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RESEARCH ARTICLE
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Specifics of the Implementation of PPP Standards: Analysis of the State Audit on the Example of Foreign Practice

Bayansulu Tassybay[1]* | **Aigerim Zhussupova[2]** | **Zhanat Bulakbay[1]** | **Gulnara Amanova[1]** | **Aliya Rakayeva[1]**

[1] L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

[2] University of International Business named after K. Sagadiyev, Almaty, Kazakhstan

Corresponding author:
*** Bayansulu Tassybay** – PhD candidate, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: mbayansulu95@mail.ru

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Abstract

The necessity to develop a state policy in the field of rational use of regional assets is due to the need to overcome the consequences of the economic crisis in the context of the introduction and development of effective application of international auditing standards in our country. This makes it possible to understand the requirements of the standards better, as well as accelerate their implementation into domestic audit practice. The study identifies the principles and strategic goals of public policy. In order to work successfully with the private sector, public authorities need to understand the fundamental principles and goals underlying PPPs clearly. Under PPP agreements, private sector contractors become long-term service providers rather than just initial developers of assets, combining the responsibilities of designing, creating, operating and possibly financing assets to provide services needed by the public sector. The article concludes that all the considered models of public policy development generally follow a common algorithm for making political decisions: interests - priorities - risks - goals - resources - decisions. Models define universal characteristics that are characteristic of policy-making processes. In conclusion, it is noted that in the process of developing and implementing state policy in the field of rational use of regional assets, it is necessary to take into account that its main role should not be in the distribution of income between regions but in creating conditions for involving regional assets in production processes through their rational use, in order to increase the economic activity of regions and the quality of life of their population.

Keywords: Assets, Public policy, Regional Assets, PPP, Political decisions, Efficiency, Subjects of public policy.

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1. INTRODUCTION

The relevance of this topic is the fact that, at present, the realities of the present time dictate requirements for the development of internal PPP standards and methodologies for conducting state audits in order to achieve maximum effect and increase the efficiency of public funds, determine the method of financing for risk sharing at all levels of project implementation. One of the ways to achieve these goals is to integrate universal international auditing standards. However, their implementation in our country requires considering a number of economic and legal features inherent in Kazakhstan's conditions. Highlighting the specifics of the application of international auditing standards in our country allows us to understand the standards' requirements better and accelerate their implementation into domestic auditing practice. This work aims to make proposals based on international practice to improve the domestic practice of organizing and interpreting PPP processes based on international reporting standards. This requires a clear understanding of elementary distinctions in conceptual aspects. So the property benefits and rights belonging to the state can be divided into having a material form and not having one. The first is real estate, including land plots and movable property. Since we have determined that the concept of state assets should be associated with the possibility of obtaining income from their use, all listed things should correspond to this attribute as assets (Staniewski & Awruk, 2015).

In addition, one of the tasks of this work is to identify aspects of the state audit process that can help increase confidence in auditors and, accordingly, ensure the reliability of their conclusions and, as a final result, make it possible to correct errors in the implementation of certain operations in the process of implementing state projects. So, audited institutions should increase their employees' awareness and perception of the ethical framework and culture. The survey results show that this can be done by ensuring that ethics training contains practical recommendations based on real examples and by improving communication with staff on ethics issues. Particular attention should be paid to whether employees know how to report any problems related to unethical behaviour and increase their sense of security. When the auditor agrees to an assignment offer, the subject is to confirm the reliability of financial statements or other financial information (Huang et al., 2020; Stefan, 2019).

It is essential to know that the State's assets can be defined as property and goods and rights that have a valuation, are owned by the State, or are controlled by it, from which it is expected to receive income in the future. Based on the definition of state assets and the provisions of regulatory legal acts, several types of state assets can be distinguished to determine the most effective ways to manage them. A special purpose audit is carried out on a mandatory basis annually with the reflection in the audit report of the movement of budget funds from the administrator of the budget program to the final recipient of budget funds when the subjects of the quasi-public sector use budget funds in the form of:

1) budget loans;

2) loans (state and state-guaranteed loans, as well as loans attracted under the guarantee);

3) budget investments (formation and (or) increase in the authorized capital of legal entities, creation and (or) development of state assets through the implementation of budget investment projects);

4) state concession obligations;

5) related grants;

6) state assignment and state order, with the exception of state-owned enterprises that carry out their activities in the field of preschool education and training, healthcare, as well as organizations that provide a guaranteed amount of free medical care and organizations that implement a defence order.

The second group – intangible objects are property, as a rule, rights of obligations, money, etc. These rights can be defined as the rights of the claim (payment of money, transfer of property, the performance of works, and provision of services (Hay et al., 2008; Charkhabi et al., 2013). We have assigned money to the second group, although the issue of money in the legal literature is ambiguously resolved. The controversy taking place on the pages of scientific, legal publications allows us to distinguish two main directions of the definition of non-cash money, namely: the definition of the dual nature of money and the possibility of recognizing non-cash money as material objects or rights, depending on the form, this position is expressed, for example, as well as the denial of the dual nature and the statement of certainty, the unambiguity of the nature of money (Kovalev, 2010).

So, the primary purpose of the study is to development of proposals to achieve maximum effect and increase the efficiency of public funds, determining the method of financing for risk sharing at all levels of project implementation.

2. LITERATURE REVIEW

According to Block et al. (2018), the biggest problem of PPP is that maintaining it can be even more challenging. Most PPPs define trust as a continuous process that affects personal relationships and takes much time. When maintaining a PPP, trust may be lost if a new participant joins, participants are inactive or use the services that the PPP offers without participating in any of the defined responsibilities.

In many PPPs, the whole process of building trust starts from the very beginning. In many cases, it happens that participants, as a rule, change their place of work or are assigned new tasks, so they no longer attend PPP meetings. This means trust is only sometimes continuous and, in most cases, unstable. This was pointed out by many experts whose trust is built mainly due to common work experience and long-term cooperation. The budget concept is fixed as follows: the budget is a centralized monetary fund of the state intended for financial support of the implementation of its tasks and functions.

Since we associate these actions with strategic state corporate entrepreneurship, it should be noted that the income from the capital invested by the state does not always represent financial revenues to the budget. Strategic management differs from conventional management in that it solves tasks that are not always related to obtaining financial returns but allows to solve tasks that imply benefits in the future and on the scale of the whole country's economy (Huang et al., 2020).

The implementation of strategic tasks by the state is carried out, including with the help of budgetary funds. In this regard, in the Budget Code, the achievement of goals, the solution of specific tasks and activities of strategic, medium-term programs and development plans of the republic or region is associated with the concept of budget development programs. Budget development programs are budget programs, the results of which directly affect the degree of achievement of the goal, the solution of tasks and activities of strategic, medium-term programs, and development plans of the republic or region aimed at obtaining economic benefits or socio-economic effect (Article 34 of the Budget Code of the Republic of Kazakhstan).

Further, it is necessary to agree with the opinion expressed Khudyakov that, having left the budget (as a monetary fund), money does not lose contact with it, the targeted nature of the use of this money is predetermined by the budget, which gives rise to specific responsibilities for the legal entity – the owner of such money, and control over the use of these funds is covered by the concept of budget control (Khamzin et al., 2019).

Since the connection with the budget of the property allocated to a legal entity is not lost (and it manifests itself in the conduct of public administration and control over their use, as well as in

the transfer of amounts of income from use to the budget), to the extent that the state's equity participation in legal entities is, ultimately, the financial assets of the state.

As Savin et al. (2016) claimed in legal terms, it is essential to emphasize the connection of the state's financial assets with the definition of budgetary funds, which makes it possible to use methods of state regulation and control in the field of management of these assets.

Further, material objects can also be divided (according to the degree of transfer of their value in the production process to the cost of the finished product and use in the production cycle) into fixed assets and working capital (Staniewski & Awruk, 2015; Cervone et al., 1991).

The allocation of fixed assets is of legal importance for the organization of the asset management process of the state since several transactions with property constituting fixed assets of state legal entities and legal entities with the participation of the state are subject to coordination with the authorized body (Grodach et al., 2017; Wintoki et al., 2012).

Thus, the primary property rights and benefits that makeup state assets are considered. It is shown that for most of the state's property, the connection with the budget is relevant, which means that the legal regime of these assets is associated with a particular order of formation, distribution and use, and budget control. Also, as part of the assets of the state, fixed and current assets have been allocated to consider further the features of the legal regime of fixed assets assigned to state legal entities and legal entities with the participation of the state.

3. METHODOLOGY

This study was compiled considering the scientific results and conclusions made and conducted by scientists of Kazakhstan and foreign countries within the framework of activities related to developing state audits for particular purposes. When writing this study, scientific reports, publications of international organizations and relevant studies were used, which form the theoretical and methodological basis in the PPP and audit research field. A wide range of sources was used in this study, such as monographs, scientific articles and case studies that were developed by academia and organizations (Sarhan et al., 2019; Human Rights Council, 2019). When writing the article, the information of research by modern authors on the improvement of methodologies and the development of international auditing standards and PPP requirements, information from international organizations and their reports on this research topic, publications of reputable scientific publications and journals, and professional publications were analyzed.

The article proposes the following calculation for establishing trust between public-private, private-property and public-public organizations. When writing the article, the classical general scientific methodology for assessing the development of a particular purpose audit using PPP was used, namely general and unique methods of scientific analysis, such as induction and deduction, analysis and synthesis, a systematic approach, a graphical method - visualization of the results. While writing this article, the analytical research methodology was applied, which is based on a systematic approach. Well-known concepts, models and comparative analyses are also used. The scientific and methodological apparatus of the study included a causal relationship and a constant analysis of the changes taking place in this direction.

The establishment of trust between public-private, private-private and public-public organizations was recognized as one of the funds calculated according to the following formula (Ownership Structure and audit quality, 2019):

VAT = PRE - 0,75* PRE, if DP >0,75*CO;
VAT=UP TO - 0.75*UP TO, if DP>0.75*AE;
VAT=BEFORE the accident, if the DP<0.75*BEFORE, where:
SPLM – net cash outflow;

PRE – cash outflow;
DP – cash inflow.

Cash outflow is calculated according to paragraph 75 of the Regulations, and cash inflow is calculated according to paragraph 76 of the Regulations. Cash outflow is calculated as the sum of cash outflows during the calendar month following the date of calculation of the liquidity coverage ratio, using the outflow coefficients set out in the Table of Cash Outflows and Inflows of the bank following Annex 13 to the Standards for the following Obligations of the bank:

- cash outflows on deposits of individuals with a maturity of no more than 1 (one) month or during the calendar month following the date of calculation of the liquidity coverage ratio, as well as on-demand deposits;
- cash outflows on obligations (on deposits, loans, securities, with the exception of other accounts payable) to legal entities, small business entities that are not secured by the bank's assets, do not have a certain term of execution or the term of full execution of which is no more than 1 (one) month, or during the calendar month following the date of calculation of the liquidity coverage ratio, including at the initiative of legal entities, small businesses;
- cash outflows on obligations (on deposits, loans, securities, loan transactions, except for other accounts payable) to legal entities secured by the bank's assets, the term of which is no more than 1 (one) month or during the calendar month following the date of calculation of the liquidity coverage ratio;
- additional cash outflows on conditional and possible obligations that have a full execution period during the calendar month following the date of calculation of the liquidity coverage ratio, or regardless of the period of their full execution, if the fulfilment of obligations is provided for during the calendar month following the date of calculation of the liquidity coverage ratio.

Also, based on the results, proposals were made to improve the audit of special purposes.

4. FINDINGS AND DISCUSSION

The budget concept is associated with the receipt and expenditure of state assets. The concept of state assets is broader than the concept of the budget and budget funds. Not all state assets are reflected in the budget, but only those in motion during the fiscal year. We need to determine budget funds from the position of identifying when funds become budgetary or cease to be such.

The budgetary funds allocated for the formation of the authorized capital of a legal entity with the participation of the state formally cease to be state funds from a legal position and become the funds of the legal entity itself. Therefore, the moment of allocation determines the moment of their expenditure from the budget. On the other hand, the state transfers these funds while retaining property rights to them, which often results in the ability to control their use, manage them, and, accordingly, receive income from their use. The income received on the invested capital to be transferred to the budget also constitutes budgetary financial assets from the moment they are allocated to the budget.

As shown in Figure 1, a particular purpose audit is conducted based on a special purpose audit agreement concluded between the audited entity (customer) and an audit organization that meets the requirements established by the legislation of the Republic of Kazakhstan on auditing, state audit and financial control.

FIGURE 1. Audit quality structure

Note: compiled by authors

Any unethical behaviour of employees and members of EU institutions and bodies attracts high public interest and reduces confidence in EU institutions. Any weakness in this regard can lead to reputational damage to the image of the EU and its institutions. Unethical behaviour is also associated with the risk of corruption and fraud.

An inevitable conclusion is that, to a large extent, the audited institutions have implemented adequate ethical frameworks for staff and members with the possibility of improvement, including legal requirements and procedures to ensure them (including investigative and sanctions mechanisms). We have discovered that there is no single ethical framework for the EU.

A stable state policy and an effective system of state audit are the main mechanisms and prerequisites for achieving the tasks set by the state. These factors are inseparable and cannot be analyzed in isolation from the public administration system. The state needs clearly defined goals. The desired results and the resources needed to achieve these results must be determined in advance. Further development of the public administration system will follow the set goals, taking into account strictly established responsibilities and competencies. If every public sector employee feels like part of a single well-oiled clockwork, then the government will work like a clock showing the exact time. However, this is possible only if the mechanism is programmed to perform the necessary functions leading to achieving the goal. All mechanism elements should receive information about the task and the processes aimed at their implementation. In turn, the watchmaker needs to ensure that all the mechanism's necessary elements (preferably without decorative accessories) are in place and in working condition. If the clock is still running inaccurately, the mechanism is working inefficiently or not following the task (see Table 1).

Like a clockwork mechanism, the mechanism of public administration should be tested to determine the reasons for the failure to perform a particular task: incompetence of personnel, lack of professionalism, organizational mistakes, selfish interests, etc. In recent years, there has been a marked increase in cooperation between the public and private sectors in developing and operating environmental and transport infrastructure.

TABLE 1. The subject of state assets, as well as from the provisions of regulatory legal acts

No.	Ethical requirements	Code of Ethics of Professional Accountants [Parts A and B), mandatory
1	Task content	it must comply with the requirements for accounting and other information provided by the management of the audited entity during the audit. This information should, for example, meet the criteria of materiality, relevance, identifiability, comprehensibility, reliability, as well as comparability.
2	Object	must meet the objectives of this task. This aspect implies that users of financial statements are interested in information about the audited entity and its activities. The information provided to the auditor should allow for obtaining audit evidence to form conclusions about its reliability.
3	The need to verify compliance	The audited financial statements are prepared in accordance with the instructions and other administrative documents on the presentation and disclosure of information adopted by the organization, as well as the concept of preparing financial statements used in the organization. The auditor must ensure that all the requirements for the presentation and disclosure of information in the financial statements in terms of its relevance and completeness have been met.
4	The need for access	formation by the auditor of a reasonable opinion that there are no material misstatements. Disclosure of the nature of audit evidence on which the auditor should rely
5	The need to prepare a written report	the content of this report must comply with the requirements of applicable auditing standards
Note: compiled by source Adilet (2017)		

In the European Member States, this was partly the result of the privatization of utilities, the development of large multinational utility operators and a general review of how public spending is carried out, including recent restrictions on spending limits following the Maastricht Criteria, requiring diversification of funding sources.

While the initial projects were often in the water and road sector, with the construction of toll roads (which gives a clearly defined financial return); there is a growing recognition that PPP mechanisms can be used to meet the needs for infrastructure and services in various sectors.

The success of PPP projects, the growing availability of private sector funds capable of adopting a higher risk profile, and the general global trend towards the privatization of utilities have led to attempts to introduce the concept of PPP into the transforming economy of the candidate country.

In addition, there is a growing understanding that cooperation with the private sector in PPP projects can offer a number of advantages, including:

The acceleration of infrastructure provision of PPPs often allows the public sector to transfer initial capital expenditures into current service payments. This allows projects to be implemented when the availability of public capital may be limited (either by government spending restrictions or by annual budget cycles), thereby attracting much-needed investments.

Faster implementation – allocation transfer of responsibility for design and construction to the private sector, combined with payments related to the availability of services, provides significant incentives for the private sector to implement capital projects in a shorter construction time.

Growth slowed in 2022, mainly due to the negative spillovers from the war in Ukraine. Figure 2 demonstrates the following social assistance and benefit share.

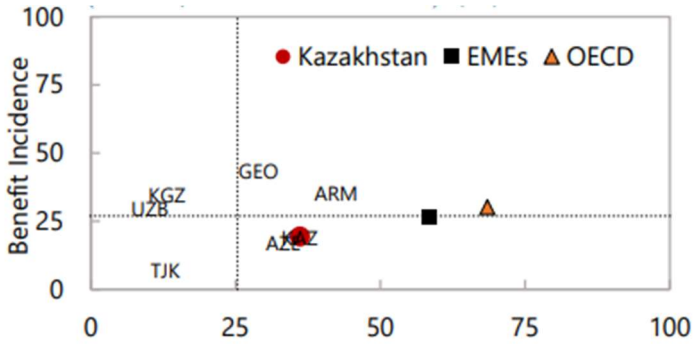


FIGURE 2. Social Assistance Coverage and Benefit Share

Note: compiled by sources Miah, et al. (2019), Cambodia (2021)

It reached 3.4% yoy in H1, from 4.1% in 2021. Retail sales growth slowed to 1.2% yoy in the same period. Investment grew by 3.6% yoy in H1 as FDI rebounded in the oil and gas sector after two years of decline. On the supply side, manufacturing and services both contributed to growth.

A sharp increase in international oil, gas and metal prices was a boon to exports, driving a trade balance improvement and flipping the current account into a surplus in H1 2022 (of US$6.6 bn, compared to a deficit of US$2.8 bn in H1 2021).

Consumer price inflation reached 16.1% yoy in August, almost double the rate a year earlier, driven by rising food costs. The authorities tightened monetary policy, imposed price caps on staple products, and limited fuel and utility price increases. Since January, the tenge exchange rate against the U.S. dollar depreciated 10%.

The goal is to optimize, not maximize, the transfer of risks to ensure that the best returns are achieved. The best incentives for execution - The allocation of project risks should encourage the private sector contractor to improve the management and efficiency of any particular project.

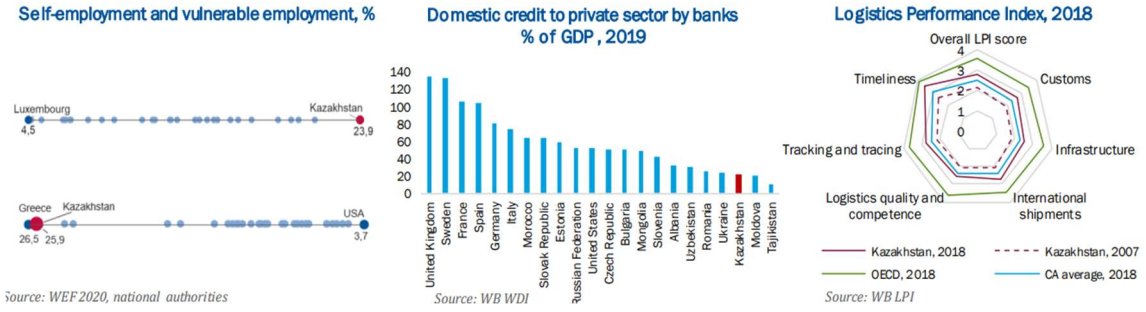
In most PPP projects, full payment to a private sector contractor will only be made if the required service standards are met on an ongoing basis.

Improving the quality of service - international experience shows that the quality of service achieved within the framework of PPP is often better than with traditional procurement. This may reflect better integration of services with ancillary assets, improved economies of scale, innovation in service delivery, or performance incentives and penalties typically included in a PPP contract.

Generating additional revenue - The private sector may generate additional revenue from third parties, thereby reducing the cost of any government subsidy required. Additional income can be obtained through spare capacity or the sale of excess assets.

According to Figure 3, adequately designed, PPPs can substantially benefit consumers and taxpayers. The potential benefit amount, however, will depend on the type of project being implemented and the contract's exact terms governing the PPP. It is important to note that public authorities have a crucial role in managing and regulating PPPs during their design, construction and operation. PPPs also require effective contract monitoring procedures to ensure that contractual obligations continue to be fulfilled in terms of quality and timing.

Foreign countries were selected for the study based on their positive experience of applying modern approaches in evaluating state bodies' activities. It should be noted that the Canadian Management Accountability Framework (MAF) was used when developing the Assessment in Kazakhstan. In addition to MAF, the Common Assessment Framework (CAF), a standard quality management tool developed for the public sector based on the excellence model of the European



EBRD Investment Activities in Kazakhstan *(as of end- 2021)*

Portfolio	€2,917m	Active projects	125
Equity share	4%	Operating assets	€1,703m
Private Sector Share[1]	60%	Net cum. investment	€9,123m

FIGURE 3. Kazakhstan – EBRD Snapshot

Note: compiled by authors

Foundation for Quality Management (EFQM/ European Foundation for Quality Management), is widely used in many European countries. So, in 2019, the CAF2021 model was adopted, emphasising digitalization, sustainable development, innovation, interaction, cooperation (participation) and diversity. On the introduction of integrated public services, we have studied the experience of New Zealand, which in 2012 carried out the reform "Result10" to solve cross-cutting problems through the interaction of several government agencies. As for innovations in the public sector, one of the leaders of the government is South Korea, which took second place in the UN e-Government Rating in 2020 (see Table 2).

TABLE 2. Assessment of the maturity of e-government

No.	Indicator	Value
1	Customer orientation	Availability of online services Convenience of receiving services Information about public services Obstacles in obtaining public services Mobile friendliness (feedback)
2	Transparency	Transparency of the procedure for providing the service Personal consultations of representatives of government agencies
3	Cross-border mobility	Accessibility of cross-border services. The convenience of using services in cross-border territories
4	Key support factors	Electronic Unique Identification (eID) Electronic documents (documents) The principle of one account (Single Sign On) Information Security (eSafe)
Note: compiled by authors		

The 2018-2019 fiscal year report included four key evaluation areas: service management, service standards, online services and customer satisfaction. The introduction of new indicators is aimed at assessing the promotion of the e-government maturity model, and its performance, increasing the emphasis on using composite indicators for providing reliable data sources. The

European Commission has developed indicators and indicators for assessing the maturity of e-government. In 2016, 34 EU countries were evaluated using this methodology, including Switzerland, Sweden, the Netherlands, Austria, France, Bulgaria, Latvia and others. The basic indicators include User Centricity, Transparency, Cross-Border Mobility and key support factors (Key enablers).

In the conditions of COVID-19, thanks to the implemented state measures, people were able to access public services through websites and other electronic applications easily. To assess the effectiveness of law enforcement agencies in interacting with citizens, several indicators are successfully used in the United States, Great Britain and Singapore. Whereas in Kazakhstan, not all of their departments are included in assessing the effectiveness of law enforcement agencies, which requires new approaches in determining the criteria for effectiveness based on the specifics of their activities. The Management Accountability Framework (MAF) is a key oversight tool used by the Treasury Canada Secretariat to ensure effective governance, accountability of federal departments and agencies, and allocation of resources to achieve results. Every year, the Treasury of Canada Secretariat evaluates the performance of 10 elements of the MAF, distributes points, and identifies priority sectors for improving management, which the organization will gradually develop in the next 12 months. All information, including the evaluation methodology, the evaluation and its results in each direction, are available on the MAF website. An analysis of reporting and the results of a survey of civil servants are used to assess MAF. The survey is conducted every three years on the condition of anonymity, using a combined method of collecting information. In particular, the respondent is offered a choice of an online questionnaire or the opportunity to fill out a questionnaire on paper and send it by mail. This makes it possible to obtain data on the level of employee involvement in all government agencies and identify problematic points of interaction between management and performers. In the MAF methodology, out of 7 management areas, 4 are the main ones, and 3 are specific areas. So, "Service Management" refers to a specific direction.

5. CONCLUSIONS

In the decade-long period, the policy of industrial and innovative development of the Republic of Kazakhstan is focused on the development of the manufacturing industry, taking into account the long-term policy laid down in the Strategic Development Plan of the Republic of Kazakhstan until 2025. At the same time, in the Strategic Development Plan of the Republic of Kazakhstan until 2025 (as amended until February 2021), it is indicated that export support and support for increasing labor productivity will be strengthened for enterprises investing in the development of the manufacturing sector. The key criterion will be the growth of added value. One of the main reasons for reforming accounting in the public sector is the need to apply unified reporting forms that could become universally recognized and understandable for a wide range of users — general-purpose financial reports, i.e. public. Such reports meet the requirements of all external user groups without considering the individual needs of each of them. Taxpayers, legislature representatives, creditors, suppliers, media representatives, and employees often do not have access to specially prepared information. The need for external users to read the reports of public sector bodies is primarily explained by the public nature of information on government revenues and expenditures.

The EU experience is interesting because when assessing the level of consumer orientation, the "mystery shopper" method is used, allowing you to assess the quality of public service provision anonymously. Here, the convenience of receiving a service implies the availability of the location of service centers for citizens. Thus, the overall goal of a PPP is to structure the relationship between the parties so that the risks are borne by those who are best able to control

them, and the increased value is achieved through the use of the skills and competencies of the private sector. The social unrest in early 2022 has provided a new impetus for structural reforms. Key priorities announced by the authorities are to raise economic growth and inclusion by promoting economic diversification, private sector development, and improved governance. The authorities are also committed to reducing greenhouse gas emissions by 15 per cent in 2030 (relative to the 1990 level) and achieving carbon neutrality by 2060. Given the multiplicity of reform needs, a Supreme Council for Reforms, chaired by the President, was created to strengthen reform prioritization and implementation.

In order to work successfully with the private sector, public authorities need to clearly understand the fundamental principles and goals underlying PPPs. Within the framework of under PPP agreements, private sector contractors become long-term service providers rather than just initial developers of assets, combining responsibilities for design, creation, operation and, possibly, financing assets to provide services needed by the public sector. As a result, central and local government agencies are increasingly involved as regulators. They focus resources on service planning, performance monitoring and contract management rather than direct management and service delivery. As a result, the State mission is carried out through the private sector.

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AUTHOR BIOGRAPHIES

*** Bayansulu Tassybay –** PhD candidate, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: mbayansulu95@mail.ru, ORCID ID: https://orcid.org/0000-0001-9817-4903

Aigerim Zhussupova – Cand. Sc. (Econ.), Associate Professor, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: aigera2008@gmail.com, ORCID ID: https://orcid.org/0000-0001-6662-7349

Zhanat Bulakbay – Cand. Sc. (Econ.), Associate Professor L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: bulakbay_zhannat@mail.ru, ORCID ID: https://orcid.org/0000-0002-3742-6756

Gulnara Amanova – Cand. Sc. (Econ.), Associate Professor, Head of department "Account and analysis", Eurasian national university the name of L.N.Gumilev, Astana, Kazakhstan. Email: agd65@mail.ru, ORCID ID: https://orcid.org/0000-0002-0829-5953

Aliya Rakayeva – Cand. Sc. (Econ.), Associate Professor, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: rakaeva@yandex.ru, ORCID ID: https://orcid.org/0000-0002-6756-8974

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Assessment of Trends in the Development of Regional Differences in Kazakhstan

Raigul Doszhan[1]* | **Akbota Anessova[2]** | **Akan Nurbatsin[3]**

[1] Al-Farabi Kazakh National University, Almaty, Kazakhstan
[2] Eurasian Technological University, Almaty, Kazakhstan
[3] University of International Business named after K. Sagadiyev, Almaty, Kazakhstan

Corresponding author:
* **Raigul Doszhan** – PhD, Associate Professor, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: raiguldos2011@gmail.com

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Abstract

The aim of the current study is to assess regional differences in urban development in Kazakhstan using ten indicators classified by financial and economic health, business development, and standard of living. The data from 2018 to 2022 was analyzed, and a rating system was used to evaluate the regions. The data was collected from open sources. A literature review was conducted to determine the leading ten indicators. The research methodology used a rating system to identify leader regions and lag over the past five years. Ten points evaluated each indicator; as a result of all calculations, the maximum score could reach 100 points. The best five-year result was 63.1 in Astana city, 60.8 in Almaty city and 59.6 in Atyrau region. The lowest indicator is in the North Kazakhstan region - 23.7 points, followed by the Kyzylorda region (24.4) and Pavlodar region (25.3). Almaty and Astana cities excel in financial contributions, while other regions receive significant funds based on various factors such as natural resources. The analysis reveals low entrepreneurship development but an increasing number of SMEs. Population growth is observed in the cities of Astana and Almaty, while regional disparities in wages and poverty levels persist. Atyrau region is an industrial region with a low retail rate. The study's results can be used to implement regional development programs.

Keywords: Economy, Economic Indicators, Social Indicators, Region, Regional Development, Rating, Cities, Kazakhstan

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1. INTRODUCTION

Regional differences in development play a crucial role in shaping the socio-economic landscape of a country. Understanding and assessing these regional differences are essential for policymakers and stakeholders to implement effective strategies for balanced regional growth and development. This study focuses on assessing trends in the development of regional differences at the level of cities in Kazakhstan.

Kazakhstan, as the largest landlocked country in the world, encompasses a diverse range of regions, each with its unique characteristics, resources, and development potential. The country is divided into 17 regions, including 14 regions and three cities of republican significance. These regions vary in location, population size, economic activities, and historical development (Tsaurkubule et al., 2022).

The assessment of regional differences in Kazakhstan is of particular significance due to the country's transition from a centrally planned economy to a market-oriented system after gaining independence in 1991. This transition has led to varying economic transformations and development across different regions. The government of Kazakhstan has recognized the importance of addressing regional disparities and promoting balanced development to ensure the well-being of all citizens.

The development of the regions of Kazakhstan may differ in various parameters, such as economic growth, social indicators, infrastructure and accessibility of services, the level of education and healthcare, and others. Each region and city has its characteristics, for example, Astana is the capital of Kazakhstan and one of the country's critical administrative and economic centres. The city is actively developing within the framework of state programs to attract investment and create innovative infrastructure. Astana is home to government agencies, large corporations and high-tech enterprises. Moreover, Almaty is the largest city and economic center of Kazakhstan. It is known for its financial, commercial and investment opportunities. Almaty has a developed infrastructure, including a transport system, an international airport and high-quality educational and scientific institutions.

Western Kazakhstan is one of the country's industrial regions, where the oil and gas and chemical industries are developed. East Kazakhstan is known for its natural resources, including coal, oil, gas and metals. Southern Kazakhstan is one of the country's most significant regions with diverse economic potential. The region has developed an agricultural industry rich in natural resources, including coal, oil and gas. Northern Kazakhstan is known for its agricultural potential and industrial enterprises. The region has access to natural resources, including coal, oil and gas, and a developed transport infrastructure. Central Kazakhstan has a mixed economic profile, including agriculture, industry, and services. The region is also rich in natural resources, including coal, iron ore and copper.

It is important to note that these reviews are general and do not cover all aspects of the development of each region. The development of regions may change over time depending on the economic and political situation, government priorities and other factors. Therefore, this study is devoted to a comprehensive assessment of the regions of Kazakhstan.

To effectively assess trends in regional differences, this study uses a comprehensive set of indicators reflecting various aspects of development. In this study, the regions and cities of Kazakhstan will be evaluated according to 10 indicators, which are divided into three groups: financial and economic conditions, business development indicators and residents' standard of living. The analysis will be based on data for five years, from 2018 to 2022, as this period has yet to be explored. A five-year average for each indicator will be used. The assessment results will be presented as a rating, where each region will be awarded a certain number of points depending on its performance.

This study aims to evaluate Kazakhstan's regions and cities on various indicators through a rating system. Data analysis will identify regions with the most significant potential for investment and business development and problem areas that require additional support and stimulation. In addition, the study aims to identify regions that need special support measures to achieve a more even and sustainable country development.

The study results can serve as a basis for developing effective strategies and programs for developing regions aimed at improving the financial and economic condition, developing entrepreneurship and raising the population's standard of living throughout the country.

2. LITERATURE REVIEW

Regional disparities in economic development, business growth, and residents' standard of living have long been subjects of scholarly inquiry. Evaluating and understanding these regional and city-level trends are essential for policymakers and urban planners to promote balanced and sustainable development within a country. This literature review examines existing research on assessing trends in the development of regional differences, focusing specifically on cities. The assessment involves indicators divided into three groups: financial and economic conditions, business development indicators, and the standard of living of residents (Greene et al., 2007; Guaralda et al., 2020).

A region's financial and economic condition fundamentally determines its overall development. Researchers have utilized various indicators to assess this aspect. Tax collection is one commonly employed measure that provides insights into the revenue generation capacity of a region (Combes & Lafourcade, 2005; Tan et al., 2017; Łasak, 2022). The level of tax collection reflects the economic activity and productivity of businesses within the region, which in turn affects its capacity for public investment and resource allocation.

The national fund's revenues is another indicator used to evaluate a region's financial and economic condition. These revenues often come from natural resource extraction, such as oil, gas, or minerals, and can significantly impact regional development (Venables, 2016; Dwumfour & Ntow-Gyamfi, 2018). Regions with abundant natural resources tend to experience economic growth and attract investments in related industries. However, reliance on a single industry may also lead to vulnerability to commodity price fluctuations and hinder diversification efforts (Mousavi & Clark, 2021).

Assessing business development indicators provides valuable insights into a region's entrepreneurial ecosystem and economic vitality. Researchers have employed various measures to evaluate this aspect. One widely used indicator is the number and growth rate of small and medium-sized businesses (SMEs) within a region (Liu et al., 2022). SMEs are crucial in job creation, innovation, and local economic development. Higher numbers and robust growth of SMBs indicate a favourable business environment and potential for economic dynamism.

In addition to the number of SMEs, the diversity of industries within a region is another important indicator of business development (Islam & Wahab, 2021). Regions with a diverse industrial base are less vulnerable to economic shocks and more resilient to market fluctuations. The presence of various industries, including manufacturing, services, and knowledge-based sectors, stimulates innovation, fosters competition, and contributes to long-term economic sustainability.

Evaluating residents' standard of living provides insights into the quality of life within a region. Researchers have employed multiple indicators to assess this aspect. One standard measure is the average household income, which reflects the economic well-being of residents (Chyn& Katz, 2021). Higher household incomes generally indicate a higher standard of living, increased purchasing power, and better access to goods and services.

Another indicator used to assess the standard of living is the Human Development Index (HDI). The HDI combines life expectancy, education, and income measures to assess human well-being comprehensively. Regions with higher HDI scores tend to have better health outcomes, higher educational attainment, and greater access to resources and opportunities (Yumashev et al., 2020; Chen et al., 2023).

Assessing regional differences at the level of cities and regions is a complex task requiring various methods and approaches. Various methods are employed in different studies to assess the development of regional differences, including composite indices, spatial analysis, multivariate analysis, growth and convergence analysis, comparative case studies, and stakeholder surveys.

Composite indices have emerged as a popular method for capturing the multidimensional nature of regional disparities. Indices such as the Regional Development Index (RDI) and the Regional Competitiveness Index (RCI) integrate multiple indicators into a single measure, providing a holistic view of regional development (Chen et al., 2022; Ran et al., 2022). These composite indices aggregate data from different sources and dimensions, allowing for comparisons across regions and over time. Composite indices offer a comprehensive understanding of regional differences by considering economic, social, and environmental factors.

Spatial analysis techniques, including Geographic Information Systems (GIS) and spatial econometric models, have also been extensively used to assess regional differences. These methods consider the spatial distribution of indicators and identify clusters or spatial patterns of development (Yao et al., 2017; Ramos-Escudero et al., 2021). Spatial analysis helps understand the spatial interactions, agglomeration effects, and spillover mechanisms that shape regional disparities. By examining the geographical context, spatial analysis provides valuable insights into the spatial dimensions of regional development.

Growth and convergence analysis methods examine the dynamics of regional development over time. Researchers employ various approaches, including growth rate analysis, convergence analysis, and spatial econometric models, to understand whether regions are experiencing convergence or divergence in their development trajectories (Calero & Turner, 2020). Convergence analysis helps identify whether less developed regions are catching up with more developed regions or if disparities are widening. These methods provide insights into the temporal aspects of regional differences and can inform policies promoting balanced development.

Another valuable method used to assess regional differences is comparative case studies. Researchers gain insights into the specific factors contributing to regional disparities by conducting in-depth examinations of selected cities or regions. Comparative case studies analyze qualitative and quantitative data, including historical records, policy documents, interviews, and statistical indicators (Ceccato et al., 2021). These studies offer a rich understanding of regional development's contextual factors and provide valuable lessons for policymakers.

Stakeholder surveys among residents, businesses, and policymakers offer subjective perceptions of regional differences. These surveys capture stakeholders' views on the quality of infrastructure, access to services, business climate, and overall livability. The subjective experiences and perspectives obtained from stakeholder surveys complement the objective indicators used in other methods, providing a comprehensive understanding of regional disparities (van Langen et al., 2021).

Assessment of regional differences at the city and regional levels requires the application of various methods and approaches. Composite indices, spatial analysis, multivariate analysis, growth and convergence analysis, comparative case studies, and stakeholder surveys are among researchers' diverse methods. Each method contributes to our understanding of the multidimensional nature of regional development. Assessing trends in developing regional differences at the city level requires a comprehensive understanding of multiple indicators.

Evaluating the financial and economic condition, business development, and residents' standard of living provides valuable insights into regional disparities. By analyzing these indicators, policymakers and urban planners can identify areas of improvement, formulate targeted policies, and promote more balanced and sustainable development.

3. METHODOLOGY

In this study, regions and cities will be assessed according to 10 indicators, which are divided into three groups: financial and economic condition, business development indicators and the standard of living of residents (see Table 1).

TABLE 1. Estimated indicators

Indicator	Description	Coding	Measurement units	Source
Financial and economic condition	Receipts of payments and taxes to the budget, KZT	Tax_Budget	KZT	kgd.gov.kz
	Receipts of payments and taxes to the National Fund, KZT	Tax_NF	KZT	kgd.gov.kz
	Gross regional product (GRP) per capita, KZT	GRP	KZT	Stat.gov.kz
Business	Number of SMEs, pcs	Num_SME	unit	Stat.gov.kz
	Share of SMEs in GDP, %	Share_SME	%	Stat.gov.kz
	Investments in fixed assets, KZT	I_FA	KZT	Stat.gov.kz
	Retail trade, KZT	R_T	KZT	Stat.gov.kz
Social status and standard of living	Population growth, pers.	P_G	person	Stat.gov.kz
	Average salary, KZT	AS	KZT	Stat.gov.kz
	Population with income below the subsistence level, %	Pov_lev	%	Stat.gov.kz
Note: compiled by authors				

According to the estimated indicators, a rating was compiled for 17 regions of Kazakhstan, 14 of which are regions and three cities of Republican significance. The assessment uses data for five years, from 2018 to 2022. For some indicators, 2022 is not considered due to the absence. The rating does not include new regions: Abayskaya, Zhetysuskaya and Ulytauskaya, as there are no data. The estimated indicator is based on ten leading indicators characterizing the current state of 16 regions of Kazakhstan, including 14 regions and two cities of Republican significance.

The average value for each indicator for the study period was used. Next, a rating was built on a point system. Up to 10 points for each indicator were awarded to the region with the best result. The rest of the rating participants received a rating relative to the leader's indicator, proportionally reduced from the maximum score. In total, the regions could score a maximum of 100 points.

4. ANALYSIS AND RESULTS

Each region's contribution to the country's financial development was assessed through financial and economic condition assessment. Here we considered indicators of tax collection from each region, receipts of payments to the National Fund and gross regional product (GRP) per capita.

The leaders in receiving payments and taxes to the state budget are the cities of Almaty and Astana, where budget allocations have more than doubled. In addition, the top three include the

Atyrau region, where growth is also observed. These three regions account for more than 50% of all budget revenues. This is because Almaty and Astana cities have a diversified economic structure. Moreover, more than a million people live in these cities. In the Atyrau region, the main focus of the regional economy is the petrochemical industry, which naturally affects the amount of taxes collected. In the Figure 1 there is given data on budget allocations by regions of Kazakhstan for the study period from 2018 to 2022.

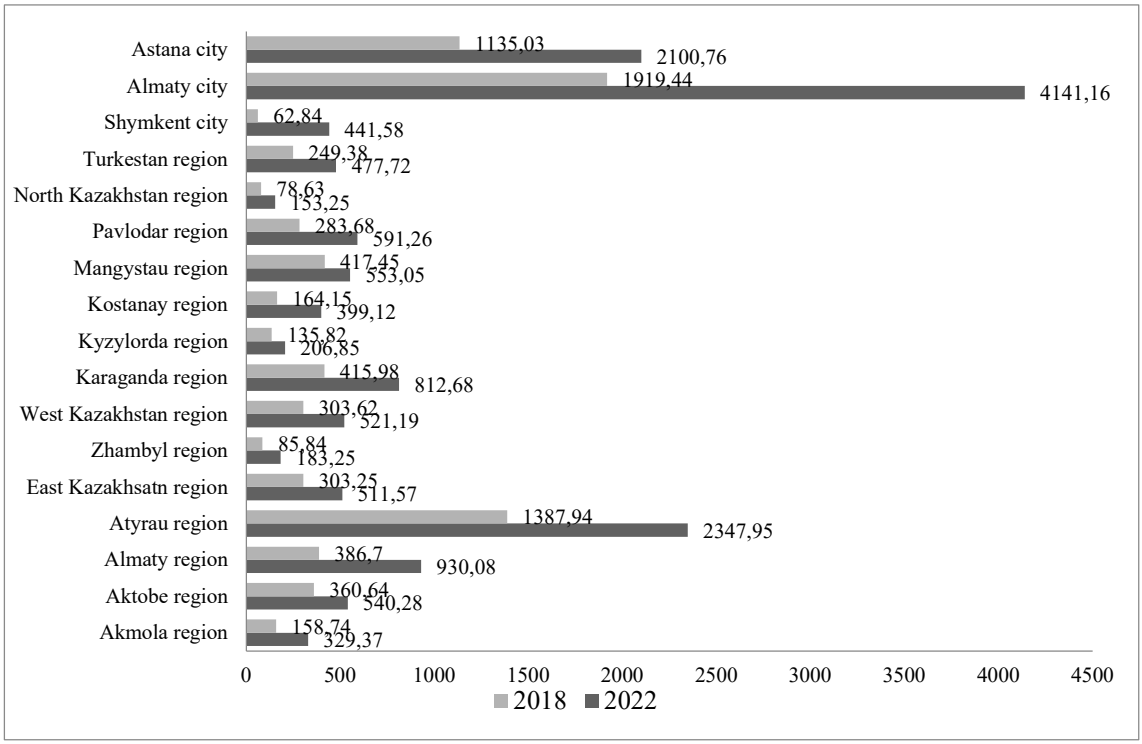

FIGURE 1. Receipts of taxes and payments to the state budget by regions for 2018 and 2022, bln. KZT

Note: compiled by authors from the Bureau of National Statistics (2022)

A comparative analysis of budget allocations by regions of Kazakhstan for the study period from 2018 to 2022 showed that the growth of budget allocations over five years is observed in Almaty and Astana cities, where budget allocations have more than doubled. In addition, Almaty and Astana cities are leaders in high budget allocations in all years. Also, significant growth in budget allocations is noticeable in the Atyrau and Aktobe regions, where budget allocations almost doubled from 2018 to 2022. The regions with constant growth include the Karaganda and East Kazakhstan regions (EKR), which show stable annual growth in budget allocations. Regions with variable dynamics include the Almaty and West Kazakhstan regions. In these regions, fluctuations in amounts are observed in different years. Regions with relatively low budget allocations include Zhambyl, Kostanay, and Kyzylorda regions, which have relatively low budget allocations compared to other regions.

The overall trend in the data suggests that Almaty and Astana are the country's leading financial centers with the highest budget allocations. However, other regions also receive significant funds for development.

Other regions, such as the Atyrau, Aktobe, and Karaganda regions, also receive significant budget funds. This is due to various factors, including the availability of natural resources (e.g. the oil and gas industry in Atyrau Region), industrial and economic facilities (e.g. metallurgical production in Karaganda Region), and national development programs.

However, some regions, such as Zhambyl region, Kostanay region and Kyzylorda region, have lower budget allocations. This may be due to less industrialization and smaller economies in these regions. In general, the comparative analysis shows that budget allocations are distributed depending on each region's strategic and economic importance. Next, in Table 2 there is presented the dynamic on tax revenues and payments to the state budget by regions.

TABLE 2. Scoring of tax revenues and payments to the state budget by regions from 2018 to 2022, thousand KZT

Region	2018	2019	2020	2021	2022	Share, %	Score
Akmola	158744533	194949731	233648856	257230744	329372996	2,2	0,9
Aktobe	360644526	400817233	312246191	376682612	540278475	3,8	1,5
Almaty	386695709	509323119	561879386	773757341	930082549	6,0	2,3
Atyrau	1387939198	1765626552	1243520012	1528845972	2347953788	15,7	6,1
East Kazakhstan	303253974	368114880	543503875	413420102	511569594	4,1	1,6
Zhambyl	85837607	98253372	113301549	145123013	183246556	1,2	0,5
West Kazakhstan	303620541	371002961	639034658	358298166	521192008	4,2	1,6
Karaganda	415984479	430984486	397360483	695327725	812683919	5,2	2,0
Kyzylorda	135824347	157295031	135676993	163101546	206846338	1,5	0,6
Kostanay	164145200	217271212	237842723	294281295	399117032	2,5	1,0
Mangistau	417452752	506808245	323120347	420185731	553053612	4,2	1,6
Pavlodar	283678322	298229477	351162190	421644281	591257798	3,7	1,4
North Kazakhstan	78625414	86164700	101292881	118921626	153249981	1,0	0,4
Turkestan	249379346	194624995	235791919	307958271	477718503	2,8	1,1
Shymkent city	62839758	196564513	241475308	291351852	441584640	2,3	0,9
Almaty city	1919440471	2224988767	2290049006	2913443807	4141163903	25,6	10,0
Astana city	1135028885	1277464496	1422910239	1441361207	2100755736	14,0	5,5
Note: compiled by authors from the Bureau of National Statistics (2022)							

The current structure of tax revenues leads to the emergence of donor and recipient regions, which, in turn, is fraught with the dependence of individual regions on transfers from the state budget. This situation affects the level of independence of budgets, which, according to the strategic guidelines of the head of state, need to be increased, and, accordingly, to refuse to provide transfers.

The composition of the top three in terms of gross regional product per capita was identical to the previous indicator. In the Atyrau region, GRP per person for the nine months of 2017 amounted to 6.27 million KZT, an increase of 16.3% from last year. In Almaty city, 4 million KZT of GRP was produced per person, in the capital - 3.89 million KZT.

Representatives of Western Kazakhstan mainly provide the stability of the country's social and economic development. Thus, the most significant amount of tax deductions to the National Fund of the Republic of Kazakhstan in 2017 came from Atyrau (1.15 trillion KZT), Mangistau (388.2

billion KZT) and West Kazakhstan (269.03 billion KZT) regions. According to this indicator, Astana city was in the red in the amount of 6.65 billion KZT.

Consider the data of the gross regional product in the context of the regions of Kazakhstan. The East Kazakhstan region demonstrates the highest growth rate, the volume of GRP, which increased by 142% over the seven years under study compared to the indicators of the base year, 2018. Also, among the leading regions that showed growth of over 100%, one can note such regions as Karaganda (122), Kostanay (131) and North Kazakhstan regions (123), Turkestan region (127), as well as the city of Shymkent.

In cities of republican significance, there is a decrease in GRP per capita by 20% or more. In Astana city, the decrease is 27%. The highest indicator for the nine months of 2022 is in the Atyrau region - 13,145 thousand KZT, two times more than in Astana and Almaty cities. Moreover, the lowest indicator is in the Zhambyl region - 1372.5 thousand KZT.

Taxes received by the National Fund of the Republic of Kazakhstan include some direct taxes from organizations in the oil sector (except taxes credited to local budgets), such as CIT, excess profit tax, mineral extraction tax, bonuses, production sharing share, rent tax on exports and an additional payment by a subsoil user operating under a production sharing contract. Table 3 presents the scoring of tax revenues and payments to the National Fund in regions of Kazakhstan.

TABLE 3. Scoring of tax revenues and payments to the National Fund by region from 2018 to 2022, thousand KZT

Region	2018	2019	2020	2021	2022	Growth	Score
Akmola	9094	6412	9497	11175	7861	86%	0
Aktobe	173910533	146346190	92002979	118223299	219902795	126%	0,953
Almaty	170899	149461	200451	162197	48911	29%	0,0009
Atyrau	1444398443	1241131874	516937719	1047884117	3621196760	251%	10
East Kazakhsan	5260760	3681389	1764383	3301494	3173434	60%	0,0218
Zhambyl	34435	16841	26829	11679	7747	22%	0,0001
West-Kazakhstan	680383138	582884771	381285716	715551212	1386929980	204%	4,76
Karaganda	6512	5204	6382	4463	3696	57%	0
Kyzylorda	163144859	174555501	87050485	73628611	153318480	94%	0,82
Kostanay	0	0	308	0	2167	-	0
Mangistau	653511254	625106066	278619145	576515364	895186933	137%	3,8
Pavlodar	323	1534	129	0	3173	982%	0
North Kazakhstan	2238	0		0	0	0%	0
Turkestan	9176968	9977432	2895803	2124470	11805614	129%	0,04
Shymkent city	0	349	202	0	1572	-	0
Almaty city	7746085	11138719	4614500	5622048	16724043	216%	0,06
Astana city	74081742	64414099	35096341	70016959	94237604	127%	0,43
Note: compiled by authors from the Bureau of National Statistics (2022)							

The volume of receipts to the National Fund in 2022 amounted to 64 trillion KZT, which increased by 99% compared to 2018.

There is more than a twofold increase in revenues in four regions, which include Pavlodar (982%), Atyrau (251%), West Kazakhstan (204%) regions and the city of Almaty (216%). Modernization was completed at the Pavlodar petrochemical plant, which affected the volume of tax revenues from the oil and gas sector of the region. In West Kazakhstan region, in 2017, the development of a new field began.

Thus, the leading position in the financial and economic segment is occupied by the Atyrau region.

In ranking the best countries for entrepreneurship according to US News & World Report in 2021, Kazakhstan was in 75th place out of 78. The assessment of the level of entrepreneurship development in the republic was only 0.9 points out of 100. Kazakhstan was rated low on all points of the rating.

The number of SMEs can track the state of the business climate in the region. In 2022, the share of small and medium-sized businesses in Kazakhstan's GDP reached 33.5%. Over the past ten years, the number of SMEs in the country has doubled - from 763.8 thousand to 1.6 million enterprises. Moreover, as of March 1, 2018, the most significant number of small and medium-sized businesses (15.4%) was registered in the South Kazakhstan region - 179.55 thousand units, 90.3% of them are individual entrepreneurs and farms. In Almaty city, 172.63 thousand representatives of SMEs were registered. Almaty region is among the top three, where 110.81 thousand SMEs are registered (see Table 4).

TABLE 4. Number of active small and medium businesses for 2018-2022

Region	2018	2019	2020	2021	Growth	Score
Akmola	44 106	45 453	46 564	48 544	110%	2,40
Aktobe	54 430	59 116	61 797	65 992	121%	3,14
Almaty	115 630	122 368	123 181	129 716	112%	6,39
Atyrau	46 756	49 917	50 239	52 031	111%	2,59
West Kazakhstan	40 062	42 785	43 035	44 260	110%	2,22
Zhambyl	63 262	69 961	69 338	71 298	113%	3,57
Karaganda	84 032	88 299	90 196	95 296	113%	4,66
Kostanay	51 093	52 516	52 495	54 870	107%	2,75
Kyzylorda	42 342	46 297	48 657	51 063	121%	2,45
Mangistau	51 096	52 949	52 900	56 521	111%	2,78
Pavlodar	43 820	45 482	45 809	46 694	107%	2,37
North Kazakhstan	28 969	30 071	30 331	30 228	104%	1,56
Turkestan	130 804	141 992	140 605	144 778	111%	7,27
East Kazakhsan	87 678	88 938	90 453	95 916	109%	4,73
Astana city	124 685	134 475	144 769	163 017	131%	7,38
Astana city	174 509	190 190	197 066	206 109	118%	10,00
Shymkent city	58 054	69 435	69 876	75 314	130%	3,55
Note: compiled by authors from the Bureau of National Statistics (2022)						

One of the essential components of the characteristics of entrepreneurship is to determine the degree of participation in the formation of the gross regional product of small and medium-sized businesses, as this category of business today serves as a powerful lever for economic development.

As for the regions, it can be seen that the most significant percentage of participation of small and medium-sized businesses is observed in the capital of the republic, Astana, Almaty and the West Kazakhstan region, where the share of these categories of entrepreneurship is 59.0%, 47.5% and 40.5%, respectively, of the total volume of GRP produced in 2021 (see Table 5).

TABLE 5. The share of small and medium-sized businesses in the gross regional product of the region of Kazakhstan

Region	2018	2019	2020	2021	Growth	Average	Score
Akmola	30,8	28,5	27,1	26,8	87%	28,3	5,09
Aktobe	20,7	20,5	23,8	24,5	118%	22,4	4,02
Almaty	32,0	32,5	32,4	37,0	116%	33,5	6,02
Atyrau	18,7	22,2	19,5	24,1	129%	21,1	3,80

West Kazakhstan	36,0	36,8	34,1	33,4	93%	35,1	6,31
Zhambyl	20,9	20,9	26,5	25,9	124%	23,6	4,24
Karaganda	17,2	17,2	17,9	17,9	104%	17,6	3,16
Kostanay	29,4	30,7	31,5	28,6	97%	30,1	5,40
Kyzylorda	16,9	16,8	17,6	18,3	108%	17,4	3,13
Mangistau	16,8	23,5	29,4	31,4	187%	25,3	4,55
Pavlodar	16,2	18,8	18,8	18,4	114%	18,1	3,25
North Kazakhstan	29,7	31,4	31,5	31,4	106%	31,0	5,58
Turkestan	19,5	23,1	24,4	30,8	158%	24,5	4,40
East Kazakhsan	18,0	19,0	20,0	20,5	114%	19,4	3,48
Astana city	48,6	57,9	56,8	59,0	121%	55,6	10,00
Astana city	40,1	40,5	49,2	47,5	118%	44,3	7,97
Shymkent city	25,6	31,2	31,8	40,5	158%	32,3	5,80
Note: compiled by authors from the Bureau of National Statistics (2022)							

In total, in the field of small and medium-sized businesses in the last year under study, more than 17 trillion KZT were produced, of which almost 14 are accounted for by small businesses. Minor participation and, accordingly, the development of small and medium-sized businesses are observed in such regions as Karaganda, Pavlodar, Kyzylorda, and East Kazakhstan, where this share is about 18-20% of the total GRP of the region.

The most attractive industry for investment in Kazakhstan remains mining and quarrying, which explains the high level of investment in fixed assets in Atyrau region, which reached 3.03 trillion KZT in 2022. But compared to 2018, it decreased by 18% (see Table 6).

TABLE 6. Investments in fixed assets by region of Kazakhstan, in billion KZT

Region	2018	2019	2020	2021	2022	Growth	Score
Akmola	278 177	333 723	436 633	514 683	420 405	151%	1,16
Aktobe	516 893	598 864	648 036	817 136	566 555	110%	1,84
Almaty	578 720	647 330	682 407	733 426	959 127	166%	2,10
Atyrau	3691401	4328236	3178960	2910114	3030 083	82%	10,00
West Kazakhstan	450 382	586 265	481 485	428 742	609 124	135%	1,49
Zhambyl	264 520	296 398	350 068	398 609	501 155	189%	1,06
Karaganda	489 030	811 433	692 347	796 866	423 077	87%	1,87
Kostanay	249 340	288 737	336 599	431 179	269 674	108%	0,92
Kyzylorda	332 655	400 209	292 344	308 941	724 871	218%	1,20
Mangistau	504 649	556 558	582 279	629 138	486 491	96%	1,61
Pavlodar	411 958	494 620	487 154	571 927	409 484	99%	1,39
North Kazakhstan	214 181	234 490	286 252	333 149	762 203	356%	1,07
Turkestan	314 114	443 503	705 722	659 114	698 220	222%	1,65
East Kazakhsan	494 597	621 913	729 115	834 080	366 671	74%	1,78
Astana city	1067455	919 107	1125211	1225027	739 521	69%	2,96
Almaty city	732 930	820 449	976 795	1187620	155 664	21%	2,26
Shymkent city	588 034	194 958	278 737	462 482	545 408	93%	1,21
Note: compiled by authors from the Bureau of National Statistics (2022)							

Table 6 shows that the total share of small and medium-sized businesses in the reporting year is approximately 33.5%, while there is a slight growth trend. Moreover, it is essential to note that the share of small businesses is predominant, almost four times higher than that of medium-sized businesses.

In Astana city, the volume of investments for the year reached 739.5 billion KZT. In Almaty city, the figure was 155.6 billion KZT, the lowest in all regions in 2022. The least of all investments were made in Kostanay (269.6 billion KZT) and East Kazakhstan region (366.6 billion KZT) regions. In total, 15 trillion KZT was invested in fixed assets throughout the country over the past year. Next, in Table 7 there is presented dynamics on retail trade by regions in for the period 2018-2021.

TABLE 7. Retail trade by regions for 2018-2021, KZT

Region	2018	2019	2020	2021	Growth, %	Score
Akmola	298855,60	318836,90	271455,60	298010,30	1,00	0,87
Aktobe	525743,90	550263,60	615305,80	722327,80	1,37	1,76
Almaty	511802,10	556468,00	516273,90	567851,10	1,11	1,57
Atyrau	305715,70	341157,60	349332,20	388333,10	1,27	1,01
West Kazakhstan	292838,80	313810,30	312456,60	380180,80	1,30	0,95
Zhambyl	302643,00	323653,30	332075,90	370681,70	1,22	0,97
Karaganda	880040,80	997074,80	1060009,80	1168145,60	1,33	2,99
Kostanay	360410,30	403970,20	435936,40	506457,00	1,41	1,24
Kyzylorda	267252,10	291314,40	311934,20	346996,50	1,30	0,89
Mangistau	234666,50	252619,20	266956,30	332583,70	1,42	0,79
Pavlodar	379174,70	407348,10	434934,50	477588,50	1,26	1,24
North Kazakhstan	261554,30	279805,50	242068,90	301524,80	1,15	0,79
Turkestan	177561,70	198002,20	202339,00	241854,60	1,36	0,60
East Kazakhsan	892043,10	1010269,70	1081804,20	1274561,50	1,43	3,11
Astana city	1143750,30	1267529,90	1369472,90	1692678,00	1,48	3,99
Almaty city	2851679,60	3382739,00	3431679,10	4044492,90	1,42	10,00
Shymkent city	360039,80	432717,90	495914,40	595053,70	1,65	1,37
Note: compiled by authors from the Bureau of National Statistics (2022)						

The indicators of retail trade demonstrate the activity of entrepreneurship in the region. So, almost a third of the total retail trade of the republic in 2022 was in Almaty city. The trade volume here amounted to 4.04 trillion KZT (30%), 12%, or 1.6 trillion KZT, falls on Astana city and 9%, or 1.2 trillion KZT - in East Kazakhstan. The most significant increase in the indicator for the study period is observed in Shymkent - 65%, the smallest - in Akmola region (0%)

Surprisingly, in the Atyrau region, with the highest income level of the population, there is a trim level of retail trade - 388.3 million KZT per person, or 257.78 billion KZT in total. As a result, in the "business" segment, the cities of Almaty and Astana took the first place.

Consider the third group of indicators - the population's standard of living or social indicator.

According to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, at the beginning of 2022, the population of Kazakhstan reached 19,503,159 people. The country's number of inhabitants has grown during the study period by 1345822 people, and the increase is 7%.

The population growth trend in the whole country has strengthened, and it is based more on natural population growth, not migration processes. However, the regional dynamics of the population of Kazakhstan are characterized by significant differentiation.

Most of the country's population is growing steadily due to high natural increase. At the same time, in large economic centres - the cities of Astana and Almaty and the western regions - population growth occurs due to natural and migration inflows.

Thus, the most significant population growth among the regions of Kazakhstan is observed in Astana city - 26%. Population growth continues in the country's largest city, Almaty; over the year, it has grown by 17%, including 29.97 thousand people due to migration.

Most people live in the Turkestan region - 2.02 million. Growth over five years is 6%.

At the same time, the population of the northern, eastern, and central regions continues to decrease since the negative balance of migration, primarily interregional, overlaps the positive natural increase. Thus, in five regions of Kazakhstan, including East Kazakhstan, North Kazakhstan, Kostanay, and Karaganda regions, there is a population decline.

The average salary in Kazakhstan in the fourth quarter of 2022 was 299 thousand KZT. Differences in wages in Kazakhstan are significant - they, as a rule, reflect the level and specifics of the development of the country's regions. In Table 8 there is provided data on average monthly salary dynamics by regions for the period 2018-2021.

TABLE 8. Average monthly salary in the regions of Kazakhstan for 2018-2021, KZT

Region	2018	2019	2020	2021	2022	Growth	Average	Score
Akmola	121 361	140 272	168 302	203 006	240 576	198%	174 703	4,53
Aktobe	137 039	156 595	182 923	217 597	264 168	193%	191 664	4,97
Almaty	115 101	136 212	168 313	207 592	257 430	224%	176 930	4,59
Atyrau	293 572	351 103	367 799	406 166	509 600	174%	385 648	10,00
West Kazakhstan	153 782	183 914	195 410	226 537	265 683	173%	205 065	5,32
Zhambyl	109 720	127 043	156 846	195 922	231 420	211%	164 190	4,26
Karaganda	149 916	172 239	203 806	240 608	272 561	182%	207 826	5,39
Kostanay	125 995	145 890	171 319	201 923	239 684	190%	176 962	4,59
Kyzylorda	130 391	152 085	178 174	212 777	263 695	202%	187 424	4,86
Mangistau	275 679	294 099	317 611	349 503	441 458	160%	335 670	8,70
Pavlodar	141 915	160 670	187 427	220 291	261 498	184%	194 360	5,04
North Kazakhstan	110 686	130 233	157 497	187 501	222 558	201%	161 695	4,19
Turkestan	104 136	123 853	158 762	195 302	235 943	227%	163 599	4,24
East Kazakhsan	140 126	162 182	190 287	224 700	276 207	197%	198 700	5,15
Astana city	240 320	266 796	302 504	344 691	387 744	161%	308 411	8,00
Almaty city	200 919	224 158	247 951	295 985	339 484	169%	261 699	6,79
Shymkent city	115 574	136 995	161 329	193 682	229 889	199%	167 494	4,34
Note: compiled by authors from the Bureau of National Statistics (2022)								

The leaders in terms of nominal wages remain highly developed regions: raw materials export-oriented regions - Atyrau and Mangicassstau regions with an average monthly salary of 385.6 thousand KZT and 335.6 KZT, respectively, and the financial and economic centres of Astana and Almaty (308.4 thousand KZT and 261.7 thousand KZT, respectively).

The decline in the purchasing power of income is more acutely felt by the socially vulnerable segments of the population. The highest poverty level is observed in the country's southern regions. Thus, in the Turkestan region, according to the results of the study period, the share of the population with an income below the subsistence level was 10.4%, and in the city of Shymkent, 4.4%. In the Mangistau region, despite the high average wages, the share of the population with incomes below the subsistence level reached 5.7%. The Zhambyl region also excelled here, where the figure was 5.4% (see Table 9).

Table 9. Share of the population with incomes below the subsistence level, %

Region	2018	2019	2020	2020	2021	2022	Growth	Average	Score
Akmola	4,6	4,4	5,1	5,1	5,7	5,9	128%	5,1	4,9
Aktobe	3,1	3,2	3,8	3,8	3,9	4,3	136%	3,7	3,5
Almaty	3,6	3,2	3,8	3,8	4,2	3,6	101%	3,7	3,6
Atyrau	2,6	2,8	3,0	3,0	3,4	3,3	126%	3,0	2,9
West Kazakhstan	3,2	3,8	4,0	4,0	4,1	4,2	129%	3,9	3,7
Zhambyl	4,9	5,2	6,0	6,0	5,1	5,1	105%	5,4	5,2
Karaganda	2,3	2,2	2,5	2,5	2,7	3,2	138%	2,5	2,4

Kostanay	3,7	3,2	3,6	3,6	3,5	4,3	118%	3,6	3,5
Kyzylorda	4,9	4,4	5,7	5,7	4,9	4,9	100%	5,1	4,9
Mangistau	5,0	4,3	5,4	5,4	6,4	7,7	154%	5,7	5,5
Pavlodar	3,4	4,1	4,4	4,4	4,0	3,9	115%	4,0	3,9
North Kazakhstan	4,9	5,1	6,6	6,6	5,1	5,7	116%	5,7	5,4
Turkestan	11,1	10,5	11,0	11,0	9,5	9,1	82%	10,4	1
East Kazakhsan	5,0	5,2	5,3	5,3	4,9	4,6	92%	5,0	4,8
Astana city	0,9	1,1	1,5	1,5	2,3	2,0	229%	1,5	10
Almaty city	2,8	2,5	4,7	4,7	4,7	4,4	160%	3,9	3,8
Shymkent city	2,7	3,0	4,7	4,7	5,3	6,4	240%	4,4	4,3
Note: compiled by authors from the Bureau of National Statistics (2022)									

The lowest poverty level in Kazakhstan is recorded in Astana city, where 1.5% of the population has an income below the subsistence level. This figure was 3.9% in Almaty city, in the Karaganda region - 2.5%.

As a result, in the segment of social development and living standards, the city of Astana was the first. Next, in Table 10 there are provided calculations on indicators for each region.

Table 10. Calculations on indicators for each region, score

Region	Financial and economic indicators			Business development				Social indicators			Score
	Tax_Budget	GRP	Tax_NF	Num_SME	Share_SME	I_FA	R_T	P_G	AS	Poverty	Total
Akmola	0,9	2,1	0	2,40	5,09	1,16	0,87	3,69	4,53	4,9	25,6
Aktobe	1,5	2,5	0,953	3,14	4,02	1,84	1,76	4,37	4,97	3,5	28,6
Almaty	2,3	1,3	0,0009	6,39	6,02	2,10	1,57	9,56	4,59	3,6	37,4
Atyrau	6,1	10,0	10	2,59	3,80	10,00	1,01	3,20	10,00	2,9	59,6
West Kazakhstan	1,6	3,3	4,76	2,22	6,31	1,49	0,95	3,26	5,32	3,7	32,9
Zhambyl	0,5	1,2	0,0001	3,57	4,24	1,06	0,97	5,66	4,26	5,2	26,7
Karaganda	2,0	3,1	0	4,66	3,16	1,87	2,99	6,57	5,39	2,4	32,1
Kostanay	1,0	2,3	0	2,75	5,40	0,92	1,24	4,27	4,59	3,5	26,0
Kyzylorda	0,6	1,6	0,82	2,45	3,13	1,20	0,89	3,98	4,86	4,9	24,4
Mangistau	1,6	3,6	3,8	2,78	4,55	1,61	0,79	3,46	8,70	5,5	36,4
Pavlodar	1,4	3,0	0	2,37	3,25	1,39	1,24	3,73	5,04	3,9	25,3
North Kazakhstan	0,4	2,0	0	1,56	5,58	1,07	0,79	2,71	4,19	5,4	23,7
Turkestan	1,1	0,8	0,04	7,27	4,40	1,65	0,60	10,00	4,24	1	31,1
East Kazakhsan	1,6	2,4	0,0218	4,73	3,48	1,78	3,11	6,16	5,15	4,8	33,2
Astana city	10	4,7	0,43	7,38	10,00	2,96	3,99	5,66	8,00	10	63,1
Almaty city	5,5	4,9	0,06	10,00	7,97	2,26	10,00	9,55	6,79	3,8	60,8
Shymkent city	0,9	1,6	0	3,55	5,80	1,21	1,37	5,18	4,34	4,3	28,3
Note: compiled by authors from the Bureau of National Statistics (2022)											

As a result of the analysis of the ten above indicators, Astana city occupies the leading position with a final score of 63.1 out of 100, Almaty city and Atyrau region took the second and third places.

Astana, the capital of Kazakhstan, also enjoys a high level of budget allocation. This is due to the city's strategic importance as the center of the country's political, administrative and economic activities. Moreover, Almaty, the capital of Kazakhstan's economic and cultural life, has the highest budget allocations in all years. This is due to significant investments in various projects, infrastructure and social programs aimed at city development.

Atyrau region is the center of the petrochemical industry, which is the basis of the economy of Kazakhstan. The lowest indicator is in the North Kazakhstan region - 23.7 points, followed by Kyzylorda region (24.4) and Pavlodar region (25.3).

6. CONCLUSION

The analysis showed that neither a region nor a city scored 100 points in Kazakhstan. Moreover, there is a big gap between regions. The gap between the maximum score (63.1) and the minimum (23.7) is almost 40 points.

In addition, the study results showed that the level of development of the regions of Kazakhstan is different among themselves for all the studied indicators. There are different leaders for different groups of indicators, but mostly these are the Astana, Almaty and Atyrau region cities.

Astana (the capital of the country) and Almaty (the largest city) these regions have a developed infrastructure, an active business community, a wide range of services and a high level of economic activity. In addition, the cities of Almaty and Astana are the leading financial centres of the country, but other regions also receive significant funds for development.

The following leaders are Atyrau and Mangistau regions, the centres of the oil and gas industry and have a high-income level and investment in this industry.

However, some regions in the country face development challenges, especially in remote and rural areas. These include North Kazakhstan, Kyzylorda, and Pavlodar regions. These regions suffer from a lack of infrastructure, limited employment and economic development opportunities, and poor availability of social services.

It is important to note that there is inequality between regions, and some regions become donors, while others become recipients of funds from the state budget. This may affect the independence of budgets and the need to increase their self-financing.

Thus, based on the analysis, the cities of Almaty and Astana and regions with high budget allocations, such as the Atyrau region, are essential for Kazakhstan's financial and economic development. However, to achieve a more even and sustainable country development, focusing on regions with low budget allocations and taking measures to stimulate their economic growth is necessary.

Kazakhstan's government is trying to balance regions' development and reduce inequalities. This includes programs and investments in various sectors of the economy, infrastructure, social services, and education to contribute to the sustainable development of all regions of the country.

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AUTHOR BIOGRAPHIES

*** Raigul D. Doszhan –** PhD, Associate Professor, Al-Farabi Kazakh National University, Almaty, Kazakhstan, Email: raiguldos2011@gmail.com, ORCID ID: https://orcid.org/0000-0001-7480-3568

Akbota G. Anesova – PhD candidate, Eurasian Technological University, Almaty, Kazakhstan, Email: a_bota@mail.ru, ORCID ID: https://orcid.org/0000-0003-1102-1803

Akan S. Nurbatsin - PhD candidate, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: nurbatsin.a@uib.kz, ORCID ID: https://orcid.org/0000-0001-5390-5776

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Use of Fish Resources and Prospects for Aquaculture Conservation in Water Bodies of West Kazakhstan Regions

Bakytgul T. Bazarova [1]*

Bibigul K. Kopbulsynova[1]

Aizhamal A. Aidaraliyeva[1]

Gulnar T. Talapbayeva[2]

[1] Zhangir Khan West Kazakhstan Agrarian-Technical University, Uralsk, Kazakhstan

[2] Korkyt Ata Kyzylorda University, Kyzylorda, Kazakhstan

*** Bakytgul Bazarova** – Mr. Sc. (Econ.), Zhangir Khan West Kazakhstan Agrarian-Technical University, Uralsk, Kazakhstan. Email: baktigulbazarova@mail.ru

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Abstract

The ability to meet the needs of the population in fish and fish products and its food security is one of the most acute problems in the Republic of Kazakhstan. The purpose of this study is to study the current state of fisheries in the Republic of Kazakhstan and to propose the development of fisheries in the West Kazakhstan region. Methods for studying of a condition of a fishery of Republic Kazakhstan statistical methods of the data analysis have been used, and exclusively the catch of fish and other water animals, and also dependence of physical volume of fish farming production on total quantity of the made production. In research topical questions of production capacity of fishing and fish-canning enterprises, by kinds and volumes of output production, economic indicators, and also on the enterprises which are carrying out purchase and realization of fish production, wholesale and retail trade, problems of marketing researches in the field of manufacture and safety of fish production are considered. Conclusions - proceeding from the received results it has been concluded that it is necessary to create laboratories and fish farming in autonomous objects, that will allow to develop innovative technologies of cultivation, conservation and replenishment of fish resources in water bodies of region, will provide educational base for training of future specialists, will create conditions for conservation and multiplication of fish resources of Kazakhstan, will increase food safety of the country, will solve key problems of fish industry development. Artificial fish farming involves intervention in the development of organisms in order to increase their productivity, such as regular restocking, feeding, protection from predators, etc.

Keywords: Fish Resources, Analysis, Development, Innovative Technologies, Production, Business, Economy, Market, Laboratory, Services

SCSTI: 06.71.07

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1. INTRODUCTION

To meet the global demand for fish by 2030, annual fish production needs to increase by 23 million metric tons. However, wild fish stocks are depleting rapidly. New fish farming and artificial breeding technologies can potentially address the population's demand for this essential food source.

The world is witnessing a decline in fish catches and an increasing focus on closed-loop water systems for aquaculture. Aquaculture, also known as fish farming, has emerged as a key driving force in the fishing industry. Fish cultivation not only boosts wild fish catches but also provides the opportunity to supply consumers in regions far from marine environments with fresh seafood.

As the demand for fish continues to rise, the traditional methods of wild fish capture are unable to keep pace, leading to concerns about overfishing and the sustainability of wild fish populations. Aquaculture offers a promising solution to meet the growing demand for fish while alleviating pressure on wild stocks. By raising fish in controlled environments, aquaculture allows for efficient production, reduced environmental impact, and the ability to supply fish consistently throughout the year.

This scientific article aims to explore the advancements and innovations in artificial fish breeding techniques and their potential to support sustainable fish production. The article will analyze the benefits and limitations of aquaculture as a solution for meeting the global fish demand, examine the technologies and practices involved in fish farming, and discuss the challenges and prospects faced by the aquaculture industry.

The relevance of the study is exclusively due to numerous factors. Firstly, an increasing population and a rising standard of living are leading to increased consumption of fish and other seafood products. However, wild fish stocks are rapidly depleting, and unless action is taken to conserve the resource, it could disappear entirely by 2050.

Secondly, aquaculture can be a consequence of the problem of fish shortages in remote regions. Many countries and regions need help accessing marine areas but can grow fish through aquaculture. This meets the need for fresh fish, creates jobs, and develops opportunities.

Thirdly, aquaculture can answer the problem of overpopulation and marine pollution. With the increasing number of people living on the shores of seas and oceans, the problem of marine waters being contaminated by waste and industrial emissions arises. Growing fish in anomalous conditions is acceptable to reduce the negative impact on the marine ecosystem and reduce the pressure on wild fish stocks.

Thus, aquaculture conservation has great potential for natural resource exploration and economic development. In this regard, aquaculture development is becoming increasingly urgent for many countries and organizations.

Artificial fish farming involves interfering with the development of organisms to increase their production, such as regular restocking, feeding, protection from predators, etc. The most important factors hindering aquaculture development are the need for more regulatory support, the decline in investment attractiveness, and insufficient logistical and scientific support. Let us consider each of these factors in more detail.

Lack of legal and regulatory support is one of aquaculture's main problems because there needs to be legislation to govern it. This can lead to misunderstandings between features and aquaculture businesses about water use regulations, conservation, protection and exploitation. It can also create problems for aquaculture enterprises that arise with unclear regulations and requirements, for example, about exporting their products or obtaining financial credit.

Low investment attractiveness of the industry: another problem that can hamper aquaculture development, falling investment and risks arising in aquaculture development. The factor of inadequate logistics, as aquaculture development, is a matter of responsibility requiring

significant investment in material resources such as equipment, infrastructure, technology, etc. Some of these resources can be very expensive, which can be a protection for enterprises.

The increasing global demand for fish necessitates exploring innovative approaches to meet this demand sustainably. In this regard, the present study focuses on analyzing and proposing ways to enhance water resource extraction using modern technologies in the West Kazakhstan region. This region, characterized by a need for advanced fishing technologies, requires efficient methods that ensure profitability in industrial fishing and cater to the area's specific needs.

By analyzing the existing practices and considering the advancements in fishery technologies, this article aims to provide valuable insights into improving water resource extraction in the West Kazakhstan region. The proposed methods should not only be effective and economically viable but also align with the region's requirements and contribute to its development.

Based on the outcomes of this research, a compilation of commonly accepted practices in water resource utilization and sustainable aquaculture development in the industry has been compiled. This compilation serves as a valuable resource for stakeholders and decision-makers involved in managing and developing fisheries in the region.

Through the integration of modern technologies and sustainable practices, the West Kazakhstan region can establish a robust and environmentally conscious fishing industry. The findings of this study contribute to the knowledge base in fisheries management and provide a foundation for implementing effective strategies that ensure the long-term viability of water resources and promote the sustainable development of the aquaculture sector. The results and outcomes of this work have been used to form a collection of generally accepted practices for the use of water resources and sustainable development of fisheries in the industry.

2. LITERATURE REVIEW

In the aquaculture industry, the emphasis is often on controlling a specific part of aquatic organisms' production process to increase their productivity. This control can take place at different stages of the production process, ranging from protecting juveniles in fish hatcheries in Alaska to catching more prominent individuals for further fattening and adaptation to market conditions, as in the case of bluefin tuna, or providing protection later in the life cycle, such as in wild-caught seed-based oyster farming (Botta et al., 2020).

Farmers often start focusing on a particular stage of the production process in aquaculture and gradually expand their control to other stages until they reach a closed production cycle. A closed production cycle makes the industry independent of wild catches. It represents the predominant model in mature aquaculture industries, providing ample opportunity for innovation and further productivity improvements.

Aquaculture is thus a process of controlled production of aquatic organisms that can go through all stages, from the protection and rearing of juveniles to producing adults with high productivity, thus ensuring the industry's sustainable development. The current ecological and economic conditions require a fundamental rethinking of the theory and practice of fisheries management subject to preserving fish productivity and biodiversity in the country's water bodies. Kazakhstan has water basins with significant biodiversity, including the Zhaik-Caspian, which Kazakh researchers quite well study as (Asylbekova et al., 2017).

Fishery water bodies of Kazakhstan are well enough studied by researchers. However, no scientific works have covered the emerging problems in the complex for all sizeable inland water bodies since the Soviet times. In modern ecological and economic conditions, the cardinal rethinking of the theory and practice of fishery management under the condition of preservation of fish productivity and biodiversity in the country's water bodies is required.

The ecological solutions in aquaculture of the West Kazakhstan region can be confidently attributed to the autonomous fish breeding installations, which are located in the water area. They allow to exclude any impact on the environment, as waste products of fish vital functions, uneaten food, and phosphorus do not get directly into the reservoir but are collected and utilized with the help of unique pumps. These and many other aquaculture inventions will help to make commercial fish farming as efficient and environmentally friendly as possible (Rogovtsov et al., 2018; Hanif et al., 2022).

Restoration of depleted fish stocks is an international policy goal and objective, so many researchers are developing modelling frameworks to characterize the variability of the internal parameter of the productivity and carrying capacity of global fish stocks around the world, ways to restore depleted fish stocks, proof of this work Isbekov et al. (2018).

Also, if to analyse the level of fish stocks, despite management policies, they continue to be fished at unsustainable levels (Coll et al., 2008). While integrating economic aspects into catch recommendations has been identified as a key factor in designing better management, few studies have explored how bio-economic modelling can assist in decision-making. Policy evaluation methods may overestimate reproductive success, jeopardizing the design and evaluation of stock recovery policies.

Currently, research on the social acceptability of aquaculture has mainly focused on expanding marine aquaculture sectors, including both coastal and offshore operations. This body of literature has a predominant interest in fish aquaculture (Alexander et al., 2016; Mather & Fanning, 2019; Cavallo et al., 2021). However, these studies need to address the social acceptability of inland aquaculture sectors specifically.

In contrast, the article "Use of Fish Resources and Prospects for Aquaculture Conservation in Water Bodies of West Kazakhstan Regions" highlights the sustainability of inland aquaculture in western regions of Kazakhstan and its impact on the environment. In this context, the issue of social acceptability of inland aquaculture sectors is narrowly examined, focusing on local socio-economic aspects and the community's perception of aquaculture development and conservation efforts in the region.

Therefore, unlike the studies, this article addresses the specific aspects of social acceptability in the context of inland aquaculture in the western regions of Kazakhstan, providing insights into the interaction with the local population and public opinion regarding the development and conservation of aquaculture in this area. Thus, based on the research, the development of innovative technologies for cultivating, conservating and replenishing fish resources in water bodies in modern conditions is necessary. It will create prerequisites for the conservation and multiplication of fish resources, increase the food security of the country, reduce the deficit of fish products, and provide access to international markets.

3. METHODOLOGY

Monographic, abstract-logical and economic-statistical methods were used during the research. Statistical methods of data analysis were used to study the state of fishery in the Republic of Kazakhstan, and exclusively the catch of fish and other aquatic animals, as well as the dependence of the physical volume of fish farming products on the total amount of products produced.

On the basis of principles of classical economic theory and institutional theory, the concepts of development of the aquaculture industry in Kazakhstan were investigated, and features of its formation, taking into account the object of research were revealed. On the basis of economic and statistical methods, the assessment of trends and prospects of growth of food production and export potential of the aquaculture industry was conducted. In addition to some specific methods,

the following scientific approaches to the analysis of the problem were used: dialectics, abstraction, deduction, induction, analysis, and synthesis (Demchuk et al., 2012; Keesman et al., 2019).

In Kazakhstan, it is necessary to take measures to transition aquaculture to an innovative development. Particular attention should be paid to technical and technological modernization implementation of modern technologies in production to reduce the cost of finished products on the consumer market. It is desirable to pay attention to increasing the financing of scientific research in the field of aquaculture (Jacenko et al., 2020).

Unfortunately, nowadays fishery science experiences an acute shortage of qualified personnel, which cannot but affect the quality of ichthyological research, including fish farming. Research requires improvement of quality and emphasis on applied research in terms of issuing recommendations for managerial decisions.

For providing fish-farm enterprises and farms with qualified personnel, it is necessary to organize training of fish-farm personnel in existing higher educational institutions, at it is necessary to provide up to 400 places annually in the state educational order. Also, currently, aquaculture enterprises need help in obtaining loans. Banks do not accept fish and other assets of aquaculture enterprises as collateral. The next problem hindering the development of fish farming is the need for more planting material, mainly fertilized eggs and young fish (especially sturgeon and whitefish species, salmon, and trout).

The problems of fish stocking material shortage are partially solved by partially subsidizing costs for the maintenance of breeding-reproductive breeding herds and acquisition of such material at the expense of funds allocated from the budget of the Republic of Kazakhstan.

The enterprises cannot increase production volumes because of the continuing shortage of fish stocking material. It is necessary to create a network of nurseries (multipliers) focused on the production of juvenile sturgeon, salmon, whitefish and carp fish in the branch institutes of Kazakhstan.

The following suggestions can be considered to improve the research methodology:

1. Study of the consumer market and analysis of the competitive environment: it is necessary to conduct market research on fish products, determine supply and demand, analyze competitors and trends in the market. This will help to determine the market needs and formulate the development strategy of the aquaculture industry.

2. Attraction of investments for the development of the aquaculture industry in Kazakhstan is necessary investments.

3. Use of modern technologies: it is important to research modern technologies in aquaculture and fish farming, which can increase productivity and reduce costs. This will help to increase the competitiveness of fish farms.

4. It is necessary to assess the effectiveness of existing programs and support measures, including state subsidies, tax incentives and other measures. This will help determine which measures should be retained, modified, or eliminated.

5. It is necessary to study the prospects of aquaculture development in Kazakhstan, as well as the problems that may arise in the future. This will help develop plans and strategies for the long-term development of the industry.

4. FINDINGS AND DISCUSSION

The use of available capacities with the direct participation of the government in the creation of the reproduction base fully complies with the provisions already laid down in the Program of Fisheries Development by 2030. A similar practice has been successfully implemented in Japan,

where the government was the main customer in the creation of reproduction centers at the initial stages of the formation of the aquaculture system.

Most of the fish caught in the Republic of Kazakhstan is consumed by the population and does not go to processing enterprises. Figure 1 shows data on fish catches for 2015-2021.

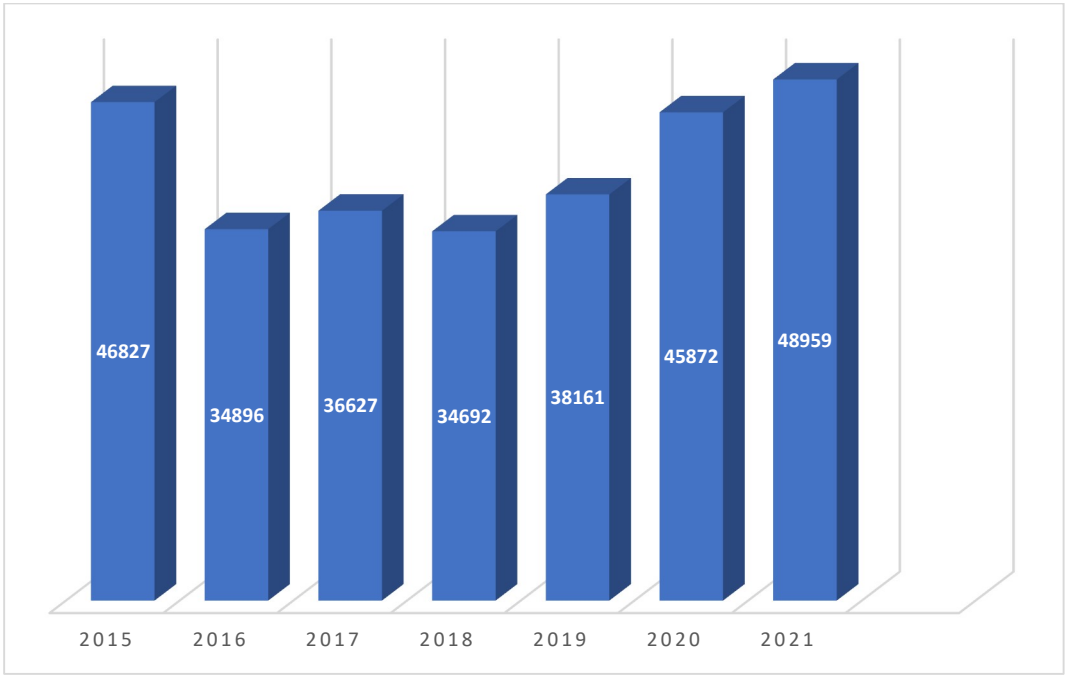

FIGURE 1. Catch of fish and other aquatic animals by fisheries in Kazakhstan (2015-2021) in tons

Note: compiled by authors based on source Bureau of National Statistics (2021)

By comparison, in the early 1990s, around 100,000 tons of fish per year, including sturgeon species, were caught in our territory. In 2019, only 35-40 tons of fish were caught (according to official statistics). This is due to the COVID19 pandemic. For 2021 almost 49 thousand tons of fish and other aquatic animals were caught. This is 6.7% more than in 2020, which is a positive factor. The catch is also interrelated with the enterprises having the right to export their products to Europe, so in 2000 only three Kazakh enterprises Atyraubalyk, Balkhashbalyk and Rybprom were included in the list of numbered enterprises having the right to export their products to Europe. The sale of products abroad has at one time enabled Kazakhstan's fishing industry to develop thanks to the inflow of foreign currency and investments, including in fish farming (Bureau of National Statistics, 2021).

More than one thousand fishery entities are engaged in fisheries in Kazakhstan, and 1,646 fishery reservoirs and their lots are attached. The industry employs 11 thousand people.

Kazakhstan also has excellent potential for the development of fish farming. Over the last seven years, the volume of fish cultivated increased by nine times - from 800 tonnes to 7.4 thousand tons. 180 fish farms are engaged in fish farming in the country, where more than 1 thousand (1 126) people are engaged.

From 2000 to 2021, fish farming was steadily growing (there are 184 fish farms in the Republic of Kazakhstan, including 99 lake-commodity fish farms, 55 pond farms, 10 cage culture fish

farms, 20 RAS and basin farms), and this growth is directly related to the state subsidization of costs (for feed).

Production in fisheries and aquaculture for 2014-2021 is shown in Figure 2.

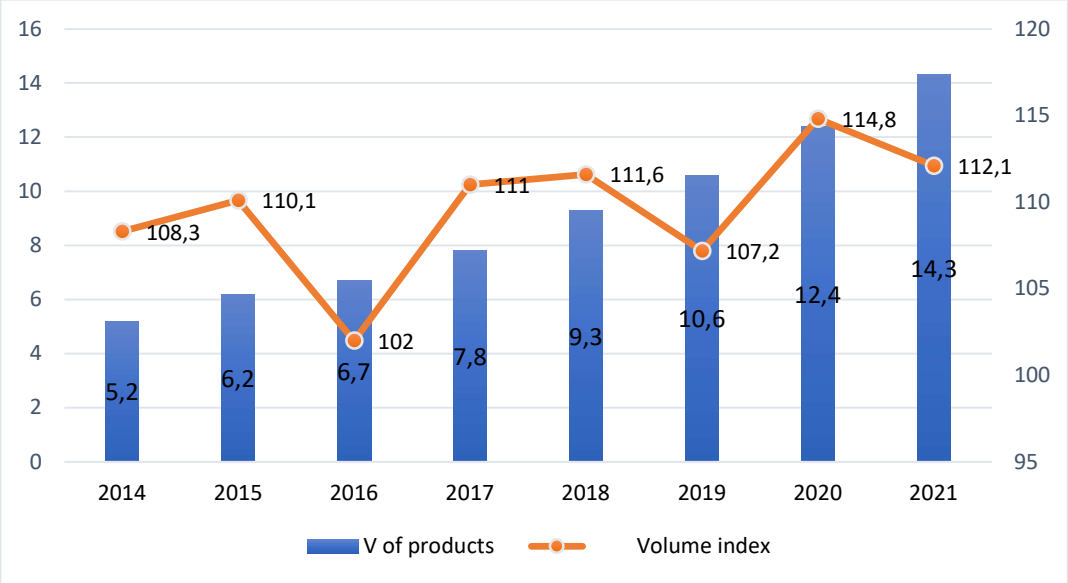

FIGURE 2. Volume of production in fisheries and aquaculture for 2014-2021

Note: compiled by authors based on source Bureau of National Statistics (2021)

According to statistics, in 2021, the volume of products and services in the fishery and aquaculture sector amounted to 14.3 billion tenge, an increase of 12.1% compared to 2020. During the analyzed period, the production volume increased by 7.2 billion tenge. This is due to the dynamic development of fish farming, as from 2014 to 2021, farmed fish increased from 800 tons to more than 43 thousand tons. The diagram also shows the dependence of the index of the physical volume of fish farming products on the volume of production, which fluctuates from year to year, there is no specific stability.

The State Programme for the development of the agro-industrial complex of the Republic of Kazakhstan for 2017-2021 provides for a significant increase in aquaculture production: in 2021, the production of marketable fish will be 5 thousand tons (an increase of 6.8 times), including sturgeon to 0.7 thousand tons (an increase of 6.8 times), whitefish - to 1.2 thousand tons (an increase of 11.6 times), carp - to 1.7 thousand tons (an increase of 5.6 times). The main challenge in aquaculture development in the Republic of Kazakhstan is attracting fishing enterprises to commercial fish farming. Despite all the difficulties associated with fishing, fishing enterprises do not seek to diversify their business through aquaculture. This is due not so much to the high costs of building fish farming facilities as to the long payback period and the shortage of innovative projects in this area.

The development plan for commercial fish farming should involve measures that will ensure the industry's transition to an innovative way of development. It is necessary to assure investors that aquaculture is profitable. 50 years have passed, and a qualitatively new system of fisheries and ecological and ameliorative use of inland water bodies of the country is required.

According to estimates, to meet the projected global demand for fish, production in fish farms should increase by more than twice: it should be about 140 million tons in 2050. Such an increase

will largely ensure food security and development opportunities. Also, aquaculture will help increase incomes and employment, especially in developing countries, where most of the industry's products are produced.

Kazakhstan is characterized by low fish consumption per capita. For example, WHO recommends consuming at least 16 kg of fish production per capita per year, while in Kazakhstan the consumption is less than 4 kg. Meanwhile, neighboring Russia and China consume 20-40 kg per capita respectively. Thus, considering the border areas, the potential niche for exporting fish products could amount to more than 3 million tons.

The number of artificial farms should increase by many times. To achieve the WHO recommended consumption rate of 16 kg per capita, growing about 300 thousand tons of fish is necessary.

In February 2020, at an offsite meeting on fisheries development in Atyrau, Prime Minister Askar Mamin gave instructions to identify the main barriers to the development of the industry. The Ministry of Ecology, Geology, and Natural Resources of the Republic of Kazakhstan, together with the business, studied these instructions and identified three issues that should be emphasized. These are - the reorientation of water bodies from fishing to fish farming, legal deficiencies, and insufficiency of state support measures.

In this connection, the Program of Fisheries Development by 2030 was approved in December 2020. Within the Program of Fisheries Development by 2030, it is planned to increase fish production by almost 30 times - from 9 thousand to 270 thousand tons; more than 500 new farms and 50 thousand jobs will be created. Export of fish products will increase from 30 to 136 thousand tons per year. The import will drop from 45 thousand to 25 thousand tons per year. At the same time, domestic fish consumption will increase twice - from 67 thousand tons in 2020 to 134 thousand tons in 2030.

For the development of fish farming, it is vital to attach fish-processing capacities to large fishery reservoirs. Atyrau, Almaty, East Kazakhstan and Kyzylorda regions process the primary volume of fish. In 2019, fishing enterprises produced 2,700 tons of marketable fish. They grow mainly sturgeon, trout and carp species of fish using proven biotechnologies of cultivation.

The region annually produces 66 tons of fish products, which is 0.9% of all fish products produced in the Republic of Kazakhstan. Neighboring regions also have an insignificant share in the development of fish farming and cooperate with the West Kazakhstan region enterprises. Mangistau region produces 107 tons of fish products and takes eighth place. Aktobe region ranks tenth in terms of fish production. Atyrau region produces 9 tons of fish products and mainly produces fish stocking material.

60 companies are registered in the Atyrau region and 7 companies - in the West Kazakhstan region. At the moment two sturgeon hatcheries are operating in Kazakhstan and they are located in the west of the country. These are "Ural-Atyrau sturgeon hatchery" and "Atyrau sturgeon hatchery" which produce 6 million juvenile fish per year. However, these fish farms use outdated technologies and cannot maintain fish stocking material year-round and do not provide training for specialists and scientific advisory activities.

The main companies in the West Kazakhstan region engaged in the production of fish products are Educational and Scientific Complex of Experimental Production and Aquaculture LLP and IE Marchenko.

Further, Table 1 presents a comparative characteristic of fishing companies in Western Kazakhstan

TABLE 1. Comparative characteristics of fishing companies in the West Kazakhstan region

No.	Name	Advantages	Disadvantages
1	Educational and	- regular customers;	- lack of ichthyological and

	Scientific Complex of Experimental Production and Aquaculture LLP	- participation in tenders; - production of food sturgeon caviar and sturgeon.	hydrobiological research laboratories; - lack of tested technology for growing carp, crustaceans and clary catfish.
2	IE Marchenko:	- availability of pond stock for carp cultivation; - sale of pond fish; - organization of sport and recreational fishing.	- lack of ichthyological and hydrobiological research laboratories; - lack of tested technology for sturgeon, carp, crustaceans and catfish cultivation in pools; - lack of fish-farming services; - lack of research development in the field of fish farming.
Note: compiled by authors based on source Bureau of National Statistics (2021)			

In Table 1, companies in the West Kazakhstan region have both disadvantages and advantages in the development of the industry. Therefore, according to the results of the study, it is necessary to ensure state support and investment in the economic development of aquaculture in the region.

Enterprises in the West Kazakhstan region are also engaged in the processing and cultivating fish products. As shown in Figure 3, by the volume of production of fish products West Kazakhstan region ranks ninth in Kazakhstan.

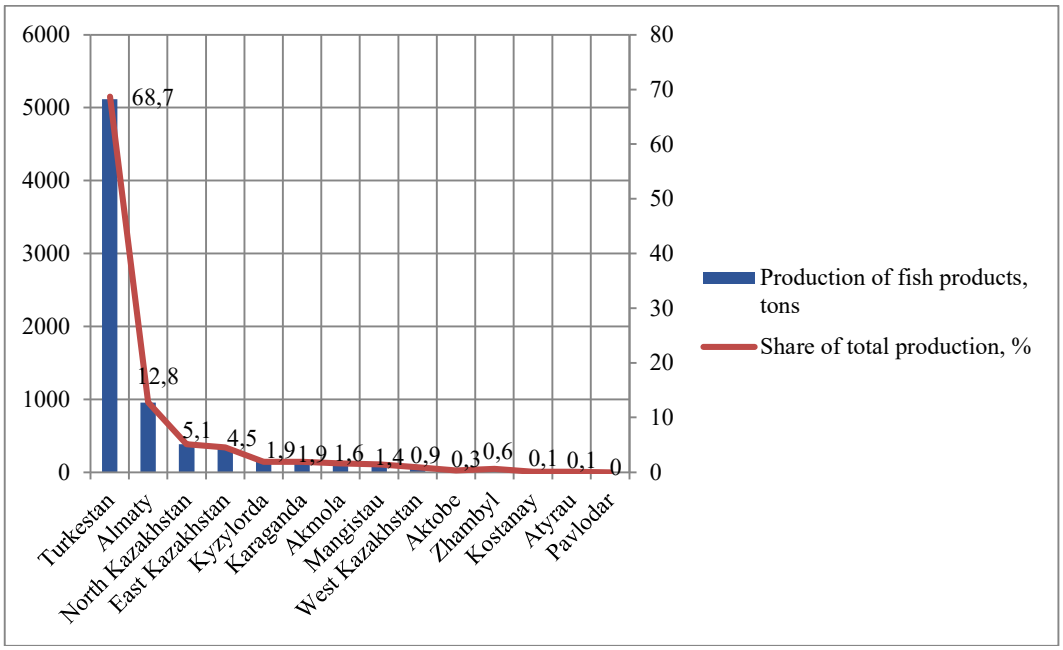

FIGURE 3. Production of fish products in Kazakhstan by region

Note: compiled by authors based on source Bureau of National Statistics (2021)

Fisheries science has repeatedly pointed to the importance of acclimatization works and mass stocking of inland water bodies with stocking material of herbivorous fish. However, no significant progress has been made. Stocking with herbivorous fish has practically stopped, and the scale of stock of sturgeon species is insignificant and is determined not so much by the possibilities of fish stocking material production as by the state order (Isbekov et al., 2018).

There is no doubt that the application of commercial aquaculture methods in inland water bodies will make it possible to significantly increase the commercial stocks of valuable fish species and increase their natural fish productivity.

At the same time, it should be noted that when the question arises about the prospects of aquaculture development in inland water bodies by methods of pasture fish farming, there is no exact data on the needs for stocking material. It becomes obvious that for the development of pasture (feeding) fish farming which ensures significant production the main limiting factor is the shortage of stocking material of whitefish, salmon, carp, sturgeon and other fish species.

To start with, the West Kazakhstan region (the city of Uralsk) can become such a testing ground. With natural and climatic features, development of pond fund, an abundance of water bodies of different types, presence of powerful scientific potential and valuable results of long-term observations of ichthyofauna, it is the most suitable region for the implementation of the concept of a new type of inland water bodies exploitation, development of pasture fish farming and aquaculture.

Besides growing fish in closed water supply systems, there is a need to create a laboratory, which will be fully equipped production premises with training and laboratory rooms. The following sectors will function in the laboratory:

- artificial reproduction of freshwater fish,
- ichthyology and hydrobiology,
- fish ichthyopathology,
- the cultivation of crustaceans and live feed.

There is no such laboratory in Kazakhstan. The creation of the laboratory will contribute to the effective implementation of the Program of Fisheries Development by 2030.

Negative impacts of cage aquaculture, arising from the lack of attention to environmental protection:

- organic pollution (eutrophication) - excess nutrients from food and fish excrement from farms increase organic levels in the water, which negatively affects marine ecosystems;
- chemical pollution - antiparasitic drugs, anti-fouling agents, antibiotics, feed dyes can have unpredictable effects on marine organisms and human health;
- genetic contamination - escaped farmed salmon can compete with wild fish and crossbreed with local wild stocks, degrading the genetic diversity of salmon;
- infectious diseases and parasites can be transmitted to wild populations.

The high profitability of cage aquaculture also entails economic and environmental risks that can cancel out all of its benefits. In the European Union, there are serious requirements for fish farms concerning the regulation of water areas. Advanced technology and development are needed to reduce the environmental load of commercial cage aquaculture (Rathod et al., 2019).

Also, the development of fishery resources in the western regions of Kazakhstan will give widespread business development and contribute to the development of the economy of both the region and the country.

5. CONCLUSIONS

Autonomous fish breeding units placed in the water area can become ecological solutions in aquaculture of the West Kazakhstan region. They will completely exclude any impact on the environment, as waste products of fish, uneaten food, phosphorus do not go directly into the water body, but are collected and disposed of with the help of special pumps. These and many other inventions in aquaculture will help to make commercial fish farming as efficient and environmentally friendly as possible.

The authors also propose that the city of Uralsk can become a testing ground for the creation of the laboratory. With natural and climatic features, development of pond fund, an abundance of water bodies of different types, presence of powerful scientific potential and valuable results of long-term observations over ichthyofauna, it is the most suitable region for the implementation of the concept of a new type of inland water bodies exploitation, development of pasture fish farming and aquaculture.

The West Kazakhstan region (the city of Uralsk) can become such a testing ground. With natural and climatic features, development of a pond fund, an abundance of water bodies of different types, presence of powerful scientific potential and valuable results of long-term observations over ichthyofauna, it is the most suitable region for the implementation of the concept of a new type of inland water bodies exploitation, development of pasture fish farming and aquaculture.

Capabilities of the laboratory created in the city of Uralsk, equipped with the latest technology:

1. Development of innovative technologies for growing rare, endangered fish species, as well as promising aquaculture objects in artificial conditions.
2. Increasing the economic efficiency of fishery enterprises by stocking valuable fish species (sturgeons, carps).
3. Monitoring of ichthyological composition and assessment of food reserve of water bodies in the Western region.
4. Development of methods of breeding and feeding ten-legged crustaceans.
5. Systematic monitoring of the state of the natural microbiome of recycled water in RAS to assess the risk of emergence and spread of infectious pathology among the farmed fish;
6. Improving the system of anti-epizootic measures for infectious pathologies of fish, as well as measures to prevent diseases of non-contagious etiology.
7. Providing services and advice to farmers on the organization and management of fish farms.

Thus, the creation of laboratories and fish breeding in autonomous units will allow the development of innovative technologies for the cultivation, conservation and replenishment of fish resources in water areas. It will provide a training base for future specialists, and also will create prerequisites for the conservation and multiplication of fish resources in Kazakhstan, will improve the food security of the country, will reduce the shortage of fish products and provide access to international markets.

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AUTHOR BIOGRAPHIES

*** Bakytgul T. Bazarova** – Mr. Sc. (Econ.), Senior Lecturer, Zhangir Khan West Kazakhstan Agrarian - Technical University, Uralsk, Kazakhstan. Email:baktigulbazarova@mail.ru, ORCID ID: https://orcid.org/0000-0001-5197-6001

Bibigul K. Kopbulsynova – Mr. Sc. (Econ.), Senior Lecturer, Zhangir Khan West Kazakhstan Agrarian - Technical University, Uralsk, Kazakhstan. Email: bkopbulsynova@mail.ru, ORCID ID: https://orcid.org/0000-0001-5665-9718

Aizhamal A. Aidaraliyeva – Cand. Sc. (Econ.), Associate Professor, Zhangir Khan West Kazakhstan Agrarian - Technical University, Uralsk, Kazakhstan. Email: aizhamal_a@mail.ru,ORCID ID: https://orcid.org/0000-0002-7291-2426

Gulnar E. Talapbayeva – Cand. Sc. (Econ.), Senior Lecturer, Department of Economics and Management, Korkyt Ata Kyzylorda University Kyzylorda, Kazakhstan. Email: gulnar7575@mail.ru, ORCID ID: https://orcid.org/0000-0001-5162-6028

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A Qualitative Assessment of Creative Entrepreneurs' Practices and Their Influence on Sustainability of Cultural Code of Nation

Doszhan Baibokonov[1]* | **Yongzhong Yang[1]**

[1] Yiwu Industrial and Commercial College, Zhijiang, China
[2] Sichuan University, Business School, Chengdu, China

Corresponding author:
*** Doszhan Baibokonov** – PhD, Yiwu Industrial and Commercial College, Yiwu 322000, Zhijiang, China. Email: d.baibokenov@gmail.com

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Abstract

This paper aims to understand how creative entrepreneurs' (CEs) motivation influences on sustainability of the cultural code of a nation (SCCN) through generating cultural creative capital (CCCs) in the Kazakhstani mare milk industry (MMI). It presents a challenge for CE to combine and integrate two such distinct sectors: the high-growth technology and cultural production. We apply our finding on a practical basis in order to create a synergy of cultural creative development, where the main role is assigned to CE. This study purposes to explore the key mechanism of CE impact to SCCN. Content analysis has been used along with 31 in-depth interviews to obtain the research objective. Data was collected from CEs through an interview, along with archival information to construct a synergy of cultural creative development with CEs. The study unfolds by coding themes using Atlas.ti 9 several crucial factors like motivation, domain-relevant skills, affordance and commercialization, and cultural protection attitude to SCCN by cultural creative industries (CCIs). The findings of this research revealed that SCCN is achieved through undertaking a set of process models of CEs in the MMI that can be used as a guideline for a variety of stakeholders. Our paper ends with drawing a set of concluding remarks and insights for theory and practice. May assist as a guideline for other traditional industry which is based on cultural products, or some practitioners which has similar type with MMI may use them to build another business.

Keywords: Creative entrepreneurs, Cultural code of a nation, Cultural Creative Capital, Mare milk industry, Cultural Creative Industries

SCSTI: 06.61.33

JEL Code: R11, R28, R58

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1. INTRODUCTION

Nowadays, most people recognize the 21st century as a century of globalization. Despite all the advantages of current economic globalization, it reasons the main threat to cultural globalization (Nobuko & Kawashima, 2016). Thus, every nation must maintain and identify the features that represent them (van der Hoeven, 2019). Relation with resource productivity and economic development is crucial to cultural heritage when striving for sustainable development (Rindzevičiūtė et al., 2016). Though many researchers (Peris-Ortiz et al., 2019) have revealed the positive economic benefit of cultural heritage protection, SCCN is first and most notably organized to maintain cultural values (van der Hoeven, 2019).

In Kazakhstan, 'The Concept of cultural policy' reflected a long-term vision for developing the sector aimed at the formation of a 'competitive cultural mentality (Baibokonov et al., 2021) and the development of modern cultural clusters' (Tuleuova et al., 2019). The most important provisions of the concept are the idea of the SCCN comprising seven components: heritage, traditions, customs, language, family, economic systems, and holidays. A priority area is also the activation of public-private partnerships and business initiatives.

The MMI's CEs were chosen as a case study in this research. The interviewer asked follow-up questions related to business activities in the MMI, what the challenges were, and to get a deeper understanding of the explanation and illustrations. Generally, the horse has played an essential part throughout the history of Kazakhs as a provider of companionship, food, transportation, and labor. An interesting statement about the value of horse meat for the Kazakhs like that they always treat the honoured guest with horse meat (Tursun et al., 2016).

Creative entrepreneurship is discovering or pursuing new ideas with cultural value using artistic expression (Bhansing et al., 2018), requiring a new combination of resources and risk calculations (Malgorzata et al., 2012). The term 'entrepreneurial' is concerned with the actions of an entrepreneur: garner resources and take risks to identify opportunities, with an explicit focus on creating new services, products, ideas, or knowledge. The CEs is the entrepreneur, focused on creating and exploiting creative or intellectual property. CCIs are commonly used for the sustainability of cultural heritage. CCIs are turning into essential parts of modern knowledge-based post-industrial economies. They are the key part of cultural identity that play an essential role in stimulating and promoting cultural diversity (Tan et al., 2020)CCIs entrepreneurship characterizes a new attitude, a new way of thinking, which seeks opportunities in cultural organizations in terms of their cultural mission as a starting point(UNTAD, 2018).

SCCN and its protection can create and generate many commercial benefits, such as heritage tourism, the revival of city centers, maintenance of craftsmanship skills and job training, increase in property values, creation of income and jobs, enhancement of small-medium business, etc. CEs have been considered a medium for revitalizing the SCCN and solving the transforming problem (Werthes et al., 2018). Many micro-, small-, and medium-scale companies and farms continue to produce mare milk products focused on low-price and commodity-based industries (Baibokonov et al., 2021). Cultures are now an influential tool for the spiritual and aesthetic growth of the individual (Umanailo, 2020), the formation of national unity, and the country's integration into the global community (Kangas et al., 2017).

2. LITERATURE REVIEW

In this study, CCIs refer to a kind of industry that has the purpose of preserving culture and, at the same time, commercial intention. They contribute to economic development and growth above and over their role in society and culture (Paris & Ben Mahmoud-Jouini, 2019). Development potentials of SCCN's hold specific importance inside the CCIs, which brings

together economy, culture, education, and science. Firstly, SCCN ensures cultural continuity and identifies and strengthens the collective. The study proposes that the CCIs are best placed to discuss and resolve how CEs can preserve an SCCN through generating CCCs. The "clash of systems" is not always productive or beneficial for economic development (Oliveira, 2018). This study intends to provide new insight into understanding the CEs' motivational aspects and their influence on SCCN. From CEs model frameworks, this research intends to determine the factors of creativity that determine how these elements create meaningful interactions for safeguarding and SCCN. Therefore, this study aims to explore the role of CEs in generating CCCs and SCCN. Many studies have been published focusing on various issues like entrepreneurship performance (Malgorzata et al., 2012; Zhen, 2020), creative business (Utama & Ratnapuri, 2018), and SCCN (Werthes et al., 2018). However, more attention should be paid to how CEs SCCN through generating CCCs (Moldavanova et al., 2018). The gap between the arts and business could be bridged by bringing culture, tradition, and businessmen together to improve SCCN and economic well-being.

Individual identities, respecting other nations' cultures and a cultural expression of diversity, and affirming symbolic, cultural, educational, social, economic, and other values. Secondly, SCCN can be a knowledge base for the development of a creative society and a means of encouraging local economic development. The production, design, and commercialization of aesthetic and symbolic cultural elements characterized CCIs (Croidieu et al., 2016). SCCN is formed based on the national images, language, spirituality, traditions and values of the people (Williams, 2016). The SCCN, as a structure that determines the genotype of a nation, consists of seven key elements, each of which is an independent cultural phenomenon, such as heritage, traditions, customs, language, family, economic systems (way of life), and holidays. If each of the seven elements is self-sufficient, they become code only if the archetypal connections between them are unbroken. The loss or deformation of at least one link leads to the mutation of the SCCN, along with the loss of identity, the erosion of ethnic memory, and the destruction of the cultural genotype of the people. Cultural creative products are the result or outcome where CEs are of exploiting knowledge, cultural heritage, and ideas in order to produce unique, symbolic, and economic-based value (Chua et al., 2015; Jones et al., 2015; Schulte-Holthaus, 2018).

Many scholars have recognized creativity from three aspects— process, product, and person (Jain & Jain, 2016), while the last aspect highlights creativity as a process that leads to innovative products (Amabile & Pratt, 2016) and in which the product is the outcome, the person is the individual who creates the product. For a product or idea to be refereed creative, it is essential to be capable and novel of being used. Per the model componential of creativity, creativity rises from the interface of four mechanisms within an individual: a) motivation), b) creativity-relevant skills, and c) domain-relevant skills (Rennick & McKay, 2018); and one outside feature: the social atmosphere or environment in which the individual is working. Domain-relevant skills are the domain expertise and accurate knowledge that an individual creative possesses (Cerneviciute & Strazdas, 2018). Creativity-relevant processes are the universal intellectual skills that encourage ideas for generating procedures, processes, or products that are both useful and novel. The social environment refers to the environment in which he or she works. The external factors are work and the social environment (Bhansing et al., 2018). It consists of all the extrinsic stimuli displayed to erode essential stimuli. Several stimulants to creativity and intrinsic motivation of other influences in the environment can serve as obstacles (Tan et al., 2020).

Innovation and creativity are often used interchangeably in the literature in contexts of organization (Sousa & Nunes, 2018). Creativity is an accomplishment of emerging new and readapting previous practices, knowledge, and thoughts to progress new paradigms, knowledge and theories (Sousa & Nunes, 2018). The purpose of generating an innovation ecosystem in CCIs arises from people working (Amabile, 2013) with each other on projects, the nature of the work,

mentoring, coaching, or community and social projects (Gilmore & Comunian, 2016). These often require relationships consisting of an exceptional link merging to cooperate, co-innovate, coach, compete, and coordinate to improve others' and personal qualifications and create value (Schulte-Holthaus, 2018). CCCs are revealed as being inputs (e.g., abilities, products, skills, vision, ideas) in innovation procedures (Boccella & Salerno, 2016; Carvalho, 2014) and links CCIs to innovation literature (Werthes et al., 2018). All this feature is suitable for new MMI in Kazakhstan.

To conclude the review of theoretical studies, CCIs include any production activity that can be described as creative (Suciu et al., 2021). For example, developing new breeds of cattle or new wheat varieties, like any other innovation in agriculture, manifests creativity (Vreede et al., 2017). Therefore, the creative segment of agriculture can be attributed to the CCIs. The second approach makes intellectual property the principle of distinction. In this perspective, the specificity of CCIs is the production and use of intellectual property. The CCIs focus on the unique practices CEs set for social and economic efficiency (Cerneviciute & Strazdas, 2018), after reviewing the literature on the CCIs to realize how CEs generate economic and cultural value that combines CCCs.

Furthermore, how CEs combine high-level technology with SCCN. With the help of literature, the authors have developed the conceptual frameworks of the study. Recent studies (Bhansing et al., 2018) in management and organizational literature have designed measures of passion and motivation as the central and crucial role in entrepreneurial activity (Schieb-Bienfait et al., 2018), while the intention of CEs can favourably impact government and capitalists' investment solution. Domain-relevant skills are the domain expertise and accurate knowledge that an individual creative possesses. Creativity-relevant processes are the universal intellectual skills that encourage the generation's ideas. The external factor is the work and the social environment. This framework consists of all the extrinsic stimuli displayed to erode essential stimuli and several stimulants to creativity and intrinsic motivation of other environmental influences that can serve as obstacles. Figure 1 visualizes the proposed conceptual framework.

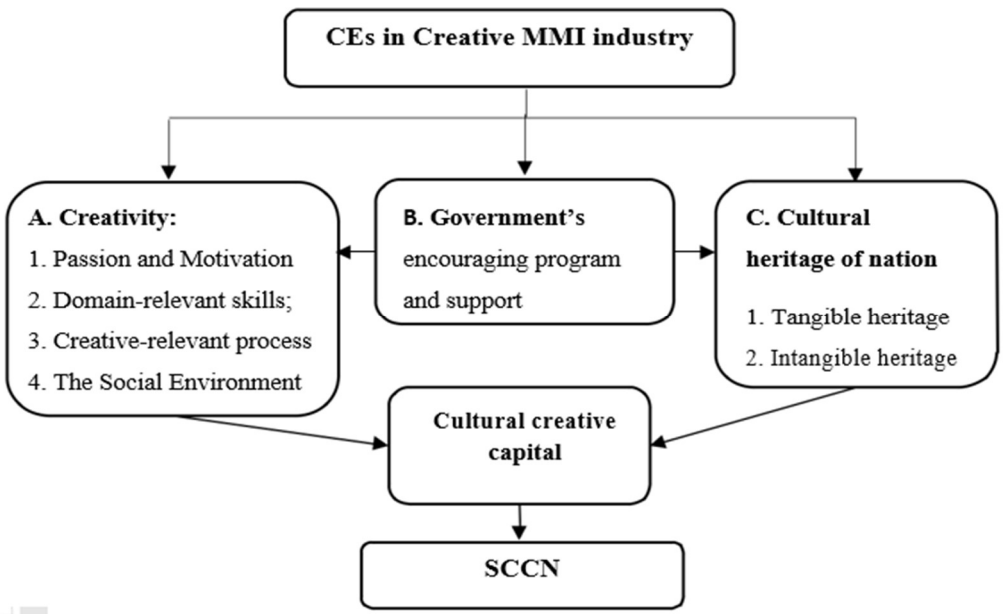

FIGURE 1. Conceptual framework to conduct a detailed investigation. Source: Own elaboration

Note: complied by authors

CEs should support by the government, that is, building and creating an industry chain that links downstream and upstream CCIs. CEs usually require the government to support them because they know their sector well than others (Amabile, 2013). Furthermore, the government should facilitate the CCI's entrepreneurs, who are a vital part of the CCIs, who make to develop and promote culturally creative products. Private and municipal segments can collaborate to create instruments or mechanisms for financing, investment, credit guarantee, and generating projects and foundations. By CEs practices for preservation, SCCN and reproduction of national traditions, the policy also aims at promoting associated CCIs, services, and products.

3. METHODOLOGY

This study used a qualitative research approach with content analysis to answer the research questions (Roberts, 2015) and in-depth interviews (Saldaña, 2021). First, through a literature review and in-depth interview, we implemented valuation tools and factors significant for CEs to sustain entrepreneurship and how they combine the new high-growth technological industry and cultural value. The interview-based in-depth qualitative research method was chosen because the MMI is not well developed, there is a lack of data on CCIs and MMI, and only several companies are producing culturally creative products. The qualitative research approach is suitable for this study. In order to increase validity and get unbiased, this study used qualitative research methods, particularly personal interviews and data saturation (Figure 2).

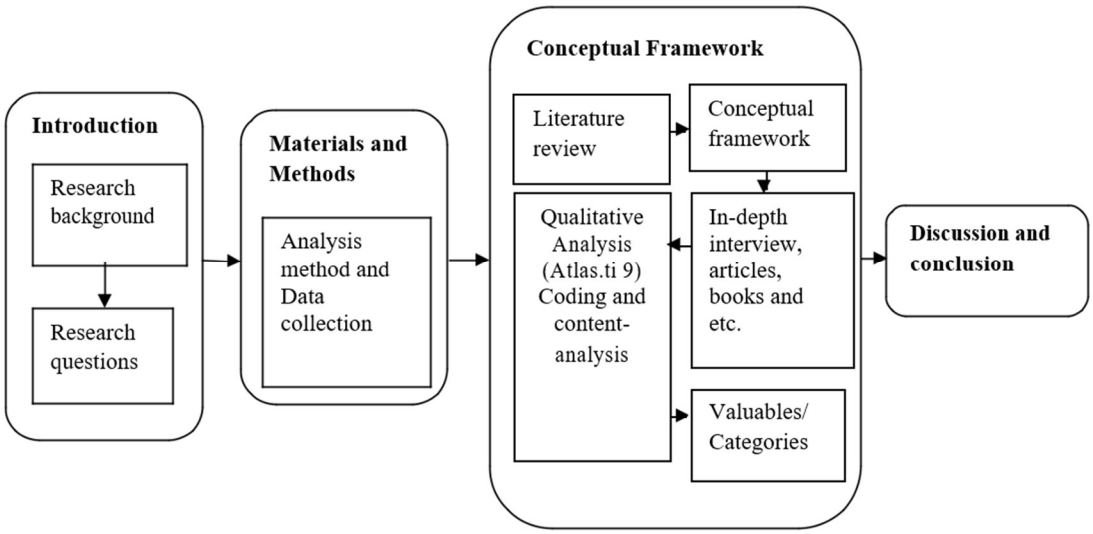

FIGURE 2. Research process layout

Note: complied by authors

Thirty interviews were conducted during the winter 2020 and spring of 2022 to obtain in-depth information. Thirty-one interviews were conducted face-to-face, four by phone, and four on social media. This research is based mainly on the analysis of documents and interviews (Figure 3).

All related documents and interview transcripts were imported into Atlas.ti 9 software for analysis (Wright, 2016). Various triangulation were used to achieve the research's reliability and creditability: first, data triangulation, in which data were triangulated from secondary data, such as books, brochures, newspapers and primary data, such as interview transcripts and observation

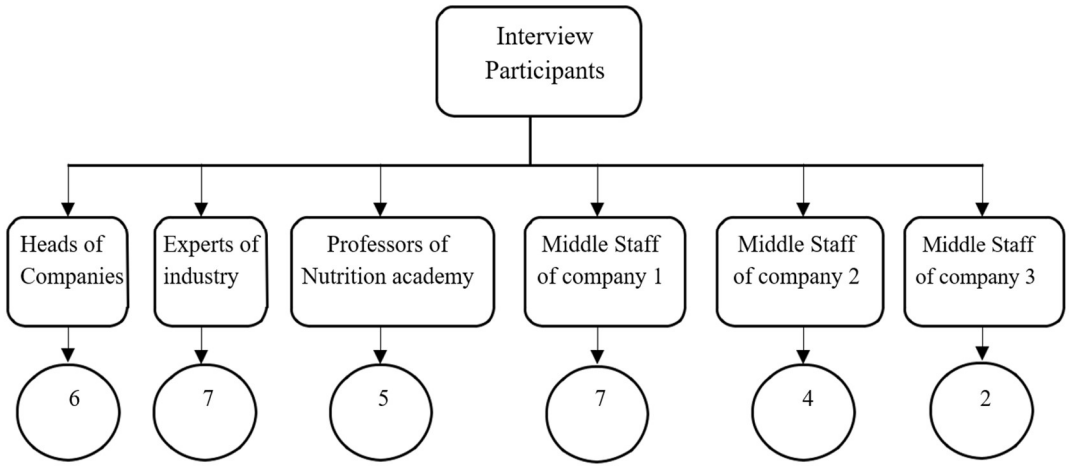

FIGURE 3. Interview participants. 1,2: Number of interviews conducted in each section

Note: complied by authors

field notes; second, triangulation of method, in which in-depth interviews and observation, and were employed for data collection; third, triangulation of researcher, in which three researchers interpreted the same body of data; fourth, theoretical triangulation, in which literature from different disciplinary perspectives were reviewed and compared, such as ethnography, management, cultural, and sociopsychology (Lisa A. Guion, David C. Diehl 2002). The coding is mostly used to code figures (Saldaña, 2021) and data such as records notes interview observation sentence by sentence 31 of entrepreneurs' and companies' staff. The goal is to analyze and investigate the phenomenon, discover the initial category, and define the concept. First, the original interview and data materials (memos, recording materials, interview notes, etc.) are sentence-by-sentence coded with an open mind. For this purpose, the coding method is largely adopted, the recording interview of the CEs and their company staff no.5, coded as CO05-6. The 31 CEs' interviewees were asked to focus on the main influencing factors.

The analysis began with searching for interactions and relationships between the first-order codes to determine the mechanisms of the creative entrepreneurship ecosystem. The analysis gave categorization-generalization by challenging industry product-level and SCCN investigation with MMI's data materials. Further, it clarified categorizing the initial concept's affecting factors into 12 more second-order themes, which are successively coded as C01, C02… C12, they were shown in Table 1 (see Table 1 for Supporting quotation), which we regrouped into four analytic categories that are driving four mechanisms to generate CCCs in MMI.

4. FINDINGS AND DISCUSSION

The data analysis achieves four mechanisms that help CEs generate and develop culturally creative products in MMI. The interview guide consists of four thematic sections: CEs' motivation, domain-relevant skills, commercialization of cultural products, and cultural protection attitude. The first sub-section concentrates on the findings of the background of the CEs' experts, the staff, and the motivation of CEs as the reason to start and become an

entrepreneur in the MMI. The CEs' motivation factor directly influences the rest three factors (see Table 1).

TABLE 1. Representative quotes (1st order themes) for second-order themes

Coding	Second-order themes	Supporting quotation from interview
C01	Sustain goal direct behavior	"Our ancestors from time immemorial were engaged in processing mare milk, getting a very useful beverage, the healing capabilities of which are described in domestic and world literature. And today, thanks to scientific developments and the modern development of technologies based on mare's milk, new healthy products have been produced." "You must have the passion; you have to love your job".
C02	Embodiment creative-relevant skills in practice	"We want to show the world that we are not only an oil and gas country, that Kazakhstan is the birthplace of mare milk. Mare milk is bound to become our new national brands, such as French wine and German beer." "New packaging with labels in four languages, which was released specifically for export."
C03	Understanding nation's conscious and demands	"Taking into account national traditions, as well as the high nutritional and biological value of mare milk, the products created are the subject of competitiveness, export orientation and national pride in the international market."
C04	Technical skills	"Powder Saumal (make milk) is indicated for infants, as it is similar in composition to mother's milk." "I have over 13 years engaged in the study of the culture of the Kazakhs. I wanted to show people the uniqueness of Kazakh dishes and products. So, when I met the author of mare's milk chocolate."
C05	Special talent	"Our ancestors from time immemorial were engaged in processing mare milk, getting a very useful beverage, the healing capabilities of which are described in domestic and world literature.
C06	Designing skills	"You have to design according to national spirit, look like our ornament, that represent them properly, but should be related export-oriented country as well."
C07	Practical knowledge	"This chocolate is unique in composition because it does not contain sugar. It can be eaten by people with diabetes, cardiovascular diseases, etc." People want to taste something nice, carry and sophisticated."
C08	Support and encouragement	Government and landlord should subsidize the new creative genre emerging mare milk industry to sponsor some cultural creative activities." "Number of economic and cultural performance and activities held by government and related sectors."
C09	Opportunity for local economic development	"All the same, a person has a responsibility to society. To make money, you can sell alcohol and cigarettes. Because you're a member of the society. Because of this, we are responsible to each other." "Not only are they chasing money, but they also bring benefits to the people and enrich themselves spiritually."
C10	Economic diversification	"This product is export-oriented – so we want to convey that Kazakhstan is not so much an oil country as a country that can produce a national product."
C11	New rehabilitation processes	"Sarzhailau" Corporation, which mare milk products has 9 large-scale projects aimed at the revival and preservation of nomadic civilization. They can attract local people and tourist visitors, especially the younger generation."

		"Finally, cultural heritage is also relevant for encouraging entrepreneurship—whether through self-entrepreneurship or development of small and medium-sized enterprises."
C12	National pride and heritage	"Opening of ethnos restaurants will be yurts where you can taste any Kazakh dishes. The franchise itself will be free, and royalties will reach 500-1000 dollar."
		"Many Kazakh phrases, cultures, and traditions are associated with horses. If we engage in this production and involve our citizens in this craft, we will retain many of our national codes."
		"The third major project is the creation of an ethnos village and Saka baths near Almaty, where you can ride horses, drink kumis, assemble a yurt, and live the life of nomads."
		"He develops the hunting club "When it was" using horses, Golden eagles, Tazy and Tobets (pedigree dog), as well as the production of wooden dishes and other infrastructure projects for his business."
Note: compiled by authors		

CE's reflect reasons for working on a task, which includes interactions of intrinsic and extrinsic motivation. In general, these CE's should have certain characteristics such as sustain goal direct behavior, creative relevant skills, and understanding nation's consciousness and their demands in order to sustain. The supporting quotation from interview and literature for each concept is shown in the third column (see Table 1).

The second-order theme is categorized using axial coding (see Figure 4), and the aggregate dimension represents the first themes integrated by selective coding.

The creative MMI is hardly seen as an embedded part of the economy partially due to weak existing evidence relating its input to total economic development and quality of life. These challenges include access to funding, restrictive legal or tax frameworks, and poor or unsuitable technological resources. However, at the same time, in Kazakhstan, the CCIs are neither identified nor integrated into the state's export-led industrial policy. There is a lack of monitoring and evaluation of realized financing and expected outputs. The funding system lacks systematization and a competitive scheme, notably managed by an independent body select, mandated to issue public calls, monitor, and distribute.

Cultural protection attitude refers to CEs who realized how to do entrepreneurship with culture. Because "MMI's production as a national symbol" and need "cultural heritage preservation in the context of globalization" as shown in Figure 4. In other words, somebody must inherit the "traditional economic activities" and "unfitness of Kazakh's culture," know why these knowledge, traditions, and skills were relevant at that time, know how to transform and what they can make "new rehabilitation process". Therefore, the significance of SCCN should be stressed, but the opportunity to do entrepreneurship with MMI should also be concentrated on the SCCN. In other words, they should know how to do business with culture and realize the value of SCCN.

CEs motivation factors can be divided into catalyzing factors, influencing the products and SCCN. This study argues that self-reflection and motivation are complex, where peers work passionately in their environment through a social process. The creative actor's knowledge, skills, and aesthetic sense toward the cultural tradition are fundamental tools for CEs to transform commodity-based mass production MMI. The awareness of traditions, knowledge, and skills are characteristics of the domain-relevant skills of actors that play a crucial role in the SCCN. The primary skills consist of technical skills, unique talent, practical knowledge, and designing skills. The CEs' entrepreneurial spirit, such as passion, intention, motivation, persistence, curiosity, and positivity, is significant.

The interaction between CE's motivation and cultural protection attitude helps SCCN, and as

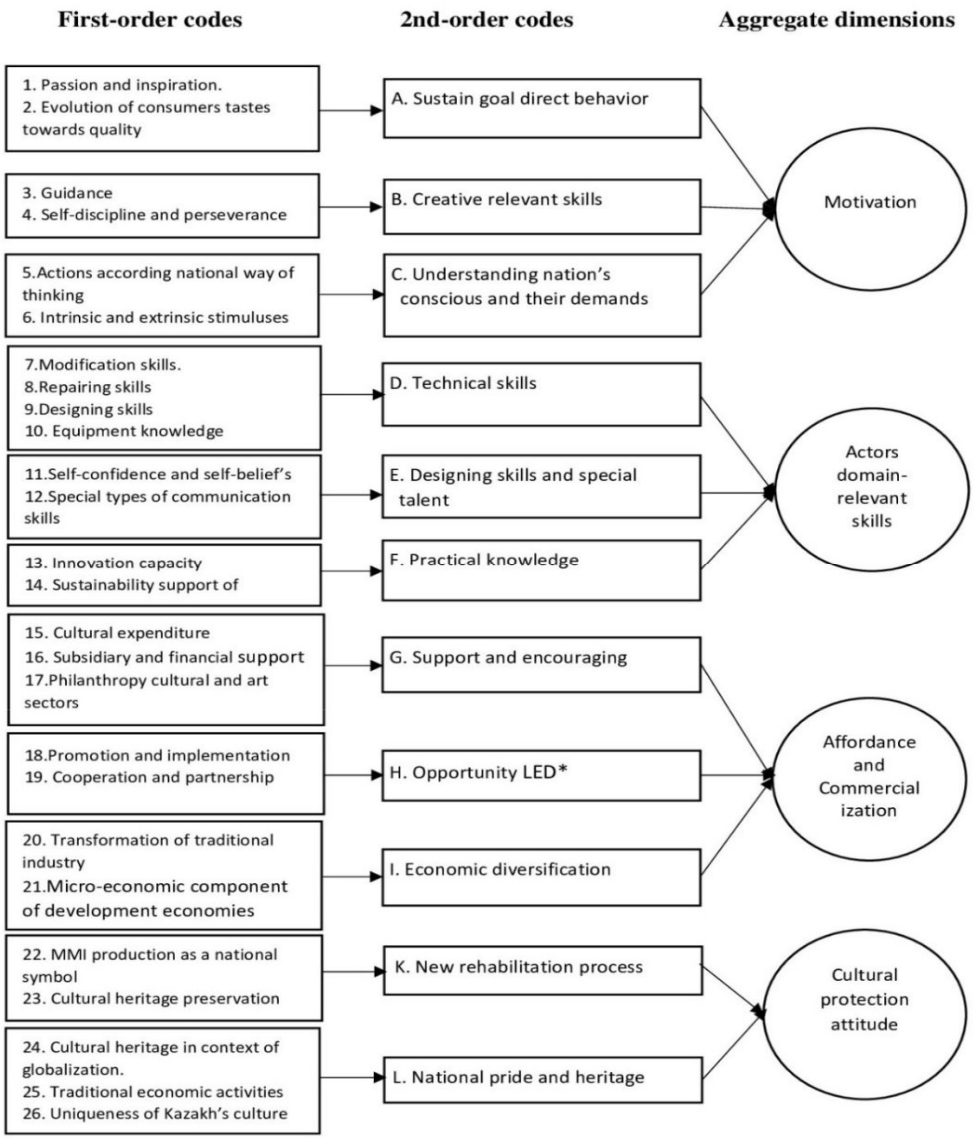

FIGURE 4. Major domains and interaction among indicators of CEs and SCCN

Note: complied by authors

who know of SCCN will have tremendous gratitude for SCCN. Cultural heritage generates values on which products and services can be based, and, as such, it includes primary monuments for creative economic development. Moreover, when a society lacks a responsible approach toward cultural heritage and its constituent elements, there is no infrastructure for developing the creative economy. Such an approach to horse heritage includes sustainable management of this heritage – identification, valuation, protection, rehabilitation, and sustainable use. According to the model, the type of value creation should be considered, such as economic or social/cultural value. The CEs by promoting a middle ground to connect different layers of the ecosystem: from CEs to the policy level.

CEs are key agents in the industry and the economic driver. They can combine their cultural creative identity and capitalistic entrepreneurial behavior. CEs are faced with many challenges that discourage the full development of the MMI's creative productivity. The analysis revealed severe constraints such as, firstly, lack of financial resources is an obstacle to the growth of creative productivity and innovation potential in MMI. Financial resources are related to the limited opportunities to attract external financial capital from private investors or banks. Direct public and government support for innovative activities in the new CCIs is how MMI CEs can overcome these constraints. Secondly, lack of time is related to the organization's size because in small businesses, there is often a multiplication of roles, i.e. increasing their workload and stress at work, and one worker performs multiple functions.

This research finding also equalizes with earlier research disputes that CEs are more motivated by the generating CCCs and SCCN itself than involvement in it for monetary rewards. The study findings align with the preceding literature and extend the literature by categorizing the key factors of creative entrepreneurship motivation and spirit that the CEs should contain. For instance, besides the primary knowledge, tradition awareness, and skills, these CEs should have appreciated the beauty of nature and be grateful for their cultural traditions and a sense of aesthetics. Besides, they should be highly motivated and persistent, positive, and curious in discovering the outside world. We can see that in the process model of CEs in the MMI (see Figure 5).

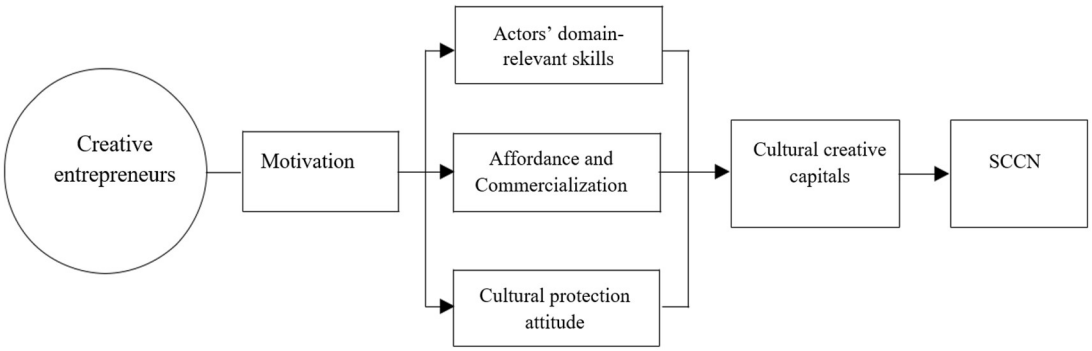

Figure 5. Process model of creative entrepreneurs in mare milk industry

Note: complied by authors

CCCs are tangible and intangible that can be observed and evaluated. Generally, the "ingredients" of CCCs consist of two elements: the first one involves a group of characteristics, such as unusualness, originality, novelty, or infrequency, and the second element is related to the appropriateness, adaptability, effectiveness, utility, and usefulness value. Four mechanisms that drove CE's engine in case MMI are interconnected and indirect in the overall process. One is impossible without the other; progress in one area encourages and makes progress in the other areas inevitable. The creative entrepreneur's mechanism begins with motivation. Motivation established connections with cultural protection attitude, actors' domain-relevant skills, affordance and commercialization and later facilitated CCCs containing cultural and economic capitals. That is a new stage of developing commodity-based traditional products in a highly technology era. Further, this process's overall output has a significant effect on SCCN.

CEs' contribution is essential because they have CCCs which are the new technologies, the intrinsically human ability to generate new ideas, new cultural forms, new business models, and whole new industries that matter. As mentioned in several cases, CEs are essential because this

group gives rise to outputs, technology, information, and ideas that are significant for developing and developing new CCIs. Therefore, in this age of globalization, industries, economies, regions, and cities that want to be effective need to do all they can to do because they are drivers of economic growth and enable to engine mechanism to SCCN.

A central premise of that approach is that the CEs' cultural embeddedness may be regarded as a channel to relevant resources and, thus as a catalyst to value creation. Also, the concept of CCCs was developed to account for the return on cultural investments, such as cultural values in social processes. CCCs are partly generated through the (unconscious) transfer of cultural assets to transmit to the next generation. According to research in Kazakhstan MMI, we can expect that CE's behavior affects cultural values such as cultural heritage, hard work, competitiveness, and material gain. The analysis shows that the technology of translation and integration of SCCN is the basis for the formation of modern cultural clusters: from scientific research to the CCIs. A catalyst for cluster development is the CCIs, and the catalyst for the CCIs is CEs, allowing to make a SCCN an integral part of everyday life, a living and constantly evolving tradition relevant to the new generation and commercialize it.

5. CONCLUSIONS

This research aims to explore and delineates linking factors between the CEs' performance and their role in the SCCN. This study's findings have significant theoretical and practical implications for the SCCN and CEs impact through generating CCCs. First, the process model of CEs in MMI can be used as a reference and guideline for various stakeholders, such as policy and decision-makers and traditional commodity-based companies, to identify what can be contributed to this cultural creativity system. Second, the interdependence and interaction of the cultural creativity system actors can assist traditional industries to be alive and suggest to shareholders what they should do to establish the cultural creative company and SCCN.

In addition, our findings also acknowledge that the interaction of SCCN, creativity, and the creativity frameworks may serve as a guideline for emerging other traditional sectors in Kazakhstan, such as the camel industry. In earlier decades, the MMI was a commodity-based mass production industry, but now it has transformed into creative products and generates cultural and economic capital. Furthermore, understanding and measuring the interrelation of factors that play a crucial role in the cultural creativity ecosystem. First, CEs work primarily for existential and cultural reasons and only then for financial and commercial reasons. Second, their main goal is not financial, but it remains as well. CE's way is practising the art they take in most technological development aspects, and they combine culture with business and commerce in MMI. Third, they put their heart into the work. CEs will not sell a defective product or even a product of poor quality. Otherwise, it will hurt their pride. Furthermore, all of the creative actors were highly motivated to work culturally entrepreneurially. The four mechanisms that drove CEs in case Kazakhstan's MMI did not occur independently from one another but were connected and interacted in a standard process. (see Fig.5 Process model of CEs in MMI): The CEs process model began with passion and motivation. As mentioned above, motivation is the key factor that gives strange rest of the mechanism. This study has used an exploratory framework to describe and analyze how CEs strengthen and develop their creative capabilities and how that influence SCCN. The purpose of the research has concentrated on the role of the CEs as supporters, architects, and developers of these cultural creative opportunities.

The value they contribute to developing and enhancing a CE's ecosystem is not acknowledged or measured in MMI. This research wants to encourage contribution and networking in the CCCs ecosystem and future research on the combination of CEs people working in the CCIs such as MMI. This study contributes on a theoretical level to public policy management and

entrepreneurship CCIs literature. Considering this gap in the literature, this study focuses on the production process in the MMI that practices CCCs provided to produce an outcome. It also emphasizes the twin value of cultural and economic capital that are generated and giving huge effect to MMI to be SCCN in the current highly technologized and globalized world. A clear value and acknowledgement of the CEs will also boost the connection between CCIs and SCCN. On a practical level, this research provides a better understanding of the link between entrepreneurship and SCCN in Kazakhstan's MMI. The self-reflections and motivation offer a real-time overview of current obstacles and issues in CCIs that can be addressed to offer the relevant backing. On the public policy level, suitable support rather than just funding can be facilitated through existing networks and newly structured ones.

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AUTHOR BIOGRAPHIES

* **Doszhan Baibokonov –** PhD student, Yiwu Industrial and Commercial College, Yiwu, China. Email: d.baibokenov@gmail.com, ORCID ID: https://orcid.org/0000-0003-2121-8298

Yongzhong Yang – PhD student, Sichuan University, Business School, Chengdu, China. Email: 3487803795@qq.com

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The Use of Instagram in Impulsive Fashion Purchases amongst Kazakhstani Centennials

Aigerim Kazhmuratova[1] | **Zhazira Kakitayeva**[1]* | **Zhazira Tymbayeva**[2] | **Dinara Satybaldiyeva**[2] | **Leona Tam**[3]

[1] Al-Farabi Kazakh National University, Almaty, Kazakhstan

[2] Satbayev University, Almaty, Kazakhstan

[3] University of Technology Sydney, Australia

Corresponding author:
*** Zhazira Kakitayeva –** PhD candidate, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: kakitayeva@gmail.com

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Abstract

The proliferation of digital technologies has made a huge impact on the development of consumers' behavior and purchasing habits. If to consider the rising presence and the role of centennials in the market, it is highly important to comprehend their preferences and consuming behavior. The primary purpose of this article is to examine the increasing role and impact of Instagram on the impulsive purchase of fashion items in the context of generation Z in Kazakhstan and to identify what kind of stimuli may affect the spontaneous decisions of centennials on buying apparel items. The methodology comprises six focus groups with 39 participants and an online survey which involved 106 centennials. The research was conducted in Almaty city among the population Z aged 18 and 22. The results indicate a prominent influence of Instagram in the everyday activities of respondents; moreover, it showed a positive correlation between this platform and the motivations of centennials to buy impulsively. The following results were obtained: 1) activities of fashion brands and friends' recommendations on Instagram act as stimuli on young consumers from generation Z; 2) activities of fashion brands and friends are likely to trigger positive reactions among centennials; 3) positive emotions derived from Instagram mainly can influence on centennials' impulsive purchases of fashion items. The outcome of this research can be helpful in the marketing departments of companies to understand the centennials' consuming habits and their use of social networks.

Keywords: Centennials, Impulse Purchase, Instagram, Consumer Behavior, Stimulus-Organism-Response Model, Fashion

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1. INTRODUCTION

With the emergence and dynamic development of social networking platforms, the way of doing shopping has altered considerably. Sreejesh et al. (2020) highlighted the modification of their function from communicative to interactive one. Zafar et al. (2019) stated that social media serve as a trigger to do impulsive purchases. Moreover, Varkaris & Neuhofer (2017) noted that compared to other SNS-s Instagram has a huge impact on the decision-making process of consumers. The fashion retail market due to intense competition has forced companies to meet modern requirements. Jegham & Bouzaabia (2022) characterize this industry as ultra-modern so to succeed in this field, there is a need to comprehend individuals' consumer behavior who tend to do impulsive purchasing (Dover, 2019). Shopping is one of the areas where young consumers from generation Z start to act independently by making choices and expressing themselves (Djafarova & Bowes, 2021).

The main distinguishing feature of Generation Z compared to other generations is that they were born in the digital age (Seemiller & Grace, 2016). For this reason, scholars introduced several variations such as “digital natives”, “post-millennials” or “iGeneration” to name them with an aim to describe fully and better outline their inherent characteristics (Wiedmer, 2015). Compared to other generations iGens are tech-geeks, well-educated and more confident (Bhavya et al, 2022). The behavior of this generation is closely related to technology and social media. According to Kim et al. (2020) by 2025, the Asia–Pacific region’s population will consist of 25% centennials. As they grow up and become active members of society, there is a need to have a close look at their preferences and interests. They cannot imagine their life without the Internet, so their shopping decisions and the search for needed items are made there (Singh, 2014). Dabija & Lung (2019) stated that since digital natives most of the time stay online, so they consider online shopping as an obvious choice. Some scientists reported that young adults incline toward impulsive purchases because fashion items are one of the tools for their communication in society. Stachowiak-Krzyżan & Ankiel (2019) also paid attention to the remarkable role of youth in the fashion industry.

In recent years, Instagram has hugely affected consumer behavior; however, far too little attention has been paid to this relation, and precisely the impact of stimuli on this social media has not been investigated in depth (Kim & Kim, 2019). By applying the S-O-R framework Leong et al. (2018) have examined the effects of stimuli on impulsive purchasing on Facebook. In 1974, Mehrabian and Russell introduced S-O-R model - stimulus, organism and response - that was mainly used in psychology (Parboteeah et al., 2009). Nevertheless, this framework plays a critical role in addressing the issue of an individual's impulsive action. Therefore, its advanced versions are widely used in marketing.

Despite the importance of research on post-millennial consuming manners, there remains a paucity of evidence on emerging markets. Villa & Jason (2017) state that no detailed investigation from an angle of national research in this field. Thangavel et al. (2021) argue that the research to date on the Generation Cohort theory has tended to focus mostly on consumers from Western and European countries. Such approaches, however, fail to apply to developing nations. This indicates a need to understand this issue from the perspective of emerging markets. Moreover, a systematic consideration of how iGens' use of Instagram affects impulsive purchases in Kazakhstan is still lacking. There are two primary aims of this study:

1. An analysis of the increasing role of Instagram in the context of generation Z and impulsive purchases in Kazakhstan.

2. Whether the modified version of S-O-R model proposed by Djafarova & Bowes (2021) applies to the purchase habits of Kazakhstani post-millennials.

2. LITERATURE REVIEW

Instagram and generation Z in Kazakhstan

Instagram is a type of social media application available free in application stores. It is mostly dedicated to visual content and allows individuals to share their photos and videos with friends and other Instagram users (Wally & Koshy, 2014; Tingetal, 2015). As World popul at ion review (2022) indicated, in 2022 Instagram had more than 2 billion users worldwide. According to Briskman (2022), this app was downloaded most in the 4th quarter of 2021. There were 10.9 million Instagram users in Kazakhstan in January 2023 and almost a third of them (31.6%) are youth 13-24 y.o. (Cat, 2023).

Jegham & Bouzaabia (2022) highlight Instagram's significance in the sales of fashion items. It can be explained by the desire of brands to visually present their apparel. Due to this primarily visual function of Instagram, most fashion companies give priority to this app. Furthermore, its user-friendliness is another advantage for brands to consider it as a sales channel.

Following the global tendency, Kazakhstan's market is also experiencing an escalating appearance of centennials. As a report from the Ministry of Labor of the Republic of Kazakhstan states, Millennials and Generation Z in 2022 make up 60% of the workforce. By 2030, this figure will reach 80% (Primeminister, 2022). From an economic point of view, this is a large category of consumers. The vast majority of iGens prefer everything at a rapid pace. Much of the current research on their shopping habits pays particular attention to impulsiveness. It is now well established from a variety of studies, there is a clear link between Instagram and consumers' spontaneous purchases because they tend not to evaluate while using it. Moreover, this app functions as a stimulus for impulsive buying (Xiang et al., 2016; Aprilia & Setiadi, 2017). Research findings revealed that about 60 % of Z members made spontaneous purchases (Brewis, 2020).

Content on Instagram

Scholars suggested several variations where Instagram may lead consumers to purchase spontaneously. Firstly, recommendations from influencers and friends (Zhu et al., 2020; Xiang et al., 2016). Secondly, promotional advertisements (Triwidsari et al., 2017). Lastly, a third option - is the appearance of videos and photos on the brands' Instagram (Handayani et al., 2018). However, to date, only a limited number of research was dedicated to its impact on impulsive buying decisions from the perspective of the fashion industry (Djafarova & Bowes, 2021).

The content on Instagram mostly can be derived from two types - user-generated and brand-generated content. The first type of content on Instagram is User-generated content (USG). Gao et al. (2021) defined it as "a form of content created by users of a system or a service and made available publicly on that system". So as Beveridge (2022) noted "any content - text, videos, images, reviews, etc. -created by people, rather than brands" can be categorized as a UGC. From the research evidence, it is clear that UGC influences the urge to buy impulsively more compared to BGC (Mayrhofer et al., 2019). 62% of centennials use Instagram on a daily basis (Wise, 2022). The posts with bought items and recommendations are recognized as extremely powerful in changing consumer behaviors (Aragincillo & Orus, 2019) Therefore, it is perceived that UGC is more credible than BGC (Nash, 2019).

Brand-generated content (BGC) means various forms of content such as photos or videos that are created directly by companies for the launch and promotion of their goods with the main goal to engage and enlarge buyers' interest (Liang et al., 2020). Sometimes it may be designated as "marketer-generated content" or "firm-generated content". In the context of Instagram, the "publications" and "stories" reached recognition from both - companies and consumers. 500

million users view stories on Instagram, the most popular ones usually belong to the content from companies' accounts (Casalo et al., 2021). Pongpaew et al. (2017) explained that BGC improves not only consumer engagement on the accounts of a brand but also assists to develop brand-consumer and consumer-consumer contacts. The authors such as Fromm & Read (2018), Evans et al. (2019), Stachowiak-Krzyzan (2019) also discussed BGC from various perspectives.

Additionally, influencers and opinion leaders can address messages on Instagram creating the next type of BGC. According to Bruhn et al. (2012), this form of communication is also powerful. In their studies Casalo et al. (2018) and Boerman (2020) have shown that Instagram is a popular and attractive app among influencers; moreover, they may engage a big number of online followers. According to Jegham & Bouzaabia (2022) such criteria as the trustworthiness of opinion leaders and their genuine relationship towards their followers help to reach a positive attitude. Fakhreddin & Foroudi (2022) also stated the characteristics such as quality and ingenuity that will lead influencers to prosper. In some cases, influencers' sponsored advertisements may cause negative viewpoints about the product, as users mostly are aware of micro-celebrities possible benefits from companies (Kim & Kim, 2020).

Stimulus-Organism-Response model and impulsive purchase

Mehrabian and Russel (1974) introduced this framework - S-O-R stands for Stimulus - Organism - Response. As shown in Figure 1 the S-O-R model identifies the interrelation between stimuli, organism and response, so external factors influence organisms triggering emotions in individuals resulting in behavioral responses from them. Some researcher categorized two forms of stimulus (S) - external such as situational stimuli and marketing stimuli or internal - characteristics of consumers.

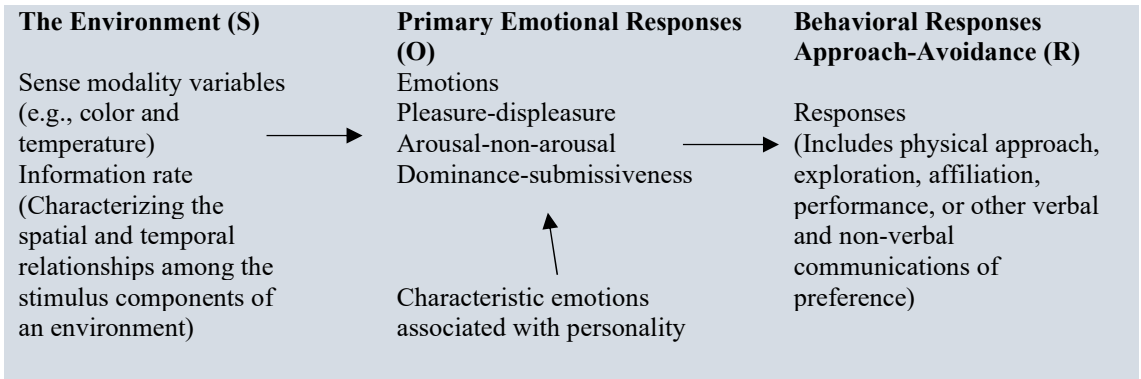

FIGURE 1. Stimulus - Organism - Response Model

Note: compiled by authors by source (Mehrabian & Russel, 1974, p.12)

Organism (O) can be defined as individuals' emotional responses. People's emotions such as interest, enjoyment or excitement refer to this category. Behavioral responses (R) are generally understood to mean responses of consumers to organisms and stimuli (Chan et al., 2017). This includes individual's reactions like investigation or approach that may appear as the result of interaction with organisms and stimuli.

Previously, this paradigm is often used by researchers. As they highlighted this model is considerably helpful to explain a connection between consumer behavior and environmental stimuli. With the recognition of motivation in impulsive purchases as the stimulus, not only online purchases but also offline ones were represented by applying S-O-R model (Zheng et al., 2019; Leong et al., 2018). Barros et al. (2019) by applying S-O-R framework in the research explained how the surrounding components like music and layout influence the motivation of consumers to purchase spontaneously. Lee & Chen (2021) examined the use of S-O-R model in live-streaming commerce in China. Moreover, Leong et al. (2018) analyzed a positive correlation between impulsive buying intention and marketing stimuli on Facebook using this theoretical approach. Therefore, this model is a reasonable structure to acknowledge Instagram's role in the consumer behavior of young generation members. Existing research recognizes the critical role of Instagram that triggers impulsiveness in consumers' purchases. Compared to other social networking platforms it has a huge impact on impulsive purchases of the apparel industry items (Aragoncillo & Orus, 2018). To date, only a limited number of research applied S-O-R framework from the perspective of Instagram (Handayani et al., 2018; Casalo et al., 2020). Nevertheless, Casalo et al. (2020) explored this interrelation where the stimulus they examined the publications of the brand, positive emotions and creativity represented as organism and as the response, they considered interaction intentions and affective commitment. Moreover, a recent study by Djafarova & Bowes (2021) extended the use of S-O-R model to Instagram. In this research, they examined the abovementioned two forms of content (BGC and UGC) as possible triggers.

This section has attempted to provide a summary of the literature relating to impulsive purchases within Instagram by centennials. There are relatively few studies that have assessed Instagram's impact on impulsive purchase intentions, therefore scholars state about research gaps. The features of earlier studies in this field were characterized by a lack of general analysis - for instance, some researchers investigated only women, whereas the opinions of men would be also vital or some of them mainly focused only on a particular aspect. Furthermore, to our knowledge, no study has examined the context of emerging markets like Kazakhstan although digitization in this country is recognized as competitive. Thus, this study aims to determine the most influential stimuli and to test the S-O-R model to the consumer behavior of Generation Z in the fashion industry within Instagram.

3. METHODOLOGY

Previously many researchers have utilized qualitative methods to achieve a more profound outline of centennials' motives and behaviors (Chen, 2018; Djafarova & Trofimenko, 2019). However, both qualitative and quantitative methods were used in this research. Denscombe (2010) defined mixed methods as the "use of qualitative and quantitative approaches within a single research project". Aiming the improvement of findings quality scholars may use a combination of different methods where each method has its specific features. This type of research allows us to look into issues more intensely and to understand the interdependences between methodology and findings. On the other hand, performing the research using several methods requires the proficiency of the researcher and takes time as well. Moreover, there is a possible problem of incompatibility of the results from various methods.

The study uses qualitative analysis to gain insights into behavioral intentions of young iGen consumers. A focus group approach can be more useful for identifying and characterizing the motivations and factors that lead them to do impulsive purchases. Moreover, the main body of literature in this field applied qualitative research methods (Chen, 2018; Nash, 2019). In general, six focus groups were conducted. Total of 39 respondents - 24 of them were female and 15 were male. All of the participants were aged between 18 and 22. The primary inclusion criteria for the focus group participants were being in the age frame of generation Z. The study was held in

November-December of the year 2022 in Almaty City. The participants were recruited from Al-Farabi National University among the Higher school of economics and business students. Prior to commencing the study, the participants received an explanation of the research. In addition, ethical issues and anonymity were also clarified. Semi-structured interviews were conducted in six focus groups. The set of predetermined questions generally can be divided into three levels - 1) about Instagram and social media usage, purpose and frequency; 2) about the activity of influencers and bloggers, brands and fashion companies' Instagram profiles; 3) about users' reactions to advertisements and recommendations, comparing influences of UGC and BGC, intentions to impulse purchases.

The quantitative method was applied to obtain data from participants about Instagram's influence on impulse purchases. The main goal of holding online-based surveys was to prove numerically the results of focus groups. The survey was created and conducted on the Google platform and was distributed online; thus, participation is voluntary. Participants first provided informed consent about the general purpose of the study. The questionnaire was prepared in the Kazakh and Russian languages. Table 1 below illustrates the demographic data of the respondents. All the participants were in the age frame of generation Z between 18 and 22. The data were collected from 106 centennials - 68,9% of the sample were female and 31,1% were male. In age criteria, most of the respondents are 18 years old (37,7%), and 20 years old (33%).

TABLE 1. Main characteristics of respondents

Questions	Answers	Distribution
Age	18 y.o	37,7 %
	19 y.o	13,2 %
	20 y.o	33,0 %
	21 y.o	14,2 %
	22 y.o	1,9 %
	Total	*100 %*
Gender	Male	31,1 %
	Female	68,9 %
	Total	*100 %*
Note: compiled by authors		

4. FINDINGS AND DISCUSSION

In this part, the results of focus groups and online survey will be discussed. The first set of questions during the focus groups aimed to shed light on the usage of Instagram, frequency of use and purpose. Regarding the question about the presence of an Instagram account, almost all participants excluding a male (who stated his indifference to it) answered positively. Another male (focus group 4) shared his unsuccessful experience of deleting an Instagram account, which was re-uploaded 5 hours later. As he explained, "I could not do anything and it felt like I lost something meaningful, something was wrong". To assess the frequency of using Instagram, the second question was asked. The vast majority replied minimum of three-four hours. Among the respondents, a female (focus group 1) disclosed spending 10-12 hours on Instagram but she then clarified that she does it simultaneously with other activities, for example, while cooking. For the third question about the purpose of Instagram usage among the frequent answers were - "to have fun in spare time", "to chat and to be in contact with friends", and "to be aware of the latest news".

The responses of the online survey about daily usage of social media platforms are presented in Figure 1. These results are in agreement with those obtained by focus groups indicating that social media platforms are an integral part of iGens' lives. So as can be seen from Table 2. more than a third of respondents entertain on social media for 3-4 hours and a massive division of

centennials (44,3%) have a preference for using social media platforms for 4 and more hours. The share of respondents who use social media less than 2 hours a day is 1/5, that means that for the vast majority (approximately 80%) of interviewees spending more than 3-4 hours on Instagram is considered as a normal activity (Table 2).

TABLE 2. Daily use of social media

Daily use of social media (hours)	Distribution (%)
less than 1 hour	2,8%
1-2 hours	17,9%
3-4 hours	36,8%
4 and more hours	44,3%
Total	100%
Note: compiled by authors	

Additionally, to analyse the popularity of social media platforms among the centennials the question was asked to indicate three of the most used type of social media platforms. The responses were distributed in the following way in Table 3.

TABLE 3. Use of social media platforms

Use of social media platforms	Distribution (%)
YouTube	76,4%
Facebook	4,7%
Instagram	91,5%
TikTok	72,6%
VKontakte	27,4%
Other	15,1%
Note: compiled by authors	

As it has become clear from the discussions of focus groups informants believe that social networking platforms such as Facebook and VKontakte are not of particular interest and they are intended for a more mature and older audience. The online survey demonstrate the similar results. For example, Facebook was chosen only by 4,7% of respondents. As can be seen in Table 3, among the leaders are three of them - Instagram (91,5%), Youtube (76,4%) and Tik-Tok (72,6%) - the most popular platforms from the perspective of youth. So, the answers demonstrate that Instagram has become the favoured app by the members of generation Z.

The purpose of the second part of the questions was to analyze the informants' opinions about the activity of bloggers and influencers, brands and fashion companies' Instagram profiles. Respondents of focus groups were asked to indicate whether they follow bloggers - 33 % answered positively, 20 % pointed out that they follow no more than five bloggers in total and 38 % replied negatively. An individual who answered negatively reasoned his response that *"these days the bloggers tend to advertise not only their blog or product, but they advertise everything for money".* The results indicate that the trustworthiness of bloggers and influencers is questionable so this reflects those of Djafarova & Bowes (2021) who found their activities less

credible. The reason is nowadays users are aware of their remunerations. In contrast, the opinion of respondents about the Instagram accounts of fashion brands and fashion retail shops were much more positive. The vast majority (72 %) answered that "yes, follow them", adding positive comments such as *"all the latest news about sales or arrivals I knew from the Instagram account of the retail shop", "If there was no retail shop's Instagram account, I would not know about it".*

The third set of questions is designed to define the users' reactions to advertisements and recommendations, comparing influences of UGC and BGC, and motivations to buy apparel items impulsively. There is a surprising result to the question "What will have more influence: 1) an advertisement of a blogger; 2) a post of a fashion retail shop; 3) a friend's recommendation - almost all participants noted that a friend's recommendation will have greater impact. They explained that friend is a reliable person who will not recommend something bad. This outcome correspondence with the viewpoint of Stachowiak-Krzyżan & Ankiel (2019) who indicated that the opinions of friends and peers are extremely indispensable for young consumers. Mostly, they tend to make decisions by following their pieces of advice. However, some responses pointed out the importance of all mentioned types of advertisement. A combination of all three will influence to purchase impulsively in the way that each form has its features, so every form will boost another's influence. As one interviewee said: *'If I saw a post of a fashion retail shop, then a blogger proposed it, finally, if my friend will suggest me as a result I will buy this item'.*

The answers to the online survey about the influence of different types of stimuli are presented in *Table 4.* These results do not support the discussions of focus groups which indicated a friend's recommendation as an absolute leader among others. According to responses of online survey participants the stimuli like a post of the brand (37,1%) and friend's recommendations (46,7%) have a greater influence on them rather than a post of fashion blogger (16,2%). These results indicate that friend's recommendations are also important however, they are not as high as in the results of focus groups. Additionally, the respondents hold the opinion that post of brand or retail shop on Instagram (37,1%) also may have an influence on them in purchase of fashion apparel (Table 4).

TABLE 4. Influence of different types of stimuli

Influence of stimuli on Instagram	Distribution (%)
Post of fashion blogger	16,2%
Post of brand or retail shop	37,1%
Friend's recommendations	46,7%
Note: compiled by authors	

The present study was designed to determine whether Instagram plays a prominent role in the lives of centennials and whether it influences to apparel purchasing habits of them. The most obvious finding to emerge from the analysis of the results of both focus groups and online survey is that Instagram has become a powerful platform in various aspects. The participants consider it as a predominant tool in terms of not only socializing and entertaining but also as a key instrument that has an effect in shaping their impulsive shopping behaviors. Moreover, another piece of evidence for it is the amount of time they spend on Instagram. Surprisingly, this research found that the trustworthiness and popularity of bloggers and micro-influencers are not highly estimated; on the contrary, the accounts of fashion brands and retail shops gained more positive responses and credibility. Likewise, the informants highlighted that friends' recommendations will be a decisive factor in purchasing an apparel item. Nearly 80 % of participants agreed that Instagram hugely affects their purchasing behavior and dressing style. The majority stated about changing their styles, saving time and being aware of the latest trends as positive aspects of Instagram. This finding is consistent with that of Lidholm et al. (2017) who stated about considerable changings that social media platforms have made. The abovementioned findings provide support for the hypothesis that Instagram has a huge influence on the everyday activities of generation Z.

Turning now to the next hypothesis about the applicability of the revised S-O-R model to purchasing habits of Kazakhstani post-millennials the findings illustrate a positive correlation. In Figure 2 presented a version of S-O-R model.

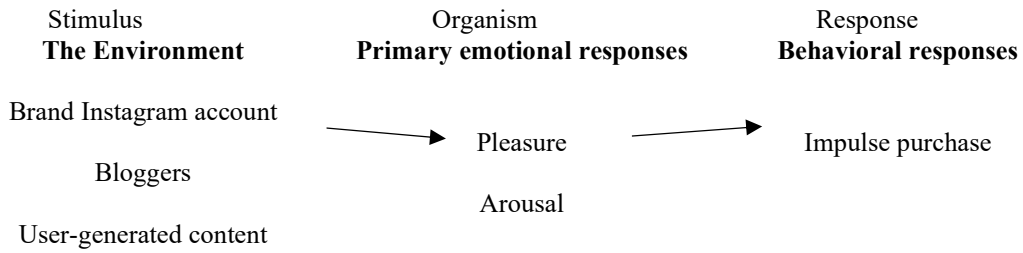

FIGURE 2. Stimulus – Organism - Response Model

Note: compiled by authors by source (Mehrabian & Russel, 1974)

The data from research suggest that stimuli such as a brand's account on Instagram, bloggers' activity and recommendations of friends trigger emotional responses (such as positive reactions, interest and willingness to buy) from centennials that in turn result in behavioral responses. The behavioral response can be seen as a spontaneous purchase of fashion cloth by them. Moreover, the results of the research indicate the interest to buy impulsively arise in both gender - female and male. Therefore, this is partly in contrast to the prevailing stereotype that fashion purchases are only interesting for women. In contrary the findings of researchers who demonstrated the micro-celebrities impact on the impulsive purchase of fashion among generation Z females, this paper reported a positive attitude of them towards brand activity on Instagram. However, there is a need to conduct further research to develop and maintain more detailed outcome.

5. CONCLUSIONS

Instagram is recognized to be an influential social media due to its distinctive feature such as it is a more concentrated on visual appearance that has a significant impact on advertisements in the fashion industry. Instagram's popularity in everyday life and its influence on impulse purchases among generation Z are indisputable. It plays a prominent role in presenting and triggering purchase intentions among young consumers in a virtual world of apparel items. However, despite the fact that an Instagram is a popular app in Kazakhstan there is a lack of research in terms of its use among centennial and particularly Instagram's impact on purchasing of fashion apparel. To fill this gap this paper aimed to justify this platform's increasing presence and describe its importance in impulsive purchases by centennials. The Methodology of this research was designed to understand Instagram's role in spontaneous purchases of fashion items by young members. So to obtain the results there were held both - qualitative and quantitative methods. The focus groups and online survey results allowed to make the following conclusions:

- Instagram has a substantial impact on the daily lives of centennial;
- this app plays a critical role in being aware of the latest fashion trends;
- the research discovered Instagram's capacity to alter consumer habits and fashion perceptions of iGens;
- the study also demonstrated an increasing interest in changing the tastes and consuming behaviour of males;
- brands' advertisements and friends' recommendations on Instagram are perceived more positively than publications of bloggers, therefore their creativity and ability to engage consumers will be appropriate;

- positive emotions derived from Instagram mostly can influence centennials' impulsive purchases of fashion items;

- the results show that S-O-R framework can be applied to understand an impulsive purchase of centennials.

To conclude, according to the findings it can be made assumptions that in order to win attention of centennials fashion brands and retail shops may broadly use Instagram. Because capacity of this app and its concentration on visual appearance of apparel allow to young people to assess the characteristics of fashion items and make decision about purchase. The future research may be addressed to identify whether the answers of a study with a bigger sample size of respondents will demonstrate similar results. Moreover, the answer to the question if the research will be held in other big cities or small towns will the results differ may cause an interest and bring valuable insights too. Additionally, a quantitative research with large sample size might be helpful to verify the applicability of findings to broader representatives of centennials. The results are helpful for managers to comprehend centennials' purchase behavior on Instagram and to develop satisfactory marketing strategies that will lead to fruitful results.

LIMITATIONS AND RECOMMENDATIONS

Although this research comprises sufficient results of focus groups, the authors note that because of the comparatively small number of respondents in online survey not all the conclusions might be a case to the broader audience of centennials in the country. Therefore, future research may be addressed to identify whether the answers of a study with a bigger sample size of respondents will demonstrate similar results or if the research in other big cities or small towns will be different may cause interest and bring valuable insights too.

PRACTICAL IMPLICATIONS

The findings are helpful for managers to comprehend centennials' purchase behaviors on Instagram and to develop satisfactory marketing strategies that will lead to fruitful results.

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AUTHOR BIOGRAPHIES

Aigerim Kazhmuratova – Cand. Sc. (Econ.), Senior Lecturer, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: aigerim_k71@mail.ru

***Zhazira Kakitayeva** – PhD candidate, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: kakitayeva@gmail.com

Zhazira Tymbayeva – Cand. Sc. (Econ.), Associate Professor, Satbayev University, Almaty, Kazakhstan. Email: zh.tymbayeva@satbayev.university, ORCID ID: https://orcid.org/0000-0002-7705-9874

Dinara Satybaldiyeva – PhD, Associate Professor, Satbayev University, Almaty, Kazakhstan. Email: d.satybaldiyeva@satbayev.university, ORCID ID: https://orcid.org/0000-0001-6494-0681

Leona Tam – PhD, Professor of Marketing, University of Technology Sydney, Australia. Email: ltam@uow.edu.au, ORCID ID: https://orcid.org/0000-0003-1116-998X

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Determination of the Role of Elements Affecting the Formation of the City Image of Turkestan

Symbat Nakhipbekova[1]* | **Zhassulan Sadykov[2]** | **Nurlykhan Abdiqadyr[1]** | **Almas Dzhaksilikov[1]** | **Turdibuvi Kazakbayeva[3]**

[1] International University of Tourism and Hospitality, Turkistan, Kazakhstan

[2] Esil University, Astana, Kazakhstan

[3] University of International Business named after K. Sagadiyev, Almaty, Kazakhstan

Corresponding author:
*** Symbat Nakhipbekova** – PhD, International University of Tourism and Hospitality, Turkistan, Kazakhstan. Email: nahypbekova.symbat@iuth.edu.kz

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Abstract

This study examines the influence of various factors on the branding process of Turkistan city and its impact on tourism development. Through a systematic analysis of relevant literature, the study aims to provide a foundation for urban branding by exploring perspectives, approaches, variables, methods, and related concepts. The analysis focuses on the impact of city branding on foreign tourists' perception of Turkistan and their decision to visit. Additionally, it investigates the tourism values associated with Turkistan and the perceptions of its residents. Statistical and empirical methods were employed in this research, utilizing the SPSS 22 program to analyze survey responses. Correlation, regression, and dispersion methods were used to derive the results. Descriptive statistics indicate that historical places play a significant role in strengthening the brand value perception of Turkistan. The study also highlights existing shortcomings in the city's tourism infrastructure and provides recommendations for improvement. Furthermore, the relationship between city image and city branding is considered, and future research could explore the connection between sustainability and urban branding, thereby contributing to the existing literature.

Keywords: Branding, Tourism, Business, Economics, City Branding, Image, Turkistan

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1. INTRODUCTION

Especially the phenomenon of globalization, which marked the 20th century, led to changes not only in the competition of firms, but also in the competition of cities. Cities that are in the process of competition try to stand out from their competitors. From the point of view of cities, many elements (natural and humanitarian structure, historical and cultural, various activities, etc.) can provide differentiation. In this regard, the concept of image (image of the city) is found, formed by many similar elements. The image of a city is described as a concept that depends on how the city in question is perceived. It was important how cities were perceived in the eyes of people, and the image was positioned as an influential factor in the development of the city.

The main goal of work in this direction is to assess the role of elements that affect the image of the city in the branding process of the city. The study used the survey method. The implementation was carried out in Turkestan and the hypotheses were tested by analyzing the results through the SPSS 22.0 program. Positive and significant connections were found between the variables of conformity of the elements of the image of the city of Turkestan, the infrastructure and activities of the city, urban services and public vision, historical and cultural heritage and the sub-criteria of perception of the brand value of the city of Turkestan. An important connection was not reached between the size of tourist orientation and promotion and the brand value of the city of Turkestan. Based on the conclusions, some recommendations were developed.

The field of urban branding has garnered significant attention from researchers due to the growing popularity and market share of branding. Both international and national studies on branding have explored topics such as economic development, urban management, and urban marketing (Kavaratzis et al., 2005; Pike, 2009). The phenomenon of globalization, fueled by the proliferation of information technologies, has gained momentum in recent times, permeating every aspect of society. Consequently, businesses, countries, and cities find themselves competing with formidable rivals in an increasingly competitive global landscape. In order to thrive in this environment, cities must position themselves not only as commodities but also as brands. The creation of a brand with a distinct image and identity has emerged as a primary objective for modern cities, and city administrators are inclined to develop visions from this branding perspective. However, while numerous studies have recently been published on spatial marketing, there remains a relative scarcity of research that specifically focuses on branding and branding-related issues.

Therefore, there is a pressing need for further research on city branding and successful city branding cases, as highlighted by (Kavaratzis, 2007). It has been underscored that although research in the field of urban marketing abounds, there is room for further theoretical and practical development (Dastgerdi & De Luca, 2018). Consequently, the branding process is regarded as a means to address the deficiencies in urban marketing and the lack of literature specifically dedicated to urban branding. Piquet contends that academic interest in spatial branding, encompassing destinations and cities, gained traction after the 1990s, further pointing to the dearth of urban branding literature (Simeon, 2006). However, it is worth noting that the roots of branding literature can be traced back to the 1940s. Although branding itself has a long history, the branding of places has been practiced for a considerable period. The urban aesthetic encompassed elements such as a uniform style for urban objects, including trash cans, lamps, benches, irrigation ditches, bus stops, and even the exteriors of urban stores. One approach to enhancing the visual-aesthetic appeal of cities is the implementation of a city design code, which provides guidelines and recommendations for signage, outdoor advertisements, building exteriors, and the surrounding environment (Zhakenova & Kairova, 2013).

This study is of particular importance as it focuses on the branding experience of Turkestan city and contributes to the existing literature by addressing gaps in the field of urban branding.

Furthermore, the study offers valuable insights to the leaders of Turkestan city. The concept of globalization, initially defined by the British, entails the perception of the world as a space where spatial boundaries are eroded through the dissemination of material and cultural values across national borders (Sarioglu, 2005). The process of globalization has accelerated the transition from an industrial society to an information society, facilitated by advancements in communication technologies. Consequently, the 20th-century globalization process has revolutionized communication and information technologies, resulting in profound changes in national economies and their transition to transnational entities (Florek & Janiszewska, 2013). Cities have assumed a crucial role in the globalization process due to their concentration of non-agricultural production, centralization of control functions, and attainment of a certain level of volume, heterogeneity, and integration (Kall, 2001). In tandem with this process, the emergence of transboundary networks of relationships has significantly improved the condition of cities. As a consequence, the flow of capital, goods, services, and information, which previously occurred primarily between nation-states, has now shifted to flow through cities. Globalization has blurred physical and economic borders between countries, reshaping the economic sovereignty of nations and positioning cities as the main units of the global economic system (Kapferer, 2012).

Therefore, the main goal of this research is to identify the elements that influence the formation of the city image in the branding process of Turkistan city and evaluate strategies for its development. It is important to highlight the novelty of this study, as the authors analyze the process of urban branding in Turkestan, conduct a survey of tourists visiting the city, identify the factors that impact the city's image, and propose potential solutions.

By investigating the branding experience of Turkestan, this study contributes to the existing literature on urban branding. It aims to fill gaps in the field and address deficiencies in theoretical and practical knowledge. Additionally, the findings of this research will provide valuable information to the leaders of Turkestan city, enabling them to make informed decisions regarding the branding and development of the city.

To conclude, the growing significance of branding and its market influence has spurred scientific research in the field of urban branding. Globalization, driven by information technologies, has brought about intense competition among businesses, countries, and cities. As a result, cities are compelled to establish themselves as brands with unique identities and images. While there is a considerable body of research on urban marketing, the focus on branding and related issues remains relatively limited. Therefore, this study aims to contribute to the literature by exploring the elements that shape the city image in the branding process of Turkestan city and proposing strategies for its development. The research findings will offer valuable insights to city leaders and contribute to bridging the gaps in urban branding knowledge.

2. LITERATURE REVIEW

A brand encompasses a collection of images, characteristics, or emotions that consumers associate with a specific symbol, product, service, organization, or place (Kavaratzis et al., 2005; Simeon, 2006). Establishing a brand requires identifying the core essence and starting point of the brand, as it is essential to understand who the brand is before considering how it will be perceived (Kapferer, 2012; Kotler & Gertner, 2007). This highlights the significance of defining brand identity prior to shaping the brand image.

The branding process is closely tied to place management, where authorities aim to enhance the perception of the branded area by consumers. Urban planners and location managers employ various marketing methods and techniques to create a distinct brand identity for a place (Oguztimur & Akturan, 2016). Anholt (2007) suggests that building a country's brand is a strategic positioning to develop a competitive advantage and gain insight into the country's

trajectory (Pike, 2009). Cities, in particular, are seeking new ways to promote themselves as attractive tourist destinations, cultural hubs, and thriving workplaces, leading to intensified competition among cities (Pustu, 2006).

The relationship between the central government and local government has undergone significant changes since the 1980s, resulting in the transfer of powers, tasks, and resources from the center to local governments. As a result, cities must demonstrate awareness and develop branding strategies to remain competitive. Transforming cities into branded cities is a primary objective for city administrations, addressing economic, social, and cultural challenges at the local level (Riza et al., 2012). Brand image represents the consumer's perspective of the brand and the connection between the brand and its trademark (Sabirova et al., 2019).

Iconic buildings play a crucial role in city promotion and image development, as they serve as communication tools and symbols of a city's status. Although the literature on urban tourism in Turkestan is limited, several studies have addressed methods and strategies contributing to its development. For instance, (Kuralbayev et al., 2017) explored the perception of tourism among local residents in Turkestan and identified areas for improvement, such as enhancing existing facilities and service quality. Other studies focused on translation errors in public signs, the architectural and cultural values of Turkestan, and conducting SWOT analyses to identify its tourist potential. To foster tourism growth in Turkestan, it is crucial to enhance service quality, address translation errors in public signs, develop infrastructure and facilities that showcase the city's strong image, and preserve and promote its cultural and historical values. These factors are key to attracting more tourists and advancing tourism development in Turkestan (Sadullaeva & Baizhaksynova, 2021; Abdrassilova et al., 2021).

Betul Garda and Sartaeva (2022) conducted a SWOT analysis in order to identify the tourist potential of Turkestan and determine its recognition in the international arena. In this context, the historical and cultural resource values of the city were studied and their administrative work was evaluated. As a result of the study, it was emphasized that in order to increase the demand of the city of Turkestan for visitors, it is necessary to develop infrastructure facilities that provide a strong image of the city, its values for domestic and foreign tourists of all levels.

These studies have significantly contributed to the theory, methodology, and practice of urban branding and development. However, the current work distinguishes itself by focusing on the development of tourism in Turkestan specifically, considering its cultural and historical tourist values. This paper aims to identify the elements influencing the city's image in the branding process and provide proposals to stakeholders in the tourism industry that can contribute to the city's development. By analyzing the role of these elements, this study aims to offer valuable insights for the stakeholders involved in the tourism sector, ultimately contributing to the overall growth and development of Turkestan.

In summary, the literature review demonstrates the importance of brand identity in the branding process and its direct connection to place management. It highlights the competition between cities and the need for cities to establish a distinct brand image to attract tourists and gain a competitive edge. The review also emphasizes the limited research on urban tourism in Turkestan and the significance of addressing factors such as service quality, translation errors in public signs, infrastructure development, and the preservation and promotion of cultural and historical values to enhance tourism in the region.

By filling the research gap and focusing on the specific case of Turkestan, this study aims to identify the elements influencing the formation of the city's image in the branding process. It will provide recommendations and proposals to stakeholders in the tourism industry, offering practical strategies for the development and promotion of Turkestan as a vibrant tourist destination.

Overall, this research contributes to the existing literature on urban branding and tourism development, particularly in the context of Turkestan. The findings of this study will not only

advance theoretical and methodological understanding but also have practical implications for city administrators, tourism authorities, and other relevant stakeholders involved in shaping the brand image of Turkestan and fostering its tourism sector.

Thus, from the literary review, we can conclude that for the development of tourism in Turkestan, it is necessary to improve the quality of Service, eliminate errors in the translation of public signs, develop superstructure and infrastructure facilities with a strong image of the city, as well as preserve and promote the tourist values of the city. These factors can contribute to an increase in the flow of tourists and the development of tourism in Turkestan as a whole.

These works made a significant contribution to the theory, methodology and practice of the formation and development of urban branding. This work differs from similar works on this topic in that the research conducted in Turkestan is limited on the basis of the development of tourism in terms of the presence of cultural and historical tourist values. In this paper, the role of elements that influence the formation of the image of the city in the branding process will be identified, and in this context, various proposals will be presented to stakeholders in the field of tourism that can contribute to the development of the city.

2. METHODOLOGY

In the current era, cities are engaged in a perpetual competition to attract tourists, investors, and businesses. Marketers specializing in urban spaces strive to create appealing destinations that serve as distinctive brands targeted at various demographic groups. However, urban spaces, from the standpoint of urban planning and design, emphasize the socio-economic dynamics governed by specific societal and political objectives. Marketing and branding literature dedicated to cities has been relatively limited, highlighting the need for further exploration in this field. Therefore, the primary objective of this study is to assess the role of factors influencing the image of a city within the city branding process. To achieve this overarching objective, the study encompasses the following sub-objectives:

1. To determine the impact of urban infrastructure and activities on the city's brand value.
2. To investigate the relationship between city services and the perceived brand value.
3. To evaluate the contribution of the city's historical and cultural heritage to its brand value.
4. To assess the influence of tourist orientation and advertising activities on the city's brand.
5. To gain insights into the city's visual aesthetics and ascertain tourists' perceptions of its image.

Furthermore, this study aims to provide valuable insights for city management and offer development recommendations based on the findings obtained from evaluating the city's branding process. The research not only fills gaps in the field of urban branding but also contributes to the existing literature in this domain.

The significance of this study lies in its potential to inform the Turkestan city administration by providing relevant information pertaining to its branding practices. By examining the hypotheses formulated below, the study seeks to establish relationships between different dimensions of Turkestan's brand image and its brand value:

H1: The elements of Turkestan city's brand image, such as competence dimensions and city infrastructure and service dimension, positively influence the brand value of Turkestan city.

H2: City services and people's attitude, which are integral components of Turkestan city's brand image, have a positive impact on the perception of competence and the brand value of Turkestan city.

H3: The dimension of historical and cultural heritage, which represents one of the elements of Turkestan city's brand image, positively affects the brand value of Turkestan city.

H4: The dimension of tourism orientation and promotional activities, which is part of the brand image perception in Turkestan city, has a positive influence on the brand value of Turkestan city.

These hypotheses form the basis for investigating the relationships between various dimensions of Turkestan's brand image and its overall brand value. By examining these relationships, the study aims to shed light on the factors that contribute to the successful branding of Turkestan city.

Despite the valuable insights generated from this study, it is important to acknowledge certain limitations that may impact the accuracy and generalizability of the conclusions. These limitations include: limited existing literature on urban branding. The number of studies specifically focused on urban branding is relatively small. This scarcity of literature may pose challenges in terms of establishing a comprehensive theoretical framework.

Dominance of daily trips to Turkestan: the majority of trips to Turkestan are characterized as short-term, daily visits. This prevalence of short stays may influence the perceptions and behaviors of tourists, potentially affecting the results and their applicability to longer-term visits.

Time availability for reaching the target audience: The study's ability to reach the target audience (tourists) was not time-restricted, meaning that the data collection process may not fully capture the entire spectrum of tourists visiting Turkestan.

Limited time frame for data collection: due to time constraints, the tourist surveys were conducted within a specific period (November 2022). This temporal restriction may limit the representation of seasonal variations and other time-dependent factors that could influence the findings.

Economic constraints and sample size: the research was conducted within defined economic limitations, which necessitated using a specific sample size. This constrained approach may impact the representativeness and generalizability of the results to the broader population of tourists visiting Turkestan.

Research conducted solely within Turkestan: the study focused exclusively on the city of Turkestan, which may limit the transferability of the findings to other cities or tourist destinations. Reliance on self-reported responses: the reliability of the study's results is contingent upon the accuracy and honesty of the participants' responses. Potential biases or subjectivity in participants' self-reporting could introduce limitations to the data.

Lack of an established scale: the study identified that a comprehensive scale specifically measuring the impact of city image elements on city branding was unavailable. This absence of a validated scale may introduce uncertainties in the measurement and assessment of the variables under investigation.

By acknowledging these limitations, future research endeavors can build upon these findings to address the identified gaps and further enhance our understanding of urban branding and its implications for cities like Turkestan.

The research methodology employed in this study played a crucial role in achieving the research objectives. The methodology encompassed various aspects, including the definition of the data collection method, research setting, sample selection, questionnaire design, data coding, organization and analysis, reliability assessment of the data collection tool, and statistical analysis.

A summary of the methodology is outlined below.

***Data Collection Method*:** the study utilized a questionnaire-based approach to collect data from participants. The questionnaire consisted of three distinct sections, each serving a specific purpose.

***Questionnaire Structure*:** the first section of the questionnaire comprised 14 questions aimed at capturing demographic information and participants' perceptions of Turkestan. The second section consisted of 19 items that assessed the importance and relevance of key elements representing the city image and their impact on city branding. Participants rated the importance

of these elements on a five-point Likert scale ranging from "1. Not absolute" to "5. Very important." The third section employed a 12-item Likert scale to measure participants' agreement or disagreement with statements pertaining to city brand elements. Response options ranged from "1. I completely disagree" to "5. I completely agree."

Sample Definition: the research model targeted a sample of 150 foreign citizens who visited Turkestan during the month of November 2022. The participants were selected through a "face-to-face" approach, ensuring direct interaction and data collection from individuals within the designated research setting.

***Data Analysis*:** during the analysis phase, two questionnaires were identified as incomplete or incorrect, leading to their exclusion from further analysis. Consequently, the analysis was conducted with a total of 148 questionnaires.

Reliability Assessment: to ensure the reliability of the data collection tool (i.e., the questionnaire), appropriate measures were implemented. This may have involved conducting reliability tests, such as internal consistency analysis, to assess the reliability and consistency of the questionnaire items and their ability to measure the intended constructs accurately.

***Statistical Analysis*:** the collected data underwent statistical analysis to explore the relationships between variables and test the formulated hypotheses. This analysis might have involved techniques such as correlation analysis, regression analysis, or other appropriate statistical methods based on the research objectives and the nature of the collected data.

By employing this methodology, the study successfully gathered data from a sample of foreign citizens visiting Turkestan, allowing for the analysis and evaluation of the research objectives and hypotheses.

Demographic characteristics of the participants

Based on the results of the survey, the demographic characteristics of the 50 participants in the study are presented below with the help of tables and graphs. Within the framework of demographic information, the distribution of answers by gender and age was discussed (Table 1).

TABLE 1. Demographic Information

Section	Number of respondents	Share weight, %
According to age characteristics		
17 and under	-	-
18-25	25	16,9
26 – 35	48	32,4
36 – 45	43	29,1
46-55	18	12,2
56 and above	14	9,4
By gender		
Male	83	56,0
Female	65	44,0
Note: based on the results of the conducted survey		

The analysis shows that 16,9% in the 18-25 age group, 32,4% in the 26-35 age group, 29,1% in the 36-45 age group, 12,2% in the 46-55 age group, and 9,4% in the 56 and older age group. 56.0% of the participants are men, and 44.0% are women.

The values of Cronbach's Alpha coefficient were used to calculate the internal consistency of factors. This coefficient represents the value of reliability due to the correlation between questions. It also indicates confidence levels in a set of questions with Cronbach's alpha-value coefficient. Table 2 below presents the results of the analysis of the reliability of the variables of

the competence elements of the city image and the variables of the value elements of the city brand.

TABLE 2. Reliability Analysis in Relation to the Competence of the Elements of the City Image and the Value Elements of the City Brand

Scale	Dimensions	Number of elements	Alpha of Cronbach
Taking the adequacy of urban image elements (α=0.911)	City infrastructure and services	6	0,874
	City services and public vision	6	0,851
	Historical and cultural heritage	4	0,812
	Tourist orientation and promotion	3	0,741
Adopting urban brand value (α=0,921)	General infrastructure and centralization	7	0,891
	City attraction	5	0,858
Note: based on the results of the conducted survey			

The Cronbach's alpha coefficients for the competency scale measurements of the urban image elements indicate satisfactory internal consistency. Specifically, the coefficients were approximately 87.4% for urban infrastructure and activities, 85.1% for urban services and public relations, 81.2% for historical and cultural heritage, and 74.1% for tourist guidance and advertising. Moreover, the overall reliability of the scale was determined to be 91.1%.

These coefficients, exceeding the recommended threshold of 70%, suggest that the measurement items exhibit sufficient reliability when assessing the respective dimensions. Therefore, it can be concluded that the scale items are reliable and suitable for interpreting the factor (Altunışık et al., 2012).

3. FINDINGS AND DISCUSSIONS

In this study investigating the role of image elements in the perception of the Turkestan brand, the collected questionnaire data were coded and analyzed using the SPSS 22.0 software. Statistical tests, specifically correlation and regression analysis, were employed to examine the relationship between the participants' sense of identity and their perception of the city brand value. These tests were chosen to analyze the data and uncover the interactions between the variables under investigation.

Table 3 shows the normative test results for the variable elements.

TABLE 3. The normative test results for the variable elements of the city brand

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Static	n	p	Static	n	p
Turkestan – as a tourist brand	,193	148	,000	,905	148	,000
Turkestan has enough high structure urban infrastructure	,230	148	,000	,899	148	,000
The tourist infrastructure of Turkestan is sufficient	,226	148	,000	,904	148	,000

Turkestan is an attractive city with cultural values	,212	148	,000	,878	148	,000
There are interesting historical places in Turkestan	,204	148	,000	,871	148	,000
Holidays in Turkestan is very interesting	,201	148	,000	,896	148	,000
The logo for Turkestan (mausoleum) is the best option	,209	148	,000	,877	148	,000
Living in Turkestan is very comfortable	,208	148	,000	,878	148	,000
Local people in Turkestan are friendly and kind	,237	148	,000	,878	148	,000
Turkestan is an important center of the university	,220	148	,000	,872	148	,000
Turkestan is an important trade center	,228	148	,000	,879	148	,000
Turkestan is an important fair and meeting center	,222	148	,000	,888	148	,000
Note: based on the results of the conducted survey						

Analyzing Table 3 above, it can be seen that all the questions related to the variable elements of the city brand are not normally distributed ($p < 0.05$). Based on these findings, it was considered necessary to use non-parametric tests in the data analysis, as all study variables did not show a normal distribution.

TABLE 4. Repetition of the Quality of Attendance of Respondents

Question	**First time**	**1**	**2**	**3 and higher**
How many times have you been to Turkestan before?	56 %	15%	21%	8%
Note: based on the results of the survey conducted				

When the above diagram-4 was studied, the respondents who participated in the study asked, "how many times have you been to Turkestan before?" the distribution of the answers to the question is shown in percentage (%). Accordingly, 56% of participants reported their first visit, 15%- 1 time, 21%- 2 times, and 8%- 3 or more times.

Factor analysis

In this section of the study, the results of a factor analysis are presented, focusing on the qualification levels of urban image elements and the perception of the city brand value in Turkestan's urban brand.

To determine the number of sub-dimensions related to the competence of city image elements in Turkestan's city branding, a factor analysis was conducted. The validity of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) goodness-of-fit test and Bartlett's test of sphericity. The KMO value exceeded 0.84 and 0.50, and Bartlett's test was statistically significant at a 0.05 probability level, indicating that the dataset was suitable for factor analysis. The analysis was performed using the principal components method with Varimax rotation.

Upon analyzing Table 5, the factor analysis revealed that the participants in the survey perceived the competencies of city image elements in four sub-dimensions within the Turkestan city brand.

TABLE 5. Factor Analysis

Factors	Questions	Factor loadings			
		1	2	3	4
Urban infrastructure and activities	Shopping and entertainment places	0,81			
	Alternative tourism service	0,75			
	Sports events	0,72			
	Accommodation and physical facilities	0,68			
	Urban infrastructure and superstructure	0,64			
	Quality of service provided at facilities	0,49			
City services and public relations	Savings on reward rates		0,77		
	Security		0,73		
	Ease of city transportation		0,67		
	Behavior of entrepreneurs and people		0,65		
	A clean city		0,53		
	Landscape and architecture of the city		0,47		
Historical and cultural inheritance	Religious places			0,88	
	Historical and cultural heritage of the city			0,68	
	Local cuisine			0,61	
	museums			0,45	
Tourist guide and promotion	Tourist information / information centers				0,92
	Tourist guidance service				0,85
	International advertising service				0,62
	Values	4,045	3,625	2,526	2,121
	Dispersion	21,288	19,077	13,296	11,163
	Total explained variance	64,824			
Note: (i) Principal components analysis of Varimax rotation (ii) KMO = 0.884, Bartlett Test = 1677.532; p = 0.00 (P < 0.001)					

These sub-dimensions consist of 19 statements and are named Urban Infrastructure and Services (6), Urban Services and Public Attitudes (6), Historical and Cultural Heritage (4), and Tourist Destinations and Publicity (3). The total explained variance accounted for 64.824% of the variation. The separate contributions to the explained variance were 21.288% for urban infrastructure and services, 19.077% for urban services and public relations, 13.296% for historical and cultural heritage, and 11.163% for tourist orientation and promotion.

Furthermore, in Table 5, it was observed that the factor loadings for urban infrastructure and service objects (0.49), urban services and public relations measurement items, city landscape and architecture (0.47), and quality of services provided by museums and historical and cultural heritage objects (0.49) were relatively small. However, it is worth noting that in the literature, factor loadings above 0.45 are considered suitable selection criteria. Therefore, the factor loadings for the elements presented in Table 5 are accepted in this analysis.

TABLE 6. Factor Analysis Related to the Elements of Perception of the Meaning of the Brand in the City of Turkestan

Factor	Question	Factor loadings	
		1	2
General infrastructure and centralization	The tourist infrastructure of Turkestan is sufficient	0,77	
	I find it very interesting to rest in Turkestan	0,77	
	Turkestan is a tourist brand	0,76	
	Turkestan is an important fair and meeting center	0,73	
	Turkestan is an important trade center	0,70	
	Turkestan has enough urban infrastructure and high structure	0,65	
	People living in Turkestan are friendly and kind		
City attractiveness	Turkestan has interesting historical places		0,83
	The logo for Turkestan is the best option		0,79
	Turkestan is an important center of the university		0,72
	Turkestan is an attractive city with cultural values		0,68
	Places of accommodation in Turkestan are convenient		0,59
	Values	4,276	3,280
	Dispersion	35,636	27,330
	Total explained variance	62,966	
Note: (i) Varimax rotation principal components analysis (ii) KMO = 0.910, Bartlett's test = 1080.227; p = 0.00 (P < 0.001)			

When examining Table 6, the factor analysis revealed that the survey included a scale of brand perception elements for Turkestan city, comprising 12 statements. The respondents categorized these elements into two sub-dimensions. These sub-dimensions are referred to as general infrastructure and centrality (consisting of 7 elements) and city prominence (consisting of 5 elements). The overall explained variance was determined to be 62.966%. Specifically, when considering the variance explained by each sub-dimension separately, general infrastructure and centrality accounted for 35.636%, while urban beauty accounted for 27.330%.

This section of the study conducted a factor analysis to determine the number of small-scale measurements related to the competence of city image elements in the branding of Turkestan city. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were utilized to assess the suitability of the data for factor analysis. Table 4 presents the results of the factor analysis, identifying four factors: urban infrastructure and services, urban services, historical and cultural heritage, and tourist management and promotion. The total explained variance of the analysis was 64.824%.

5. CONCLUSIONS

This study examined the factors influencing the image of Turkestan in the city branding process and provided valuable insights for city leaders and future research. The findings shed light on various aspects that contribute to the brand value of Turkestan and offer recommendations for enhancing its attractiveness to tourists, investors, and other target groups.

The evaluation of visitor experiences revealed that the majority of tourists have short stays in Turkestan. This emphasizes the need for the city to offer a wider range of alternative activities to

extend the duration of visitors' trips. Furthermore, investments should be made in attractions and facilities that cater to young people, allowing them to enjoy their time in Turkestan with friends.

In terms of information and communication technology, it is crucial for Turkestan to prioritize the use of digital tools, particularly social media platforms, to reach a broader audience and increase awareness of the city's offerings. Internet advertising should be given greater attention, considering its significant role in the information age. Additionally, participation in tourist fairs can serve as an effective avenue for promoting Turkestan and attracting more visitors.

Religious and cultural heritage emerged as key elements that enhance the brand value of Turkestan, especially in the context of religious tourism. Organizing international festivals and events can further contribute to increasing visitor numbers and should be actively pursued by the city. The mausoleum of Khoja Ahmet Yasawi stands out as one of the most famous assets of Turkestan and should be extensively promoted. Furthermore, Turkestan's positive image as a city of tolerance should be leveraged through strategic branding initiatives, as it indicates the warmth of the city's residents towards foreigners and contributes to visitor satisfaction.

However, the study also identified areas for improvement. Turkestan's tourism infrastructure was perceived as lacking, suggesting the need for further research and investment in this aspect. By addressing the identified shortcomings and enhancing the tourism infrastructure, Turkestan can provide better experiences for visitors.

In conclusion, this study provides valuable insights into the factors influencing Turkestan's brand image and offers recommendations for city leaders to strengthen the city's attractiveness. The findings underscore the importance of enhancing visitor experiences, leveraging technology for effective branding, showcasing religious and cultural heritage, and investing in tourism infrastructure. Future research should explore the relationship between sustainability and urban branding, assess the effectiveness of international advertising activities, and conduct comparative studies among domestic and foreign tourists. By implementing the suggested strategies and conducting further research, Turkestan can position itself as a prominent destination and enhance its brand value in the global tourism market.

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AUTHOR BIOGRAPHIES

***Symbat Nakhipbekova –** PhD, Acting Associate Professor, International University of Tourism and Hospitality, Turkistan, Kazakhstan. Email: nahypbekova.symbat@iuth.edu.kz, ORCID ID: https://orcid.org/0000-0002-7461-0384

Zhassulan Sadykov – PhD, Acting Associate Professor, Esil University, Astana, Kazakhstan. Email: zhass83@mail.ru, ORCID ID: https://orcid.org/0000-0002-7133-9162

Nurlykhan Abdiqadyr – Lecturer, International University of Tourism and Hospitality, Turkistan, Kazakhstan. Email: abdiqadyr.nurlykhan@iuth.edu.kz, ORCID ID: https://orcid.org/0009-0007-5088-1335

Almas Dzhaksilikov – Lecturer, International University of Tourism and Hospitality, Turkistan, Kazakhstan. Email: a.dzhaksilikov@iuth.edu.kz

Turdibuvi Kazakbayeva – Senior Lecturer, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: t.kazakhbaeva@mail.ru, ORCID ID: https://orcid.org/0000-0001-7372-7479

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External Factors Influencing on the Development of Mutual Funds in Kazakhstan

Lyudmila Kan[1]* | **Tamara Mukhamedyarova-Levina[1]** | **Bizhamal Abdullayeva[2]** | **Dinara Mukhiyayeva[3]**

[1] Turan University, Almaty, Kazakhstan

[2] NARXOZ University, Almaty, Kazakhstan

[3] L.N. Gumilyov Eurasian National University, Almaty, Kazakhstan

Corresponding author:
*** Lyudmila Kan** – PhD Student, Turan University, Almaty, Kazakhstan. Email: 21220835@turan-edu.kz

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Abstract

This study explores the potential for the development of mutual funds in Kazakhstan by analyzing external factors such as regulatory policies, market conditions, and geopolitical events. The increasing household savings rate in Kazakhstan and growing foreign investment in mutual funds suggest a positive outlook for the industry. The aim of this study is to explore and analyze the external factors influencing the development of mutual funds in Kazakhstan and their potential implications for investors and the broader financial market. Additionally, the study aims to investigate the factors that influence investors' behavior in selecting mutual funds over other investment vehicles such as bank deposits. The study also seeks to develop and test hypotheses regarding the impact of external factors, such as time horizon, investment knowledge, and risk capacity, on the development of mutual funds in Kazakhstan. The research is based on a survey of professionals from the finance and banking industry in Kazakhstan, and the results indicate that consistent past performance, size of funds, and cost of transaction are the most important factors for mutual fund selection. The study concludes that the growth in mutual funds in Kazakhstan presents significant opportunities for investors, fund managers, and policymakers, but also highlights the need for continued research into the factors influencing mutual fund performance.

Keywords: Economic, Mutual Find, National Bank, External Factors, Dependency, Influence, Kazakhstan

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1. INTRODUCTION

Development of mutual funds in Kazakhstan is the result of the interactions of various external factors. As one of the critical forms of investment, mutual funds play an essential role in raising and managing investors' funds. Furmethmore, mutual funds have become a popular investment vehicle for individuals seeking diversification in their investment portfolios. The development of mutual funds is influenced by various external factors that shape the industry's growth and evolution. This literature review will examine the external factors that impact the development of mutual funds.

According to the National Bank of Kazakhstan, the household savings rate in Kazakhstan increased from 20.1% in 2019 to 24.3% in 2020, indicating a growing trend towards savings among the population (National Bank of Kazakhstan, 2021). This is a positive sign for the development of mutual funds in Kazakhstan, as investors seek to put their savings to work in investment vehicles that offer potentially higher returns than traditional savings accounts.

Foreign experience also supports the potential for mutual funds development in Kazakhstan. For example, in neighboring Russia, mutual funds have grown significantly in popularity in recent years. According to data from the Central Bank of Russia, the number of mutual funds in the country grew by 10.2% in 2020, with assets under management increasing by 20.4% (Central Bank of Russia, 2021). This growth has been fueled by a combination of factors, including favorable regulatory policies, increasing investor education, and a growing middle class.

Moreover, foreign investment in Kazakhstan's mutual funds has also been increasing in recent years. According to data from the National Bank of Kazakhstan, the total volume of foreign investments in Kazakhstan's mutual funds grew by 45.3% in 2020, reaching 340.5 billion tenge (National Bank of Kazakhstan, 2021). This suggests that foreign investors are also recognizing the potential for growth in Kazakhstan's mutual fund industry.

The increasing household savings rate in Kazakhstan, combined with foreign experience and investment, suggests a positive outlook for the development of mutual funds in the country. However, regulatory policies, market conditions, and geopolitical events will also play a significant role in shaping the future of this industry.

The issue of the development of investment funds and the factors influencing it is of interest to scientists and practitioners. Some researchers have studied the legal framework, licensing and regulatory mechanisms as a factor in the operation of mutual funds. (Neelima, 2016; Li et al. 2020) Others have considered financial infrastructure, exploring the relationship between capital development and mutual fund growth (Farid & Wahba, 2022). In addition, economic conditions, ie. GDP growth, inflation, interest rates, and market stability also influence the development of various investment funds (Xu, 2018). In addition, the authors explore the role of financial literacy and investor education programs in encouraging investment in mutual funds (Fitria et al., 2019; Shaik et al., 2022). However, research has yet to be devoted to examining the factors influencing investor behavior when choosing mutual funds over bank deposits, which is a scientific gap. This study contributes to the study of this gap.

Mutual funds are a popular investment vehicle globally, providing individuals and institutions with access to professionally managed portfolios of securities. In the Republic of Kazakhstan, mutual funds have gained significant traction in recent years as investors seek to diversify their portfolios and benefit from the country's growing economy. However, the development of mutual funds in Kazakhstan is influenced by a variety of external factors, including regulatory policies, economic conditions, and geopolitical events. Understanding these external factors and their impact on the development of mutual funds in Kazakhstan is critical for investors, fund managers, and policymakers seeking to capitalize on the opportunities presented by this growing industry. The subject of the research is the relationship of investment entities, both individuals and legal entities of the market, participating in the development of mutual funds, as well as economic

relationships that develop in the process of functioning of mutual funds in the system of collective investments. This paper aims to explore and analyze the external factors influencing the development of mutual funds in Kazakhstan and their potential implications for investors and the broader financial market.

The results of this study will provide a picture of the external factors influencing the development of mutual funds in the Republic of Kazakhstan. Their analysis and understanding can help policy makers, regulators and practicing investors make decisions and shape strategies in this area.

2. LITERATURE REVIEW

Regulations play a critical role in shaping the development of mutual funds. The regulatory framework provides guidelines and restrictions that govern mutual fund operations, including investment objectives, fees, disclosure requirements, and investor protection. The Securities and Exchange Commission (SEC) in the United States and the Financial Conduct Authority (FCA) in the United Kingdom are examples of regulatory bodies that shape the mutual fund industry's development. These bodies have implemented various regulations, such as the Investment Company Act of 1940 in the United States and the Undertakings for Collective Investment in Transferable Securities (UCITS) in Europe, to protect investors' interests and ensure the stability of the financial markets (Zetzsche, 2018).

The existing “Behavioural Finance” studies are very few and very little information is available about investor perceptions, preferences, attitudes and behavior. All efforts in this direction are fragmented. Some research assessed the awareness of mutual funds among investors, to identify the information sources influencing the buying decision and the factors influencing the choice of a particular fund (Trotta, 2018). The study revealed that income schemes and open-ended schemes are more preferred than growth schemes and close ended schemes. Investors look for safety of Principal, Liquidity and Capital appreciation in the order of importance. Newspapers and magazines are the first source of information through which investors get to know about mutual finds schemes. Investor service is a major differentiating factor in the selection of mutual funds schemes (Wang & Yang, 2019).

Rajeswari (2018) conducted research related to understanding the behavioral aspects of the investors of the Northeastern region towards equity and mutual funds investment portfolio. The study discussed that well paid, and self-employed formed the major investors in mutual fund primarily due to tax concessions. Deb et al. (2007), Ravi et al. (2020) and Mandal et al. (2020) conducted a study to understand investor preferences survey to get an insight into the mutual fund operations of private institutions with special reference to Kothari Pioneer. The survey revealed that Awareness about mutual funds concept was poor in small cities. Age and income are the two important determinants in the selection of the funding purchasing mutual funds based on data obtained from a judgment sample of 336 educated investors in Urban and semi-urban cities (Ravi et al., 2020). The result shown that fund safety is the most important criteria. Yang et al. (2021), examined the relative importance of factors considered important in the selection of mutual funds by financial advisors in emerging markets.

The economic environment is another critical factor influencing the development of mutual funds. Economic indicators, such as GDP growth, inflation, and interest rates, affect the investment decisions of mutual fund managers and investors. When interest rates are low, investors tend to seek higher yields in riskier assets such as stocks and bonds. This can lead to an increase in demand for equity and fixed income mutual funds (Gyamfi Gyimah et al., 2021).

The technological environment has played a significant role in the development of mutual funds. The widespread use of the internet and mobile devices has made it easier for investors to

access mutual fund information, make investments, and monitor their portfolios. Additionally, advancements in technology have led to the development of robo-advisors, which use algorithms to recommend investment portfolios based on an investor's risk tolerance and investment goals. These technological advancements have made mutual funds more accessible to a wider range of investors, including younger generations who are more tech-savvy (Kaur & Bharucha, 2021).

The demographic environment is also an important factor influencing the development of mutual funds. The aging population in many countries has led to an increased demand for retirement investment options, such as mutual funds. Additionally, millennials, who are the largest living generation, have shown a preference for socially responsible investments. This has led to the development of mutual funds that invest in companies that have a positive impact on society and the environment (Shaik et al., 2022).

The development of mutual funds is influenced by various external factors, including the regulatory environment, economic environment, technological environment, and demographic environment. Understanding these external factors is crucial for mutual fund managers and investors to make informed investment decisions. As the mutual fund industry continues to evolve, it is essential to monitor these external factors and their impact on the industry.

The methodologies used by various scientists varies. Some studies used questionnaire-based survey methods to collect data from mutual fund investors to investigate the relationship between investment choices, risk tolerance, and demographic characteristics and used a combination of quantitative and qualitative research methods to explore the factors affecting the future development of the mutual fund industry (Gong et al., 2016; Asemi et al., 2023; Xu, 2018) and in-depth interviews (Kaur & Bharucha, 2021). Other studies used a dataset of mutual fund holdings to investigatethe phenomenon of "home bias" in domestic equity portfolios and how distance, language, and culture influence stockholdings and trades.

Other studies used time-series regression analysis to examine the dynamic relationship between stock, bond, and mutual fund flows and investigated the relationship between stock lending and corporate control and regression analysis to examine the relative contributions of skill and luck to mutual fund returns (Malhotra & Sinha, 2021; Harvey & Liu, 2022). In addition, to examine the changing role of mutual funds in retirement planning scientists used a literature review and secondary data analysis, to defined benefit pension plans there were investigated the factors that affect the selection and termination of investment management firms. Party transactions involving companies and international mutual fund holdings (Ferreira & Matos, 2008) to investigate the role of institutional investors in global financial markets.

Asad & Siddiqui (2019), Farid & Wahba (2022) and Fitria et al. (2019) analyzed the factors that influence the development of the mutual fund industry and investment decisions in mutual funds using descriptive statistics and regression analysis.

In conclusion, various external factors, including time horizon, investment knowledge, and risk capacity, influence mutual funds' development and performance.

The time horizon or the time investors plan to hold their investments plays a significant role. Mutual funds are designed to cater to different time horizons, offering options for short-term, medium-term, and long-term investment goals. Investors with shorter time horizons prefer funds with liquidity and lower volatility. Investors with a deeper understanding of financial markets, investment strategies, and fund performance will likely make more informed decisions. They may conduct thorough research, analyze fund prospectuses, and evaluate historical performance before selecting a mutual fund or relying on recommendations.

Furthermore, the risk capacity of investors influences their mutual fund preferences. Risk capacity refers to an investor's ability to tolerate and absorb potential losses. Some investors may have a higher risk tolerance and be more comfortable with aggressive growth funds that offer the potential for higher returns but come with increased volatility. Conversely, risk-averse investors

may opt for conservative funds that prioritize capital preservation and provide a lower level of risk.

3. METHODOLOGY

This review paper covers some studies and techniques used to check the mutual fund's dependence from the external factors, such as time horizon, risk capacity and investment knowledge. Through this survey it is observed that performance analysis of mutual funds needs an extensive in-depth analysis of various factors and further study can be done to improve the predictability and volatility of mutual fund performance. Current research consists of two part^ analysis of the current activity situation of mutual investment funds and an analysis of such factors as time horizon, investment knowledge and risk capacity.

The first stage is devoted to analyzing the mutual fund market and covers data for five years, from 2018 to 2022, since this period was not previously analyzed.

The second part of the analysis covers the gap between existing studies; this study framework is based on the conducted literature review. Current work is focused on the influence of factors on the customer's behaviour in the selection of mutual funds. Thus, the objective of this study is to find out which of the factors have effect on the developing of the mutual funds in Kazakhstan.

The following hypotheses were developed.

Mutual funds are influenced by Time Horizon external factor (H1)

Mutual funds are influenced by Investment knowledge external factor (H2)

Mutual funds are influenced by Risk Capacity external factor (H3)

In the table 1 there are shown survey questions.

The questionnaire consisted of descriptive statistics (age, gender, current income, education level and occupation) and four groups of questions. In Table 1 there are shown survey questions.

TABLE 1. Questionnaire: Tine Horizon, Invest Knowledge, Risk Capacity, Mutual Funds

No.	Question	Question groups
1	I plan to begin taking money from my investments in …	Time Horizons
2	As I withdraw money from these investments, I plan to spend it over a period of . . .	
3	When making a long-term investment, I plan to keep the money invested for . . .	
4	Which statement best describes your knowledge of investments?	Invest Knowledge
5	From September 2021 through November 2021, stocks lost over 31%. If I owned a stock investment that lost about 31% in three months, I would . . .(If you owned stocks during this period, please select the answer that matches your actions at that time.)	
6	When it comes to investing in bond mutual funds , I would describe myself as . . .	
7	I check the management expense ratio (MER) before purchasing a bond mutual fund….	
8	High turnover can be a warning sign	
9	Past performance of mutual fund statistics can't tell me how the fund will perform in the future	
10	It's important to Make sure the fund's goal fits with your investment goals	
11	Generally, I prefer an investment with little or no ups and downs in value, and I am willing to accept the lower returns these investments may make.	
12	When the market goes down, I tend to sell some of my riskier investments and put money in safer investments.	

13	Based only on a brief conversation with a friend, coworker, or relative, I would invest in a mutual fund.	Risk Capacity
14	In making financial and investment decisions you are:	
15	When you are faced with a major financial decision, are you more concerned about the possible losses or the possible gains?	
16	I prefer the higher potential returns with the higher risk rather than less returns with less risks	
17	From September 2021 through October 2021, bonds lost nearly 4%. If I owned a bond investment that lost almost 4% in two months, I would Sell some of the remaining investment	
18	Mutual Funds are more most secure rather than Hedge Fund?	Mutual Funds
19	Mutual funds are more aggressive in maximizing its rerturns?	
20	Mutual funds are regulated by Kazakh Law	
21	Mutual funds are focused on retail investors	
22	Mutual funds strategies are generally limited to invetsments in the equity market	
Note: compiled by authors		

This survey is based on the twenty-two question that were answered by category of professionals from the finance and banking area of Kazakhstan in the age of more than 35 years old with the stable financial situation and availability of some savings. Answers on the questions were grouped by the following categories: time horizons, investment knowledge and risk capacity.

The result of the survey pointed out to four important factors which dominate the choice of mutual funds. These are consistent past performance, size of funds and cost of transaction. Factors which relate to fund managers and investment style are not considered to be relatively important. Conjoint analysis was selected to study the importance of attributes for mutual fund selection.

The present study is proposed to study, analyze the factors which influence the behavior of investors in selection of mutual funds instead of bank deposits. Studies of analyzing of investor's behavior found from time to time.

Data Collection – for carrying out the study, the population was defined as residents of big urban town (Almaty), who have mutual funds in the city. The data was collected with the help of a questionnaire.

Questionnaire design - the Questionnaire consists of five parts: general/personnel details, investors opinion related to investment knowledge and experience, awareness and readiness to risk and the length of the investments, and mutual funds.

Time Horizons – the length of the investments time horizons impacts the types of investments that may be suitable for an investor. Investors with a time horizon of a greater than three have a greater degree of flexibility when building a portfolio. If there is a very short time horizon, more conservative investments or money market funds may be the only suitable option in this case.

Investment knowledge – if an investor has a high level of investment knowledge, he has a good understanding of the relative risk of various types of investments and understand how the level of risk taken affects protentional returns. If an investor has very little knowledge of investments and financial markets, speculative and high-risk investments and strategies are likely not suitable option.

Risk Capacity – investor's financial situation is including the assets; debts and the amount and stability of investor's income are all important when determining how much risk can be taken with the investments. The larger portion of total assets which are invested, the more conservative investor might wish to be with the portion of the portfolio.

Understanding these external factors, including time horizon, investment knowledge, and risk capacity, is crucial for investors and fund managers when making investment decisions. By aligning mutual fund offerings with investors' needs and preferences in these areas, fund managers can attract and retain investors better suited to their fund's objectives and characteristics.

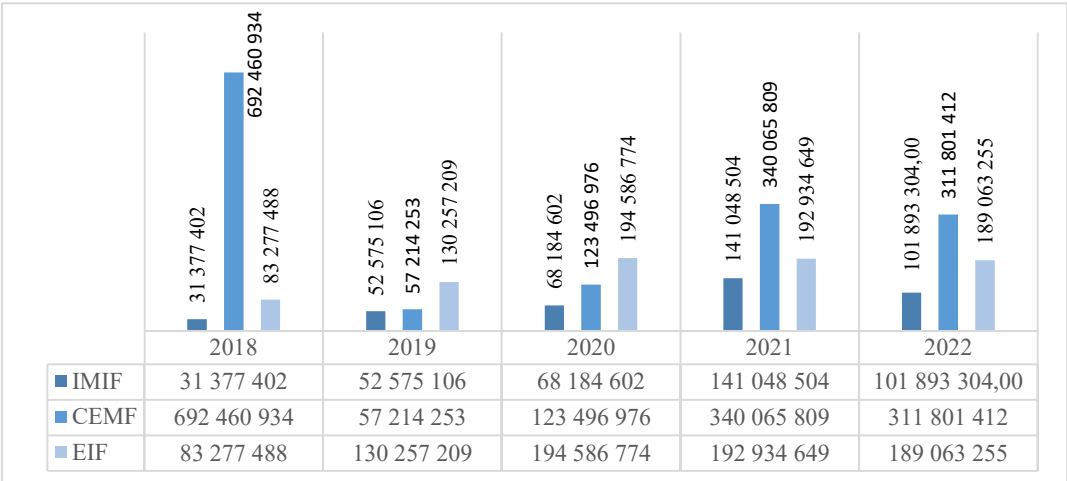
4. FINDINGS AND DISCUSSIONS

Investment horizons for Kazakhstanis have become much broader. The growing interest of citizens in increasing their funds has led to an interesting trend: the revival and development of mutual funds and the formation of a collective investment market.

In the context of the crisis caused by the COVID-19 pandemic, the population of Kazakhstan is actively investing money in various financial instruments. Deposits have traditionally been the most common type of investment to protect against inflation among the people. So, in January 2023, compared to January 2022, the total volume of household deposits in Kazakhstani banks increased by 3.7 trillion tenge.

At the same time, starting in 2020, Kazakhstanis are becoming increasingly interested in the securities market. The country's stock market is experiencing tremendous growth in the number of retail investors. If in 2018-2019, the number of retail investor accounts was practically the same and did not exceed 120 thousand, and then by the end of 2020, their number was more than 130 thousand. In June 2021, there were 176.5 thousand accounts in the country retail investors, corresponding to approximately 2% of the employed population of Kazakhstan.

A mutual fund pools investors' funds to collectively invest them in some financial instruments - stocks, bonds, real estate, etc. You can buy a share, that is, a share in this portfolio or several shares - their number depend on the share's price and the amount the investor has contributed. In most cases, the minimum investment in a mutual fund is quite affordable for any potential investor. In the figure, 1 there is presented data on mutual investment funds for the period from 2018 to 2022.



	2018	2019	2020	2021	2022
IMIF	31 377 402	52 575 106	68 184 602	141 048 504	101 893 304,00
CEMF	692 460 934	57 214 253	123 496 976	340 065 809	311 801 412
EIF	83 277 488	130 257 209	194 586 774	192 934 649	189 063 255

FIGURE 1. Assets of interval and open mutual investment funds

Note: compiled by authors

Since 2019, especially in 2021, mutual funds have been gaining more and more popularity among the population of the Republic of Kazakhstan. In 2021, the assets of interval mutual

investment funds (IMIFs) increased by 2.2 times compared to 2020 and for the year and amounted to 141 billion tenge (68.1 billion tenge a year earlier). In 2022, assets decreased to 101.9 billion tenge. The assets of closed-end mutual funds (CEMF) decreased compared to 2018, with a sharp decline in 2019 to 57.2 million, a 12-fold decrease. Then there was growth in 2022, assets reached 311.8 million tenge. Assets of equity investment funds (EIFs) show positive dynamics from 2018 to 2021, and in 2022 they decreased by 3%.

Meanwhile, the number of shareholders among the population as of 2022, amounted to 6.8 thousand people, two times more than in the same period of the previous year. Compared to 2018, it has grown 45 times, from 151 to 6844 people. The number of shareholders in interval mutual funds is given in the table 2.

TABLE 2. Number of shareholders of mutual investment funds (at the end of the period) from 2018 to 2022

Mutual fund type	2018	2019	2020	2021	2022
Closed	21	46	95	159	146
Open	1	77	73	78	80
Interval	129	854	1026	2801	6618
Total	151	977	1259	3038	6844
Note: compiled by authors based on the source (Websites of government bodies, 2023)					

The most popular among the population are mutual funds of such investment management companies as Halyk Finance, BCC Invest and First Heartland Jusan Invest. In the table 3there is given data on mutual funds for 2021 and 2022.

TABLE 3. Net assets of mutual funds for 2021-2022

#	Title investment fund	Net assets, (thousand tenge)	
		2021	2022
	JS "BCC Invest" SO JSC "Bank CenterCredit"	54 031 553	12 187 654
1	IMIF "BCC Elite"	0	73 683
2	IMIF "CenterCredit - Foreign Exchange"	49 733 948	18 231 346
3	IMIF "CenterCredit - Reasonable balance"	4 297 605	3 882 625
	EIF **"First Heartland Jusan Invest"**	**11 130 985**	**8 559 438**
4	IMIF "harMONEY"	1 067 322	223 388
5	IMIF "abyROI"	840 001	589 478
6	IMIF "állEM"	5 733 314	5 095 579
7	IMIF "allGA"	2 545 585	2 427 082
8	IMIF "doSTAR"	944 763	223 911
	JS "Branch NBK "Halyk Finance"	**62 590 265**	**54 330 528**
9	IMIF "Halyk - Prospective investments"	5 903 988	5 459 636
	IMIF "Halyk – Balanced"	6 277 809	6 100 093
10	IMIF "Halyk-Currency"	49 975 731	41 986 042
11	IMIF "Halyk-Liquid"	432 737	361 195
12	IMIF "Halyk Global"	-	423 562
	JS "IH "Astana-Invest"	**21 387**	**38 984**
13	IMIF "Alpha State"	21 387	38 984
	JSC" Centras Securities "	**2 276 538**	**1 541 866**
14	IMIF "Centras-Global Markets"	916 028	609 391
15	IMIF "Eurobond Fund"	741 642	491 335
16	Open-end investment fund "Treasury"	618 868	441 140
	JSC"Management company "ORDA Capital"	**-488**	**-669**
17	IMIF "ADAL INVEST"	-488	-669

	JS "FORTEFINANCE"	**1 629 987**	**2 242 521**
18	IMIF «TABYS Capital»	1 201 211	1 551 456
19	IMIF SAQ Capital	428 776	691 065
	JS «UD Capital»	**-**	**42 103**
20	IMIF «UDC Progress»	-	18 707
21	IMIF «UDC Safe+»	-	23 396
	JS "Freedom Finance"	**4 929 493**	**5 493 903**
22	IMIF "Fixed Income"	4 291 667	4 893 903
23	IMIF "GoodWill"	637 826	600 000
Note: compiled by authors based on the source (Bureau of National Statistics, 2022)			

The most significant volume of net assets of mutual funds is managed by Halyk Finance — 54,330,528 tenge. Now the company operates five mutual funds. Of these, the main share is occupied by the IPIF "Halyk - Currency" - 41,986,042 tenge. Compared to 2021, the assets of the Halyk-Valutny mutual fund decreased by 8 million tenge, but despite the decrease, its performance is the best among the country's most significant mutual funds.

Halyk Finance also manages mutual funds such as Halyk - Balanced, Halyk - Prospective Investments, Halyk - Liquid and, since 2022 "Halyk Global". The difference between them is in the structure of the investment portfolio and, accordingly, the level of profitability.

BCC Invest and First Heartland Jusan Invest also have a notable amount of mutual fund assets. The first manages a sizeable mutual fund, "CenterCredit - Currency", the number of net assets decreased from 49.7 million tenge to 18.2 million tenge, a decrease of 2.7 times.

Meanwhile, First Heartland Jusan Invest manages three currency and two tenge mutual funds. The total net assets of the joint investment fund of the company reached 8.5 million tenge. In general, in 2022, there will be a decrease in net assets in all mutual funds.

The activities of management companies are controlled and licensed by the authorized state body, and money is invested in strict accordance with the investment declaration, which contains a list of assets permitted for acquisition (securities, precious metals, bank deposits and other financial instruments). The analysis did not include closed-end mutual funds (CPIFs) since information on them is not disclosed in the context of management companies.

Due to the volatility of the national currency exchange rate and low rates on foreign currency deposits, investors remain in demand for shares of investment funds, the investment strategy of which provides for the acquisition of foreign currency assets. Compared to foreign currency deposits, the yield on which does not reach even 1%, investing in foreign currency mutual funds is a popular tool, which can be several times higher than the values of second-tier banks of the Republic of Kazakhstan. As of August 1 of this year, 50% of UIF investors are holders of units of currency investment funds. Most foreign currency mutual funds are managed by Halyk Finance, one of the largest asset management companies.

Overall, conducted analysis showed that Halyk Finance dominates the foreign currency mutual fund market and is one of the largest asset management companies in the country. The number of shareholders has also significantly increased, with a 45-fold growth compared to 2018. Mutual funds managed by companies like Halyk Finance, BCC Invest, and First Heartland Jusan Invest have garnered the most attention from investors. Halyk Finance manages a significant volume of net assets and offers various mutual fund options.

Kazakhstan's investment landscape has witnessed a significant shift in recent years. The population has shown a growing interest in diversifying their funds, leading to the resurgence and development of mutual funds and the collective investment market. Amidst COVID-19, people started changing investment behavior and investing in various financial instruments. Household deposits in Kazakhstani banks have increased significantly. Retail investor accounts have risen steadily, indicating a rising interest in the securities market.

Mutual funds have gained popularity among the population since 2019, with a notable increase in 2021. Assets of interval mutual investment funds have more than doubled during this period, reaching 141 billion tenge. Closed-end mutual funds experienced fluctuating asset levels, while equity investment funds displayed positive dynamics until a slight decrease in 2022.

The activities of management companies are strictly regulated and licensed by the authorized state body, ensuring adherence to investment declarations that outline permitted assets for the acquisition. The volatility of the national currency exchange rate and low rates on foreign currency deposits have contributed to the demand for foreign currency mutual funds, providing higher potential yields than traditional bank offerings. Current trends in the financial market reflect changing preferences and the search for higher returns in a shifting economic landscape.

The second part of the study was carried out by collecting responses from respondents (35 respondents). The Questionnaire consists of five parts: general/personnel details, investors opinion related to investment knowledge and experience, awareness and readiness to risk and the length of the investments. The questionnaire consists of 30 questions. The questionnaire is developed based on the questionnaire of MFDA (Mutual Fund Dealers Association of Canada). A brief profile of the respondents is reported in Table 1. Using the visual binning process in SPSS, we have categorized the variable age and it shows that most of the respondents were observed to be in the age of group over 35 years old (86%). In a similar way, the data characteristics are reported for the remaining variables like gender, education and monthly income. In the table 4 there is given profile of respondents.

TABLE 4. Profile of respondents

Variable	Categories	%
Gender	Male	51%
	Female	49%
Age	More 35	86%
	More 45	11%
	More 55	3%
Education	Graduate	
	Post graduate	66%
	Professional degree	34%
Occupation	Social area	
	Finance and Bank area	52%
	Legal area	17%
	Other	31%
Income	Less than $1000	51%
	Less than $2000	31%
	Less than $3000	9%
	Less than $4000	9%
	Less than $5000	0
Note: compiled by authors		

For the comprehensive understanding of the factors that influence on the developing of mutual funds, a set of 30 statements, sub grouped into four dimensions Time Horizon – 4 statement, Investment knowledge – 7 statements, Risk Capacity – 7 statements and General info – 7 and Mutual Fund – 5 statements.

In the Survey, the respondents were asked to rate the importance of the 5 grouped variables (1 Independent and three Dependent variables) on a 5-scale ranging from Highly important/Highly agree (5) to Not Important/not disagree (1).

Before the provision of the hypotheses testing Cronbach's alpha for reliability was conducted. The results for Hypothesis 2 (Mutual funds are influenced by Investment knowledge external factor) showed that Cronbach's alpha reliability was less than .05. Thus, the group of questions for "Investment knowledge" needs to be changed or redesigned. Therefore, further analysis included testing of hypothesis 1 and 3. In the table 5 there are given results for model significance based on the hypotheses put forward.

TABLE 5. Hypotheses results

Hypothesis	Regression weight	Beta-coefficient	R2	F	P-value	Hypothesis supported
H1	Time Horizons	.096	.009	.307	.584	Yes
H3	Risk Capacity	.349	.122	4.574	.040	Yes
Note: compiled by authors						

H1 - Mutual funds are influenced by Time Horizon external factor.
H3 - Mutual funds are influenced by Risk Capacity external factor.

The dependent variable Mutual Fund was regressed on predicting variables Time Horizon (H1) and Risk capacity (H3) to the test the hypothesizes H1, H3. Time Horizon predicted Mutual Fund (1,33)=0.307, p>0.001, and Risk Capacity (1,33)=4.574, p>0.001, which indicate that Time Horizon can play some role in shaping of Mutual Fund Development. These results clearly direct the positive affect of the Time Horizon and Risk Capacity. Moreover R2=12% and 9%of the variance in Risk Capacity and Time Horizon can be changed.

To have better understanding of the data, factor analyses is conducted. From the Table it is clear that the approximate Chi-Square statistics is 86.5 with 45 degrees of freedom, which is significant level at 0.05 level.

To sum up, certain factors, such as Time Horizon and Risk Capacity, significantly influence the development of mutual funds. The regression analysis revealed that Time Horizon (H1) and Risk Capacity (H3) had a positive and statistically significant effect on Mutual Fund development. This implies that the time horizons of investors and risk tolerance affect the characteristics and performance of mutual funds. Investors with longer time horizons and higher risk capacities may be more inclined to invest in mutual funds that align with their investment preferences.

Factor analysis confirmed the suitability to explore the factors influencing mutual fund development. The results emphasize the importance of considering factors such as Time Horizon and Risk Capacity in understanding the development and performance of mutual funds. This knowledge can enhance the decision-making process for investors and industry professionals, ultimately contributing to the growth and success of the mutual fund industry. In the table 6 there is presented results for Kaiser-Meyer-Olkin (KMO) Measure of sampling adequacy.

TABLE 6. Results for Kaiser-Meyer-Olkin Measure of sampling adequacy

Kaiser-Meyer-Olkin Measure of sampling adequacy	.506	
Bartlett's Test of sphericity	App. Chi-Square	86.5
	Df	45
	Sig.	.000
Note: compiled by authors		

KMO value is 0.506, which is considered average result as it exceeds 0.5 (between 0.5 and 0.6 is considered average). Bartlett's Test shows 0.000 which is less than 0.005, meaning that factors from variables are satisfactory.

The analysis indicates that factor analysis is an appropriate technique to use for the data. The Chi-Square statistic value of 86.5 with 45 degrees of freedom is significant at the 0.05 level, suggesting that the factor model is a good fit for the data. The KMO value of 0.506 suggests that the data is somewhat suitable for factor analysis, although it is only average. The Bartlett's Test of sphericity shows that factors from the variables are satisfactory, as the p-value is less than 0.005. Overall, the results suggest that factor analysis can be used to identify underlying factors that explain the relationships between the variables in the data. In the table 7 there is given total variance explained.

TABLE 7. Total variance explained

Components	Initial eigenvalues			Extraction sums of squared loadings		
	Total	Dispersion %	Cumulative %	Total	Dispersion %	Cumulative %
1	2,689	26,890	26,890	2,698	26,890	26,890
2	1,584	15,837	42,726	1,584	15,837	42,726
3	1,195	11,945	54,671	1,195	11,945	54,671
4	1,132	11,234	65,995	1,132	11,234	65,995
5	1,029	10,293	76,288	1,029	10,293	76,288
6	,849	8,495	84,783			
7	,619	6,193	90,975			
8	,481	4,809	95,784			
9	,299	2,987	98,771			
10	,123	1,229	100,000			
Note: compiled by authors						

From the Table we can see that, total variance explained is 76.288 percent where the first factor determines the 26.890 percent of the variance. The second factor provided a 15.836 percent of the total variance, third and fourth factors determine accordingly 11.945 and 11,324 percent of the variance and finally the fifth factor determines 10.289 percent of the total variance.

The analysis revealed that factors such as Time Horizon and Risk Capacity significantly influence the development of mutual funds. The regression analysis showed positive effects of Time Horizon and Risk Capacity on Mutual Fund development, explaining 12% and 9% of the variance, respectively. Factor analysis confirmed the suitability of the data and identified underlying factors that explain the relationships between variables.

5. CONCLUSIONS

Mutual funds have become a popular investment vehicle for individuals seeking diversification in their investment portfolios in Kazakhstan. The increasing household savings rate, foreign investment, and experience suggest a positive outlook for the development of mutual funds in the country. However, regulatory policies, market conditions, and geopolitical events will also play a significant role in shaping the future of this industry. Through the survey, it was observed that mutual fund performance analysis needs an extensive in-depth analysis of various factors. The present study proposed to analyze the factors that influence the behavior of investors in selecting mutual funds in Kazakhstan. The growing interest of citizens in increasing their funds has led to the revival and development of mutual funds and the formation of a collective investment market. The COVID-19 pandemic has led to an increasing interest in the securities market, and the country's stock market is experiencing tremendous growth in the number of retail investors. Understanding the external factors that impact the development of mutual funds in

Kazakhstan is critical for investors, fund managers, and policymakers seeking to capitalize on the opportunities presented by this growing industry.

In conclusion, this study examined the external factors that impact the development of mutual funds in Kazakhstan. The increasing household savings rate, foreign experience and investment, and a growing interest in the securities market all suggest a positive outlook for the mutual fund industry in the country. However, regulatory policies, market conditions, and geopolitical events will continue to play a significant role in shaping the industry's future.

Furthermore, the study conducted a survey to analyze the factors that influence investors' behavior in the selection of mutual funds in Kazakhstan. The results highlighted the importance of consistent past performance, size of funds, and cost of transaction in mutual fund selection.

The study's limitations include the small sample size and the exclusion of younger investors from the survey. Additionally, the study only focused on external factors and did not delve into the internal factors that affect mutual fund performance.

Following recommendations are developed:

Encourage investor education and awareness campaigns to increase knowledge about mutual funds and the benefits of investing in them.

Monitor and analyze external factors such as regulatory policies, economic conditions, and geopolitical events to identify potential risks and opportunities for the mutual fund industry in Kazakhstan.

Develop and implement policies that support the growth of the mutual fund industry in Kazakhstan, such as tax incentives for investors and favorable regulatory frameworks.

Further research on the factors that influence investors' behavior in selecting mutual funds in Kazakhstan to better understand and meet the needs of investors.

Encourage the development of local fund managers to increase competition and provide investors with a wider range of investment options.

To improve future research, studies could be conducted to analyze the internal factors that influence mutual fund performance and to expand the survey to include a larger and more diverse sample of investors. In addition, policymakers and regulators should continue to monitor the mutual fund industry's development and create a conducive environment for its growth in the country. Overall, this study provides valuable insights into the external factors affecting the mutual fund industry in Kazakhstan and could inform investment decisions and policymaking in the country.

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AUTHOR BIOGRAPHIES

***Lyudmila E. Kan –** PhD Student, Economics Department, Turan University, Almaty, Kazakhstan. Email: 21220835@turan-edu.kz, ORCID ID: https://orcid.org/0000-0002-8551-0573

Tamara T. Mukhamedyarova-Levina – PhD, Associate Professor, Turan University, Almaty, Kazakhstan. Email: honeyzhu@mail.ru, ORCID ID: https://orcid.org/0000-0002-9744-4104

Bizhamal A. Abdullayeva – Cand. Sc. (Econ.), Finance and Accounting Department, NARXOZ, University, Almaty, Kazakhstan. Email: olia_kz@mail.ru, ORCID ID: https://orcid.org/0000-0003-2208-0913

Dinara M. Mukhiyayeva – PhD in Economics, Associate Professor, Management Department, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: gauhar1973@mail.ru, ORCID ID: https://orcid.org/0000-0002-7634-5166

Investing in bond mutual funds.

I plan to begin taking money from my investments in . . .

Less than 1 year
1-2 years
3-5 years
6-10 yers
11-15 years
More than 15 years

As I withdraw money from these investments, I plan to spend it over a period of . . .

2 years or less
3-5 years
6-10 years
11-15 years
More than 15 years

When making a long-term investment, I plan to keep the money invested for . . .

1-2 years
3-4 years
5-6 years
7-8 years
More than 8 years

Which statement best describes your knowledge of investments?

I have very little knowledge of investments and financial markets.
I have a moderate level of knowledge of investments and financial markets.
I have extensive investment knowledge; understand different investment products and follow financial markets closely.

From September 2020 through November 2020, stocks lost over 31%. If I owned a stock investment that lost about 31% in three months, I would . . .

(If you owned stocks during this period, please select the answer that matches your actions at that time.)

Sell all of the remaining investment
Sell some of the remaining investment
Hold on to the investment and sell nothing
Buy more of the investment

Generally, I prefer an investment with little or no ups and downs in value, and I am willing to accept the lower returns these investments may make.

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

When the market goes down, I tend to sell some of my riskier investments and put money in safer investments.

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

Based only on a brief conversation with a friend, coworker, or relative, I would invest in a mutual fund.

I strongly disagree

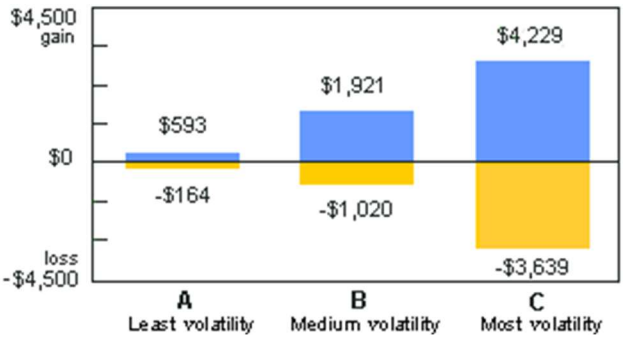
I disagree
I somewhat agree
I agree
I strongly agree

From September 2021 through October 2021, bonds lost nearly 4%. If I owned a bond investment that lost almost 4% in two months, I would . . .

(If you owned bonds during this period, please select the answer that matches your actions at that time.)

Sell all of the remaining investment
Sell some of the remaining investment
Hold on to the investment and sell nothing
Buy more of the investment

The chart below shows the highest one-year loss and the highest one-year gain on three different hypothetical investments of $10,000.* Given the potential gain or loss in any one year, I would invest my money in . . .



Investment A (gain $593; loss -$164)
Investment B (gain $1,921; loss -$1,020)
Investment C (gain $4,229; loss -$3,639)

(*The maximum gain or loss on an investment is impossible to predict. The ranges shown in the chart are hypothetical and are designed solely to gauge an investor's risk tolerance.)

My current and future income sources (such as salary, Social Security, pension) are . . .

Very unstable
Unstable
Somewhat stable
Stable
Very stable

When it comes to investing in bond mutual funds , I would describe myself as . . .

Very inexperienced
Somewhat inexperienced
Somewhat experienced
Experienced
Very experienced

What is your estimated net worth (investments, cash, home and other real estate less mortgage loans and all other debts)?

Less than $1000
Less than $2000
Less than $3000
Less than $4000

This investment account represents approximately what percentage of your total savings and investments. (Total savings and investments include all the money you have in cash savings, GICs, savings bonds, mutual funds, stocks and bonds)?

Less than 25% (10 points)
25%-50% (5 points)

51%-75% (4 points)
More than 75% (2 points)

How would you classify your overall financial situation?

No savings and significant debt
Little savings and a fair amount of debt
Some savings and some debt
Some savings and little or no debt
Significant savings and little or no debt

What is your age group? (*Your age is an important consideration when constructing an investment portfolio. Younger investors may have portfolios that are primarily invested in equities to maximize potential growth if they also have a higher risk tolerance and long investment time horizon. Investors who are retired or near retirement are often less able to withstand losses and may have portfolios that are invested to maximize income and capital preservation)*

Under 35
More 35
More 45
More 55
More 65

I check the management expense ration (MER) before purchasing a bond mutual fund….

always
sometimes
do not think it's important
I forget to do it
I do not know what is it

Regularly I compare the funds cost and performance against similar funds to see what kind of value I'm getting…

always
sometimes
do not think it's important
I forget to do it
I do not know what is it

In making financial and investment decisions you are:

Very conservative and try to minimize risk and avoid the possibility of any loss (0 points)
Conservative but willing to accept a small amount of risk (4 points)
Willing to accept a moderate level of risk and tolerate losses to achieve potentially higher returns (6 points)
Aggressive and typically take on significant risk and are willing to tolerate large losses for the potential of achieving higher returns (10 points)

When you are faced with a major financial decision, are you more concerned about the possible losses or the possible gains?

Always the possible losses (0 points)
Usually the possible losses (3 points)
Usually the possible gains (6 points)
Always the possible gains (10 points)

I agree that the success of a mutual fund depends on the portfolio manager's skill at choosing investments….

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

It is important to research management report of fund performance, simplified prospectus and soma fund fact

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

If a fund's returns vary a lot from year to year, it may be considered higher risk because its performance can change quickly in either direction.

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

It's important to make sure the fund's goal fits with your investment goals

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

I prefer the higher potential returns with the higher risk rather than less returns with less risks

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

Past performance can't tell me how the fund will perform in the future

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

High turnover can be a warning sign

I strongly disagree
I disagree
I somewhat agree
I agree
I strongly agree

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RESEARCH ARTICLE
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Sustainability Covenants as a Financial Measure to Enhance the Efficiency of Companies

Stefan Noack[1]* | Ilona Bordiyanu[2] | Bernd Zirkler[1] | Christian Brauweiler[1]

[1] Westsächsische Hochschule Zwickau – University of Applied Sciences, Zwickau, Germany

[2] Kazakh-American Free University (KAFU), Ust-Kamenogorsk, Kazakhstan

Corresponding author:
*** Stefan Noack** – M.A., Westsächsische Hochschule Zwickau – University of Applied Sciences, Zwickau, Germany
Email: stefan.noack.cyp@fh-zwickau.de

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EJEBS

Abstract

This article aims to identify the status quo of sustainability covenants firstly, secondly analyze their possibilities in enhancing sustainability performance and thirdly present further research directions. Covenants are additional contractual agreements mainly used in financial contracts, e.g. loans. They often focus on financial performance indicators, e.g., equity and net debt ratio, which the borrower must fulfil. However, the purpose of this article is to present a new approach to non-financial covenants, so-called sustainability covenants. Therefore, also nowadays ecological and social challenges are addressed. Banks have a huge impact on sustainable development by introducing more non-financial indicators in evaluating the creditability of borrowers. As a key hypothesis, this article argues that the approach of integrating ecological and social objectives through non-financial covenants is underrepresented in economic and business practice. Therefore, this article wants to examine how those objectives can be integrated into the financial concept of covenants and rely on research towards an integrative sustainability approach. In addition, a systematic literature review was conducted from October 2022 to July 2023 to analyze the status quo and derive future research directions. The review was based on two databases – Google Scholar and Scopus. As one key result, it was revealed that there is scarce existing literature on sustainability covenants, which refers to them as a policy measure. Only a few publications analyze their usage in financial contracts. However, this study implies the necessity for further research on sustainability covenants, emphasizing that they are powerful indicators to enhance the sustainability performance of the borrower.

Keywords: Sustainability Covenants, Financial Covenants, Non-Financial Covenants, Economic Growth, Sustainability Performance Management, Management Control System, Business

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JEL Code: D40, G21, G32

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1. INTRODUCTION

The topic of sustainability has gained enormous importance in recent years and has become indispensable in politics, ecology, finance, and economics. Against the backdrop of a growing world population and the associated increase in demand for consumer goods and energy, sustainability is one of the most important topics of the 21st century, mainly because of limited input factors. Already in the 70s, global awareness for sustainable development was created. The reports from the limits of growth from the Club of Rome accelerating to the Brundtland Report "Our common future" from the World Commission for Environment and Development (WCED), building the foundation for the concept of sustainable development and leading to the 17 sustainable development goals of the United Nations (UN).

However, the pressure from stakeholders on financial institutions and companies is increasing. Furthermore, man-made climate change and climate-related problems, like landslides, floods, tornadoes, heat waves, and droughts lead to new challenges for companies and their global supply chains. Therefore, only reporting on sustainability is not sufficient anymore, leading to the need for new financial measures and tools to enhance the sustainability performance of companies (Zirkler et al., 2018).

Moreover, the finance sector is under enormous pressure from politics and its stakeholders to develop effective and efficient sustainable measures, like green bonds, sustainability-linked loans, and Environmental, Social and Governance (ESG) investments. In this context, financial covenants are considered a powerful tool for monitoring and steering the environmental impact of organizations (Jouffray et al., 2019; Sumalia et al., 2020). However, the topic of sustainability indicators used as financial covenants, therefore, additional clauses bound to an indicator in financial contracts, has not yet been covered in the standard literature. In contrast to the mentioned pressure on financial institutions and companies to increase their sustainability performance, the lack of legally binding clauses to financial contracts offers a research gap.

Jouffray et al. (2019) and Loorbach et al. (2020) underline the power of covenants to enhance the sustainability performance of companies. Furthermore, the development of sustainability-linked loans, which bind the loan's interest rate to the sustainability performance of a borrower, e.g., the CO2 emissions, is a way to foster sustainable development (Guthrie, 2022). Therefore, the question arises of how covenants as a finance tool to reduce information asymmetries can be used by financial institutions as a measure to monitor and steer the sustainability performance of the borrower.

This article uses a literature review as a first step to capture the status quo of sustainability covenants in the literature and relate to their usage in practice. Therefore, the Scopus and Google Scholar databases were analyzed. In addition, the collected results are used to describe the status quo, and further implications for actions to use covenants to foster sustainability are discussed. In the conclusion section, further research opportunities are provided.

2. LITERATURE REVIEW

In general, covenants are additional contractual agreements/clauses in any contract or agreement (Woehe et al., 2013). In a financial context, covenants are additional contractual agreements/clauses primarily used in international bank loan contracts between a borrower and a lender, which function as an early risk monitoring system (Prilmeier, 2017). They limit the scope of the debtor before the actual risk occurs to protect the creditor. Such measures aim to increase the chances of closing financing gaps through capital providers and reduce operational debt service expenses, significantly contributing to sustainable management (Zirkler et al., 2020). Covenants can be divided into financial and affirmative covenants (see Figure 1).

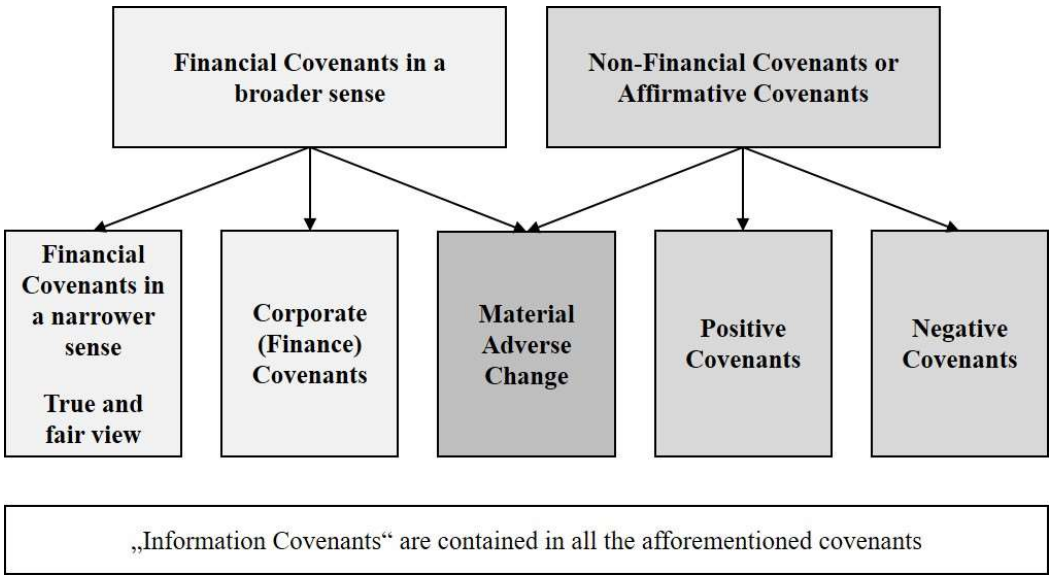

FIGURE 1. Classification of types of covenants

Source: compiled by source Brauweiler (2016)

Financial covenants are additional agreements between a borrower and a lender, including critical financial figures that the debtor has to achieve. Therefore, they regulate, legally binding, which values of the agreed financial indicators must be achieved in a period and may not be exceeded or fallen below (Zirkler et al., 2020). Typical key figures are the equity ratio, the (dynamic) debt-equity ratio, the return on equity or return on assets, the cash flow, and the cash flow and asset coverage ratio. Also, interest coverage ratios are important (Prilmeier, 2017).

However, this means that by overshooting or undershooting the agreed figures, the borrower breaks the covenant and the contract will trigger certain events (see Figure 2).

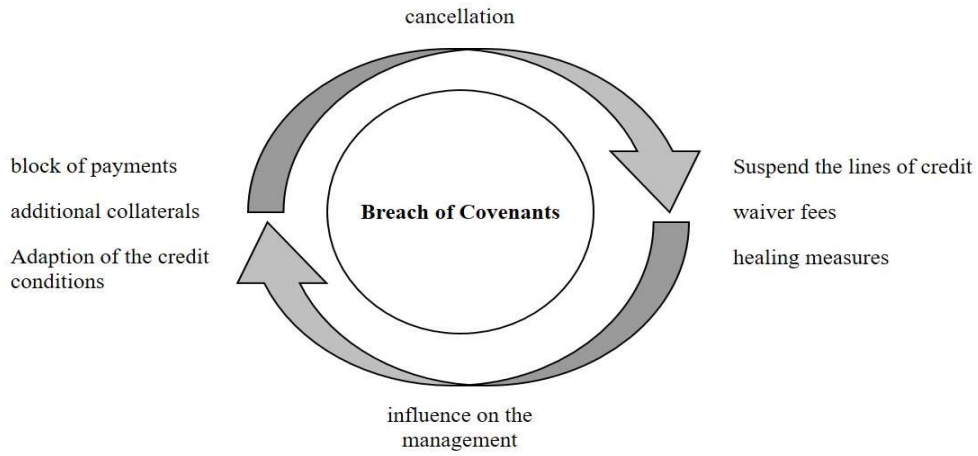

FIGURE 2. Breach of Covenants

Source: own presentation, content related to source Graml (2014)

In most cases, the credit lines will be suspended, or the interest rate will be adjusted to the new risk situation. Nevertheless, the creditor can influence or change the management and implement an interim manager. Furthermore, the creditor can cancel the loan contract. However, this is not used often in practice. A fee will usually be collected and healing measures initiated (Noack & Brauweiler, 2019).

Affirmative covenants contain concrete obligations to take actions in the form of commands (positive covenants) or prohibitions (negative covenants). They can be further subdivided into non-financial covenants (compliance with laws, reporting of required information) and corporate covenants (e.g., prohibition of selling certain assets) (Woehe et al., 2013; Zirkler et al., 2021). Examples are the negative pledge (prohibition for further collateralizing), pari-passu agreement (in case of insolvency, equal treatment of claims from the lender and other creditors), and the cross-default clause (possibility of cancellation if the borrower breaks agreements with other contractors) (Olivares-Caminal, 2017).

According to the literature analysis conducted for this article, there is little literature devoted to the topic of sustainability covenants, especially their usage in financial contracts such as loans (see Figure 3). Contrary to this, the overall topic of covenants, especially in finance and business management literature, is widely spread (e.g., studies of (Davydenko et al., 2020; Prilmeier, 2017). A quick search of "financial covenants" relates to around 6.330 results in Google Scholar and 105 search results in the Scopus database.

Furthermore, if the search term "sustainability" is expanded regarding the Tripple-Bottom-Line Approach of Elkington (1994) – which explains sustainability as a balanced concept resulting from the interaction of the economic dimension with the social and environmental dimension – the term environmental covenants is most spread in literature, regarding the sustainability framework (see Figure 3).

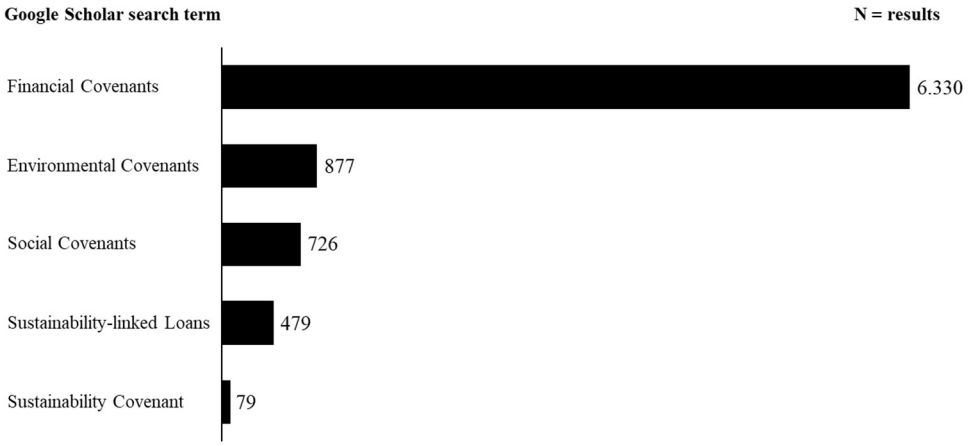

FIGURE 3. Google Scholar search results for Sustainability Covenants, Environmental Covenants, Social Covenants and Sustainability-linked Loans

Source: compiled by authors

Environmental Covenants are closely related to the definition of sustainability covenants as voluntary agreements between government and corporations or industries. They can be both affirmative and quantitative (Herenius et al., 1994). Covenants and indicators of lenders to monitor the environmental activity of borrowers (Choy et al., 2023) are the subject of a wider literature stream. However, with in total of 877 research results (see Figure 3), it is still an

underdeveloped literature stream. One reason for this extensive research compared to covenants that integratively consider all three dimensions of the TBL could be the extensive focus of government agencies on climate goals and sustainable development goals.

Social or value covenants are morally binding and inherent norms, values, and trust, e.g., the Armed Forces Covenant of the UK Ministry of Defence (Equality and Human Rights Commission, 2022). In a business context, they can be seen as a stakeholder-centric perspective where the company forms a bilateral informal agreement through promises and trust with its stakeholders. This can be expressed through the company's communication with its customers indirectly, e.g., corporate behavior, culture, and strategy, or directly, e.g., marketing, customer services, and public statements (Biraghi & Gambetti, 2013). The social dimension is highly intangible and a new research field in the sustainability management literature. This could explain why search results are lower compared to environmental covenants (see Figure 3).

Nowadays, sustainability in the finance sector is often considered under the framework of ESG – Environmental, Social, and Governance (Abhayawansa & Tyagi, 2021). ESG ratings are a new measure from financial institutions like banks to rate a corporation's sustainability performance and adjust, e.g., their interest rate towards the rating results (Jha & Rangarajan, 2020; Kaplan & Ramanna, 2021). This is brought further through sustainability-linked loans, which connect determinants of loans such as interest rates towards, e.g., the CO2 emissions of a company (Carrizosa & Ghosh, 2022; Guthrie, 2022). Therefore, the interest rate will increase if the company emits more than the agreed CO2 emissions in the loan contract. Regarding the importance of sustainability-linked loans, one could assume that literature deals extensively with this term. Nevertheless, regarding Figure 3, only 477 search results could be discovered, which is way under the search terms environmental and social covenants. As covenants are part of loans, search results for sustainability-linked loans were assumed to be higher. However, sustainability-linked loans are a new research field, whereas sustainability covenants have been elaborated on since 2002 in literature, according to the literature analysis.

However, this study examines the status quo and development of sustainability covenants in literature and praxis through literature analysis. Regarding the found literature, sustainability covenants can be distinguished on the one hand as – most of the times – voluntary governmental agreements and, on the other hand, additional clauses in financial contracts. They inherit as well affirmative covenants and quantitative indicators, which are non-financial.

Moreover, a third stream of literature was also discovered in the framework of this study. This one relates to the etymological foundation of the term covenant from Christian theology, which defines a covenant as an agreement, commitment, or promise between god and man (Otubanjo et al., 2010). In the framework of the literature analysis, this sort of literature and definitions were not considered and excluded. However, the combination of this literature stream with the thoughts of sustainability was discovered in a publication by Bosselmann et al. (2008). They define democratic ecological covenants as an obligation to ourselves and the earth or even a greater dimension like the universe (Bosselmann et al., 2008), which also relates to the bilateral agreement explored in social covenants (Biraghi & Gambetti, 2013).

However, this study focuses on the first two mentioned literature streams and adds the publication of Bosselmann et al. (2008) in the literature analysis for a holistic view but clearly distinguishes that this is not the focus of this article.

According to the literature on sustainability covenants, 79 search results could be determined (see Figure 3). It is mentionable that the definition is based on the financial definition of covenants, which are additional agreements in any business contract, e.g., in loan contracts. Furthermore, due to distinguishing between affirmative and financial covenants, sustainability covenants are a measure for both governments and financial institutions. As the term sustainability suggests, an integrative approach to environmental, social, and economic aspects

of literature is very scarce in this field. Moreover, sustainability is often associated with sustainable development goals or sustainable development, which are essential frameworks on a national level.

Therefore, sustainability covenants can be defined in a governmental context as additional voluntary agreements between a government or a government agency with a covenant partner (e.g., companies, public authorities, NGOs, industry associations, and other organizations) (Cary et al., 2004; Gunningham, 2017). The goal is that the company can improve its environmental impact and act as an environmental innovator in the regional or national community (Cary et al., 2004). The state can foster environmental innovations (Shinn & Polsky, 2002).

Furthermore, the covenant partner can receive funds from the government agency to achieve a sustainable transition. In this context, the Environment Protection Authority (EPA) in Victoria, Australia, signed a sustainability covenant with SAM Indexes GmbH to support the expansion of Australia's sustainable investment market, provide a sustainability benchmark for investors, and offer an incentive for companies to achieve constant improvement. The company agreed to affirmative, positive covenants to receive EPA funding (SAM Indexes GmbH, 2007).

Concerning the literature analysis, more results were discovered using sustainability covenants as an agreement between government agencies and the covenant partners. The identified governmental actors with their covenant programs are listed in Table 1.

TABLE 1. Governmental actors and their established covenants

Governmental actor	Covenant
Environment Protection Authority (EPA) in Victoria, Australia Victoria's Voluntary Sustainability Covenant model (VSC) was introduced with Section 49AA–49AC, Environment Protection Act 1970.	"*Sustainability covenants are voluntary agreements between EPA and a 'person or% body'. They seek to improve resource use, and promote best practice to advance social and economic development. They are established by the EP Act2, which provides for agreements:* *• to increase the efficiency with which the person or body uses resources to produce products or services* *• to reduce the ecological impact of the production of services and the processes by which they are produced.*" (Krpan, 2011)
Québec government, Canada Framework agreement with the Aluminium Association of Canada	Covenants targeting Greenhouse Gas emission reductions are signed with individual aluminium companies voluntarily. Covenant with the Rouyn-Noranda, Canada Magnolia production facility, forcing a requirement to reduce SF6 emissions. Introducing voluntary covenants with the aluminium industry. (Bramley et al., 2002)
Australian Packaging Covenant Organisation (APCO): founded as National Packaging Covenant (NPC) in 1999 Collective Impact Framework, Australia (see for further information APCO, 2022)	"*The covenant was established to minimize the environmental impacts of consumer packaging waste throughout the entire life cycle of the packaging product by closing the recycling loop, developing economically viable and sustainable recycling collection systems and ensuring that the voluntary process continues.*" "*Signatories to the Covenant recognize that a cooperative approach between industry and government is the best method of achieving consistency in the management of packaging and paper.*" (Beyer, 2002)
New Jersey Department of Environmental Protection (NJDEP), USA	Signing of sustainability covenants with some of New Jersey's most prominent companies according to New Jersey's Greenhouse Gas Action Plan (Shinn & Polsky, 2002) Signing the sustainability covenant by all 56 presidents of New Jersey's state colleges (Shinn & Polsky, 2002)

New Jersey's Sustainability Greenhouse Gas Action Plan	For example, Rowan University agreed to reduce its greenhouse gas emissions to 3.5% between 1990 and 2005 (Hollar & Sukumaran, 2002)
Office of Commonwealth Games Co-ordination (OCGC), Australia Sustainability Covenants according to the Commonwealth Games Environment Strategy	Construction firms signed sustainability covenants for constructing the major Games infrastructure and incorporating water- and energy-saving technologies and design elements. For example, one covenant was signed with the Village Park Consortium to fulfil construction regulations for rainwater collection, water treatment, and recycling. (Harris, 2010)
EU Covenant of Mayors for Climate & Energy, Belgium Voluntary covenants through a Sustainability Action Plan	Voluntary covenants were established 2008 for local governments to implement the EU climate and energy objectives. The initiative gathers more than 9,000 local and regional authorities across 57 countries. Based on this success, the Global Covenant of Mayors was established. (EU Covenant of Mayors, 2022) The Covenant of Mayors provides information about several indicators related to the emissions reduction plans of those cities that have signed the Covenant. (Pablo-Romero et al., 2015)
City of Kalamazoo, USA Regional Sustainability Covenant	"*The city of Kalamazoo has decided to collaborate with the greater southwest Michigan area by being a signatory to a regional Sustainability Covenant. The covenant introduced environmental-related indicators referring to waste management/recycling, water usage, and transportation.*" (Geiger, 2010)
Netherlands Government, Ministry of Environment Voluntary covenants based on the National Environmental Policy Plan (NEPP)	Establishment of Voluntary covenants as agreements between the state and licensing authorities and industry sectors The covenants inherit emission reduction targets The signing companies agree to transmit corporate environmental plans to enhance the quality of the environmental management (Chapman, 2003; Suurland, 1994)
Tasmanian Environment Minister, Australia Voluntary Conservation Covenants	"*A conservation covenant is a voluntary, legally binding agreement made between a landowner and the Tasmanian Environment Minister that aims to protect and enhance the natural, cultural and scientific values of private property. Conservation covenants are made under Part 5 of the Nature Conservation Act 2002 (NC Act).*" "*The terms of conservation covenants will vary, depending on the values present on the land and the conditions agreed between the Tasmanian Minister and the landowner (and, in some circumstances, the Commonwealth Minister). The terms may require compliance with a detailed management plan for the covenanted land or the terms may be imposed by the covenant itself.*" (EDO Tasmania, 2017)
Source: derived by authors according to references	

The other discovered literature stream regards sustainability covenants as additional agreements to a loan and uses them in the sustainable finance framework as a monitoring and enforcement tool. In this regard, covenants can be a powerful tool and critical mechanism for banks to monitor the sustainability performance of the borrower and incentivize them to take specific sustainability actions (Jouffray et al., 2019; Sumalia et al., 2020). Moreover, they can be used as a steering mechanism to close information asymmetries regarding sustainability reporting and enhance the sustainability performance of the borrower (Sumalia et al., 2020); (see for steering mechanisms of covenants: Zirkler et al., 2020). However, specific tailoring is needed for these sustainability covenants to fit specific industry sectors (Sumalia et al., 2020).

The literature directly related to sustainability covenants is very scarce and focuses on contracts between governmental agencies and stakeholders. Sustainability covenants are a comprehensive spread governmental tool, especially in Australia, to protect nature, avoid water pollution, reduce waste, and therefore focus on the ecological dimension of sustainability. Literature reports positively on the usage of non-financial sustainability covenants and introduces them as a measure to enhance governmental activities in the field of ecological sustainability.

Furthermore, no existing literature review was found, but the topic has been present in the literature since 2002 (see Figure 4). Moreover, one of the first discovered sustainability covenants was established in 1970 –Victoria's Voluntary Sustainability Covenant model. The literature examined this model and reported on the implications for the region and businesses. As can be seen in Table 1, this article discovered nine governmental actors from the literature review, which set sustainability covenants into force. However, this contributes to the literature and shows how the topic developed since 2002, which new sustainability covenants were set into force, how they developed, and which implications on sustainability performance can be derived. Collecting over 20 years of research is a crucial step to enhance the importance of the topic and shape further research in this field, as sustainability is an omnipresent research topic of our time.

In addition, the recent literature focuses on integrating ecological and social drivers through non-financial covenants into loan contracts. Therefore, the financial dimension can be addressed with sustainability covenants as well. This literature does not consider the existing literature on sustainability covenants in the governmental area. Therefore, this literature review is essential to show synergies and development lines between those two literature streams. Furthermore, as sustainability-linked loans are used more often nowadays, it is striking that the existing literature on sustainability covenants in business and finance is scarce. This article discovers the status quo and introduces further research possibilities on sustainability covenants in loan contracts to enhance the sustainability performance of companies.

3. METHODOLOGY AND DATA

Considering the classic literature on financial covenants, the dimension of sustainability or environmental and social indicators is missing in the standard research literature. However, with the current man-made depletion of our planet, sustainability aspects need to be integrated into the economic dimension. Moreover, sustainability-linked loans or ESG ratings are regarded as new financial tools to implement sustainability drivers and objectives as financial measures and monitor a company's sustainability performance. In addition, the fundamental hypothesis of this article argues that the approach of integrating ecological and social objectives and drivers through non-financial covenants is underrepresented in economic and business literature and corporate practice. However, the implementation of sustainability covenants can be a powerful financial tool to enhance the sustainability performance of lenders and borrowers.

Therefore, a systematic literature review as qualitative research method was conducted from October 2022 until July 2023 to firstly identify the status quo of sustainability covenants in literature, secondly analyze their importance in enhancing the sustainability performance of the agreed parties and thirdly present further research directions. The review was based on two databases – Google Scholar (http://www.scholar.google.com) and Scopus (http://scopus.com) – following a systematic and replicable procedure.

The systematic literature review is an established and well-known research approach in management literature. This article uses the main advantages of a literature review to collect and condense information about the status quo of sustainability covenants, analyse future research lines and develop a contextual theory towards sustainability covenants, as existing research is scarce (Sauer & Seuring, 2023).

In this article, the literature review and analysis used theoretical scientific research, synthesis, and deduction methods with an integrative and ongoing analysis. Firstly, quality- and content-related inclusion and exclusion criteria were determined. Regarding qualitative aspects, only articles in journals, books and conference proceedings were included. Grey literature and bachelor and master theses were excluded. Moreover, literature towards the religious definition of covenants and where specific covenants like the EPA covenants were mentioned only as an example (see for further information: Engel, 2006; Lodhia, 2015; Therivel, 2017) were excluded. However, literature on sustainability covenants is very scarce, and to show research potentials, also doctoral thesis was included.

As the subject of sustainability can be divided into closely related sub-areas, like environmental and social, and concerning the finance sector in ESG and sustainability-linked loans, which would lead to an enormous amount of results, the authors agreed to focus in this study on the term sustainability as content-related criteria. In addition, articles only focusing on the economic dimension of covenants were excluded. Furthermore, only English articles were included, and the review scope was not limited due to the manageable amount of discovered literature.

As search keywords in Scopus, only the search term "sustainability covenant*" led to results in a total of three, which could all be used for the analysis process. Considering the research in Google Scholar, the following literature landscape evolved:

"sustainability covenant" – 79 results
"sustainability covenants" – 63 results
"sustainable-linked covenant" – 0 results
"sustainability-linked covenant" – 1 result
"sustainability-linked covenants" – 4 results
"sustainable covenant" – 8 results
"sustainable covenants" – 4 results

After applying the inclusion and exclusion criteria and screening the text, using the search terms "sustainability covenant*", "sustainable-linked covenant*", "sustainability-linked covenant*", and "sustainable covenant*" in titles, abstracts and keywords, 41 articles remained to analyze the complete text, especially covenant-related text passages. The remaining literature was analyzed in an extensive procedure towards the contribution, covenants usage, definition, and publication parameters. Following the screening procedure, 28 articles remained for the literature analysis (see Table 2).

TABLE 2. Literature selection procedure for the analysis section

Scanned Object/Source	**Number of papers**
Results in Scopus	3
Results in Scholar	146
Excluding duplicates, grey literature, off-topic	./. 105
Complete-text screening	Σ 41
Removing non-relevant articles	./. 13
Remaining articles for the analysis	Σ 28
Source: created by authors based on source Mukatova et al. (2022)	

To provide a holistic view of the literature, we categorized the publications according to year, Governmental actors and the used form of covenants, Governmental actors and the number of publications referring to them, and usage of sustainability covenants.

4. ANALYSIS AND RESULTS

The first publication identified is from 2002, and most of the analyzed literature (16 publications) was written from 2002 to 2009 (see Figure 4). Due to adding the search term "sustainability-linked covenant*", three publications from the last three years could be identified. This could relate to recent literature from the financial field, where the term sustainability-linked loans is used more often (Carrizosa & Ghosh, 2022).

Furthermore, the results (see Figure 4) show that the topic of sustainability covenants is not a new invention.

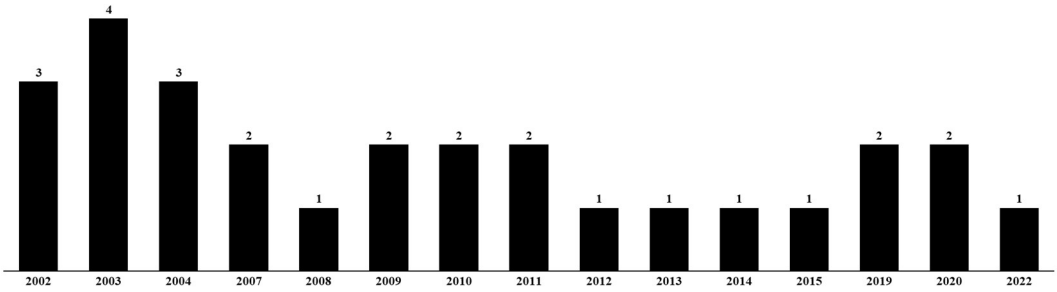

FIGURE 4. Distribution of publications by year

Source: compiled by authors

Despite the increasing research towards sustainability, the number of publications decreased or remained stable. This can be related to the governmental actors that develop and juristically agree on the sustainability covenants. Therefore, the literature on sustainability covenants is primarily from 2002 to 2004 when there was first evidence on Victoria's Voluntary Sustainability Covenant model, the Framework agreement with the Aluminium Association of Canada and the Australian Packaging Covenant. The signing of sustainability covenants with some of New Jersey's most prominent companies, according to New Jersey's Greenhouse Gas Action Plan and the voluntary covenants based on the National Environmental Policy Plan of the Netherlands, led to a further increase in the publications on sustainability covenants. Furthermore, the covenants released by the EPA are elaborated on most in the literature. As it is one of the best practical examples of existing sustainability covenants, which are also determined as sustainability covenants by the Australian state.

Further research is necessary to identify if other terms, like environmental covenants, ESG covenants, or sustainability-linked loans, are used more often in literature and why. However, this research is necessary because the literature suggests that sustainability-linked covenants in financial contracts effectively steer sustainability performance (Jouffray et al., 2019; Loorbach, 2020).

Surprisingly, even if covenants are considered as often used in financial contracts such as loans (Prilmeier, 2017), sustainability covenants are used more often by governmental agencies, especially in Australia and the Netherlands (see, for example, Cary et al., 2004; Chapman, 2003; McConvill & Joy, 2003). This offers an exciting research field where governmental agencies are ahead of the finance sector, which is seen as one key actor in fostering sustainable development (Nykvist & Maltais, 2022).

In the framework of the literature analysis, the following governmental actors and their implemented covenants could be identified (see Table 3).

TABLE 3. Governmental actors and the used form of covenants

Governmental Actor	Covenant	Country
Environment Protection Authority (EPA)	Voluntary non-financial Covenants Environmental indicators	Australia
Australian Packaging Covenant Organisation (APCO)	Voluntary non-financial Covenants Environmental indicators	Australia
Tasmanian Environment Minister (TEM)	Conservation Covenant Non-financial Negative Covenants	Australia
Netherlands Government, Ministry of Environment (MoE)	Voluntary non-financial Covenants Environmental indicators	Netherland
New Jersey Department of Environmental Protection (NJDEP)	Voluntary non-financial Covenants Environmental indicators	USA
City of Kalamazoo	Voluntary non-financial Covenants Environmental indicators	USA
Covenant of Mayors (CoM)	Voluntary non-financial Covenants Environmental indicators	European Union (EU)
Québec Government	Voluntary non-financial Covenants Environmental indicators	Canada
Source: Created by the authors according to the data		

The presented covenants are already discussed in the literature review in Table 1. However, according to the literature analysis, the EPA and NJDEP covenants, as most referred to covenants of the publications, are explained in more detail (see Figure 5).

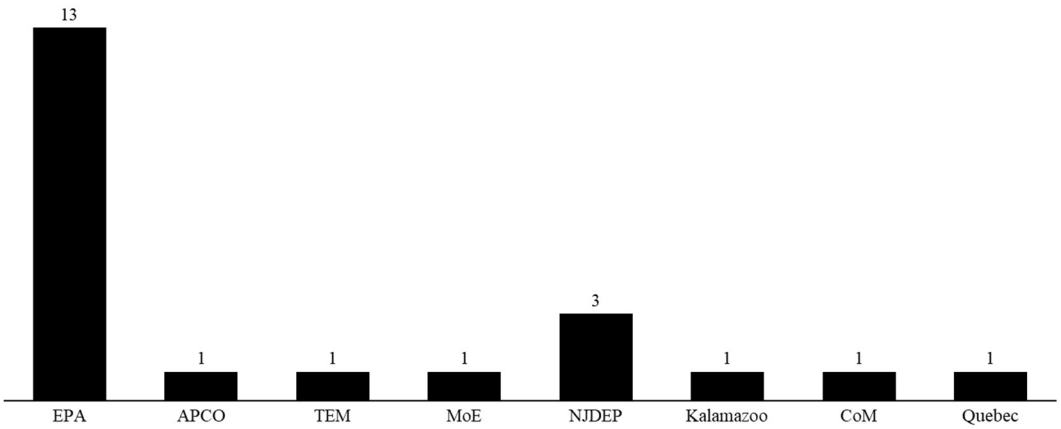

FIGURE 5. Governmental actors and the number of publications referring to them

Source: compiled by authors

Moreover, as described before, sustainability covenants are additional affirmative or non-financial covenants mostly agreed between a governmental agency and a stakeholder as a covenant partner. Therefore, this article identifies and examines the critical governmental actors according to the number of publications referring to them (see Figure 5). The statistical

distribution presented in Figure 5 shows a clear focus on the EPA actor. Their use sustainability covenant model can explain this. They are the first authority to invent and promote a sustainability covenant framework with this terminology. In addition, most of the publications deal with the implications and development of this sustainability covenant model. Furthermore, it is presented as an example of a sustainability covenant and its impacts on the environment and businesses. The New Jersey Department of Environmental Protection (NJDEP) is the second largest governmental actor. They were the first who set up a sustainability covenant in the United States and signed them with all New Jersey's state colleges in 2002 and New Jersey's most prominent companies. According to the impact and the used terminology as sustainability covenant, the search results were higher than on the other remaining governmental actors.

The Environment Protection Authority (EPA) in Victoria, Australia, added a sustainability covenant model within Section 49AA–49AC of the Environment Protection Act in 2002 (Horne et al., 2009). The covenants are established between EPA and critical organizations from different industry sectors or an industry as a whole, therefore, function as a policy instrument. By signing the voluntary sustainability covenants, companies can increase their sustainability performance and environmental impact. Furthermore, they can receive funds from EPA to accomplish sustainability-related investments. The funds or other benefits are agreed with the covenants but are not written in the Environmental Protection Act (Kazaglis et al., 2007; Krpan, 2011; McConvill & Joy, 2003; Newton, 2004).

The aims are to foster sustainable development, increase resource efficiency, reduce the ecological impact of products and services and create a commitment to environmental protection. Furthermore, they foster partnerships between the EPA as a governmental organization and industries (Kazaglis et al., 2007; Krpan, 2011; McConvill & Joy, 2003).

The analyzed literature supports the concept of sustainability covenants. It regards them as a powerful policy instrument that will enhance sustainable development and increase the sustainability performance of the contracted parties and the region (see, for example, Damptey, 2011; Gunningham, 2017; Kazaglis et al., 2007; McConvill & Joy, 2003).

In 2011 Krpan (2011) reviewed that there exist 24 established covenants. They cover a wide variety of organizations. One such covenant exists with a significant water drinking production utility in Melbourne, the public sector, to reach a net zero goal on GHG emissions (Ananda, 2018). Furthermore, the Plastics and Chemicals Industry Association implemented a zero-waste goal to reduce their environmental impact by deteriorating the environment with plastic waste (Smith, 2009). Also, banks agreed to covenants to increase their sustainability performance (Lodthia, 2015). VicSuper Pty Ltd (a significant public service provider for superannuation funds) wants to enhance its sustainability performance with this agreement, which enhances sustainability investments, establishes a sustainability reporting system, and includes further information covenants to inform stakeholders. On the contrary, EPA agrees to support the superannuation industry's sustainability transition (Cary et al., 2004). Moreover, the Victorian Trucking Association (VTA) established a covenant with EPA to improve resource efficiency within the logistics industry. Therefore, they discover joint projects and work on specific sustainability initiatives like carbon footprint reduction (Markey et al., 2014).

The New Jersey Department of Environmental Protection (NJDEP) covered the Dutch model of sustainability covenants and used them as a measure to accomplish its Sustainability Greenhouse Gas Action Plan and reduce GHG emissions (Bramley et al., 2002; Engel, 2006; Shinn & Polsky, 2002). NJDEP developed environmental indicators to measure the state's sustainability goal achievement and used them as sustainability covenants with its local organizations (Engel, 2006; Shinn & Polsky, 2002;).

A meaningful achievement was signing all 56 presidents of the New Jersey state's colleges in February 2001 and some of the region's most prominent companies, implementing GHG emission

reduction strategies (Bramley et al., 2002; Shinn & Polsky, 2002). The colleges agreed to reduce their GHG emissions by 3,5 % until 2005 and received support from NJDEP (Bramley et al., 2002; Hollar & Sukumaran, 2002).

To summarize, sustainability covenants are currently used more as a policy instrument than in financial loan contracts. However, the literature analysis also identified five articles that focus on the usage and implementation of sustainability key performance indicators and sustainability regulations as covenants in their contracts (see Figure 6).

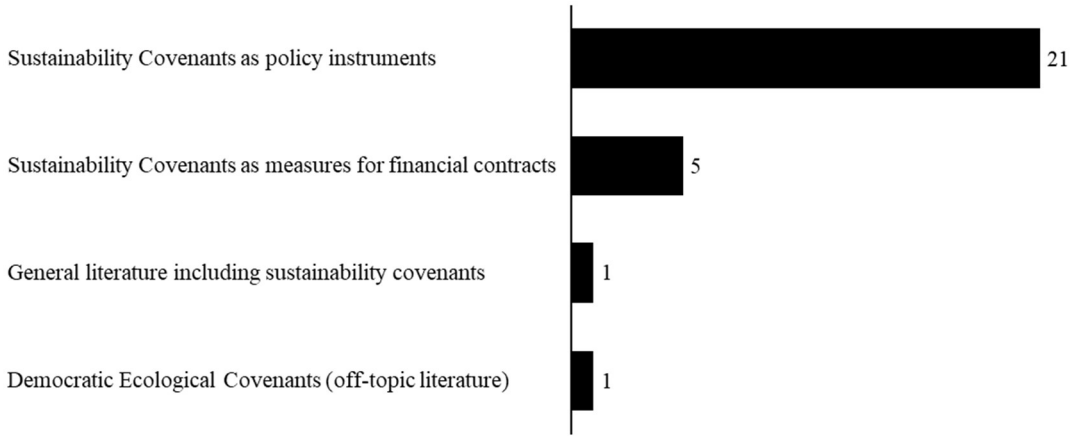

FIGURE 6. Usage of sustainability covenants

Source: Created by the authors according to the data

As described in the paragraphs before, governmental actors use sustainability covenants as terminology more often. Each additional agreement between a government agency and a covenant party, regarding primarily ecological regulations, is considered a sustainability covenant. The EPA (as an example) is famous for its sustainability covenant model and, therefore, influences the literature review and presents evidence of using sustainability covenants as policy instruments (see Figure 6). In one dissertation from Prest (2003), restrictive covenants in the sustainable usage of borrowed land and forestry are discussed. They show a practical example of sustainability regulations as affirmative covenants to preserve forests and nature. Furthermore, examples of sustainability covenants, like the EPA model or as part of an environmental management system, are given and present a first attempt to consider sustainability covenants in general. However, this is not the book's central issue, and elaborations are very scarce. This article evaluated the publication to support further research on sustainability covenants and show an exciting research field of sustainability covenants as policy instruments.

More important for the research on covenants as a measure to enhance the sustainability performance of companies are the five publications which consider sustainability covenants as a measure in financial contracts (see Figure 6). The financial literature stream regards sustainability covenants as essential measures for the finance industry to increase the sustainability performance of its borrowers (Jouffray et al., 2019; Thomae et al., 2019). This literature stream includes articles from the last three years and can be considered new.

Furthermore, the publications suggest transforming financial instruments to implement sustainability indicators and aspects (Jouffray et al., 2019; Loorbach et al., 2020). However, practical examples are scarce in the discovered literature. The Principles for Investment in

Sustainable Wild-Caught Fisheries are one example, where nine principles function as a basis for voluntary sustainability-linked covenant usage (Jouffray et al., 2019; Sumalia, 2020).

Furthermore, Hoepner & Schneider (2022) explain how investors can influence healthy behavior by using sustainability key performance indicators as covenants. In the analyzed investment case, covenants were used before by the investor and were adjusted toward sustainability indicators (Hoepner & Schneider, 2022).

Nevertheless, sustainability-linked covenants are regarded as powerful tools for the finance sector, but the literature focuses more on sustainability improvement loans, green bonds, ESG investments, and sustainability-linked loans (Thomae et al., 2019).

5. CONCLUSIONS

This article enriches the literature on sustainability covenants with a systematic literature review. Furthermore, this article introduces the necessity to conduct future research on sustainability-linked covenants for financial contracts as they can increase the borrower's sustainability performance.

According to the covenant literature, covenants can be used as financial or non-financial/affirmative covenants (Woehe et al., 2013). Regarding this definition, sustainability covenants would count as non-financial covenants establishing positive (allow specific actions) and negative (restrict or prohibit actions) covenants. However, this definition's specific nature of non-financial indicators is not regarded in the classification made by literature. Sustainability performance indicators express the ecological and social impact of the borrower and are linked to financial investment or loan criteria. Therefore, the financial sphere and non-financial sphere are combined in one contract.

Non-financial Covenants in loan contracts function similarly but focus on regulations concerning preparing and reporting financial statements or prohibitions like the negative pledge, pari-passu agreement, and the cross-default clause. Therefore, they do not measure non-financial indicators, distinguishing them from sustainability covenants.

Surprisingly, the identified literature on sustainability covenants focuses on using them as policy tools. Few publications discuss them as instruments for financial contracts without practical evidence. All of them see the potential of sustainability covenants to steer and monitor the sustainability performance of a borrower and recommend the usage in practice.

In addition, the topic of sustainability covenants seems to be an exciting research field, providing an essential measure for financial institutions to foster the sustainability performance of their clients. Furthermore, covenants reduce risks and information asymmetries in loan contracts. Therefore, using sustainability covenants in loan contracts can reduce information asymmetries towards the sustainability performance of the borrower, and moral hazard approaches like greenwashing can be identified. This is essential information for stakeholders and ESG investors.

Considering the scarce existing research on sustainability covenants, further empirical research is needed. A follow-up study could extend the literature review and also search for the terms “environmental covenant”, “ESG covenant*”, and “sustainability-linked loans” to have a more diversified view on the topic and develop strategies for action.

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AUTHOR BIOGRAPHIES

***Stefan Noack** – PhD candidate in a cooperative PhD program between Kazakh-American Free University, Ust-Kamenogorsk, Kazakhstan, and WHZ Zwickau University of Applied Sciences, Germany, Email: stefan.noack.cyp@fh-zwickau.de, ORCID ID: https://orcid.org/0000-0002-1298-9069

Ilona Bordiyanu – PhD, Associate Professor, Kazakh-American Free University, Ust-Kamenogorsk, Kazakhstan. Email: bordiyanuilona@mail.ru, ORCID ID: https://orcid.org/0000-0002-7175-9829

Bernd Zirkler – Professor, Dr. rer. pol. habil. Dr. h.c., Zwickau University of Applied Sciences, Zwickau, Germany. Email: bernd.zirkler@fh-zwickau.de, ORCID ID: https://orcid.org/0009-0000-0615-3807

Christian Brauweiler – Professor, Dr. rer. pol. Dr. h.c. mult., Business Administration, Management Accounting & Internal Auditing, WestsächsischeHochschule Zwickau University of Applied Sciences, Zwickau, Germany. Email: christian.brauweiler@fh-zwickau.de, ORCID ID: https://orcid.org/0000-0003-0284-5667

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Assessment of the Sustainable Development of Regions: the Case of Kazakhstan

Laura Kuanova[1] | **Assel Bekbossinova**[2]* | **Temirlan Abdykadyr**[3]

[1] al-Farabi Kazakh National University, Almaty, Kazakhstan

[2] Eurasian Technology University, Almaty, Kazakhstan

[3] University of Hong Kong, Hong Kong, China

Corresponding author:
***Assel Bekbossinova** – PhD candidate, Eurasian Technology University, Almaty,Kazakhstan. Email: aselka01@mail.ru

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Abstract
This research work is devoted to assessing the sustainable development of regions in the example of Kazakhstan. Sustainable development is a strategically important aspect of the country, balancing economic growth, social well-being and environmental protection. The paper considers the key indicators used to assess the sustainable development of the regions of Kazakhstan. The Sustainable Development Goal Index (SDI) was calculated based on seven statistical indicators: gross regional product per capita, food security, unemployment rate, poverty rate, crime rate, education level, and environmental pollution in 14 regions and three cities from 2011 to 2021. The data was collected from the Bureau of National Statistics of Kazakhstan. The initial data of stability indicators were used as a matrix with dimensions m * n to calculate the weight coefficients. Further indicators were scaled and standardized. In addition, to evaluate the weighted index, a measure of the entropy of the indicator was calculated. As a result of the index calculation, it was revealed that the rating leaders are the regions with the lowest normalized poverty level, and these regions take the first place - the cities of Almaty, Astana and Shymkent. In comparison, the highest normalized poverty rate with the lowest positions are Turkestan, North Kazakhstan and Zhambyl regions. This work is essential for making effective decisions and developing targeted strategies for the sustainable development of Kazakhstan. It can be used as a basis for further research in the regional development sustainability field.

Keywords: Economy, Economic Indicators, Sustainable Development Goals, Region, Regional Development, Kazakhstan

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1. INTRODUCTION

Sustainable development today is becoming one of the most relevant and significant global and regional topics. In the face of rapid changes in the world caused by social, economic, and environmental challenges. The biological crisis and pandemic, which led to the stagnation and decline of the world economies, both developing and developed countries, caused severe damage to humanity. The current situation on the world stage was deepened by the political crisis, which led the world economies into imminent economic and social crises. There was a need for a qualitative transformation of all economic system elements. These cardinal transformations necessitate the adjustment of the national economy development concept and revising the state management system.

Worldwide threats, which have an ambiguous impact on the economy, exacerbate the issue of adjusting strategic goals and alternatives for Kazakhstan's economic development. The problem of improving the model of the socio-economic prospects of Kazakhstan, with the still raw material sector of the economy, is paramount. In turn, the UN Global Sustainable Development Goals are aimed at solving several social, environmental, and economic problems on the principle of "leave no one behind" and cover a wide range of external and internal challenges of each country individually and the world as a whole (Shirazi et al., 2021; Kuanova et al., 2021). At the same time, it should be noted that the increasing external challenges have a worldwide orientation, which necessitates the unification of the efforts of all countries to implement the Global Sustainable Development Goals of the United Nations (GSIA, 2019).

Some countries with developed economies integrate the UN SDGs into plans and programs for strategic economic growth: they adopt legislative frameworks, develop state roadmaps and programs, and create international platforms. Thus, the development of the modern level of globalization and the simultaneous increasing ambiguity not only actualize the issue of diversification of the economy of Kazakhstan and the departure from the raw material vector but also reveals the need to solve social, environmental and economic problems.

Kazakhstan achieved first place in the Central Asian region in terms of its FDI stock per capita and FDI stock to GDP ratio in ranking in 2018. Despite the volatile global investment climate, which reduced foreign investment into emerging markets and transition economies, the country maintained its attractiveness to foreign investors (Shirazi et al., 2021). According to the SSI Kazakhstan ranks 56 of 154 countries with 7.7 scores for Human well-being, 2.8 for Environmental well-being, and 5.3 for Economic well-being (SSI, 2022). There is another rating for SDGs assessment, which the UN compiles and the Bertelsmann Foundation annually – the UN SDG Index is calculated for 163 countries of the world based on 100 indicators related to implementing 17 SDGs. It should be noted that the number of indicators for the index measurement increases year by year to cover the data gap. Thus, it was estimated within 60 indicators in 2016, and 100 in 2022 (Lafortune et al., 2018). According to SDG Index, Kazakhstan ranks 65 with 71.1 scores.

Since sustainable development covers all aspects, economic, social, and environmental, the research results positively impact improving the institutional support and management system of sustainable development in the regions, and territories. Moreover, the improvement of social policy and environmental education, and the effective use of resources through implementation mechanisms based on the principle of "financing according to the needs of the regions" will allow sustainable economic development goals to be achieved.

This study focuses on Kazakhstan's sustainable regional development and its importance in ensuring equal and sustainable progress in various parts of the country. Kazakhstan, one of Central Asia's largest countries, has a diverse geography, unique natural resources, and rich cultural heritage, providing unique opportunities and particular challenges for the sustainable development of all its regions. Assessing the sustainable development of areas becomes critical

in the context of rapid growth in urbanization and global sustainability issues. The integrated approach will help develop more effective strategies and innovative solutions to manage regional development and create more sustainable regional environments.

In the context of rapid changes in the global economy and the environment, sustainable development is becoming the task of the government, authorities, and society. Only the interaction of the state, the business sector, scientific and educational institutions, and civil society can ensure the successful implementation and support of sustainable development at all levels.

The purpose of this study is to analyze the current state of sustainable development in the regions of Kazakhstan based on the latest available data. Key indicators that affect the sustainability of regions, such as GRP per capita, unemployment, poverty, food security, and environmental and social aspects, were considered.

The study results help identify priority areas and develop effective strategies to achieve sustainable development in all regions of Kazakhstan. The paper aims at supporting and strengthening the sustainability of the economy, social justice, and environmental protection because there is a prosperous future for Kazakhstan and its people by taking joint actions.

2. LITERATURE REVIEW

Countries with developed economies, such as the United Kingdom, Sweden, Germany, and Japan, have implemented the SDG in strategic programs and justified them in the legislative framework, which allowed for improving indicators covering sustainable development. However, the contradictory challenges and uncertainty of the external situation caused by the pandemic, and lockdowns, in turn, exacerbated many social problems, such as hunger, poverty, and inequality in health and education. These negative consequences have caused the need for concerted efforts for a qualitative transformation of the world economy. According to some estimates, 231 indicators are used officially for the SDGs' progress and rankings toward sustainable development. The essential function of the indicators is the target and goal identification, resource distribution, and impact behavior. Two hundred thirty-one indicators seem insufficient for all 169 targets of the SDGs, as some marks have 12 target tree indicators and 105 targets tracked using one indicator for each target (Steingard et al., 2023). According to Kim (2023), to ensure effective governance, it is crucial to have a collective understanding of indicators and their purpose. Indicators act as boundary objects and should be designed in a way that includes the viewpoints of all stakeholders involved. Monitoring progress towards sustainable development goals goes beyond just collecting statistical data; it involves an ongoing dialogue process between scientists and policymakers. This dialogue revolves around questions such as what needs to be measured, why it is essential to measure specific aspects, and who should be responsible for measuring them. These discussions play a vital role in shaping the monitoring process for SDGs.

The transition to sustainable development of the country's economy at the present stage largely depends on the diversification of the economy, which is the most constructive for the current post-pandemic situation. Since sustainable development is a complex and interdisciplinary field of research (Urbaniec et al., 2017) and a dynamic process influenced by various factors and their complex interaction (Zhang et al., 2017), it was used a weighted index assessment method in this study, which is an effective tool implemented by international and domestic assessments (Cheng et al., 2018). Reliable results of the empirical analysis will allow evaluation of the effectiveness of institutional support for sustainable development, economic growth, and economic and social indicators that influence the sustainable development of regions (Luo et al., 2023; Ullah et al., 2023).

In the study by Kwatra et al. (2016), they considered the possibility to induce the development of various regions and to identify stable and unstable indices of regions. However, the creation of the index faced difficulties due to complexity, stability assessment, data limitations, the need for

methodologies to maintain estimates, and adherence to the details of information on the specific problems of each region.

In the study by Maranghi et al. (2020), sustainable development assessment includes an analysis of the interaction of regions with the environment and social and economic factors. The study focuses on the level of energy consumption, resource efficiency, greenhouse gas emissions and other aspects that affect the sustainability of the regional environment. A set of six regional sub-dimensions is defined, considering flows and their interdependence in infrastructure and quality of life. The combined approach considers different levels of data granularity, including information flows and quality-of-life data.

Borowski and Patuk (2021) draw attention to food security, conservation of species and ecosystems, availability of energy and capacity sources, and parameters that determine the positive impact of climate change and environmental regulation on the energy and economic development sectors. Moreover, sustainable development becomes necessary to achieve a high standard of living and well-being and ensure food security. Here, the emphasis is on the urgency of action and attention to pursuing sustainable development. For instance, innovative approaches to sustainable development in agriculture, including the search for new production methods and technologies consistent with environmental requirements, environmental, economic valuation, animal welfare and improved working conditions for farmers.

Improving data quality and developing methodologies allow for a more accurate consideration of sustainable development. A review of various approaches for the sustainability assessment of territories used in practice has shown that the main complexity in choosing a methodology and approach is the choice of tools for generalizing (normalization) data, bringing them to a single measurement system, the choice of coefficients of significance (weight) of indicators and their evaluation (Tolstykh et al., 2020; Bilgaev et al., 2023).

There are few studies with an appropriate number of sustainability assessments at the local and regional levels. The reason is mainly based on methodologies directed at the national level and limited data availability. The conventional method for conducting a sustainability assessment involves creating a list of indicators, which can be derived from statistical data or expert opinions. These indicators are then converted into the appropriate format for assessment and used to estimate a composite sustainability index (Anelli et al., 2022). The Sustainable Society Index (SSI) is structured along the lines of the Triple Bottom Line of social, environmental, and economic sustainability. It measures a country's achievements in terms of sustainability of social development on a scale from 0 (the lowest degree of sustainability) to 10 (the highest degree of sustainability) based on 24 indicators (Nogueira et al., 2022). Most scholarly articles on how COVID-19 and other threats have affected Sustainable Development Goals have a worldwide perspective. However, it is essential to note that most policies related to achieving these SDGs are under the jurisdiction of individual nation-states. Given this context, there is an increasing urgency for national policymakers to reconsider and redesign their policies about anticipating and recovering (Gostin et al., 2019; Buckley, 2022).

The study of mechanisms for implementing and integrating goals into state development programs at the international scientific level has a fairly extensive range. The state policy of Kazakhstan in achieving the Sustainable Development Goals was defined in the Strategy of Kazakhstan – 2050 and partially outlined by the Concept of transition to a "green economy". However, the results achieved are moderate, have a "focal mosaic appearance" (Satybaldin et al., 2019), and do not have a systematic structure for implementation. 17 SDGs were adopted in 2015 with 169 targets for solving problems in all aspects of human life, social, environmental, and economic, and are wired for all member countries of the organization, of which Kazakhstan is also a member.

Despite the number of studies of Sustainable Development Goals by authors worldwide, a gap

in research related to achieving the goals in the regional context, in the context of worldwide threats, and the renewal of the Concept needs to be sufficiently studied. Based on the conducted literature review, seven main indicators were selected (gross regional product per capita, food security, unemployment rate, poverty rate, crime, education, and pollution) to assess the sustainable development of regions of Kazakhstan.

3. RESEARCH METHODS

The primary type of research used to achieve the main goal and objectives of the research is fundamental to the use of theoretical and empirical scientific research methods. The methods implement the research. The method of studying theoretical and methodological foundations of sustainable development, considering global threats and challenges based on international research. And the method is based on a comprehensive analysis of the current state and prospects of sustainable development of Kazakhstan's regions in the context of global threats using quantitative research tools. The research consists of the following stages:

(1) Selection of indicators and assessment methodology;
(2) Calculation and analysis of sustainable development of regions and cities of Kazakhstan.

Thus, for the study, there have been used several criteria for selection indicators for the regions' sustainability estimation (ESDR, 2022):

(1) The total number of indicators was limited by the main seven indicators, including Gros regional product;
(2) The indicators are single-variable and simple. The regions without available information were excluded.

The indicators are statistically valid and robust.

Within the framework of the key existing international sustainability assessment instruments, statistical data is the primary source for comparing and ranking different territories and regions (SGM, 2023). The system of collecting statistical data at the regional level is developed less than needed for Kazakhstan's sustainability assessment. At the same time, many important aspects of sustainable development still need to be adequately reflected. Therefore, the set of indicators is partly limited by the possibility of collecting open statistical data on the scale of all regions.

The authors selected seven indicators describing the country's regions' economic, social, and environmental or ecological situation. There was a limitation while researching the available statistical data for the regions. The indicators have been selected by similarities of the world bank data for the countries and have been used as official secondary data of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, Bureau of National Statistics. There is a lack of data for many indicators and some regions. Nevertheless, the authors decided to rich the goal and assess the sustainability of the country's regions.

For this reason, this study analyzes the impact of the quality of institutional support, economic growth, employment, and social welfare (the main grouped SDGs) on improving the economic model of sustainable development using statistical data on regions and cities of Kazakhstan from 2012 to 2021.

For the study were selected 14 regions and three big cities of the country, 17 overall. However, for the South Kazakhstan region, the data for the last 12 years has not been found from official sources, and the indexes have not been estimated for the region. The authors tried to cover the main SDGs, for regional sustainability assessment, but the accent was made to the social and economic indicators presented in Table 1.

TABLE 1. Indicators for sustainability assessment

No.	Indicator	Description
1	Gross regional product per capita	The growth rate of the GRP per capita
2	Food security	The proportion of the population at risk of malnutrition (hunger) in the total population
3	Unemployment rate	The unemployment rate of the population, the unemployed population within the economically active population
4	Poverty rate	Proportion of the population with incomes used to consumption that below the national subsistence line
5	Crime	Crime index, the total number of registered crimes for 1000 divided to total population of the region
6	Education	Gross secondary education enrolment ratio of the total population
7	Pollution	The number of sources of pollutant emissions from the total amount divided by the total population of the region
Note: compiled by authors		

This is a limitation of using only seven indicators for the sustainability assessment of 15 regions and three big cities of Kazakhstan. The reason for the limitation is difficulties with statistical data obtaining for every region. Mostly there is a lack of data. But the authors believe it is the start of further research it could develop by including newly available sustainability indicators. Furthermore, by assessing the regions for different periods, the progress of regress in the sustainable development of the regions could be estimated.

For the assessment of the sustainable development of regions, the Sustainable Development foals index (SDI) was estimated. This index was calculated based on seven statistical indicators characterizing the region's sustainable development in three main directions: economic development, social infrastructure, and environment.

The first stage of the sustainability assessment of the regions is primary data processing.

For calculating the weighting coefficients, raw data of sustainability indicators are used as a matrix with dimension m*n, where m is the number of assessment objects (regions), and n is the number of indicators (criteria or indicators of sustainability), which calculated by formula (1).

$$X = \begin{pmatrix} x_{11} & \cdots & x_{1n} \\ \vdots & \ddots & \vdots \\ x_{m1} & \cdots & a_{mn} \end{pmatrix} \qquad (1)$$

where xij is the initial value of the sustainability indicator.

As the next step, the indicators undergo linear scaling (normalization) operations, for making the data comparable across indicators determining the position of a particular region or city among others with the assignment of a private index from 0 to 1, where 1 characterizes the region as an absolute leader in terms of the indicator, and 0 – as an absolute outsider, which calculated by formula (2).

$$z_{ij} = x_{ij} - x_{ij}\, min(x) \;/\; x_{ij}\, max(x) - x_{ij} \min(x) \qquad (2)$$

where, xij – initial value of the indicator (sustainability indicator) for a specific region, and z_{ij} – normalized value of the indicators.

The following step is the standardization of the normalized indicators regarding the sum of values for the number of research object (regions), which calculated by formula (3).

$$s_{ij} = z_{ij} / \sum_{t=1}^{m} zij \quad (3)$$

where,

s_{ij} – standardized value of the indicator (sustainability indicator),

z_{ij} – normalized value of the indicators for the specified object (regions).

The second stage in the sustainability assessment of the regions is the evaluation of weighting coefficients (significance coefficients) of sustainability indicators.

For the estimation weighted index, it is needed to calculate the measure of the entropy of the indicator (the measure of the deviation of the given value from the ideal), which calculated by formula (4).

$$\varepsilon_j = -\alpha \sum_{t=1}^{m} (s_{ij} \ln s_{ij}) \quad (4)$$

where,

ε_j – a measure of the entropy of the indicator,

α - coefficient is equal to "1-ln m"; and

s_{ij}- standardized value of the indicator.

And finally, it is the calculation of the weighted coefficient of the sustainability indicator (index), which calculated by formula (5).

$$\delta_j = (1- \varepsilon_j) / \sum_{j=1}^{n} (1 - \varepsilon_j) \quad (5)$$

where,

δ_j – the weighted coefficient of the sustainability indicator (index), and

ε_j – a measure of the entropy of the indicator.

For the research, the authors have estimated the Sustainability development index for every region by using the described methodology and ranked the results from the most sustainable region to the unsustainable region of the country.

4. FINDINGS AND DISCUSSION

It must be mentioned the reason for the regional sustainability identification. There is a need to consider every region separately because the country's territory is large – 2,724 million square kilometres and the terrain is varied: steppes – 63%, deserts and semi-deserts - 25%, mountains - 10%, forests – 2% (Bimendiyeva et al. 2018). As a result, there are different industries and infrastructures across the country. It means there is a need for separate management and budget economic strategies.

Global threats, such as pandemics, political instability, financial crisis, and natural disasters, have an essential influence on every country's economic and social situation. SDGs and targets are becoming actual and are requiring more attention, as these circumstances at national and global levels exacerbate the problems of poverty and hunger. Next is provided data on gross regional product per capita by regions (Figure 4).

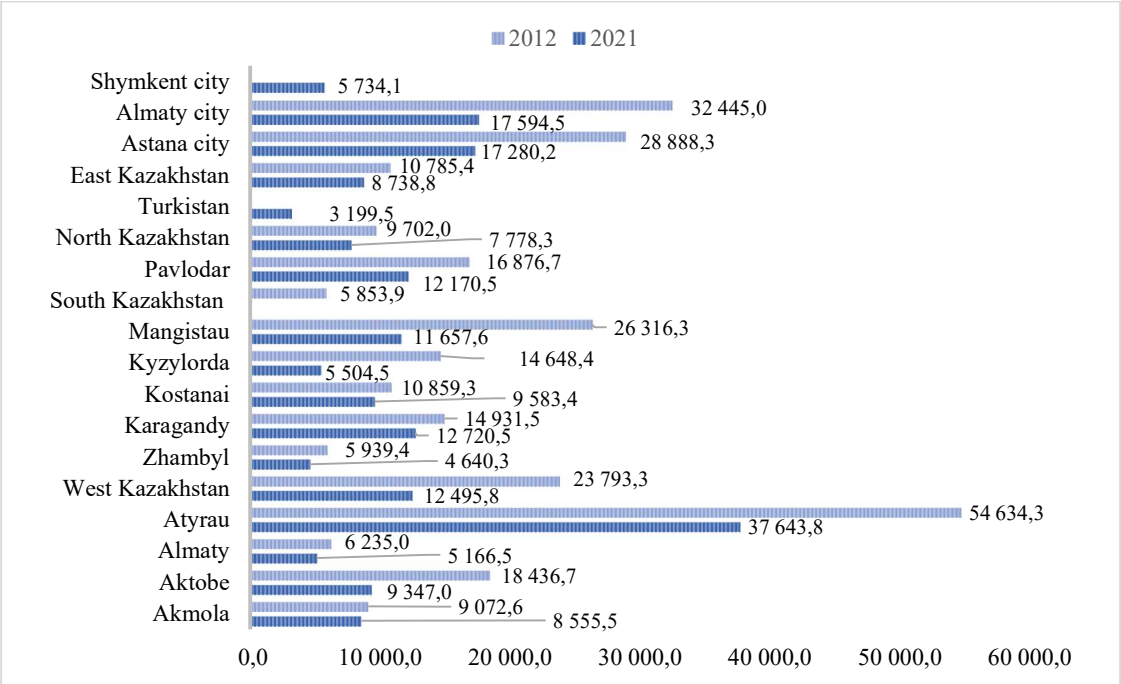

FIGURE 4. Gross Regional product per capita by regions, USD

Note: compiled by authors from the Bureau of National Statistics (2022)

Regarding national statistics, GRP is an excellent indicator of a country's gross domestic market. It represents the value of the final product and services sold in the economy, which are residents of a given region. Gross output is the total value of goods and services produced in the economy in the reporting period.

The highest GRP per capita is in the Atyrau region, and the lowest is in the Turkestan region. At the same time, it should not be considered that the coverage of the population of the Turkestan region is three times larger than that of the Atyrau region (Figure 4).

In general, based on the total of GRP per capita for the generally accepted period, it can be made possible to take:

1. The leaders in terms of GRP per capita are the oil and gas regions of the western region of Kazakhstan, as well as two megacities of the country - Almaty and Astana.

2. High values of GRP are significantly affected by population statistics.

3. High and low values of GRP per capita are in no way connected with the quality of life concerning the formation of a person's future well-being.

Since 2000, Kazakhstan has been using the concept of absolute poverty to determine minimum living costs. This entails calculating the cost of a basic consumer basket, which includes essential food products, goods, and services necessary for survival. The national poverty line in Kazakhstan is established by taking into account the average value of the subsistence minimum per capita as a percentage of the state's economic capabilities. Currently, it stands at 5.5% of the population total (Figure 5). To determine these indicators every quarter, a sample survey is conducted among 12,000 households. Additionally, the estimation method relies on expert and nutritionist input to select items included in this consumer basket rather than household behavior. The resulting list consists of 43 different commodities. Based on the methodology employed by the World Bank, in 2020 approximately 12% of the total population, which amounts to around 724 thousand

individuals, were living below the poverty line. This represents an increase in poor people compared to those recorded in 2019. This data based on PPP is two times more than the national poverty line. Next, there is given data on the proportion of the population at risk of malnutrition (Starvation) and proportion of population with incomes used to consumption that below subsistence line (Poverty) in selected periods.

Actually, according to the Kazakhstani official statistic, there is no hunger in the country, but there is a meaning of "food security", that is the proportion of the population at risk of malnutrition in the total population. Thus, 6.7% of the population could be at risk of starvation, that is 1.132 million people and it is 562 thousand people more at the risk of malnutrition (Figure 5).

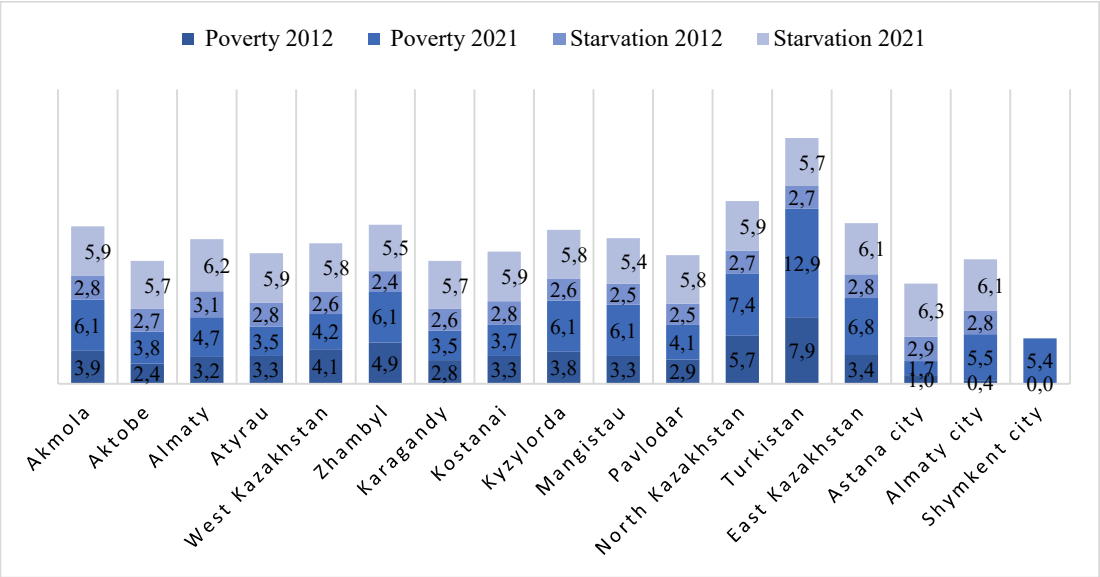

FIGURE 5. The proportion of the population at risk of starvation and poverty for 2012 and 2021, in %

Note: compiled by authors from the Bureau of National Statistics (2022)

Unfortunately, there is traced a negative trend in the labor market, is a result of cutting of expenses by the large employers. As a result, there is a need to form a new mechanism in the labor market for the government. Officially, there are 5.5% unemployed people of the total population (Figure 6).

One of the SDGs is promoting equitable quality education, encouraging lifelong learning opportunities for all. Furthermore, education relates to crime prevention (Martins Filho & Melo, 2023). The pandemic period and distance education had a mixed impact on the quality of education and accessibility, exposing additional problems for society and the state. Kazakhstan has satisfied primary and secondary education indicators, as these levels of education are mandatory and free, provided by the state. In the context of regions, there is a difference in the indicators.

Social tension arising from external and internal threats leads to increased crime. The crime index for the total population was used, estimated by the number of registered crimes in the regions.

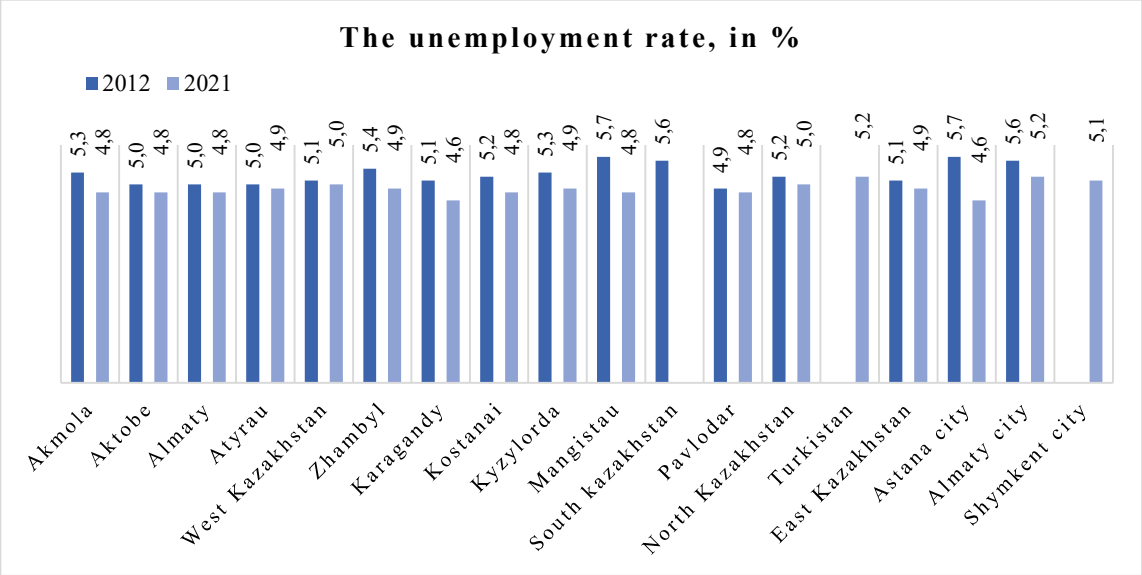

FIGURE 6. The unemployment rate of the population for 2012 and 2021, in %

Note: compiled by authors from the Bureau of National Statistics (2022)

For the environmental direction of the SDGs, it was selected the pollution indicator, in the form of the number of sources of pollutant emissions from the total amount of emissions per person in the region.

Based on the data retrieved from the estimation of the sustainability indexes of the regions, the first finding was the indicators of the selected criteria are various for varied regions of the country and there is a lack of similar results (see Table 2).

TABLE 2. The mean of the indicators of the regions in Kazakhstan

Normalized indicator	RGP	Poverty	Food security	Unempl.	Educ.	Crime	Pollution
Akmola	0,227	4,000	3,770	4,940	7,688	-5,115	5,275
Aktobe	-5,964	2,490	3,580	4,870	5,857	-4,319	5,606
Almaty	-0,923	2,990	3,980	4,820	4,286	-1,306	10,066
Atyrau	-2,047	2,960	3,490	4,930	5,828	-2,911	2,827
West Kazakhstan	-5,099	3,430	3,610	4,980	7,512	-4,030	1,626
Zhambyl	-1,734	4,270	3,420	4,990	0,144	-5,735	4,279
Karagandy	-0,728	2,190	3,440	4,830	-0,023	-6,843	4,687
Kostanai	0,200	3,080	3,720	4,940	-3,598	-9,745	5,229
Kyzylorda	-8,805	4,190	3,750	4,970	-0,739	-9,604	3,125
Mangistau	-6,535	3,860	3,350	5,050	5,837	-0,449	-0,064
Pavlodar	-2,097	2,600	3,590	4,830	1,244	-7,942	4,415
North Kazakhstan	-1,142	4,950	3,410	5,000	-3,259	-4,603	8,198
Turkistan	9,599	7,970	3,540	2,070	1,864	-9,102	-4,421
East Kazakhstan	-1,475	3,970	3,650	4,910	-0,370	-7,257	1,392
Astana city	-4,335	0,920	3,730	4,830	13,852	-0,976	1,269
Almaty city	-5,922	2,000	3,740	5,330	24,775	-4,695	-5,865
Shymkent city	-3,535	2,090	3,630	5,125	9,960	-5,122	-0,369
Note: compiled by authors							

Obtained results allow to rank every region by each indicator, and to illustrate the average sustainable development index of the region (see Table 3).

TABLE 3. Rank of the regions for the selected Sustainable Development Index indicators

Indicator	Akmola	Aktobe	Almaty	Atyrau	West KZ	Zhambyl	Karagandy	Kostanai	Kyzylorda	Mangistau	Pavlodar	North KZ	Turkistan	East KZ	Astana city	Almaty city	Shymkent city
RGP	2	15	5	9	13	8	4	3	17	16	10	6	1	7	12	14	11
Poverty	13	5	8	7	10	15	4	9	14	11	6	16	17	12	1	2	3
Food security	16	7	17	5	9	3	4	12	15	1	8	2	6	11	13	14	10
Umempl.	9	6	2	8	12	13	4	10	11	15	5	14	1	7	3	17	16
Education	4	6	9	8	5	12	13	17	15	7	11	16	10	14	2	1	3
Crime	9	12	15	14	13	7	6	1	2	17	4	11	3	5	16	10	8
Pollution	14	15	17	8	7	10	12	13	9	4	11	16	2	6	5	1	3
Note: compiled by authors																	

As can be seen from Table 3, the variation of the normalized RGP varies from -8.805 in Kyzylorda to 9.599 in the Turkistan region. The poverty indicator varies from 7.970 in Turkistan to 0.920 in Astana city. The food security indicator is approximately equal for all regions and cities: 3.980-3.350. The unemployment indicator starts from 2.070 in Turkistan and ranges to 5.050 in Mangistau. If to turn to the education index, it varies from -3.598 in Kostanai to 24.775 in Almaty, there is the most difference between the growth of education and its decrease. The crime indicator has a negative value, which is the good tendency of decreasing registered crimes in the regions. That is -9.102 in Turkistan and -0.976 in Astana city. The most polluted region is Almaty city with the increase in the source of pollution – 10,066, followed by North Kazakhstan – 8.198

Using the results of the normalized selected indicators for the country's regions, we have ranked every region according estimated value. The RGP indicator showed positive leading positions for Turkistan, Akmola. Kostanai and Karagandy regions, while for Aktobe, Mangistau, and Kyzylorda regions this indicator has demonstrated negative and last positions.

As for the poverty indicator assessment, the proportion of the population with incomes used to consume below the national subsistence line was selected. The leader of the rank are regions with the lowest normalized poverty rate, and these regions are ranked first – Almaty city, Astana city, and Shymkent city. At the same time, the highest normalized poverty rate with the lowest positions are Turkistan, North Kazakhstan, and Zhambyl regions. For the following three indicators also were used the rank of negative effects. The food security indicator is based on the proportion of the population at risk of malnutrition (hunger) in the total population in the study and assessed top ranks for Mangistau, North Kazakhstan, and Zhambyl regions. The normalized food security indicator is varied for 0.63 points, and Almaty, Akmola, and Kyzylorda regions have the highest value. The population's unemployment rate was identified as an unemployed population within the economically active population. The regions were ranked Turkistan, Almaty regions, and Astana city with the lowest normalized unemployment indicator. In contrast, Almaty city, Shymkent city, and Mangistau region ranked last. Almaty, Astana, and Shymkent cities are ranked as the leaders of the education indicator and have significant differences with the regions. Almaty City, Turkistan, and Shymkent City were ranked top of the normalized pollution indicator.

From the assessment of the selected normalized indicators, it is possible to identify leaders and outsiders of the sustainable development index ranking for 14 regions and three cities of the country.

5. CONCLUSIONS

A state strategy is needed for further actions to implement the Sustainable Development Goals. The definition of clear and understandable indicators and the application of world best practices considering the specifics of the current situation in the country. Developing solutions using digital systems will effectively integrate sustainable development goals into the strategic concept of the regions and the country.

It should be noted that the scientific component of implementing the UN Sustainable Development Goals in the development of Kazakhstan's regions needs to be sufficiently explored. Despite understanding the leading role of new socio-environmental goals aimed at economic diversification, there must be more straightforward and more understandable indicators for further tactics and actions in the country.

Identification and assessment of the Sustainable development goals indicators and ranking them allow for the improvement of social policy and environmental education, the effective use of resources through implementation mechanisms based on the principle of "financing according to the needs of the regions". Consequently, it is the instrument for achieving sustainable economic development goals under global threats.

Generally, despite active initiatives on the part of the Government of the Republic of Kazakhstan and the development of relevant legislative documents on the SDGs, it should be noted that their achievement could be better across regions. Some SDG goals are integrated into the strategic development plans of the regions, but there needs to be more systematic management to achieve them.

Given the "focal mosaic" and uneven nature of the achievement of the SDGs in different regions and cities of republican significance, we believe it is necessary to assess the regions' current state with the dynamics of achieving the SDGs. This will allow monitoring of the interim results, adjusting them as necessary, and identifying the most vulnerable regions in the SDGs.

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AUTHOR BIOGRAPHIES

Laura Kuanova – PhD, Senior Lecturer, Finance and accounting Department, Higher School of Economics and Business, al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: laura_kuanova@mail.ru, ORCID ID: https://orcid.org/0000-0002-7354-4506

***Assel Bekbossinova** – PhD candidate, Eurasian Technological University, Almaty, Kazakhstan. Email: aselka01@mail.ru, ORCID ID: https://orcid.org/0000-0003-1054-6640

Temirlan Abdykadyr – student, Faculty of Business and Economics, University of Hong Kong, Hong Kong, China. Email: tabdykadyr@gmail.com, ORCID ID: https://orcid.org/0009-0001-2963-5291

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Assessing the Interdependence of Oil Industry Indicators on Kazakhstan's Economy

Galymzhan S. Beisembayev[1]* | **Anna A. Kredina[1]** | **Zhasym D. Osmanov[1]** | **Assel A. Akhmetkyzy[1]**

[1] University of International Business named after K. Sagadiyev, Almaty, Kazakhstan

Corresponding author:
*** Galymzhan S. Beisembayev** – PhD candidate, K. Sagadiyev University of International Business, Almaty, Kazakhstan. Email: galymzhan.beisembayev@mail.ru

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EJEBS

Abstract

The impact of oil production on the regional economy and average wages is widely discussed among economists and politicians. The oil industry is one of the main sectors of the economy of Kazakhstan and makes a significant contribution to the country's GDP. An assessment of the interdependence of the indicators of the oil industry on the economy allows us to understand what factors affect the development of this industry and, accordingly, the country's economy. This study provides a comprehensive overview of the impact of oil production on the regional economy and average wages, with a focus on the importance of diversification and sustainability strategies for long-term economic growth. The purpose of this study is to study the positive and negative aspects of the impact of oil production on the region's economy and average wages. The research methodology involves two stages of empirical analysis of oil production data and economic indicators in the region from 2016 to 2021. At the first stage, a correlation analysis (Pearson correlation) was carried out; at the second stage, a predictive regression model was built. The study shows that oil production has greatly contributed to the economic growth and development of the region, which has led to an increase in average wages and improved living standards. The findings of this study are of great importance to policy makers and stakeholders involved in the development of the oil industry in the region.

Keywords: Economy, Region, Regional Economy, Economic Growth, Oil Production, Average Salary, Kazakhstan

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1. INTRODUCTION

The impact of oil production on the regional economy and average wages is one of the most topical and debated topics among economists and politicians. On the one hand, oil revenues can significantly contribute to the development of the region's economy, improve the living standards of the population and increase wages. However, on the other hand, dependence on oil revenues can lead to negative consequences, such as "Dutch disease", environmental degradation and social inequality.

This article provides a comprehensive overview of the impact of oil production on regional economies and average wages, emphasizing the importance of diversification and sustainable development strategies for long-term economic growth. Oil production can have a significant impact on regional average wages. Regions with active oil production may have high wages for oil industry workers, including engineers, technicians, and site workers. In addition, oil production can lead to job creation in the oil industry and related industries such as transport, logistics and facility maintenance. This can also contribute to wage growth in these industries.

However, it should be noted that oil production can have positive and negative consequences for the region's economy. For example, rapid growth in oil production can lead to inflation and job losses in other sectors of the economy, which can negatively affect average wages. In addition, oil production may have a negative impact on the environment and public health, which could lead to social and economic problems that could reduce average wages in the region. Thus, the impact of oil production on average wages in the region depends on many factors and can be both positive and negative (Brown et al., 2019).

The purpose of this study is to examine the positive and negative aspects of the impact of oil production on the regional economy and average wages. In order to achieve this goal, the study employs a comprehensive methodology, including an extensive literature review and empirical data analysis concerning oil production and economic indicators within the region. By scrutinizing various dimensions, the research sheds light on the intricate relationships between oil production, regional economic growth, and wage dynamics.

The positive aspects of oil production's influence on average wages are undeniably significant. The injection of oil revenues into the regional economy can stimulate economic growth, providing the impetus for increased job opportunities across multiple sectors. As mentioned earlier, not only do oil industry workers benefit from higher wages, but the ripple effects extend to ancillary industries. This interconnectivity amplifies the potential for wage growth in various segments of the economy.

However, the potential downsides must not be overlooked. The reliance on oil revenues can engender a skewed economic structure, where other sectors remain underdeveloped due to inadequate investment. This phenomenon, known as the "Dutch disease," can lead to overemphasizing the oil sector at the expense of diversification. Consequently, economic vulnerability could arise if oil prices plummet, resulting in reduced revenues and potential job losses, thus dampening average wages.

Environmental degradation poses another critical concern. While oil production can drive economic growth, the ecological toll it takes might lead to long-term repercussions. Damaged ecosystems, pollution, and resource depletion can fuel negative feedback loops affecting regional health and economic stability. These challenges could put downward pressure on average wages as the societal costs of addressing these issues mount (Bjørn & Hauschild, 2013).

In conclusion, the intricate relationship between oil production and average wages underscores the complexity of their interplay. While oil revenues can contribute positively to wage growth and overall economic prosperity, the potential pitfalls of overreliance and environmental degradation must be vigilantly managed. A nuanced understanding of these factors is crucial for

policymakers and stakeholders as they seek to harness the benefits of oil production while safeguarding the region's long-term economic and social well-being.

The main purpose of the paper: to explore the positive and negative aspects of the impact of oil production on the region's economy and average wages. This study proposes the following hypotheses:

H1: *Average monthly salary in Atyrau region affects the economic growth of the regions.*

H2: *Unemployed population about Atyrau region affects the economic growth of the regions*.

H3: *The cost of oil on world markets affects the economic growth of regions*.

2. LITERATURE REVIEW

Oil production is an essential source of economic growth for many countries and regions worldwide. Oil production can have a significant impact on average wages in a region, including through the creation of new jobs and increased output. This literature review will examine several studies that analyse the impact of oil production on economic growth and average wages in the region. Olayungbo (2019) assessed the impact of the oil industry on economic growth and income in Nigeria using data from 1970 to 2015. The study found that oil production positively affects economic growth, but no effect on average wages was found.

Studies have also been conducted on the impact of oil production on incomes in Israel. A study published in 2015 showed that oil extraction leads to an increase in average wages in regions with a high concentration of oil companies. However, national income generally needs to increase more to fully offset the cost of importing oil extraction technology and equipment (Zaher & Maayan, 2015). U.S. researchers conducted a study on the impact of oil production on income and employment in Louisiana. The study found that oil production positively affects employment and average income in the region. However, the authors of the study note that this positive effect may be short-term, as it depends on oil prices and changes in the investment policy of oil companies (Luthra et al., 2007).

Kilian & Park (2009) investigated the impact of oil price shocks on the U.S. stock market. Knowing that oil prices can fluctuate widely and often cause volatility in global markets, it is important to understand how these fluctuations are reflected in the U.S. market and how they affect investors. The authors look at the period from 1986 to 2016 to analyse the various oil price shocks that occurred during this period. They examine these shocks' short-term and long-term effects on the U.S. stock market. From their analysis, the authors come to some interesting conclusions. First, they find that oil price shocks have a significant short-run impact on the U.S. stock market. High oil prices tend to cause panic among investors, leading stock prices to fall. On the other hand, low oil prices can make stocks more attractive to investors, leading to higher stock prices. However, researchers also find that the long-term impact of oil price shocks on the stock market is less significant. Companies in the oil industry can quickly adapt to price changes and take measures to mitigate their risks. In addition, the stock market has many other factors that can affect the stock market. Overall, the authors provide an interesting analysis of the impact of oil price shocks on the U.S. stock market. She emphasises the importance of closely monitoring oil prices and their impact on investments. However, she also points out that the long-term effects may be less significant, offering a more stable picture for investors.

O'Hara & Gentile (2009) studied Kazakhstan's economy and noted that the sharp decline in the prices of other major export commodities, especially metals (another cornerstone of Kazakhstan's resource-based economy), has also led many mining companies to either reduce working hours or lay off workers. Consequently, wages are beginning to decline in real and nominal terms. As the economy is heavily dependent on the export of oil and other commodities, Kazakhstan is clearly in a vulnerable position. With an economy heavily dependent on oil and other commodities exports, Kazakhstan is clearly vulnerable to global economic shocks.

The results of Kang et al. (2016) show that positive oil price changes are significant in all cases with an expected positive sign, which means that an increase in oil prices leads to an increase in real GDP. On the other hand, negative oil price changes are significant only for Kuwait and Qatar, with the expected positive sign indicating that a fall in oil prices leads to a decrease in real GDP. In the case of Bahrain, Oman, Saudi Arabia and UAE, the results show that negative oil price changes are not statistically significant, implying that falling oil prices do not significantly impact the real GDP of these countries.

Prasad & Keane (1995) suggest that oil prices can significantly impact wages in countries dependent on oil revenues. They focus on a few large oil-producing countries such as Saudi Arabia, Russia and Nigeria and analyse data on wages and oil prices in these countries. The authors of the paper use empirical analysis to examine the impact of oil price changes on wages. They consider both the short-run and long-run effects of oil prices on wages. The primary approach of the analysis is to model the relationship between changes in oil prices and changes in wages. The results of the study show that there is a significant relationship between changes in oil prices and wages in oil-producing countries. When oil prices increase, wages also increase, and vice versa; when oil prices fall, wages decrease. This is because oil revenues are a significant part of the gross domestic product of these countries, and changes in oil prices affect the overall economic situation.

However, the article also notes that the impact of oil prices on wages may vary from country to country and its institutional structure. For example, in some countries, a portion of oil revenues may be alienated from the government through taxes or levies rather than being paid in the form of increased wages. Political stability and the government's response to changes in oil prices also play a role. In conclusion, the article emphasises that oil prices can significantly impact wages in oil-producing countries. Changes in oil prices can lead to changes in the economic status of workers, and it is important to take this into account in policymaking and planning for social and economic interventions in these countries.

Herrera et al. (2019) examined the relationship between oil price fluctuations and changes in employment and unemployment. The authors of the study analyse macroeconomic data to identify how rigid or elastic the labour market responds to changes in oil prices. They assess the relationship between oil price changes and employment and unemployment rates in different countries or regions. The paper provides various theories on how changes in oil prices can affect the labour market. For example, higher oil prices can lead to higher energy and transport costs for businesses, negatively affecting their ability to hire new employees or retain old jobs. At the same time, lower consumer incomes due to higher oil prices could reduce demand for goods and services, potentially leading to higher unemployment. As a result of the study, the authors conclude how changes in oil prices affect the labour market. For example, they may find that higher oil prices lead to lower employment or higher unemployment in the short or long term.

Stevens (2018) examines the various ways in which oil and gas affect the economy. The author discusses the role of the oil and gas industry in creating jobs and attracting investment. Extensive oil and gas extraction and production projects require significant infrastructure, technology, and human capital investment to boost the economy. Foreign scholars argue that when oil prices rise in Liberia, the high costs of resource reallocation among oil-producing industries lead to labour intensification, whose contribution to Liberia's GDP far exceeds that of oil. Thus, the overall conclusion of the study is that when substitution opportunities are available, rising oil prices lead to high labour and capital intensity and may have an offsetting effect depending on the contribution of these factors to GDP. Thus, when oil prices fall in Liberia, measures should be taken to stimulate the services sector (Brown et al., 2019).

American Exercise studied how ownership of subsurface resources affects oil and gas revenues. For the average U.S. County with production growth from 2000 to 2014, we found that

royalty income and its multiplier effect accounted for 70 per cent of total revenue growth, with each royalty dollar generating an additional 49 cents of local revenue. The county whose residents owned the subsurface earned 28 cents more from each production dollar than the county with no ownership. Nationally, oil and gas production increased personal income in the U.S. in 2014 by $67 billion (0.5%) more than it would have if all royalties had accrued overseas. Thus, areas with the same abundance of resources can have opposite economic outcomes due to differences in property rights (Gbatu et al., 2017).

A study by Russian scientists analysed the impact of oil production on economic growth and average wages in Russia. The study found that oil production positively impacts Russia's economic growth, but no impact on average wages was found. However, the authors of the study note that this may be because oil production in Russia is carried out by state-owned companies, which may need to make more efforts to develop social programs and improve living conditions in the production regions (Kononova & Zaverisky, 2016).

In Tabata (2009), one of the main conclusions is that oil prices significantly impact the Russian economy. When oil prices are high, Russia earns significant export revenues, and its economy grows. However, when oil prices fall, Russia faces serious challenges, including economic recession, inflation, and declining financial reserves. The author also discusses measures the Russian government took to mitigate the adverse effects of falling oil prices.

In the Kazakhstan studies, the author pointed out that analysing the impact of the oil and gas sector on the socio-economic situation in the region The oil and gas sector is a systemically important segment of the economy, so it is difficult to overestimate the impact it has on the situation in the region as a whole. The experts interviewed also recognise the determining role of the oil and gas sector in the socio-economic development of the western region. At the same time, both positive and negative aspects of oil companies' presence in the western oblasts' territory are noted. As the most important plus, experts call the creation of jobs, as well as a relatively high level of labour remuneration, which can be offered by oil and gas companies. This fact directly affects the living standards of the local population, as the presence of a high-income group represented by oil and gas company employees increases effective demand and stimulates the development of other industries (Buldybaeva, 2013).

The work of other Kazakhstani scientists shows that possessing huge oil and gas resources, the presence of which in any state allows successful solving of the most complex socio-economic, technological, financial and monetary problems, Kazakhstan is still unable to realise this advantage, which can bring tangible benefits to the national economy.

Thus, it is clear from the presented studies that oil production positively affects economic growth in different countries, but the effect on average wages needs to be clarified. In some regions with a high concentration of oil companies, an increase in wages can be observed, while in other regions, such an effect was not found. However, the authors of the research note that the positive effect may be temporary and depend on changes in oil prices and the investment policy of oil companies. It is also worth noting that state-owned oil companies may need to make more efforts to develop social programmes and improve living conditions in the production regions (Egorov et al., 2018). In the following sections, the research methodology, calculations, and description of the results obtained will be described in more detail.

3. METHODOLOGY

Systematic literature review and empirical data analysis are essential research methods that can be used together or separately, depending on the research objective. A systematic literature review helps to identify key themes and issues related to the research topic and to highlight important findings by other researchers. This method also helps assess the quality of previous

studies and identify gaps in their methodology and data. Empirical data analysis, in turn, allows statistical methods to analyse the data collected during the research process. This helps to identify relationships between variables and determine which variables influence the study results. In addition, this method can help identify hidden factors influencing the study results. Together, these two methods can help better understand the problem and achieve the objective.

In order to achieve the purpose of this study, the methods listed above were chosen: systematic literature review and empirical data analysis (based on the use of Pearson correlation). To perform correlation analysis, it is necessary to determine the correlation coefficients between all pairs of variables, including the dependent variable (Y) and independent variables (X1, X2, X3).

Pearson correlation coefficient shows the degree of linear relationship between two variables. It can take values from -1 to 1, where 1 indicates a positive linear relationship, -1 indicates a negative linear relationship, and 0 indicates no linear relationship.

The method of least squares is used to calculate the regression coefficients. Multiple linear regression allows us to determine which variables affect the dependent variable Y. To do this, it will be use the formula (1):

$$Y=\beta\_0+\beta\_1 X\_1+\beta\_2 X\_2+\beta\_3 X\_3+\varepsilon \qquad (1)$$

where Y is the dependent variable, X_1, X_2, X_3 are the independent variables, β_0 is the free coefficient, β_1, β_2, β_3 are the regression coefficients, ε is the random error.

This method allowed us to analyse:

Theoretical aspects of the impact of oil production on the economy.

Real economic indicators in Atyrau region.

Quantitative data were used, which allowed us to obtain results based on correlation analysis of indicators of the impact of oil production on the economy of the region. In particular, gross regional product (hereinafter GRP) and average monthly wages in Atyrau region were taken as an economic indicator.

The phases of this study included the following important steps:

Selecting the object of research and setting the research objective.

Collecting, sampling and analysing literature sources related to the research topic.

Collect, sample and analyse empirical data related to oil production and economic performance of the region.

Analysing the findings and drawing conclusions.

Results of correlation analysis and their interpretation.

Results of regression analysis and their interpretation.

Findings of the study (conclusion).

The data for this study were taken from the annual statistical collections of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan from 2016 to 2021. Table 1 presents variables for correlation analysis. The data for Atyrau region were selected for analysis.

TABLE 1. Variables for correlation analysis

Code	Indicator	Unit of measurement
Y	Gross regional product per capita of Atyrau oblast	US dollars.
X1	Average monthly salary in Atyrau region	tenge
X2	Unemployed population about Atyrau region	person
X3	Cost of oil on world markets	US dollars.
Note: compiled by the authors		

Gross regional product per capita is presented as the dependent variable, the other variables are independent. Table 2 below presents data for correlation analysis which was carried out with the help of the SPSS program.

TABLE 2. Data for correlation analysis

Year	Y	X1	X2	X3
2016	25 289,60	268 441	445 467	55
2017	29 708,90	264597	442 279	65
2018	36 162,30	293572	443 644	50
2019	38 104,20	351103	440 652	70
2020	28 776,40	367799	448 805	50
2021	37 643,80	406 166	449 644	70
Note: compiled by authors according to source Bureau of National Statistics (2023)				

4. ANALYSIS

Kazakhstan is a significant oil producer, and oil production is one of the key sectors of the country's economy. Kazakhstan continues to produce oil from significant fields such as Tengiz, Kashagan, Karabatan. Also, recently, the government of Kazakhstan has been actively promoting investment projects in the oil and gas industry aimed at developing new fields and improving production efficiency. It is also worth noting that Kazakhstan is a member of the Organisation of Petroleum Exporting Countries (OPEC) and complies with the agreements on limiting oil production within the framework of this organisation. Before analysing oil indicators, it is proposed to consider an essential regional economic indicator, GRP. Table 3 shows the dynamics of GRP indicators in Kazakhstan for 2016-2021.

Table 3. Dynamics of development of GRP indicators in Kazakhstan for 2016-2021, in USD

Region	2016	2017	2018	2019	2020	2021	Ratio 2021/ 2016, %
Akmola	5 313,9	6 465,6	6 675,2	6 848,3	7 513,0	8 555,5	+60,9
Aktobe	7 203,9	8 434,7	9 097,5	8 874,7	8 063,4	9 347,0	+29,6
Almaty	3 256,4	3 790,8	3 998,1	4 142,4	4 371,5	5 166,5	+58,6
Atyrau	25 289,6	29 708,9	36 162,3	38 104,2	28 776,4	37 643,8	+48,8
West Kazakhstan	9 293,3	11 130,1	12 462,1	11 760,2	10 052,5	12 495,8	+34,4
Zhambyl	3 105,9	3 711,7	3 963,6	3 968,1	4 058,1	4 640,3	+49,4
Karaganda	7 840,2	9 512,0	9 955,9	10 218,2	10 731,8	12 720,5	+62,2
Kostanay	5 047,3	6 469,0	6 866,6	7 357,0	8 026,4	9 583,4	+89,6
Kyzylorda	4 971,7	5 641,1	6 057,6	5 980,7	4 923,8	5 504,5	+10,7
Mangistau	11 341,5	15 517,8	16 484,9	13 985,1	10 497,9	11 657,6	+2,9
Pavlodar	7 619,0	9 614,4	10 562,8	10 511,6	10 053,0	12 170,5	+59,8
North Kazakhstan	4 737,5	6 091,7	6 317,5	6 547,1	6 968,6	7 778,3	+64,1
Turkestan*	2 850,4	3 367,2	2 431,6	2 633,8	2 843,4	3 199,5	+31.
East -Kazakhstan	5 862,8	7 023,0	7 539,1	7 653,0	8 160,3	8 738,8	+49,1
Astana	15 411,8	17 687,7	18 448,8	18 486,7	16 645,1	17 280,2	+12,1
Almaty	17 940,4	20 534,4	19 250,7	18 769,2	16 740,5	17 594,5	-1,8
Shymkent*			6 431,8	5 622,7	5 715,7	5 734,1	-12
Note: compiled by authors according to source Bureau of National Statistics (2023)							

According to the presented data on GRP indicators for the period 2016-2021, positive dynamics can be traced in all regions of Kazakhstan. For 2021, the GRP indicator for Kazakhstan was 10,369.9 USD. In 2021, the GRP indicator for Kazakhstan amounted to 10,369.9 USD, which is 34.2% more compared to 2016. It should be noted that the highest indicators were found in the following regions of Kazakhstan: Kostanay region (+89.6), North- Kazakhstan region (+64.1), Karaganda region (+62.2), Akmola region (+60.9), Pavlodar region (+59.8). At the same time, regions with negative indicators were identified: Shymkent city (- 12), Almaty city (-1.8). Zhambyl (+49.4), East Kazakhstan (+49.1), Atyrau (+48.8) regions developed at the average level. In some regions, changes in GRP dynamics are not very noticeable. Thus, in Aktobe, West-Kazakhstan, Kyzylorda, Mangistau, Turkestan and Astana regions GRP growth was slightly below the national average. In general, we can say that Kazakhstan demonstrated stable GDP growth during this period.

The data show that Kazakhstan's economy has grown steadily over the past six years, with some regions growing more strongly than others. However, the country still faces economic challenges, especially with the COVID-19 pandemic and oil price fluctuations that have had a significant impact on the economy. Figure 1 shows the dynamics of crude oil production in Kazakhstan for 2016-2021, in million tons.

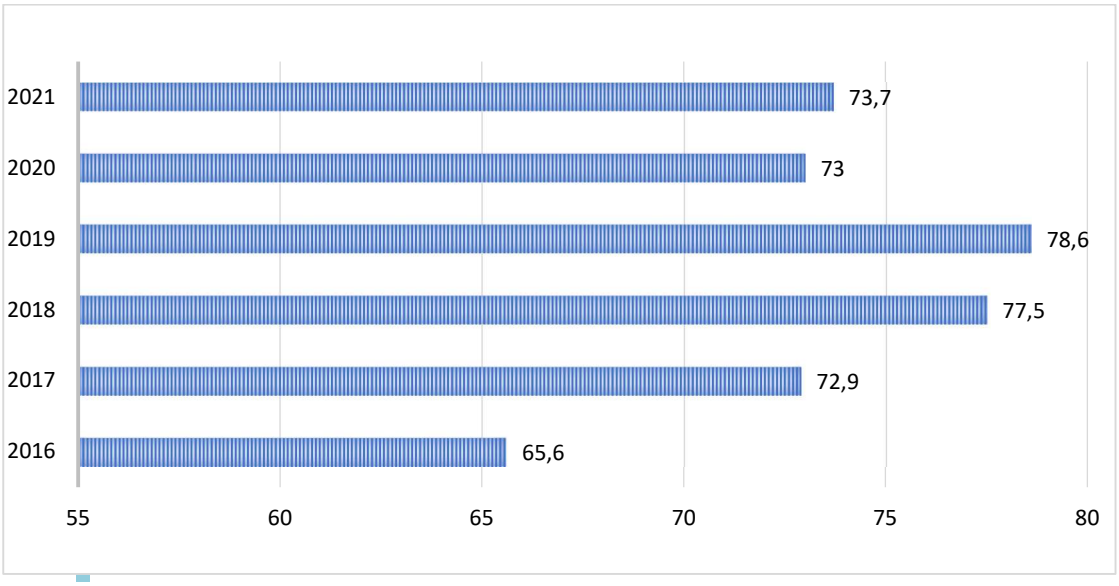

FIGURE 1. Dynamics of crude oil production in Kazakhstan for 2016-2021, in mln tonnes

Note: compiled by authors according to source Bureau of National Statistics (2023)

Analysing annual data on crude oil production in Kazakhstan for the period from 2016 to 2021, the following conclusions can be drawn: The general trend of crude oil production in Kazakhstan has some instability, changing during the period under review. Thus, in 2016-2019, a positive growth trend of 13 million tonnes (19%) of crude oil production was recorded. In 2020, crude oil production decreased by 5.6 million tonnes (6.3%), and in 2021 - there was a slight increase of 0.7 million tonnes (1%), which may indicate that the economy is beginning to recover from the COVID-19 pandemic and other economic difficulties.

5. FINDINGS

Prior to conducting the correlation analysis, a test for normality of distribution using the Kolmogorov-Smirnov method was conducted. From the table 5 below, it can be seen that a test for normality of distribution using the Kolmogorov-Smirnov uniform distribution was conducted for four samples labelled as Y, X1, X2 and X3. The following statistics were calculated for each sample: number of observations (N), normal distribution parameters such as mean (Mean) and standard deviation (Std. Deviation).

The largest absolute differences between the empirical distribution function and the normal distribution function. These values are indicated as "Absolute" and divided into positive and negative differences. In addition, the values of the Kolmogorov-Smirnov test statistic (Test Statistic) and the corresponding two-sided p-values (Asymp. Sig. (2-tailed)), which indicate the probability of obtaining the observed differences if the data are normally distributed. The values of Asymp. Sig. (2-tailed) are equal to .200 for all samples (Y, X1, X2 and X3). This means that at a significance level of 0.05, the Kolmogorov-Smirnov test fails to reject the null hypothesis that the data are normally distributed. Thus, based on this sample and the result of the Kolmogorov-Smirnov test, we can assume that the data Y, X1, X2 and X3 probably have a normal distribution.

TABLE 5. Results for normality of distribution (One-Sample Kolmogorov-Smirnov Test), N=6

Parameter		Y	X1	X2	X3
Normal Parametersa,b	Mean	32614,200	325279,667	445081,83	60,000
	Std. eviation	5382,2901	58199,1982	3588,045	9,4868
Most Extreme Differences	Absolute	,245	,207	,184	,201
	Positive	,205	,207	,156	,201
	Negative	-,245	-,171	-,184	-,201
Test Statistic		,245	,207	,184	,201
Asymp. Sig. (2-tailed)		,200c,d	,200c,d	,200c,d	,200c,d

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Note: compiled by authors

Value from (-)1 to (+)1 – if the coefficient is positive, it indicates a direct relationship (when one variable increases, the other also increases). If negative - on the reverse (when one increases, the other decreases). A value of 0 indicates that there is no linear relationship between the variables. Testing the significance of the correlation coefficient allows you to determine whether the relationship found is random or statistically significant. Table 4 below presents the results of correlation analysis.

Table 4. Results of correlation analysis (N=6)

Parameter		Y	X1	X2	X3
Y	Pearson Correlation	1	0,553	-0,160	0,510
	Sig. (2-tailed)		0,255	0,762	0,301
X1	Pearson Correlation	0,553	1	0,581	0,340
	Sig. (2-tailed)	0,255		0,226	0,509
X2	Pearson	-0,160	0,581	1	-0,220

	Correlation				
	Sig. (2-tailed)	0,762	0,226		0,675
X3	Pearson Correlation	0,510	0,340	-0,220	1
	Sig. (2-tailed)	0,301	0,509	0,675	
Note: calculated by authors using SPSS programme					

Correlation between Y and X1: the correlation coefficient is 0.553, indicating a moderately strong positive linear relationship between Y and X1. The p-value is 0.255, which is above the generally accepted significance level of 0.05, indicating that the correlation coefficient may not be statistically significant at this level. The sample size for this correlation is 6.

Correlation between Y and X2: the correlation coefficient is -0.160, indicating a weak negative linear relationship between Y and X2. The p-value is 0.762, which is above the significance level of 0.05 and indicates that the correlation coefficient is not statistically significant at this level.

Correlation between Y and X3: the correlation coefficient is 0.510, indicating a moderate positive linear relationship between Y and X3. The p-value is 0.301, indicating that the correlation coefficient cannot be statistically significant at the significance level of 0.05. The sample size for this correlation is 6.

Correlation between X1 and X2: The correlation coefficient is 0.581, indicating a moderately strong positive linear relationship between X1 and X2. The p-value is 0.226 which is below the significance level of 0.05, indicating that the correlation coefficient is statistically significant at this level.

Correlation between X1 and X3: the correlation coefficient is -0.220, indicating a weak negative linear relationship between X2 and X3. The p-value is 0.675, which is above the significance level of 0.05, indicating that the correlation coefficient is not statistically significant.

Second stage: regression calculations

To perform a regression analysis, you need to exclude the variable X2, since only the influence of X1 and X3 on the dependent variable Y was confirmed. Now you can perform a regression analysis to estimate the influence of X1 and X3 on X. For this, multiple regression will be applied. Since there is only one dependent variable, a simple linear regression can be run. To perform regression analysis, it is necessary to estimate the regression parameters - free term (b0) and regression coefficients (b1 and b2). The least squares method is used to estimate these parameters. Further regression analysis is carried out using the provided data. Presumably the model will be linear by formula (2):

$$Y=\beta\_0+\beta\_1 X\_1+\beta\_3 X\_3 \qquad (2)$$

Using the least squares method, obtain the parameter estimates: b0 = 0,246; b1 = 0,603; b2 = 0,042. Thus, the regression equation will be by formula (3):

$$Y=0.246+0.603*X\_1+0.042*X\_3, \qquad (3)$$

Next use this model to predict Y values based on X1 and X3 values. Regression parameter estimates are used to predict Y values based on X1 and X3 values. For example, if the new values X1 = 0.7 and X3 = 0.8 are inserted into the regression equation, then the predicted Y value is obtained by formula (4):

$$Y=0.246+0.603*0,7 +0.042*0,8=0.357 \quad (4)$$

Thus, the predicted value of Y for X1 = 0.7 and X3 = 0.8 is 0.357.

6. DISCUSSIONS

Discussing the impact of the average monthly salary in the Atyrau region on the economic growth of the region requires a holistic approach, considering both direct and indirect impacts and the specific nuances of the Atyrau region, a crucial oil-producing area in Kazakhstan. Higher average monthly wages generally translate into higher disposable income and, consequently, higher income tax revenues (assuming a progressive tax system). The government can use this extra income to invest in public services, infrastructure, and other growth-enhancing projects. Regions with higher wages tend to attract skilled workers looking for better pay and living conditions. This influx could lead to a more competitive and innovative workforce and economic growth.

Risks: Given that Atyrau is a vital oil industry centre in Kazakhstan, wages, especially in the oil sector, may be higher than in other sectors or regions. This disparity can lead to income inequality and potential social unrest. Even if it offers high salaries, over-reliance on one industry can be risky. Diversifying the economic base and ensuring growth benefits the broader population is critical to sustainable long-term development.

Rising oil prices could lead to increased revenues, improved financial balances and foreign exchange reserves. Conversely, lower prices could lead to fiscal pressure, potential layoffs in the energy sector, and reduced ability to finance public services. It should be noted that the cost of oil on world markets plays a crucial role in shaping the economic trajectories of regions around the world. Its multifaceted influence affects everything from direct financial balances to consumer behavior and geopolitical dynamics. Regions and countries should be aware of these implications and, where possible, take steps to diversify their economies and reduce their vulnerability to oil price fluctuations.

Conclusions on the hypotheses:

H1: *Average monthly salary in Atyrau region affects the economic growth of the regions* - accepted.

H2: *Unemployed population about Atyrau region affects the economic growth of the regions*- rejected.

H3: *The cost of oil on world markets affects the economic growth of regions* - accepted.

7. CONCLUSIONS

The study found that oil production has significantly contributed to the region's economic growth and development, increasing average wages and improving the population's quality of life. However, dependence on oil revenues has also led to negative consequences that must be considered when designing regional development strategies. The findings of this study have significant implications for policymakers and stakeholders involved in developing the region's oil industry.

In conclusion, the study has established strong links between average monthly wages, unemployment rate and gross regional product per capita in Kazakhstan. In addition, it was found that the cost of oil on world markets can impact the region's economic performance, but this impact is not strong. These results have important implications for the design of economic policies and development strategies of the region. In particular, an increase in average monthly wages can stimulate gross regional product growth. However, other factors, such as unemployment rates and

the impact of world markets, need to be considered. Overall, the study emphasises the importance of considering various factors when designing regional economic development strategies.

Thus, oil production can positively and negatively affect the economy and population depending on many factors. For example, oil prices, the investment policy of oil companies, the level of social infrastructure development, etc. Therefore, to assess the impact of oil extraction on the economy and society, it is necessary to consider numerous factors and research the specific conditions of each country and region. The results obtained are intended for decision-making by persons responsible for developing the oil industry in the region.

8. LIMITATIONS

It is extremely important to remember that correlation does not imply causation. Observed relationships may be influenced by latent variables not included in this analysis. Also, the predictive power of the regression model, while promising, requires further testing, preferably using an out-of-sample data set, to ensure its robustness.

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AUTHOR BIOGRAPHIES

***Galymzhan S. Beisembayev** – PhD candidate, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: galymzhan.beisembayev@mail.ru, ORCID ID: https://orcid.org/0000-0003-2108-3258

Anna A. Kredina – PhD candidate, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: anna.kredina@gmail.com, ORCID ID: https://orcid.org/0000-0002-7682-2727

Zhasym D. Osmanov – Cand. Sc. (Econ.), University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: zhasym@mail.ru, ORCID ID: https://orcid.org/0000-0002-5225-0365

Assel A. Akhmetkyzy – Master of Business, Researcher, University of International Business named after K. Sagadiyev, Almaty, Kazakhstan. Email: assel.akhmetkyzy@gmail.com, ORCID ID: https://orcid.org/0009-0004-1980-484X

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Migration Impact on the Labour Market and Economic Activity of Kazakhstan

Damira M. Iskakova [1]* | **Aigul A. Kurmanalina[2]** | **Dariya B. Iskakova[1]** | **Saule G. Serikbayeva[3]** | **Almagul Zh. Ibrasheva[2]**

[1] «Scientific and Production Enterprise «Innovator» LLP, Astana, Kazakhstan

[2] K.Zhubanov Aktobe Regional University (Zhubanov University), Aktobe, Kazakhstan

[3] Almaty Technological University (ATU), Almaty, Kazakhstan

Corresponding author:
*** Damira M. Iskakova** – Cand. Sc. (Econ.), LLP Scientific and Production Enterprise "Innovator", Astana, Kazakhstan. Email: damirais61@mail.ru

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EJEBS

Abstract

This study examines the relationship between migration (M), economic activity (EA), and the labour market (LM) in the Republic of Kazakhstan from 2000 to 2022. The research comprises three stages, namely indicator selection, data analysis, and correlation-regression analysis. The study hypotheses propose that migration has a notably adverse influence on both the labor market and economic activity. Secondary data from the World Bank and the National Bureau of Statistics of the Republic of Kazakhstan were employed, covering the years 2000 to 2022. The chosen variables encompass migration growth, GDP, labor productivity, investment in fixed assets, real wages, and unemployment rates. The research includes three latent variables: migration (M), economic activity (EA), and the labor market (LM). The measurement models for these variables show acceptable to high reliability, suggesting a sufficient association between the included variables. Regression analysis reveals a significant negative impact of migration on both economic activity and the labour market. Migration can significantly influence economic activity, unemployment rate, and real wages. The findings support the hypotheses, indicating positive economic indicators and the country's socio-economic development trends. These results are valuable for understanding population dynamics and the potential impact of migration on the economy and social processes in Kazakhstan. Overall, the study provides insights into the relationships between migration, economic activity, and the labour market, highlighting the importance of these factors in shaping the country's development.

Keywords: Economy, Migration, Economic Activity, Labour Market, Gross Regional Product, Kazakhstan

SCSTI: 06.77.65
JEL Code*:* F22, J61, I21

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1. INTRODUCTION

Migration impacts demographic indicators, such as the size and structure of the population by age, profession and social status, which ultimately affects the labor market and economic activity. Migration has two aspects: the demand for labor and the supply of labor, and their effects may be different depending on the circumstances. On the labour demand side, migration can usually lead to changes in labour demand in different regions. If migrants come to a particular region in large numbers, the demand for labour can increase, especially in sectors that require low-skilled labour, such as agriculture, construction, or maintenance. This can lead to increased employment and higher wages. This situation may increase the rate of inflation.

On the labour supply side, migration flows also affect labour supply. The departure of migrants from a particular region may reduce the available labour potential in that region. As a result, there may be a labour shortage, especially in specific industries or professions. At the same time, regions that receive migrants may experience an increase in labour supply, affecting competition in the labour market and wages. As a result, inflationary pressures are easing.

Thus, no matter which of the effects of migration dominates, it ultimately affects the inflation rate. In addition, migrants can stimulate economic growth and activity in the regions they visit. They can fill vacancies and offer their services, contributing to the development of various sectors of the economy. Migrants can also stimulate consumption and create additional demand for goods and services.

Within monetary policy, central banks consider various internal and external factors when making decisions. Some of the main ones, of course, are the actual and expected dynamics of inflation, the trajectory of economic growth and the situation in the labour market in the country. Therefore, the question arises: How significant are the consequences of migration for such critical macroeconomic indicators as unemployment and wages in Kazakhstan?

In the domestic economic literature, the issues of the significance of migration effects on the economy in the country and separately for the regions still need to be studied more. Most scientific research is devoted to the dynamics and direction of migration flows in Kazakhstan and the reasons for the observed trends.

Migration flows can change in a small labor market. Introducing new visitors may lead to an increase in the labour supply in some areas, which may affect the employment rate of the local population. This may create competition in the labor market and labor costs for some categories of workers (Fairlie & Meyer, 2003; O'rourke & Sinnott, 2006; Akgündüz et al., 2015; Edo, 2015).

Most of the studies rely on the analysis of the distribution of shares of foreigners in different regions to determine the impact of migration on the labor market. Various methods are used, including modelling and econometric assessments, to understand better migration's impact on the labor market and its broader implications (Borjas, 2003; Brucker & Jahn, 2008; Alvarez & Royuela, 2022). Migration can have a particularly significant impact is in the unskilled and low-paid sectors of the economy, where migrants are often involved in manual labor such as agriculture or construction. At the same time, in highly skilled industries, migrants can make a positive contribution by filling skills gaps and promoting innovation and productivity (Tan, 2012; Eckstein & Peri, 2018; Oesch & Piccitto, 2019).

Studies conducted in different countries do not provide a clear answer regarding the positive or negative impact of immigration on wages and employment. State policy and regulation of migration also play an essential role. This can significantly affect the availability of labor and employment conditions for migrants and the local population (Longhi et al., 2010; Helbling & Kalkum, 2018; Piyapromdee, 2020; Nweke & Enyosiobi, 2023).

However, in the domestic economic literature, questions about the significance of the impact of migration on the economy as a whole and on individual regions have yet to be sufficiently studied. Most of the research is devoted to analyzing the dynamics and direction of migration

flows in Kazakhstan and the reasons for these trends (Nyussupova & Sarsenova, 2012; Arbashiyeva & Spanov, 2022; Jussibaliyeva et al., 2023).

In most regions of Kazakhstan, interregional migration plays a significant role in the overall balance of migration, and researchers note an increase in the outflow zone of the population and a decrease in the inflow zone. Major cities such as Astana, Almaty, Shymkent and Atyrau are centres of attraction for migrants, while populations are declining in other regions. This study analyzes indicators for the entire country.

This study aims to empirically assess migration's impact on economic activity and the labor market in Kazakhstan as a whole. The study considers the impact of external and internal migration flows, including international and internal migrants. Illegal migrants are excluded due to a lack of statistical data.

2. LITERATURE REVIEW

There is a significant body of research, and the empirical literature on the topic provides mixed data on the impact of migration on wages and employment. Most studies rely on analysing the dispersion of the shares of foreigners by region to determine the impact of migration on the labor market. However, the findings of these studies differ. Research on this topic uses various methods, including modelling and econometric estimates, to better understand migration's impact on the labor market and its broader implications. In studies from different countries (Australia, Austria, Germany, UK, Netherlands, Norway, USA, France), no unequivocally positive or negative study of immigration on wages and employment was found. In the UK and the US, immigration has been found to have reduced pressure on wages in the distribution but marked a significant increase in wages at the top and bottom of the distribution (Alvarez & Royuela, 2022).

The impact of migrants on wages and employment is complex and causes economic debate. Some studies confirm that the influx of migrants can have a negative impact on the wages of some groups of the local population. They suggest that with a large number of available labor resources, migrants can compete with local workers and lead to lower wages (Edo, 2015). It is important to note that the impact of migrants on wages and employment can vary depending on factors such as the level of education of migrants, the reason for migration (refugees or migrants), the demand for labour in a particular region, government policies and regulation of migration (O'rourke & Sinnott, 2006; Akgündüz et al., 2015). This may be especially the case in unskilled and low-paid sectors of the economy, where they are often engaged in manual labour such as farming or construction. At the same time, in sectors that require high skills, migrants can make a positive contribution by filling the lack of specialists. They may have specialized skills that drive innovation and productivity. Moreover, migrants can contribute to economic growth and job creation, fill vacancies in sectors with a shortage of local workers, and help increase production and consumption (Tan, 2012; Eckstein & Peri, 2018; Oesch & Piccitto, 2019).

Another critical factor is the state policy and regulation of migration. Different countries adopt different approaches to control and manage migration flows. Introducing strict immigration policies can impact the availability of labour and employment conditions for migrants and the local population (Helbling & Kalkum, 2018; Nweke & Enyosiobi, 2023).

In developing countries, public policy on migration is based on various laws and regulations that govern the citizenship status and registration of migrants. In developed countries, public policy and regulation of migration is often associated with a balance between the needs of the labour market and the social integration of migrants. They seek to attract highly skilled professionals and investors and regulate the flow of low-skilled labour to maintain the sustainability and development of the economy.

Interest in the impact of migration on self-employed residents is due to several factors. First, self-employment, perhaps as the way out of poverty and promote the economic development of

ethnic groups. Second, it can influence tensions between ethnic groups and political influence. For instance, a study conducted in the US showed that self-employed migrants can crowd out self-employed locals and reduce their earnings. The possibility of immigrant clustering in specific market segments could lead to a more significant negative impact of immigration on wages and employment. This may limit the ability of local groups to use business ownership as a way of economic development. Self-employed immigrants are crowding out local self-employed workers. This can be explained by various factors, including market competition, immigrant preference, and changes in supply and demand for certain types of businesses (Fairlie & Meyer, 2003). Borjas (2003) proposes a different approach, using differences in the share of foreigners in groups with education and experience at the national level to determine the impact of migration on wages. Research also indicates that local and foreign workers are only partially substitutes for each other (Brucker & Jahn, 2008).

Migrants influence supply and demand and the local labor market from the moment they arrive, affecting the labour supply of similar skills and qualities. The impact on local and immigrant workers depends on the extent to which different types of work can substitute for each other in production and how firms change their composition and production methods in response to immigration(Cohen-Goldner & Paserman, 2011). Government spending on education and health care may also be affected. In the long run, migration shocks can lead to changes in the level and structure of firms' investments. Technologies and future migration patterns within and outside the country may also be affected. Therefore, long-term effects may differ significantly from short-term ones (Longhi et al., 2010; Piyapromdee, 2020). Immigration to the US and Europe raises concerns about lower wages and limited employment opportunities for the local population. In continental Europe, where the labor market is inflexible and unemployment is high and stable, fears of worsening unemployment due to immigration are prevalent. There is also concern about the financial burden on welfare states due to high unemployment among foreign labor (Brucker, 2011).

Brell (2020) divided migration flow into refugees and immigrants, in the study among developed countries. The results showed that refugees, even if they find work, usually receive lower wages than natives and other immigrants. The situation of refugees in relation to wages has been gradually improving over time, but in most countries not as fast as for other immigrants. Even in the long run, wages for refugees often lag far behind those of natives and other immigrants. Moreover, the results showed that refugees have low wages even when they have a job, and their wages gradually improve over time, but still remain significantly lower than those of natives and other immigrants. Problems of social inclusion and access to highly skilled jobs may be factors influencing this wage inequality.

Studies of domestic authors are mostly aimed at analyzing the dynamics of the migration process of labor resources in the regions of Kazakhstan (Nyussupova & Sarsenova, 2012) and especially under the conditions of the Eurasian Economic Union (Abdrasheva & Spanov, 2022). The results showed that in recent years a large flow of migrants has been observed in the East and South regions. Moreover, there was also observed a negative balance of migration which leads to demographic and economic problems. Jussibaliyeva et al.(2023) analyze the impact of urban infrastructure on youth migration to big cities. The results reveal a strong link between youth migration and education as well as healthcare. Education plays a key role in both domestic and international youth migration. The study highlights the need to develop higher education and increase employment to mitigate the loss of human resources.

In general, the impact of migration on the labour market is determined by various factors, including migrant characteristics, local housing and commodity prices, local labour market competitiveness, multiplier effects, spatial connectivity, capital accumulation, technological spillovers, and labour market institutions. The overall picture of the impact of migration on wages

and employment could be more precise and transparent. Research results vary depending on the methodology and data used. Some studies show that migration may slightly reduce local workers' wages while foreigners' wages decline more significantly. However, it should be noted that these studies may be contested.

3. METHODOLOGY

Determining the suitable methodology and choosing appropriate indicators play an essential role in research on the impact of migration on wages and employment. The wrong choice of methodology or inappropriate indicators can lead to distorted results and unreliable conclusions.

Therefore, careful planning and methodology development are integral to such research.

Conducting a literature review is also fundamental. It allows the study of existing research on this topic, identifies methodological approaches and indicators, and draws attention to conflicting results. This helps to avoid repeating mistakes and to build research based on existing knowledge. The study consists of three stages:

1. Selection of indicators.

Due to the lack of complete information, this provides an overview of trends and changes over time concerning migration, wages, and employment. This approach fills in data gap and provides an overall picture of the impact of migration on these indicators. Based on the studied literature and in accordance with the results of the regression analysis of a wide range of indicators characterizing migration flows and the economic development of the country, it was decided to use the following variables in the models (see Figure 1).

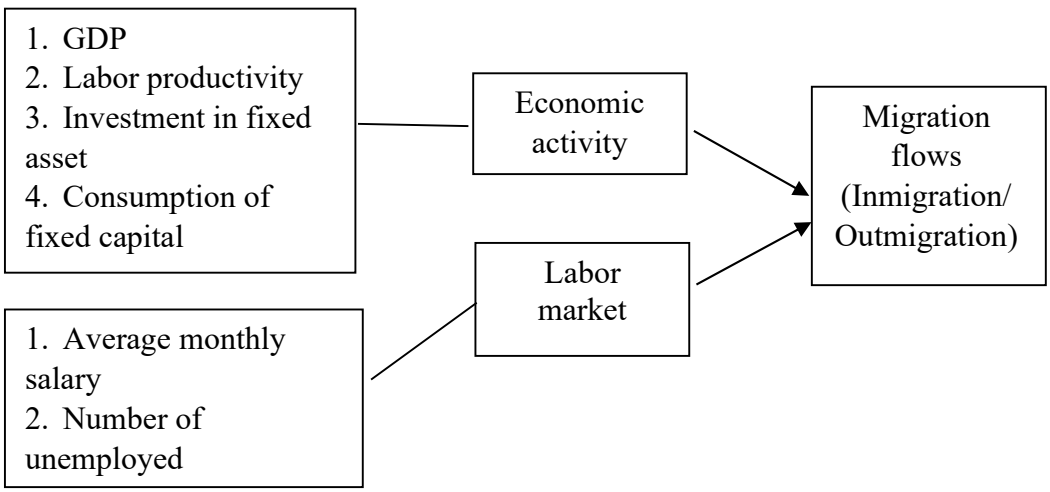

FIGURE 1. Model of the impact of indicators on migration

Note: compiled by authors

The model consists of a dependent indicator - migration, and independent indicators - economic activity and labor market. Economic activity will be measured by three indicators: GDP, labor productivity, investment in fixed capital and consumption of fixed capital. And the labor market will be assessed by the average monthly wage and the number of unemployed.

2. Analysis of the considered data. The data was collected from official data source: World Bank and the National Bureau of Statistics of the Republic of Kazakhstan for the period from

2000-2022. Given the limitations of the data, using secondary data from the last 10 years is a practical approach. This provides an overview of trends and changes over time in relation to migration, wages and employment. This study used data from the World Bank for the period from 2000 to 2022.

Based on the literature review the following variables were selected in the models: migration growth to assess migration flows, as well as indicators of economic activity, including GDP, GRP, labor productivity and investment in fixed assets. To analyze the labor market, data on real wages and unemployment rates were used.

3. Correlation-regression analysis. The method of checking the reliability and validity of data in social and marketing research (Cronbach's Alpha, Composite reliability and Average variance extraction) is used to analyze the results. Therefore, the study separately evaluates the results of each of these parameters for three measurement models: Migration (M), Economic activity (EA) and Labor market (LM). Next, there is conducted evaluation of two construction models, which represent the two hypotheses of current research.

The hypotheses of current research are:

Hypothesis 1: Migration has significantly negative impact on Labour market.

Hypothesis 2: Migration has significantly negative impact on Economic activity.

4. RESULTS AND DISCUSSION

Industrial policies of the Kazakhstan and EAEU countries

The industry is essential in the Eurasian Economic Union (EAEU) economies. The foundations of industrial policy in the EAEU countries are contained in several documents (long-term, medium-term, sectoral and intersectoral). Unlike national ones, the industrial policy within the Union is formed by the main areas of industrial cooperation. The EAEU industrial policy aims to collaborate and remove obstacles to creating a common market of industrial goods and services (Presnyakova, 2020). However, scientific, technological, and industrial cooperation and mutual trade remain low (Kasatkin et al., 2021; Kostyunina, 2021). The main stages and tools of its implementation are shown in Table 1.

TABLE 1. Labor market indicators from 2000 to 2022

Year	Number of unemployed, people	Year	Number of unemployed, people	Year	Average monthly salary, tenge	Year	Average monthly salary, tenge
2000	955,2	2011	473,12	2000	14374	2011	90028
2001	814	2012	474,81	2001	17303	2012	101263
2002	679,6	2013	469,61	2002	20323	2013	109141
2003	669,4	2014	460,44	2003	23128	2014	121021
2004	656	2015	447,7	2004	28329	2015	126021
2005	634	2016	445,1	2005	34060	2016	142898
2006	653	2017	439,7	2006	40790	2017	150827
2007	579	2018	441,13	2007	52479	2018	162673
2008	559,2	2019	442,05	2008	60805	2019	186815
2009	532	2020	441,8	2009	67333	2020	213003
2010	469,61	2021	450,55	2010	77611	2021	250311
		2022	458,87			2022	308250
		Growth	- 496			Growth	293 876

Note: compiled by authors based on the Bureau of National Statistics (2022)

Economic activity is a general concept that refers to all economic activities associated with producing, distributing and consuming goods and services in the economy. It includes various activities involving individuals and households, as well as enterprises and government organizations. It is important to note that economic activity is not limited to monetary transactions but also includes informal transactions and exchanging goods and services without money. However, in this study, economic activity will be assessed by four indicators described in the methodology. The dynamics of the consumption of fixed capital and labor productivity is given is Figure 2.

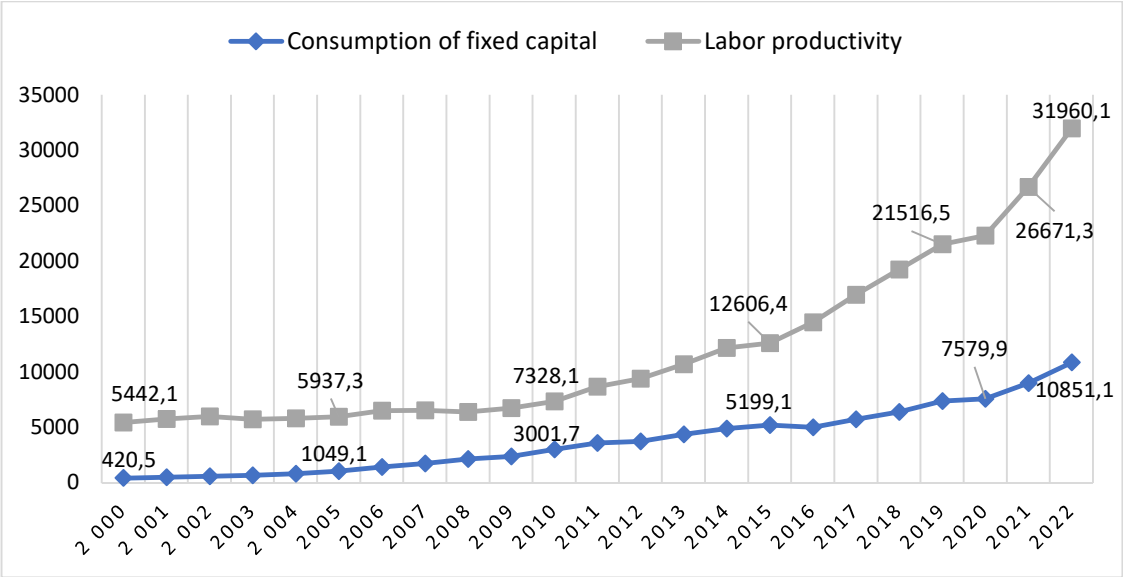

FIGURE 2. Indicators of consumption of fixed capital and labor productivity, 2000-2022, million tenge

Note: compiled by authors based on the Bureau of National Statistics (2022)

Consumption of fixed capital reflects the depreciation and ageing of the main capital assets used in the economy. The value of consumption of fixed capital increased by 25.8 times during the study period. This indicator increased from 420.5 million tenge to 10851.1 million tenge. This indicates increased depreciation and obsolescence of production assets in the economy.

Labour productivity shows how much output is produced per worker. Labour productivity has a positive trend. There is an increase from 2000 to 2022, and this indicator increased by 26,518 million tenge, which may indicate an increase in production efficiency and the introduction of new technologies and methods of work.

Investments in fixed capital - this indicator reflects the volume of investments in new production assets. The volume of investment in fixed assets is gradually increasing from 2000 to 2022, which indicates the desire of the economy to modernize and expand production. Next, in Figure 3 there is given dynamics of GDP indicators and investment in fixed assets.

GDP is the total amount of goods and services produced in an economy. The value of GDP is also growing from 2000 to 2022, which indicates an increase in the country's overall economic activity. Since 2000, the volume has increased by 100 trillion tenge. Growth peaks mainly occurred in the post-crisis years.

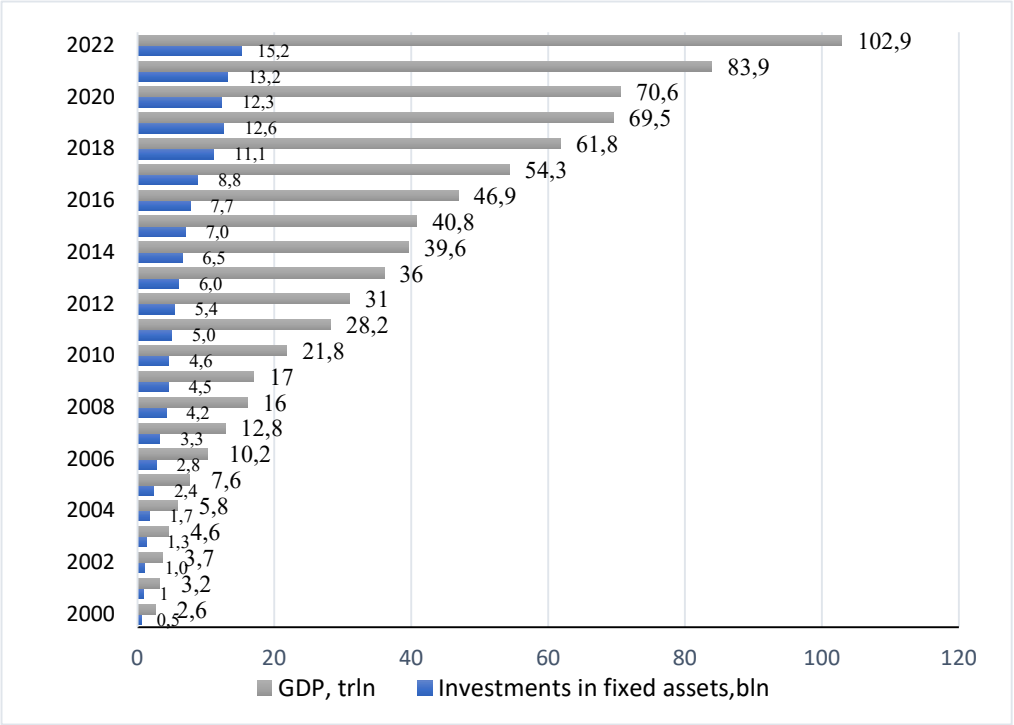

FIGURE 2. GDP indicators and investment in fixed assets from 2000 to 2022, tenge

Note: compiled by authors based on the Bureau of National Statistics (2022)

So, in 2010, GDP was almost 22 trillion tenge, and in 2011 it was already more than 28 trillion tenge. In 2015 - 40.8 trillion tenge, in 2016 - almost 47 trillion tenge (see Figure 3).

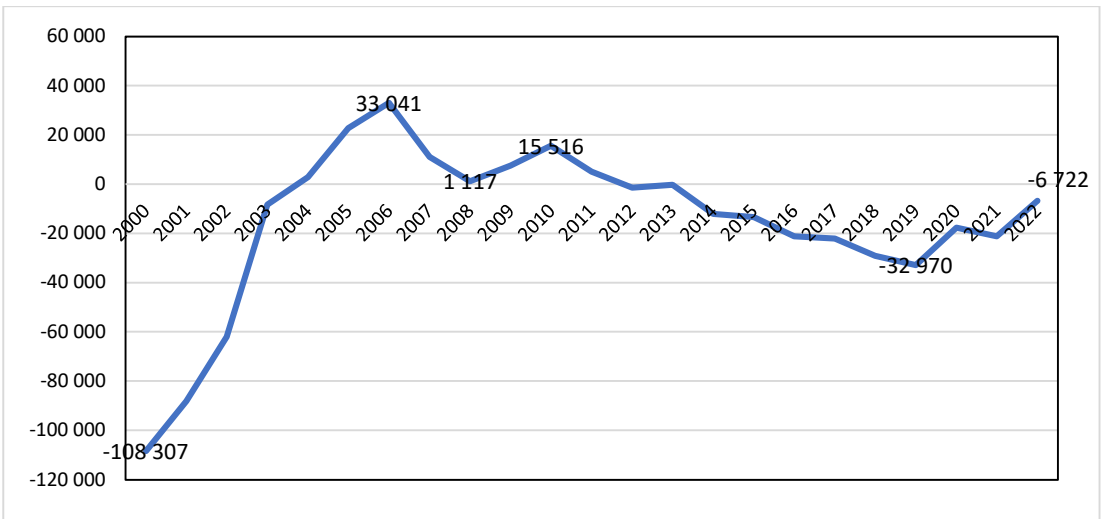

FIGURE 4. Migration growth in the Republic of Kazakhstan from 2000 to 2022, people

Note: compiled by authors based on the Bureau of National Statistics (2022)

The general trend of indicators indicates an increase in economic activity, investment activity and labour productivity during the study period. This may indicate a positive development of the country's economy. However, for complete data analysis, it is also necessary to consider other factors, such as inflation, unemployment, political stability, etc., to get a more accurate picture of the state of the economy.

The labour market has two key indicators: the unemployed population and the average monthly salary (see Table 1). The number of unemployed decreased from 2000 to 2002 but rose, especially from 2010 to 2013. After that, the unemployed population began to decline again. However, in recent years (from 2020 to 2022), there has been a slight increase in the number of unemployed. During the study period, the number of unemployed people decreased by 496 thousand, almost twice. The value of the average monthly wage is constantly growing. It increased from 14,374 tenge to 308,250 tenge, 21.4 times over the study period. This indicates an increase in the income of workers in the economy. The general trend of the data shows that the country's economy grew and developed over the period under study. The growth of real wages indicates an increase in the standard of living and well-being of the population, which, in turn, can help reduce unemployment.

Figure 4 presents data on the migration growth of the population in the Republic of Kazakhstan from 2000 to 2022. Migration growth shows the difference between the number of immigrants (coming into the country) and the number of emigrants (leaving the country). If the value of the migration gain is positive, more people arrive in the country than left, and the population increases. If the value is negative, more people leave the country than they arrived, and the population decreases.

From 2000 to 2002, there was a negative migration growth, meaning more people left the country than came. The population was declining. The highest positive indicator was in 2006, and amounted to 33,041 people. Then there was a decrease until 2008, but the indicator remained positive until 2011. Further, the migration growth was negative and decreased to -32,970 people in 2019. Moreover, since 2020, there has been an increase and decrease in migration growth.

The general trend in migration growth in Kazakhstan shows that in different periods the country attracted or lost migrants. However, in general, since 2005, the country has had a positive migration growth, contributing to the increase in the total population. These data can be important for understanding population dynamics and the potential impact of migration on the economy and social processes in the country.

As a result of data analysis, all economic indicators show a positive trend. Also, labour market indicators show a positive trend. The number of unemployed has fallen, and wages have risen. Migration growth in recent years also has a positive trend compared to the base year 2000. Next, a correlation regression analysis will be considered to determine the impact of economic activity and the labour market on migration growth using SmartPLC.

There are two hypothesis in this research. The study includes three laten variables: migration (M), economic acidity (EA) and labour market (LM). Therefore, the research includes three measurement models and two construction models. The first stage of the analysis includes measurement models validity testing.

The results for Cronbach's Alpha. Cronbach's Alpha result for the "M" model is 0.637. According to the established criteria, the value is higher than 0.6, which allows considering this model reliable. Although it may vary as being in an "acceptable" value between 0.6 and 0.8, the value is still within acceptable limits. Thus, it can be included that the reliability results of the "M" model are acceptable, suggesting a sufficient association between the included variables. The "EA" model has a high Cronbach's Alpha of 0.979. This indicates the high reliability of the data

in this model and the high degree of relationship between the variables. The "LM" model has an average Cronbach's Alpha value of 0.687. This indicates the average level of reliability of the data in this model.

In Table 2 there are provided results for measurement models' factors validity.

TABLE 2. Results for measurement models: "M", "EA", "LM"

Model	Cronbach's Alpha	Composite reliability	Average variance extraction	Result
M	0,637	0,840	0,726	Reliable
EA	0,979	0,984	0,940	Highly reliable
LM	0,687	0,860	0,755	Reliable
Note: complied by authors				

The results for Composite reliability. The "M" model has a good Composite reliability of 0.840. This confirms the high reliability of the data in this model. The "EA" model has a very high Composite reliability of 0.984. This confirms the excellent data reliability in this model. The "LM" model also has a high Composite reliability of 0.860, indicating high data reliability in this model.

The results for Average variance extraction. The Migration Model (M) has a mean Average variance extraction of 0.726. This suggests that the variables in this model only explain part of the total variance in the data. The "EA" model has a high Average variance extraction of 0.940. This confirms that the variables in this model account for a significant portion of the variance in the data. The "LM" model also has a high Average variance extraction of 0.755. This indicates the importance of the variables in this model in explaining the overall variance of the data.

The "M" model shows the highest data reliability and validity among all three models, indicating that it best fits the data and explains relationships between variables well. The "M" and "LM" models also have acceptable reliability and validity, but their results are slightly lower compared to the "EA" model.

The results for construction models are given in Figure 5.

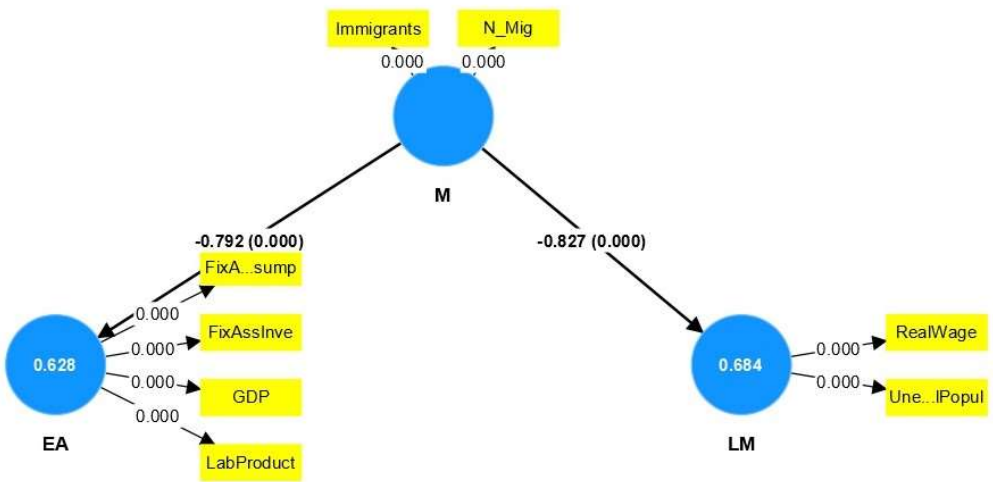

FIGURE 5. Construction models

Note: compiled by authors

The overall results for the construction models show that there is significantly negative impact of migration flows on labour market and economic activity in Kazakhstan. The results support both hypotheses. Below, in Table 3, there is provided the summary for the results of the construction models, which represent the hypotheses for this research.

TABLE 3. Summary for construction models

Model	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	R-square	Hypotheses
M -> EA	-0.792	-0.803	0.048	16.424	0.000	0.628	Supported
M -> LM	-0.827	-0.844	0.050	16.667	0.000	0.684	Supported
Note: complied by authors							

Interpretation of the results for the "M -> EA" model. The results indicate a meaningful and statistically negative significant effect of Migration (M) on Economic Activity (EA) in the "M -> EA" model. R-square (coefficient of determination) shows how well the "M -> EA" model explains the variability of the dependent variable (Economic Activity - EA) based on the variance of the independent variable (Migration - M). The R-square value is 0.628, which means that about 62.8% of the variability in Economic Activity can be explained by the variance in Migration in this model. Thus, there is a clear link between Migration and Economic Activity, and Migration can significantly influence the level of Economic Activity in this context. P values represent the probability that the observed value of the coefficient (Original sample) could be obtained by chance, provided that the null hypothesis is true. The value of P values is 0.000, which means that the observed value of the coefficient is statistically significant.

Interpretation of the results of the "M -> LM" model.

R-square (coefficient of determination) shows how well the "M -> LM" model explains the variability of the dependent variable (Labor market - LM) based on the variance of the independent variable (Migration - M). The R-square value is 0.684, which means that about 68.4% of the Labor Market volatility can be explained by the Migration variance in this model. The value of P values is 0.000, which means that the observed value of the coefficient is statistically significant. The results indicate a meaningful and statistically negative significant impact of Migration (M) on the Labor Market (LM) in the "M -> LM" model. Thus, there is a clear link between Migration and the Labor Market, and Migration can significantly affect the unemployment rate and real wages.

Both hypotheses are supported.

Most previous studies have assessed the effects of migration to the labour market using spatial correlation, linking wage and employment variables to the share of immigrants in some geographic regions or industries. However, this approach has limitations and may give false results. Therefore, other methods have been used in recent years, including national-level analysis with differences in shares of immigrants by education and experience groups. In general, studying the impact of migration on the labour market requires considering various factors and characteristics of the labour market, such as market rigidity, country specificity, and the level of education and experience of immigrants (Brucker, 2011).

S. Weiske (2019) in his work determines the significance of the impact of immigration on the US economy. When assessing the dynamic responses of macroeconomic indicators to immigration shocks, the SVAR model is used. Within the model framework, the author distinguishes three types of shocks: immigration shocks, shocks of neutral and investment

technologies. To separate them most accurately from each other, long-term restrictions are introduced. According to the results obtained, immigration in the short-term harms total real wages and, at the same time, positively on investment. The impact on production and consumption is negligible. In general, immigration does not matter much to the US economy.

Summarizing the findings, the degree of influence of migration on the indicators of economic activity and the labour market varies depending on the country - the object of the study. Thus, in works on Western European countries (EU countries and Norway), estimates have shown that migration still has a specific effect on the indicators under consideration. At the same time, the results obtained in the study for the United States, on the contrary, indicate an insignificant impact of migration on the country's economy. Perhaps this is because the ratio of migrants to the permanent population in European countries in the analyzed periods was higher than in the United States.

For example, migration increased the resident population in Norway by 0.9–0.8% each year from 2010–2014. However, in the US, since 1950, this ratio has generally been below 0.4%. Generally, the assessment sequence used in the work corresponds to the methods used in the reviewed European Union, Norway and USA studies.

It should be noted that, according to most authors, the main problem in conducting empirical research on the impact of migration on macroeconomic indicators is the limited access to information on net migration, wages, the state of the labour market, and other variables that can be used in regression analysis.

5. CONCLUSIONS

In Kazakhstan, migrants can also be labour migrants, students, or refugees, but their numbers may be smaller due to differences in economic development and the size of the country. Government policies and migration regulations also exist but may need to be more developed and focused on managing labour migration and attracting investment.

This research aimed to empirically assess migration's impact on economic activity and the labour market in Kazakhstan. The study considered external and internal migration flows, including international and internal migrants, while excluding illegal migrants due to data limitations. Careful planning, suitable methodology, and indicator selection were essential to ensure the reliability of the research.

The analysis revealed positive trends in economic indicators, such as GDP, labour productivity, and investment in fixed assets, indicating a growing economy over the study period. The labour market also exhibited positive trends, with a decrease in the number of unemployed and a significant increase in real wages, indicating improvements in the standard of living.

The migration growth analysis showed that Kazakhstan experienced positive and negative migration flows, with an overall positive migration trend since 2005, contributing to an increase in the country's total population.

The correlation-regression analysis supported both research hypotheses, indicating that migration negatively impacts the labour market and economic activity. These results emphasize the importance of understanding migration's influence on wages and employment dynamics to inform policy decisions and address potential challenges.

Based on the findings, it is recommended that policymakers and stakeholders consider the implications of migration on the labour market and economic activity. Initiatives to support local workers and maintain economic growth while managing migration flows more effectively could lead to a balanced and sustainable development path for Kazakhstan. Further research and continuous monitoring of migration trends and their impact on the economy and labour market will be crucial for making informed policy decisions in the future.

A limitation to this study is that Kazakhstan does not keep records of illegal migrants. For further research, it is recommended to conduct an analysis of illegal migrants and conduct a qualitative study, since this issue has not yet been studied in the context of Kazakhstan.

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AUTHOR BIOGRAPHIES

***Damira M. Iskakova** – Cand. Sc. (Econ.), Leading Researcher, Director, LLP Scientific and Production Enterprise "Innovator", Astana, Kazakhstan. Email: damirais61@mail.ru, ORCID ID: https://orcid.org/0000-0002-1440-9515

Aigul A. Kurmanalina – Cand. Sc. (Econ.), Docent, Department of Economics and Management, K.Zhubanov Aktobe Regional University (Zhubanov University), Aktobe, Kazakhstan. Email: kurmanalina@mail.ru, ORCID ID: https://orcid.org/0000-0002-0012-2775

Dariya B. Iskakova – PhD Candidate, Senior Researcher, L.N. Gumilyov Eurasian National University, LLP Scientific and Production Enterprise "Innovator", Astana, Kazakhstan. Email: iskakova.dariya@bk.ru, ORCID ID: https://orcid.org/0000-0003-1982-0140

Saule G. Serikbayeva – Cand. Sc. (Econ.), Acting Associate Professor, Almaty Technological University (ATU), Almaty, Kazakhstan. Email: s.serikbayeva@mail.ru, ORCID ID: https://orcid.org/0000-0001-7053-6503

Almagul Zh. Ibrasheva – Master Sc. (Econ.), Senior Lecturer, Department of Economics and Management, K.Zhubanov Aktobe Regional University (Zhubanov University), Aktobe, Kazakhstan. Email: ibrasheva1975@mail.ru, ORCID ID: https://orcid.org/0000-0002-6998-762X

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