic and sectoral-level data, without a detailed microeconomic or firm-level investigation. Nevertheless, this approach enables the identification of systemic trends and bottlenecks in financing sustainable development, providing a reliable basis for policy recommendations to strengthen productivity growth in Kazakhstan.

Results and their discussion

Kazakhstan's transition to a market economy has been characterized by a decline in GDP and record levels of inflation and unemployment. The government adopted various programs to promote economic growth. Due to its oil and natural resource reserves, Kazakhstan began attracting foreign investment and has experienced economic growth since 2000. The unemployment rate has decreased (12,8% in 2000 and 4,7% in 2023). Analysis of the main indicators from 2000 – 2023 showed increasing GDP per capita (1229\$ in 2000 and 13117\$ in 2023) and investments in fixed capital (595,6 bln.tg. in 2000 and 17649 bln.tg. in 2023). Since 2003, a significant portion of capital investment has been directed towards the mining sector, with the share fluctuating between 25% and 40%. However, the share of investment in GDP in 2023 was only 15%, well below the government's 2028 target of 21% [4].

The decline in investment as a share of GDP since 2010 was due to a reduction in fixed capital investment across industries that experienced serious difficulties during the crisis. The declining share of investment in GDP subsequent years are associated with following factor:

1) The lending activity of banks. The structure of funding sources is dominated by investors' own funds (83,4%), totaling 14,7 trillion tenge. The volume of state funds is 2,9 trillion tenge (16,6%). The share of borrowed funds in IFC (Investment fixed capital) is 10,6% (1,9 trillion tenge), of which loans from second-tier banks account for only 2,5% (445,3 billion tenge). (Concept of the Investment Policy of the RK until 2029). In 2000 share of commercial banks in investments in non-financial assets composed 5,8% [5]. The low participation of domestic banks in economic development was mentioned twice in the President's speeches to the people in the last 2 years (09/01/2023 and 09/02/2024).

The limited role of commercial banks in lending is a the result of several factors: the accumulation of a large quantity of stressed assets following the Great Recession (in 2008); high credit risks for the private sector associated with an inefficient private sector that is not sufficiently diversified; declining lending on account of high interest rates on loans, which, in turn, are due to the high base rate. In this business climate, banks are not interested in taking on the risks of lending to finance capital investments;

2) Insufficient coordination of investment (across industries) according to the Investment Policy of the Republic of Kazakhstan until 2029: ineffective interaction between various government agencies and development institutions in the framework of attracting and retaining investments; corruption; This document mentions that attracting investment is ensured within the framework of a three-tier system, which can be the reason of corruption; barriers in tax administration; insufficiently transparent access to production factors (land, raw materials, energy); shortage of highly qualified personnel; regional potential: insufficient use of investment potential by regions; government regulation: excessive number of inspections of investors by government agencies; certification: insufficient development of the product certification institute (lack of laboratories, specialists, etc.) (Concept of the Investment Policy of the RK until 2029); depreciation of fixed assets. Due to the high cost of equipment, many companies cannot afford to upgrade it. The degree of depreciation of fixed assets of the organization – 31,7% in 2000 and 46,5% in 2023 [6]. All these factors negatively influence economic growth and decrease productivity levels.

The essential role of productivity in building a well-balanced economy is widely discussed worldwide. According to this indicator, differences in economic growth can be defined between countries, fields, and regions. Also, the level of social-economic development and future income are predicted. Studies conducted by domestic and foreign authors allowed the identification of the integral role of productivity in the economy, and many different factors influencing its level were classified. According to Iooty and Melecky (2021), productivity can be used not only to show the efficiency of production but also to reveal differences in living standards between and within countries.

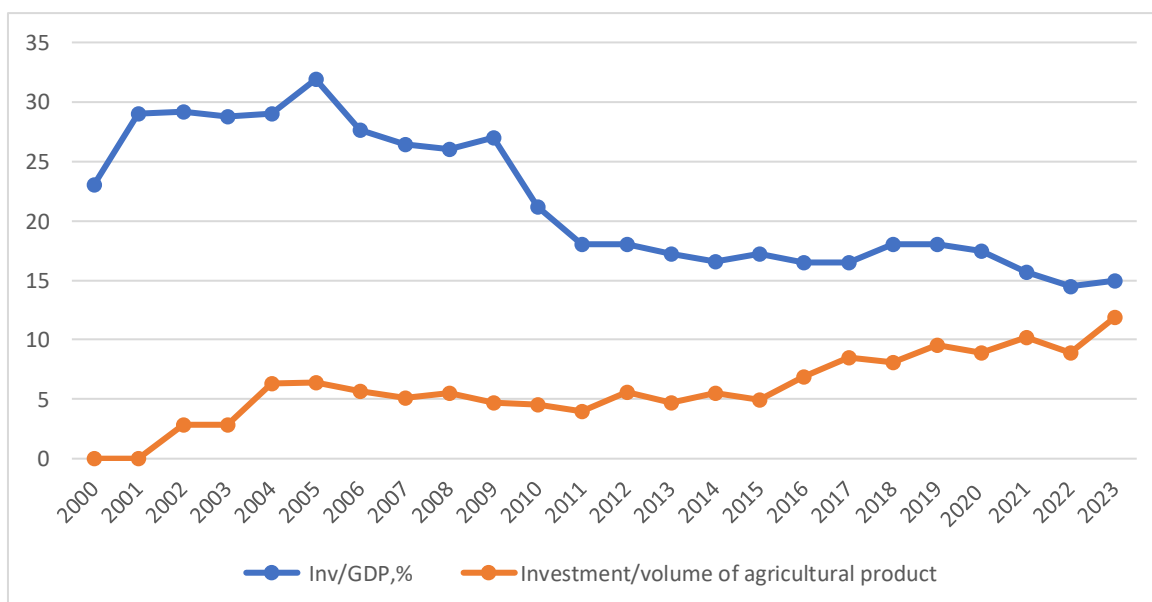


Figure 1 - Funding ratios: funding to GDP; funding to Agricultural production output

Note: Compiled by authors

"Around the world, productivity—the efficiency with which firms combine labor and capital to produce goods and services—is a crucial driver of economic growth. It is also a major factor in global inequality" [7]. In this research work, three main factors influencing productivity are identified: modernization of the enterprise through the introduction of innovations and technologies and the improvement of management processes;

obtaining the necessary resources (finance, personnel, land); and displacing ineffective enterprises. All these factors leads to increasing economic growth.

Research by H. Lee and N. Tovma focused on ways to increase productivity growth in Kazakhstan [8]. “The findings revealed that improving infrastructure and securing quality local human resources are main factors to promote productivity in Kazakhstan’s single-industry towns”. They argue that infrastructure and human capital investment are essential for increasing productivity. Improved infrastructure and high-quality skilled workers will speed up the production process, creating more favorable conditions for the production of products (works). G.O. Bazarkhanova, has demonstrated the correct approach to be the division of factors influencing the level of productivity into material and technical, socio-psychological factors, organizational and economic factors, and places emphasis on the management process, namely the rational construction of motivation systems, the choice of the optimal organizational structure and the improvement of decision-making processes [9].

Table 1 - Types of factors and their characteristics

	Types of factors	Characteristics	Consequences
1.	Social infrastructure	Education, healthcare, culture, community housing	Access to better social infrastructure provide Higher levels of Output per worker
2.	Transport infrastructure	Roads, railways, airports, ports	Makes communication between two countries and cities, so increase competition and productivity
3.	Finance infrastructure	Financial institutions, financial instruments and technologies	Through green finance provide new quality productivity
4.	Information infrastructure	Servers, databases, communication networks, and storage devices.	Creation, use, transport, storage, and destruction of information
5.	Innovation infrastructure	Equipment, facilities, resources and services	Development of new power, products and process, which leads to productivity
6.	Technological infrastructure,	Computer hardware, systems software, communication and networking systems, development tools, application software, special purpose tools	Processing a lot of information and receiving them on time, such increase productivity
7.	Domestic competition	Main instrument of economy for development	The desire to introduce new technologies and improve organizational efficiency, the removal of inefficient firms from the market
8.	Behavior of production factors	Labor, capital, land	Low labour costs leads to use labour-intensive production techniques to companies and they don't want to use new, innovative technologies, in result will be decreased productivity
9.	Behavior of consumers	Consumers	Reduction demand rises costs, which leads to low productivity
10.	Green finance	Green securities	Growth of economy through new quality productivity

Note: Compiled by authors

In a report prepared by the World Bank (as part of the Joint Economic Research Program (JERP) fiscal year 2020/21, deals with reasons for low productivity in Kazakhstan were given, notably: competition distortions in product markets, business support policies that could not provide productivity growth, the lack of a well-functioning institutional framework for attracting foreign direct investment (FDI) and several constraints on innovation, weak science-industry links [10]. Also given some policies for improving productivity growth were recommended, such as: removing competition distortions that obstruct the reallocation of productive resources toward the most efficient firms and that preempt productivity gains; reshaping business support policies to prioritize firm productivity growth rather than firm survival; unlocking opportunities for FDI in nonextractive sectors; boosting R&D and innovation to maximize the impact on productivity.

The next author also considered that social infrastructure has been identified as a factor influencing productivity levels. With access to better education, health care, legal protection and other factors, a country

can achieve higher levels of output per worker [11]. Some authors considered the consequences of economic growth, which can lead to environmental problems. Therefore, they proposed achieving a stable economy by increasing the productivity of a new quality, which is possible through green fiscal policy. "Governments should strengthen support for enterprises and individuals engaged in green technologies and innovations to increase the complexity of new quality productivity" [12]. According to the following authors, low levels of competition, serious technological lag, worn-out equipment, and a lack of investment are the main reasons for low labor productivity.

The role of factor intensity is also essential, because countries with low labour costs tend to choose relatively labour-intensive production techniques, leading to low levels of labour productivity. Some companies don't want to use new, innovative technologies; they prefer low labour costs, which, in turn, results in decreased productivity [13, 14, 15]. Also reduction demand rises costs, which leads to low productivity. Because while waiting for demand to pick up for holding on to hard-to-get workers will be spent costs, for example in Euro area. Klaas de Vries [16]. Influencing different factors on productivity requires a systematic approach to measuring their impacts, helping us understand the main reasons for low productivity and, respectively, define ways to increase it.

The authors mentioned above analyzed many factors that influence productivity levels. These can be classified as being internal or external. Internal factors are more manageable than external factors. Still, we suppose that distinguishing internal factors and effective management help protect the population from external shocks associated with fluctuations in the prices of oil and raw materials on the world market, world economic crises, and prices of imported goods (table 1).

Table 1 presents the main internal factors, including social infrastructure, transport infrastructure, financial infrastructure, information infrastructure, innovation infrastructure, technological infrastructure, domestic competition, consumer behavior, and green finance. Development all these factors create effective term for increasing productivity.

Conclusion

As a result of the theoretical analysis, we can conclude that productivity is main indicator, which forms sustainable development. The proposed classification of factors determining labor productivity allows us to identify the causes of productivity declines and determine the impact of various factors on productivity. According to this premise, we can make economic predictions, including economic crises, create long-term development plan, evaluate economic condition of the nation on the macro, mezzo and micro levels, etc. Therefore, in order to boost the development of an economy, it is important to distinguish and analyze the main factors of low productivity.

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ФИНАНСОВАЯ ПОДДЕРЖКА УСТОЙЧИВОГО ЭКОНОМИЧЕСКОГО РАЗВИТИЯ КАЗАХСТАНА

Аннотация

В статье рассматривается роль финансовой поддержки и инвестиций в достижении устойчивого экономического развития Казахстана. Цель статьи - на основе комплексного анализа динамики инвестиционных процессов и финансовой инфраструктуры Казахстана за 2000–2023 гг. выявить структурные дисбалансы и факторы, сдерживающие рост производительности, а также обосновать стратегические направления инвестирования в аграрный сектор, инновации и «зелёные» финансы для обеспечения устойчивого экономического развития страны. С использованием статистических данных и политических документов был проведён описательный и сравнительный анализ тенденций за период 2000–2023 гг.; анализ выявил структурный дисбаланс инвестиций в пользу добывающего сектора. Проведённый факторный анализ показал ключевые внутренние и внешние факторы, влияющие на производительность, включая финансовую инфраструктуру, технологическую модернизацию, человеческий капитал и качество государственного управления. Особое внимание уделено неэффективности использования инвестиций в основной капитал сельского хозяйства и ограниченному участию коммерческих банков в долгосрочном кредитовании. Результаты исследования показывают, что недостаточная координация инвестиционной политики, высокий уровень износа основных фондов и слабая институциональная поддержка сдерживают рост производительности, тем самым замедляя устойчивое развитие. Автор приходит к выводу, что целевые инвестиции в сельское хозяйство, инновации и «зелёные» финансы в сочетании с укреплением институциональных основ способны смягчить внешние шоки, повысить производительность и обеспечить сбалансированный экономический рост Казахстана.

Ключевые слова. Казахстан, устойчивое развитие, финансовая поддержка, инвестиционная политика, производительность, сельское хозяйство, институциональная среда, экономический рост.

ҚАЗАҚСТАННЫҢ ТҰРАҚТЫ ЭКОНОМИКАЛЫҚ ДАМУЫНА ҚАРЖЫЛЫҚ ҚОЛДАУ

Андатпа

Мақалада Қазақстанның тұрақты экономикалық дамуына қол жеткізуде қаржылық қолдау мен инвестициялардың рөлі қарастырылады. Мақаланың мақсаты - 2000–2023 жылдар аралығындағы Қазақстанның инвестициялық процестері мен қаржылық инфрақұрылымының динамикасына кешенді талдау жасау негізінде құрылымдық теңгерімсіздіктер мен өнімділік өсімін тежейтін факторларды анықтау, сондай-ақ елдің тұрақты экономикалық дамуын қамтамасыз ету үшін аграрлық секторға, инновацияларға және «жасыл» қаржыға инвестиция салудың стратегиялық бағыттарын негіздеу болып табылады. Статистикалық деректер мен саяси құжаттарды пайдалана отырып, 2000-2023 жылдар аралығындағы үрдістердің сипаттамалық және салыстырмалы талдауы жүргізілді, бұл инвестициялардың өндіруші сектордың пайдасына құрылымдық теңгерімсіздігін

анықтады. Жүргізілген факторлық талдау өнімділікке әсер ететін негізгі ішкі және сыртқы факторларды айқындады, олардың қатарына қаржылық инфрақұрылым, технологиялық жаңғырту, адами капитал және мемлекеттік басқару сапасы кіреді. Ауыл шаруашылығындағы негізгі капиталға салынған инвестициялардың тиімсіздігіне және коммерциялық банктердің ұзақ мерзімді несиелеуге шектеулі қатысуына ерекше назар аударылды. Зерттеу нәтижелері инвестициялық саясаттың жеткіліксіз үйлестірілуі, негізгі қорлардың тозуының жоғары деңгейі және институционалдық қолдаудың әлсіздігі өнімділіктің өсуін тежеп, тұрақты дамуды баяулататынын көрсетті. Автор мақсатты инвестициялар ауыл шаруашылығына, инновацияға және «жасыл» қаржыландыруға бағытталса, сондай-ақ институционалдық негіздер нығайтылса, сыртқы күйзелістерді жұмсартуға, өнімділікті арттыруға және Қазақстан экономикасының теңгерімді өсуін қамтамасыз етуге болатынын алға тартады.

Негізгі сөздер. Қазақстан, тұрақты даму, қаржылық қолдау, инвестициялық саясат, өнімділік, ауыл шаруашылығы, институционалдық орта, экономикалық өсу.

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