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Diversification of the economy of the Mangystau region based on the strategies of Norway and Australia: assessment of opportunities and development prospects

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ABSTRACT

The purpose of this study is to determine whether Mangystau could benefit from adopting economic diversification techniques from Australia and Norway. With a focus on the pressing need for diversification because of Mangystau's reliance on low-tech and raw material exports, the research aims to determine the strategic adjustments that must be made in order to preserve a diverse economic structure. Qualitative interviews, content analysis, and retrospective and comparative industrial data analysis were all used in the study. These techniques were applied to evaluate the benefits and difficulties of economic diversification in detail. The research shows that combining elements of Australia's and Norway's economic models can improve the socioeconomic dynamics in Mangystau. The implementation of Norway's resource management strategies, which prioritize long-term stability, has the potential to greatly enhance the effectiveness of the region's use of oil and gas assets. The region may be able to attract investments and boost economic growth by leveraging Australia's experience in developing infrastructure and fostering a positive business climate. The suggested tactics may serve as the foundation for the creation of long-term resource management initiatives, the enhancement of the local infrastructure, and the promotion of commercial activities.

1. INTRODUCTION

Kazakhstan has followed a multi-vector foreign strategy for the last thirty years with the goal of preserving its independent, sovereign identity. According to [1], this strategy entails cultivating ties with a number of prominent nations, dissecting global concerns into smaller parts, tailoring its interests to a variety of partners, and lowering the possibility of becoming overly dependent on any one state partner.

All oil and gas consortiums must adhere to regulations on working with regional businesses in Kazakhstan's oil and gas industry. However, because of agreements reached more than 20 years ago, these stringent regulations do not completely apply to the three major oil and gas consortia operating in the region [2].

The goal of stable welfare growth for its people is a fundamental component of Kazakhstan's new economic strategy as an independent nation. This goal is strongly related to increased living standards and sustainable income growth. The Republic of Kazakhstan's National Security Strategy for the years 2021–2025, which was authorized by a presidential decree, is one of the key texts in this system. Since the nation's independence, there have been six documents similar to this one [3]. The first president's Kazakhstan Development Strategy, which aims to create a society of universal welfare based on a strengthened state, a developed economy, and Kazakhstan's aspiration to join the world's 30 most industrially developed nations, served as the framework for the development of the national security strategy until 2050 [4].

Kazakhstan is developing a new economic model that draws on accumulated knowledge and international practices as part of its active integration into the global community. According to official data, the Gross Regional Product (GRP) of the Mangystau region increased nominally by 2.7 times between 2010 and 2023. About half of the GRP structure is still accounted for by the mining industry, which continues to be the region's largest economic sector despite a 10% decline from 2010 [6].

The depletion of oil field reserves is leading to a reduction in reliance on the oil sector. Concurrently, the region's manufacturing sector has expanded from 5% to 7%, while the transportation and storage business has grown from 7% to 8%. A significant obstacle to the growth of the region is the absence of economic diversity. For instance, there have been 30,500 more small and medium-sized businesses functioning during the last five years—a surge of 60%. Nevertheless, their 1.2% GDP contribution to the nation is still quite small. The significant amount of wear and tear on engineering infrastructure is another crucial factor. For example, the sewage systems in urban areas have a level of deterioration of 51%, while the water supply networks are 67% worn out [2].

The objective of this research is to examine and evaluate the feasibility of incorporating effective elements of the Australian and Norwegian economic models into the Mangystau area of Kazakhstan.

Hypothesis for research. The Mangystau region may lessen its reliance on raw material exports and solve its lack of technological advancement by incorporating elements of Australia's and Norway's economic policies into its own economic plan.

In order to support Mangystau's choice of Norway and Australia as diversification models, it is important to highlight the following:

1. Mangystau is very interested in Norway's distinctive approach to managing natural resources, especially in the oil and gas industry.

2. Despite a heavy reliance on resource industries, Australia's successful practices in infrastructure development and economic diversification are the driving force behind the selection of a development plan based on its experience.

3. The extraction and export of natural resources, such as minerals and oil, have long been associated with Australia, Norway, and Mangystau.

4. One of the effective mechanisms for managing resource revenues used by Norway is its unique Government Pension Fund (Future Generations Fund).

5. Norway actively invests in innovative and sustainable technologies, including renewable energy and green technologies.

6. Australia has successfully diversified its economy through active infrastructure development and the creation of a favorable business environment, which has attracted investments into non-resource sectors.

Mangystau can learn a lot from Norway's and Australia's experiences in handling economic downturns and adjusting to shifts in the world market, especially in light of swings in commodity prices.

The study may have the following limitations:

1. Incomplete information might not fully explain every local Mangystau trait. For instance, due to disparities in legal systems, economic development levels, and financial allure, applying tactics and ideas that have worked in Australia and Norway may not work in Mangystau.

2. Local institutions, companies, and the populace may oppose the adoption of new tactics since they are used to the current economic paradigm.

3. Economic downturns, shifts in the energy markets, and fluctuations in commodity prices can pose serious obstacles to the adoption of renewable energy sources and the attainment of diversity.

Based on cutting-edge models from Australia and Norway, this study's scientific originality is the creation and rationale of a complete strategy for the Mangystau region's economic diversification.

2. Literature Review

Kazakhstan's economy has been developing steadily in recent years, helped along by the adoption of cutting-edge technologies and the continuous advancement of important economic sectors. According to Aralbay R. [7], the nation is still actively adapting to the quickly shifting global economic landscape in 2024, which includes changes in commodity prices and other worldwide economic difficulties.

Kazakhstan's southwest is home to the Mangystau Region, formerly known as Mangyshlak. It was reestablished in 1990 under the name Mangystau after being founded on March 20, 1973, from the southern part of the Guryev area. The city of Aktau is the administrative hub.

The area located on the Mangyshlak plateau, east of the Caspian Sea. It is bounded to the northeast by the Atyrau and Aktobe areas, to the south by Turkmenistan, and to the east by the Republic of Karakalpakstan in Uzbekistan. Much of Kazakhstan's oil is extracted from the industrial Mangystau region, which is crossed by the Aktau-Zhetybai-Uzen oil pipeline. Because of Aktau, the area is frequently referred to as Kazakhstan's "sea gateway"[4].

The Mangystau region had a population of 795.9 thousand as of July 1, 2024, with 364.2 thousand (45.8%) residing in urban areas and 431.7 thousand (54.2%) in rural regions. Between January and June of 2024, there was a natural population gain of 8,010, with a 1.9% reduction in births and a 17.4% increase in deaths over the same period in 2023. There was an improvement in foreign migration and a worsening of domestic migration, resulting in a positive migration balance of 1,076 individuals [8].

With 18,000 unemployed people in the second quarter of 2024, the unemployment rate as a percentage of the workforce was 4.9%. The percentage of the labor force that was jobless as of August 1, 2024, was predicted to be 17,741, or 4.8%. The average nominal monthly wage in 2024's second quarter was 579,838 tenge, 9.2% more than in 2023's corresponding period [9].

In the second quarter of 2024, the real wage index was 100.4%. In comparison to the first quarter of 2023, per capita nominal cash income increased by 13.6% to 235,295 tenge in the first quarter of 2024. During the same time frame, the real income index increased to 103.1% [5].

There are 71 oil fields in the Mangystau area, and their combined oil reserves are 2,813.8 million tons, or 12% of Kazakhstan's total reserves. There are 154.1 billion cubic meters of recoverable gas reserves. The Khazar and Kalamkas-Sea fields will begin to be developed in 2028, and the first oil is anticipated by 2030. In this regard, the area offers great potential for the growth of petrochemicals and the manufacture of premium fuel and lubricants. As a flagship project, it is suggested to start building a fourth oil refinery at Mangystau. Furthermore, the region has significant potential in the transportation and logistics industry because to the seaports of Aktau and Kuryk. The region's overall cargo transshipment through the ports of Aktau, Kuryk, and the northern terminal has increased from 3.5 million tons to 6.5 million tons during the last five years [10]. This is a nearly twofold increase.

The region's tourism industry has grown as a result of the climate, the wealth of historical sites, the shoreline of the Caspian Sea, the steppes, the mountains, the natural sceneries, and the canyons. The Mangystau region's underground mosques, which are treasures of architectural design, may be the distinctive hallmark of its tourism potential [10]. The Mangystau region's industrial production volume is depicted in Figure 1.

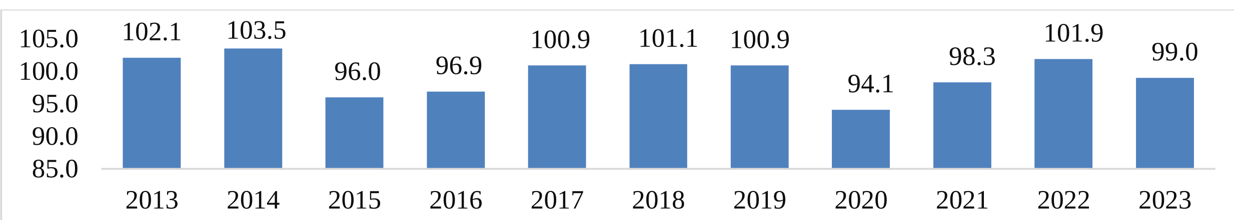

Figure 1. Industrial Production Volume in Mangystau from 2013 to 2023, %

Note: Compiled by the author based on source [5]

At current prices, the industrial production volume from January to July 2024 was 1,692,643 million tenge, 3.4% more than during the corresponding period in 2023. Production volumes rose by 3.3% in the mining sector and by 12.4% in the manufacturing sector, while there was a 6.5% decrease in the supply of gas, electricity, steam, hot water, and air conditioning. There was a 3.1% increase in the activities related to pollution eradication, waste collection, treatment, and disposal, and water supply [5].

Between January and July of 2024, the total value of agricultural products and services produced was 15,839.4 million tenge, representing a 97% increase over the same period in 2023. Figure 2 displays Mangystau's foreign trade turnover throughout the last ten years.

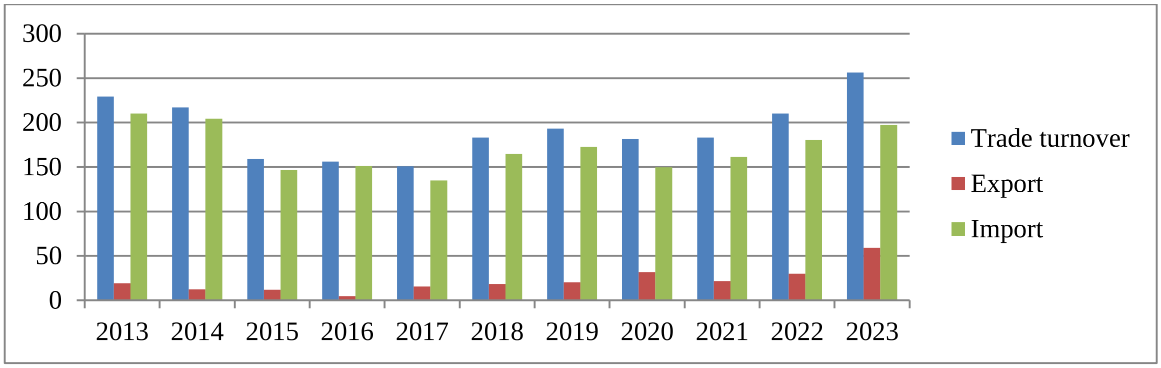

Figure 2. Foreign Trade Turnover of Mangystau, million USD

Note: Compiled by the author based on source [5]

From 2013 to 2016, trade turnover consistently decreased, most likely as a result of external or economic causes. Trade turnover has been steadily improving since 2016, with a notable uptick in 2023.

The trade balance has been negativing for the whole period under consideration since imports have been far higher than exports. Nonetheless, export quantities have been rising since 2016, with 2023 seeing a particularly significant acceleration. In the meantime, import levels have stayed mostly steady with the exception of a notable rise in 2023. The Mangystau investment index for the previous ten years is displayed in Figure 3.

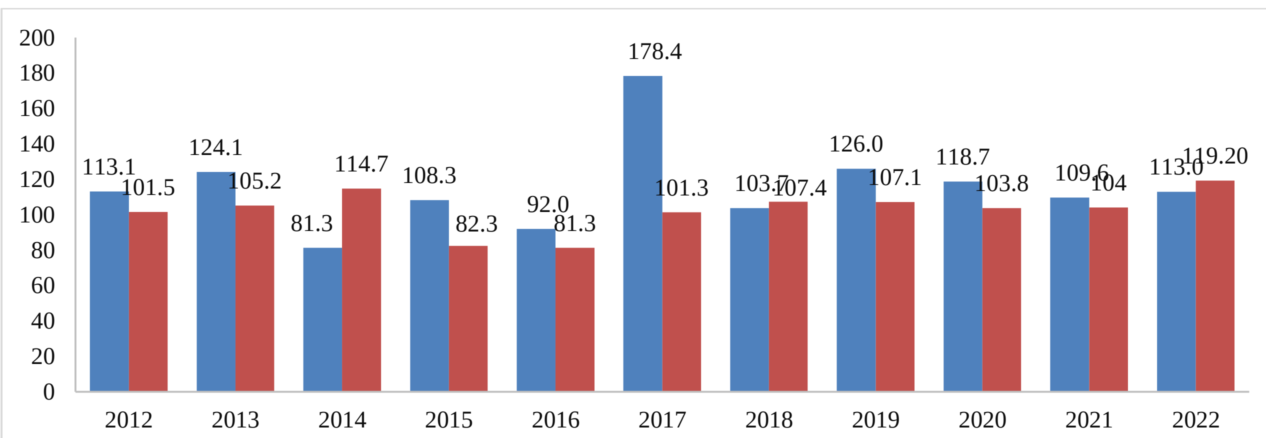

Figure 3. Investment Index of Mangystau over the Last 10 Years, %

Note: Compiled by the author based on source [5]

Over the course of the observation period, fixed capital investments have showed largely steady growth with some volatility. 2014 had the biggest increase even as spending in building new homes decreased. 2015 and 2016 saw a decline in investments, which was followed by a rebound in growth. Over the course of the analysis period, fixed capital investments peaked in 2022.

Investments in the building of homes have shown a great deal of volatility over the years, with abrupt downturns and increases. Notably, investments peaked in 2013 and then sharply declined in 2014 and 2015. With the exception of a little increase in 2019, investment growth has been gradually declining from a rebound after 2016 that peaked in 2017.

We will next examine the data on Mangystau's culture over the previous ten years.

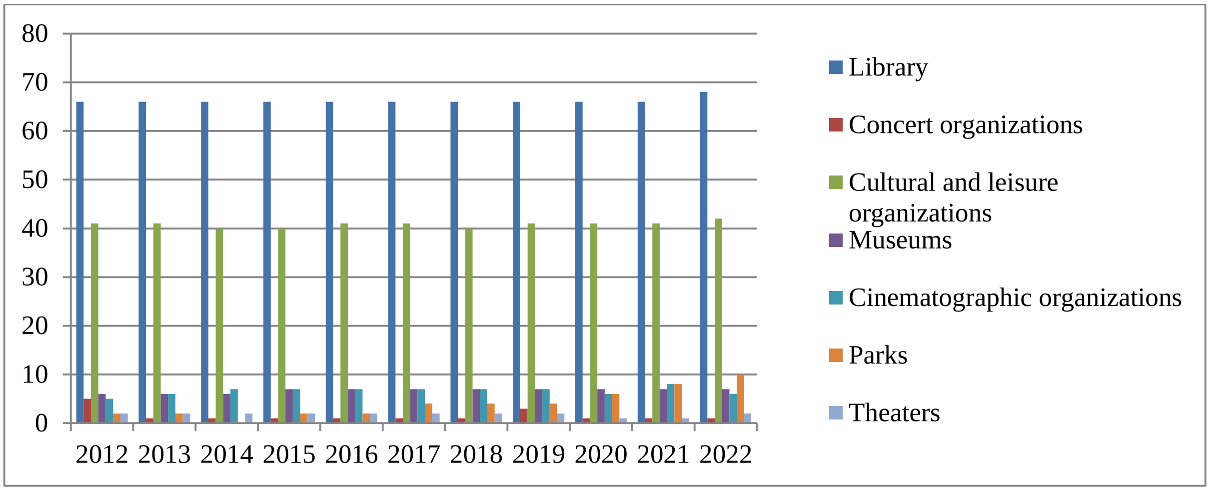

Figure 4. Cultural Statistics of Mangystau, units

Note: Compiled by the author based on source [5]

According to the analysis of Figure 4, Mangystau's cultural institutions have generally been developing steadily, with some indications of growth, especially in parks and museums. The dramatic decline in concert organizations and the volatility of the movie theater industry, however, might point to problems in these domains.

3. Research Methodology

A thorough scientific methodology is used in this study, which involves a comparison and retrospective analysis of industrial data from the Mangystau region. The National Bank of Kazakhstan, the Ministry of National Economy of the Republic of Kazakhstan, and numerous internet sites provided data for this study.

The necessity for a thorough analysis of past data on Australia's and Norway's economic diversification led to the decision to use retrospective analysis in order to pinpoint critical success factors and roadblocks for the later implementation of comparable tactics in the Mangystau region. We can assess the suitability of various approaches to resource management and infrastructure development within the framework of Kazakhstan's economy by conducting a comparative analysis of them. Qualitative interviews with experts and stakeholders were used to gain a better knowledge of the unique characteristics of the area and to uncover variables that affect how well the suggested methods are implemented. Systematizing information for the creation of well-founded findings and recommendations was made possible by the use of content analysis in the processing of opinions and suggestions obtained from the interviews. Twenty interviews were done with important participants, which included four academic specialists, four public figures, five government officials, and seven corporate representatives. Based on the idea of data saturation, which is reached when new interviews stop yielding new information and validate the representativeness and adequacy of the data gathered, the sample size was calculated. Depending on the respondents' availability, interviews were done over the phone and in person. With the participants' permission, all interviews were videotaped, guaranteeing accuracy for later analysis.

Correlation and data processing were performed using the Python, Statistical. For the analysis, we used tools that allowed us to work with data, create tables, calculate averages and standard deviations, as well as perform the necessary mathematical operations. The results of the analysis were visualized using graphs, which helped to better understand the relationships between the variables and make the conclusions more clear and understandable.

The following formula was used to compare the approaches:

$$R = \sum_{i=1}^{n} (X_i - Y_i)$$

R is the difference between strategies in different countries,

X_i, Y_i - performance indicators in countries (Norway and Australia) on key factors such as infrastructure, resource management, business support.

Qualitative interviews with experts and stakeholders were also conducted to identify the factors influencing the success of the implementation of strategies. The interviews were analyzed by the method of content analysis using data encoding, while formulas were used to systematize and highlight topics:

$$T_k = \frac{M}{n}$$

Where, T_k - is the highlighted topic, M is the total number of mentions of the topic, n is the number of interviews.

Statistical data processing was carried out using the Python programming language. To do this, we used tools that allow us to work with data, create tables, calculate averages and standard deviations. For example, the following formula was used to calculate the average value:

$$\bar{X} = \frac{\sum_{i=1}^{n} X_i}{n}$$

Where $\bar{X}$ - is the average value, X_I are the values of the indicator, n is the number of observations.

The standard deviation was calculated using the formula:

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n} (X_i - \bar{X})^2}{n}}$$

Graphs were used to visualize the results, which made it possible to better understand the relationships between variables and make conclusions more visual and understandable.

4. Results and Discussion

Mangystau is one of Kazakhstan's top ten areas with the most potential for growth in the travel industry. While the surrounding areas are perfect for eco-ethno tourism, Aktau itself offers prospects for beach tourism. A thorough plan aimed at augmenting tourism in the area has been established, and vital aspects for industry enhancement have been pinpointed. Because of this, the area saw more than 117,000 visitors this year, of whom more than 67,000 stayed at the "Rixos Aktau" resort complex, which opened in July. The "Rixos Aktau" project, which is Central Asia's largest resort-style hotel, is spurring the growth of the travel industry in the area [7].

The Kuryk seaport's capacity is to be increased by designating it as a Special Economic Zone (SEZ), emulating the SEZ "Seaport Aktau." Kuryk port has a capacity of 6 million tons, however it only handles 2 million tons of cargo annually.

But with a 1 meter sea level decrease expected by 2030, climate change threatens the ports' ability to function and makes cargo transit more difficult [10].

Thus, taking into account the nation's territorial and geographical development, the regional center—Aktau—along with Aktobe, Oral (Uralsk), and Atyrau—plays a crucial role in creating a Western macro-region's sustainable spatial structure. Oil and gas extraction is the main focus of the monotown Zhanaozen's economy in terms of future economic specialization [11].

After that, we'll look at the interviewees' responses (Table 1).

1. The first goal of the interview was to learn more about the prospects and problems facing Mangystau's economy in terms of diversification.

2. To determine what elements support and undermine diversification.

3. To compile suggestions for enhancing diversification tactics.

Table 1. Responses from Respondents

Question	Response
What is your opinion of the Mangystau region's economic situation right now? Which main obstacles and chances do you see?	The Mangystau region's economy is highly reliant on the extraction of oil and gas, which leaves it susceptible to changes in the world energy markets. However, diversification has become more and more popular in recent years. Opportunities include the growth of the agro-industrial complex, infrastructure, and tourism.
Which economic sectors in Mangystau, in your opinion, offer the most room for diversification? Why?	Agriculture and tourism both have a lot of promise. There are distinctive natural features in Mangystau that can attract travelers. Given the vast amounts of undeveloped land, there are potential in agriculture to increase production and processing.
What can encourage non-resource sectors to grow?	infrastructure projects, financial assistance from the government in the form of tax breaks and subsidies, and the creation of specialized training programs.
What part do policies and plans from the government play in encouraging economic diversification? Which actions do you think are the most successful?	Government initiatives, such the development of industrial parks and subsidy schemes, are crucial. Good practices include making direct infrastructure expenditures and fostering an environment that is conducive to business.
What actions or modifications to policy might make diversification more successful?	Legislation must be strengthened, investor conditions must be made more clear, and money for educational initiatives must be increased.
How would you rate the present climate in Mangystau for non-resource investments?	The climate for investments is getting better, but there are still obstacles to overcome, like a lack of knowledge

Exist difficulties luring in investment?	about opportunities and political instability risks.
Which funding options and financial instruments are most important for the economic diversification of the area?	International financial institutions, private investments, and government grants are important sources of funding. Public-private alliances are crucial as well.
Which social and cultural elements could have an impact on the process of diversification? What alterations in public opinion and conduct are required for plans to be successful?	Diversification may be hampered by social issues such as a dependence on conventional sectors. New sectors and inventions require a shift in public perception.
What kind of human and educational resources are needed to help diversification?	In order to ensure that skilled professionals are trained to operate in these growing areas, it is imperative to design educational programs relating to new industries.
What suggestions would you make to strengthen the existing plans and methods for broadening Mangystau's economic base?	I suggest boosting infrastructure development, promoting private investment, and bolstering government support for emerging businesses.

Note: Compiled by the author based on source [5]

The data analysis demonstrates that the establishment of a welcoming business environment and the state's active involvement in natural resource management were the key factors in the diversification of the economies of Australia and Norway. However, the Mangystau region differs from Norway in that it faces a difficulty of scarce resources for the creation of stabilization funds, necessitating the customization of solutions to the unique circumstances of the area. The over-reliance on the hydrocarbon industry and the inadequate infrastructure development to accommodate other sectors are two major problems. This restriction emphasizes how crucial it is to make long-term reforms and investments to enhance the business climate and draw in private capital.

The interviews conducted suggest that the primary obstacles to economic diversification are associated with the significant reliance on energy resources. Conversely, the growth of non-resource sectors, such as tourism and the agro-industrial complex, presents chances for the economy to diversify. The development of these industries requires funding, backing from the government, and the education of skilled professionals. Successful diversification can be facilitated by practical actions like the establishment of industrial parks and subsidy schemes. In this process, political risks, information scarcity, and better investment conditions all play significant roles. Important financing sources for diversification include international financial organizations, private investments, and government grants [12].

Two important components of a successful diversification strategy are the encouragement of innovation and shifts in public opinion. In order to foster diversification, it is imperative that educational programs and the preparation of specialists be implemented in addition to enhanced government support, improved infrastructure, and promotion of private investment.

In the course of the study, a survey of specialists was also conducted. The purpose of this survey is to assess the prospects for economic diversification in the Mangystau region, identify the main sectors with the greatest potential for development, and find out what contributes to or hinders their growth. The survey is aimed at collecting expert opinions on current investment conditions, necessary government support measures and strategies to improve the region's economy (Appendix 1).

According to the survey, it can be concluded that the majority of experts (40%) believe that the region's economy is heavily dependent on the oil and gas sector, which is why it is vulnerable to fluctuations in world energy prices. At the same time, 30% of respondents see potential in the development of tourism and agriculture, which opens up opportunities for diversification. The rest indicated the need to modernize the infrastructure (20%) or found it difficult to give an accurate answer (10%).

According to respondents, tourism has the greatest opportunities for economic diversification (45%), followed by agriculture (25%) and manufacturing with processing (20%). The remaining sectors are considered less important (10%). Half of the specialists (50%) believe that the main driving force for the development of non-resource industries is investment in infrastructure. Government support (subsidies and tax incentives) — 30% and the development of educational programs — 20% were also noted.

Respondents believe that the most effective measures to support diversification are the creation of industrial parks (35%) and direct investment in infrastructure (25%). Government subsidies also play an important role (20%), but many experts believe that the effectiveness of government programs is limited (20%). Respondents believe that improving legislation and increasing transparency for investors (40%) is the most important aspect. It is also important to increase the financing of educational programs (30%) and attract international partners (20%).

Half of the experts (50%) noted that the conditions for investing are getting better, but problems remain. The main difficulties are related to the lack of information and political instability, so it is important to inform investors and create a stable political environment.

According to experts, the main sources of financing are government grants (40%) and private investments (30%). International financial organizations (20%) and public-private partnerships (10%) they can also play an important role.

The majority of experts (45%) believe that adherence to traditional industries hinders the development of new directions. There is also a shortage of qualified specialists (30%), which underlines the importance of raising public awareness and training. Experts believe that the most important thing is to develop educational programs for new industries (50%) and train qualified personnel (30%). Respondents suggested increasing government support for new industries (35%), improving infrastructure (30%) and stimulating private investment through tax incentives (25%).

The analysis showed that the main problems in the diversification of the Mangystau economy are associated with a strong dependence on oil and gas, as well as a lack of investment in other sectors. Experts believe that it is necessary to improve laws, develop infrastructure and strengthen government support for the development of non-primary industries.

Special attention should be paid to the development of tourism, agriculture and industry, as they can become the basis for diversification. It is also important to develop educational programs and create industrial parks for sustainable economic growth in the long term. Next, we will make a correlation (Table 2).

Table 2. Correlation with processed data

	Option 1 (%)	Option 2 (%)	Option 3 (%)	Option 4 (%)	Average value
Option 1 (%)	1.0	0.27	-0.43	-0,82	0
Option 2 (%)	0.27	1.0	0.09	-0,62	0,18
Option 3 (%)	-0.43	0.09	1.0	-0,08	0,15
Option 4 (%)	-0.82	-0.62	-0.08	1,0	-0,13
Average value	0.0	0.18	0.15	-0,13	0,05

Note: Compiled by the authors

The correlation analysis revealed a positive relationship between the improvement of infrastructure and the development of educational programs, which underlines the importance of an integrated approach to economic diversification (Table 3)

Table 3. Correlation analysis of the survey

Question	Correlation with diversification (r)
Assessment of the current state of the economy	-0.45
Potential of industries	0.60
Obstacles to diversification	-0.55
Measures for the development of non-resource sectors	0.70
Investment climate	0.50
Sources of financing	0.65
Social and cultural factors	-0.30
Human and educational resources	0.55
Measures to improve the investment climate	0.75
Long-term prospects of the sectors	0.80

Note: Compiled by the authors

Data visualization confirms that the key areas for the development of the region include tourism, agro-industrial complex and infrastructure, as well as the need to improve the legislative framework and attract international partners (Figure 5).

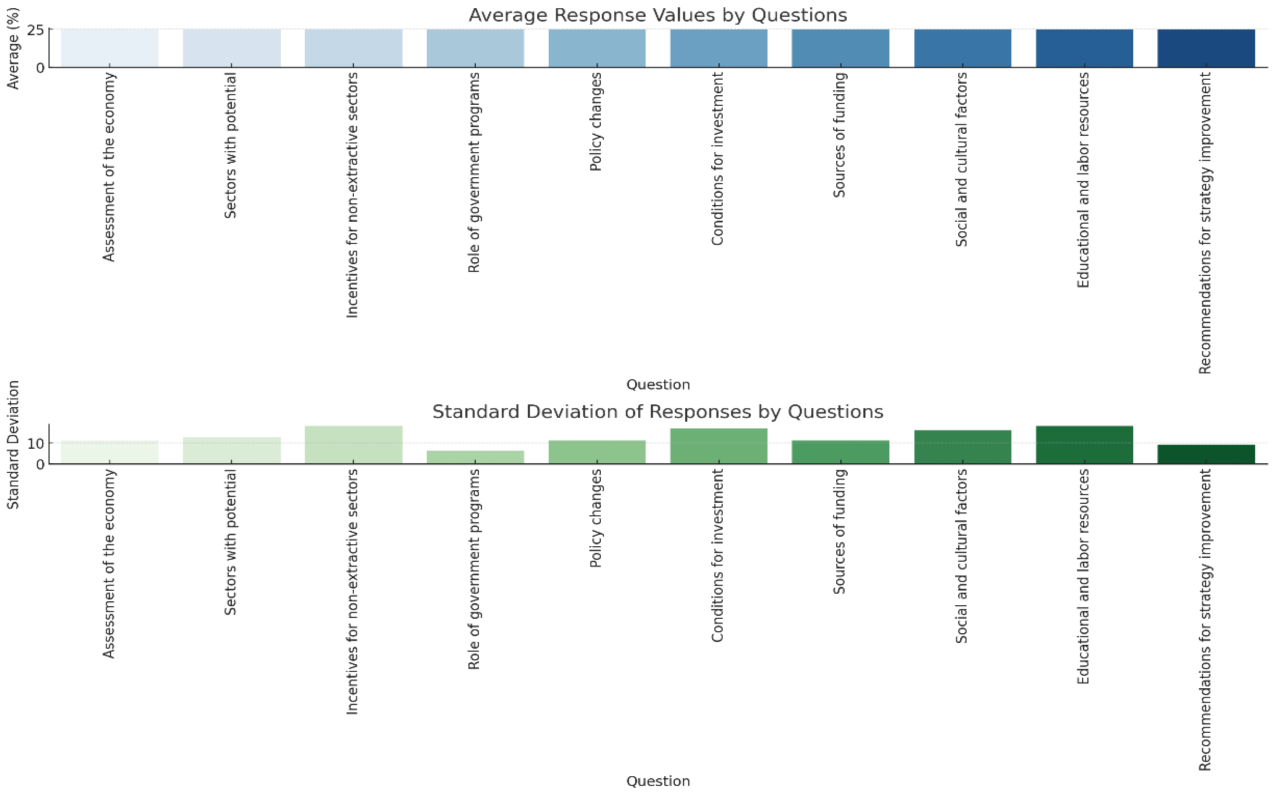

Figure 5. Survey data

Note: Compiled by the authors

Next, the heat map shows a detailed correlation between the different answer options for all questions (Figure 6).

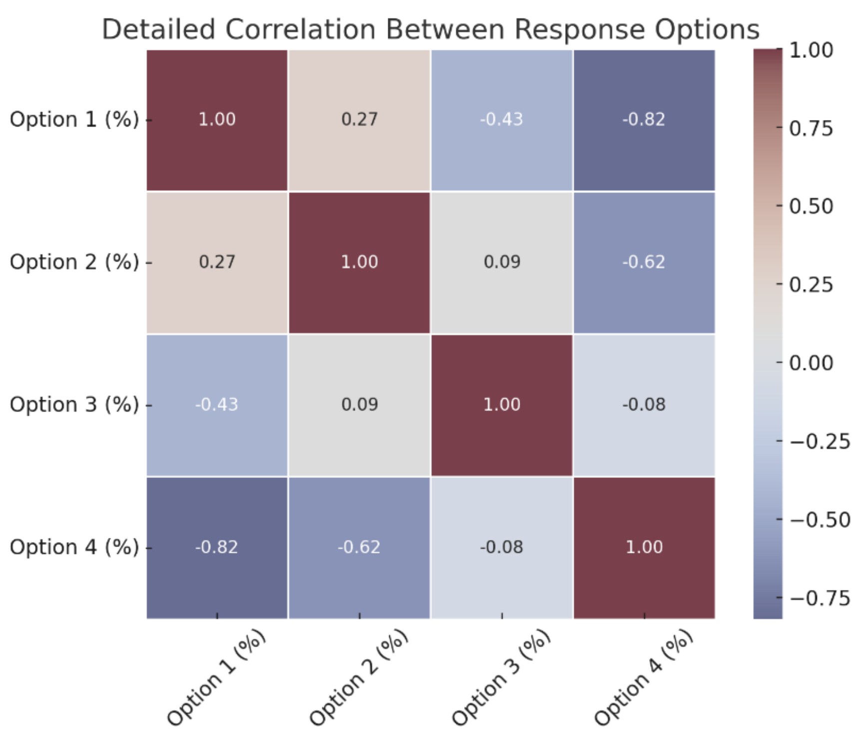

Figure 6. Correlation heat map

Note: Compiled by the authors

The correlation between "Option 1 (%)" and "Option 4 (%)" is -0.82, indicating a strong feedback loop. This means that when respondents choose Option 1 more often, they are less likely to choose Option 4. The correlation is -0.62, which also indicates a moderately strong negative relationship. Thus, the choice of option 2 is associated with a lower preference for option 4. These negative correlations indicate competing preferences of the respondents. For example, priorities for choosing investment strategies or evaluating government programs may be mutually exclusive for some participants. If you need to analyze these relationships more deeply or get additional visualizations, please let me know.

Figure 7 shows the correlation heat map.

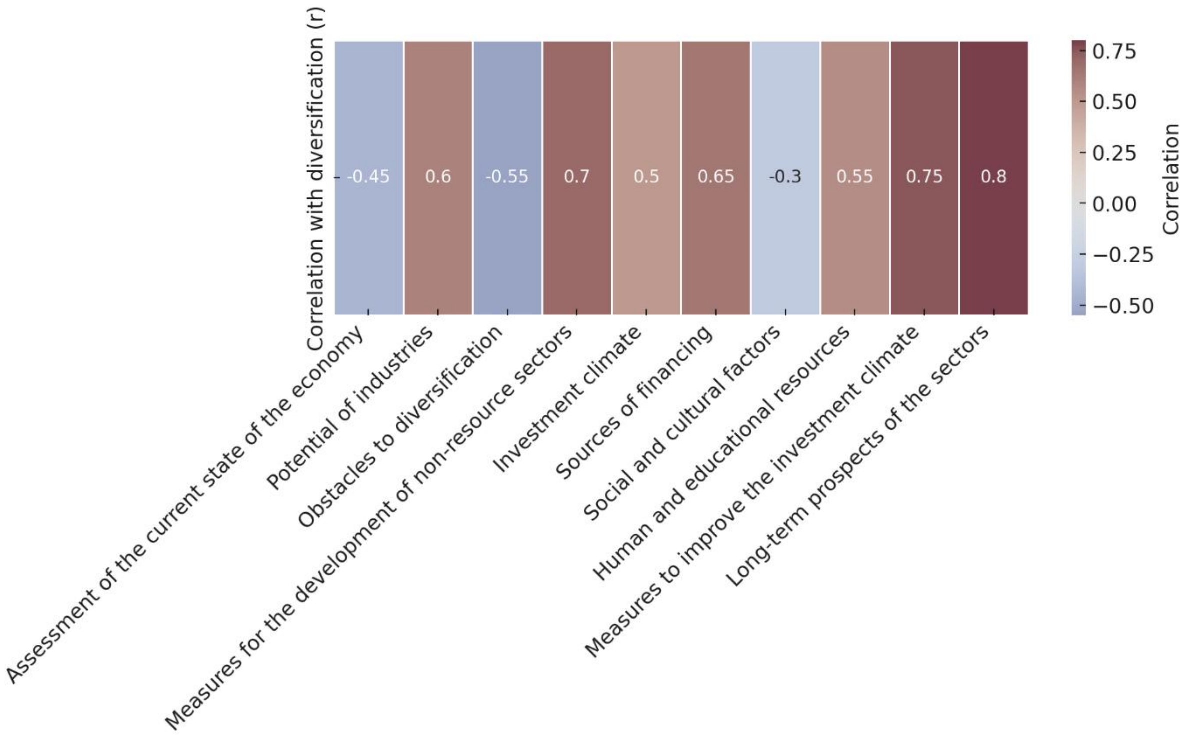

Figure 7. Correlation heat map

Note: Compiled by the authors

Thus, it can be said that measures to improve the investment climate and the long-term prospects of the sectors have the greatest correlation with successful diversification.

4.1 Export Diversification Challenges

Although Kazakhstan is still working to diversify its economy, almost 70% of its exports are made up of mineral resources, with oil making up the remaining 42%. By contrast, Kazakhstan's economy exhibits an uneven distribution of export flows, heavily dependent on oil and other natural resources; the Netherlands, where information technology makes up 15% of exports without any other goods or services representing more than 3%, and Turkey, where transport and tourism make up 9% and 7% of exports respectively, with no other goods or services exceeding 3% [13].

Official figures for 2022 show that 31% of Kazakhstan's total exports were non-resource exports. However, the degree of raw material processing must be taken into account in order to evaluate export diversification appropriately.

First-stage processed goods like metals, products from oil refineries, and unprocessed agricultural products should not be included in exports that are not resources [14]. Although high average wages are noted in the Mangystau and Atyrau areas, these incomes show little growth or stagnation when compared to the capital and other important cities such as Almaty. This may point to inefficiencies in the development of these areas, as the activities of big oil extraction corporations primarily drive high pay while other economic sectors remain underdeveloped.

A financial expert highlights the significant possibility of encountering a scenario akin to a monotown, albeit spanning two regions, in the absence of diversification in the western areas [15]. The extraction of natural resources and the processing of primary products are currently the main sources of competitiveness in the Mangystau region. Certain industries, like light industry and agriculture, are not as competitive as others.

The difficulties with diversification in the Mangystau area are shown in Figure 8.

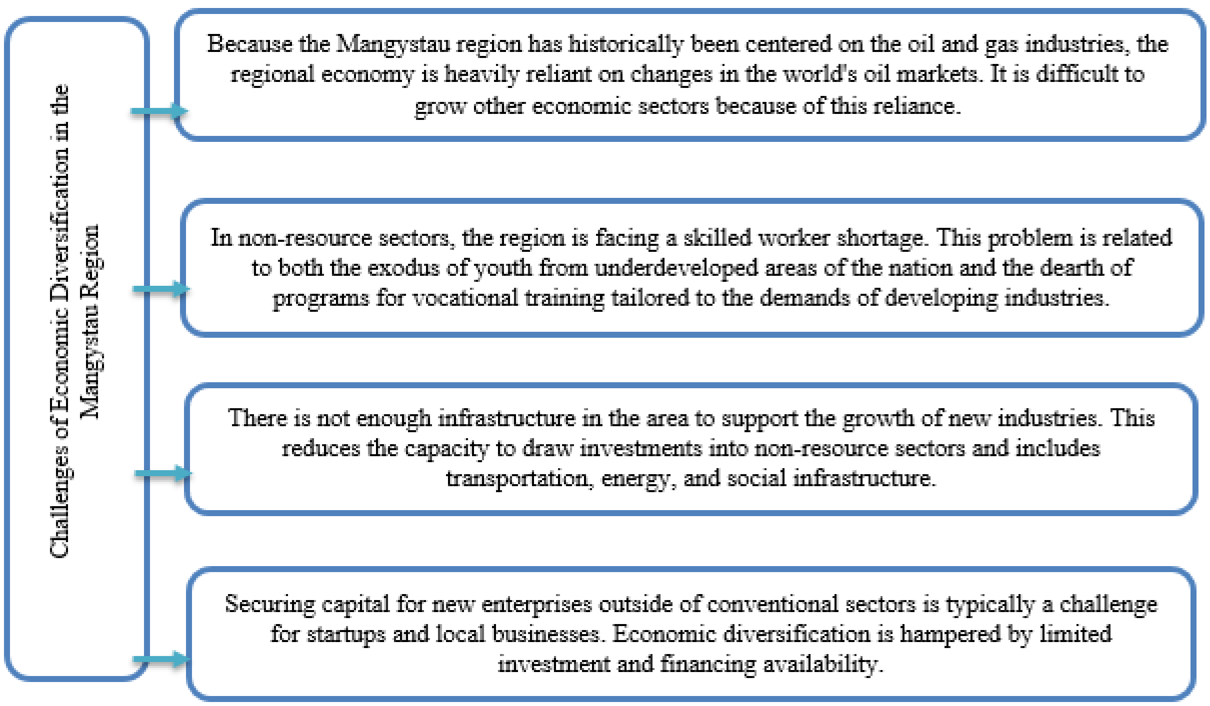

Figure 8. Challenges of Diversification in the Mangystau Region

Note: Compiled by the author based on source [5]

The effective implementation of an investment and structural policy targeted at attracting investments from varied sources, including foreign capital, is necessary to diversify the Mangystau region's economic potential and enable structural changes in the economy. The region's priorities for investment activity include supporting small and medium-sized enterprises and adding more jobs.

4.2 Analysis of Economic Diversification in Global Regions

Persian Gulf nations like Saudi Arabia and the United Arab Emirates have effectively adopted diversification policies to lessen their reliance on oil. According to Misrif Ashraf [16], these nations are devoting substantial resources to the advancement of tourism, technology, financial services, and renewable energy. Given the region's advantageous geographic location, such strategies might be used in Mangystau to boost the non-resource sectors of the economy, particularly in tourism and logistics.

Chile has been able to diversify its economy by increasing the growth of its fisheries, agricultural, and high-tech industries and decreasing its dependency on copper exports. Investments in these areas have been greatly aided by government incentive programs [17].

This experience shows that export-oriented industries like raw material processing and agriculture can achieve sustained development, and this might be a component of Mangystau's strategy. Local examples can provide insightful information as well. For example, the Kostanay region has improved employment and reduced its reliance on raw materials by increasing agriculture and the food sector. This demonstrates the flexibility with which diversification policies may be adjusted to Kazakhstan's geographical setting, underscoring the need of government assistance and economic development initiatives.

Malaysia's economy shifted from being resource-based to being centered on high-tech services and manufacturing. Key success elements included the creation of industrial parks and luring foreign direct investment [18]. Mangystau can benefit from Malaysia's experience in establishing special economic zones and luring in foreign capital to bolster regional economic diversification. By including cases from other parts of the world, the study's scope is expanded and the variety of ways to economic diversification is demonstrated. This makes it possible to comprehend more fully which strategic components, given Mangystau's particular circumstances, would work best for the region. Such an approach offers a greater range of instruments for putting the research's practical suggestions into practice, in addition to strengthening its theoretical underpinnings.

4.3 Feasibility of Implementing Norway's Economic Diversification Strategy

Norway's economy, which is based on knowledge, innovation, technology, and sustainable development, is very competitive. The nation is a leader in industries like energy, shipbuilding for the maritime industry, oil and gas, and seafood production. For nations with large hydrocarbon reserves, Norway's experience in growing the oil and gas industry is a good model, as this sector changed quickly and became a vital component of the national economy. To achieve these results, effective government regulation was crucial. Norway's overall exports in 2023 were $176 billion, a 36% decrease from 2022. In particular, from $276 billion in 2022 to $100 billion in 2023, the nation's goods exports decreased (Figure 6) [15].

This shows how flexible Norway is in responding to market fluctuations and emphasizes the value of adaptable policies for nations like Mangystau, where the oil and gas industry is dominant. In addition to emphasizing effective resource management, the Norwegian model also incorporates innovation, sustainability, and government participation—elements that may play a crucial role in determining Mangystau's own diversification plan [19].

Norway is a liberal democracy with a robust parliamentary system, a well-developed market economy, and strong private property rights protection. The nation enjoys the advantages of a strategic location in the financially developed region of Western Europe and with access to maritime routes. In Norway, engineers and businesspeople are always bringing new and cutting-edge products to the market. Along with other Scandinavian nations, Norway's society is notable for its unwavering adherence to the equality concept. Norway has some of the lowest worldwide income gaps between top executives and workers. As of right now, the Norwegian government does not give any particular economic diversification plan priority. The fundamental tenet of regulatory agencies is non-intervention, with an emphasis on fostering competition in the marketplace.

For instance, Statoil's public listing and partial privatization were intended to boost the company's accountability to private investors and encourage it to compete with global public oil giants. Norway's economy has become more diversified naturally as a result of its quickly growing oil and gas industry. Instead of offering financial incentives, the government supported the growth of industrial clusters by offering advisory and organizational assistance. The laws of the nation mandate that all government operations be carried out in full public view [20].

4.4 Feasibility of Implementing Australia's Economic Diversification Strategy

Geographically and historically, the Asia-Pacific area has constituted the core of the Australian Union's foreign policy agenda. Neither party's foreign policy strategy has ever placed a high focus on relations with the European Union or Australia. But Australia's foreign policy is heavily influenced by its bilateral relations with the European Union, especially in light of the country's economic growth [21]. The increase of shares and sectors in each market has resulted in substantial changes to the stock markets during the last ten years. The majority of the biggest stock markets in the world are now more concentrated as a result of this expansion. Australia is a noteworthy exception, though, since its sector and share diversification has improved.

Australia authorized a list of important technologies in May 2023 that are vital to the nation's interests, including social stability, economic development, and security. These technologies are essential to sustaining dependable access and demand the growth of indigenous industrial, scientific, and intellectual capacities in addition to safe supply chains [22]. Since 2021, the government of Australia has financed two programs aimed at diversifying the country's telecommunications sector, which was estimated to be worth $33.7 billion in 2023. With a $22.1 million budget, the first initiative is called the Australian 5G Innovation Initiative, and it supports 19 projects that test, demonstrate, and investigate innovative applications of 5G technologies.

The Territorial Connectivity Development Program has been given an even larger budget of $32 million. This program will support practical projects like the deployment of open architecture radio access networks (Open RAN) as well as fundamental research on the applications and regulatory implications of new standards and 6G networks [22].

Australia implemented a number of reforms in the financial sector, labor market, tax system, and corporate regulations to achieve economic success and stability during the global financial crisis. Additionally, the nation leveraged foreign investments and provided support to small and medium-sized enterprises.

4.5 Development of a Diversification Model

The following model of optimal economic diversification is suggested for the Mangystau region based on the examination of multiple countries. The particular economic, social, and environmental circumstances of the area should be taken into account in this model, along with effective diversification techniques that have been used in other nations:

1. Norway's Sovereign Wealth Fund Strategy: To make efficient use of its oil earnings, Norway established a Sovereign Wealth Fund that makes investments in foreign assets, guarantees long-term economic stability, and finances upcoming initiatives. It is advised that Mangystau start the process of creating a regional

stability fund derived from oil earnings in order to promote economic diversification. A part of the money ought to go toward social programs, infrastructure improvements, and creative projects.

2. Australia's Emphasis on Agrotechnology, Renewable Energy, and Ecotourism: In order to lessen its reliance on the coal and mining industries, Australia encourages the growth of agrotechnology, ecotourism, and renewable energy. Mangystau should put policies in place to boost the green economy, such as the construction of solar and wind power facilities and the development of the ecotourism industry. These tactics might lead to the creation of more jobs and promote the sustainable growth of the area.

3. Norway's Investment in Fishing and Marine Technology: Following the discovery of oil reserves, Norway made significant investments in shipbuilding, fishing, and marine technologies, all of which contributed to economic diversification. It is advised that Mangystau expand into non-resource industries like manufacturing, the chemical industry, fisheries, and aquaculture. This can be done by promoting investment through the establishment of special economic zones and industrial zones, which provide prospective investors with tax breaks and other advantages.

4. Investments in Research, Education, and Innovation: In order to successfully achieve economic diversification, Norway and Australia have made large investments in research, education, and innovation. These efforts have promoted the creation of new technologies and the collection of knowledge. Mangystau ought to concentrate on founding research institutes and academic institutions with an emphasis on natural resource management, sustainable development, and technology. Programs for training in emerging areas like environmental and information technologies would fall under this category.

5. Assistance for Small and Medium-Sized Businesses (SMEs): Australia has made a concerted effort to assist SMEs by offering a range of initiatives, such as concessional loans, subsidies, and streamlined administrative processes. According to Mangystau, it is advised to foster an atmosphere that is advantageous for SMEs by lowering administrative obstacles, opening up finance sources, and offering tax incentives. It will be crucial to support entrepreneurship in non-resource industries including IT, agroindustry, and tourism.

6. Regulatory Reforms to Encourage Business Growth: Australia's experience demonstrates that lowering administrative hurdles and streamlining regulatory processes expedites the growth of businesses. Mangystau ought to carry out regulatory reforms, with an emphasis on streamlining the procedures for business registration and licensing and lowering administrative barriers for investors and businesses.

7. Allocating Funds to Social Programs to Promote Stability: In Norway, social programs are funded to promote social stability and enhance the standard of living. It is suggested that social initiatives be put into place in Mangystau with the goal of raising living standards, strengthening the healthcare and educational systems, and lowering unemployment in order to promote social stability in the area.

Table 4 presents the suggested economic diversification model for Mangystau and outlines the measures needed to implement it in a phased manner that will achieve this complete approach to sustainable development for the region.

Table 4. Phased Implementation of the Economic Diversification Model for the Mangystau Region

№	Name	Year	Description	Effect of Implementation	Risks

1	Preparatory	1	The objective of establishing an oil-derived stabilization fund is to provide capital for upcoming economic diversification initiatives. A thorough plan of action for putting suggested policies into practice is included in the creation of strategies and action plans. This includes setting aside money for small company support, industrial diversification, and the advancement of the green economy.	establishing the framework for long-term, sustainable growth and boosting investor confidence .	Risks include a lack of initial funding and potential resistance from local authorities or the population.
2	Development of Infrastructure and Business	2-3	1. To supply the area with clean energy and encourage the creation of new jobs, investments in green energy entail the installation of wind and solar power facilities. 2. To improve trade routes and increase the effectiveness of products transportation, the development of transport and logistics infrastructure requires the upgrading of road networks and ports. 3. The implementation of special loan programs and tax advantages, notably in the tourism and agro-industry sectors, is one way to support the small and medium-sized business sectors.increase in the GDP of the area, the development of new jobs, and a decrease in reliance on natural gas and oil resources.	Increase in the GDP of the area, the development of new jobs, and a decrease in reliance on natural gas and oil resources.	Potential delays in the completion of infrastructure projects and a lack of interest from private investors are two examples of risks. .
3	Diversificati	4-5	1. Investments in subjects	As a result,	Potential risks

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on and Sustainable Growth	like engineering, the chemical industry, and other promising areas contribute to the development of non-resource sectors. 2. Promoting eco-tourism and continuing the development of renewable energy sources are essential components of supporting an environmentally sustainable economy. 3. Improving social infrastructure entails putting policies into place targeted at raising the standard of healthcare and education provided to the populace in order to raise their standard of living.	sustainable economic development is expected, along with a reduction in unemployment, an improvement in the quality of life, and an increase in the share of non-resource sectors in the overall economy.	include possible economic crises that could slow down growth, as well as fluctuations in global energy markets.

Note: Compiled by the author

By developing an implementation plan for the diversification model, an approximate estimation of the expected economic impact can be calculated (Table 5).

Table 5. Projected Economic Effect for the Next 5 Years

Year	*Mangystau GDP Growth (%)*	*Jobs Created*	*Infrastructure Investments (billion tenge)*	*Share of Non-Resource Sectors in the Economy (%)*
1	+2%	500	50	20
2	+3,5%	1000	120	25
3	+4,5%	1500	150	30
4	+5,5%	2000	180	35
5	+6,5%	2500	200	40

Note: Compiled by the author

Figure 9 illustrates the key risks and mitigation strategies.

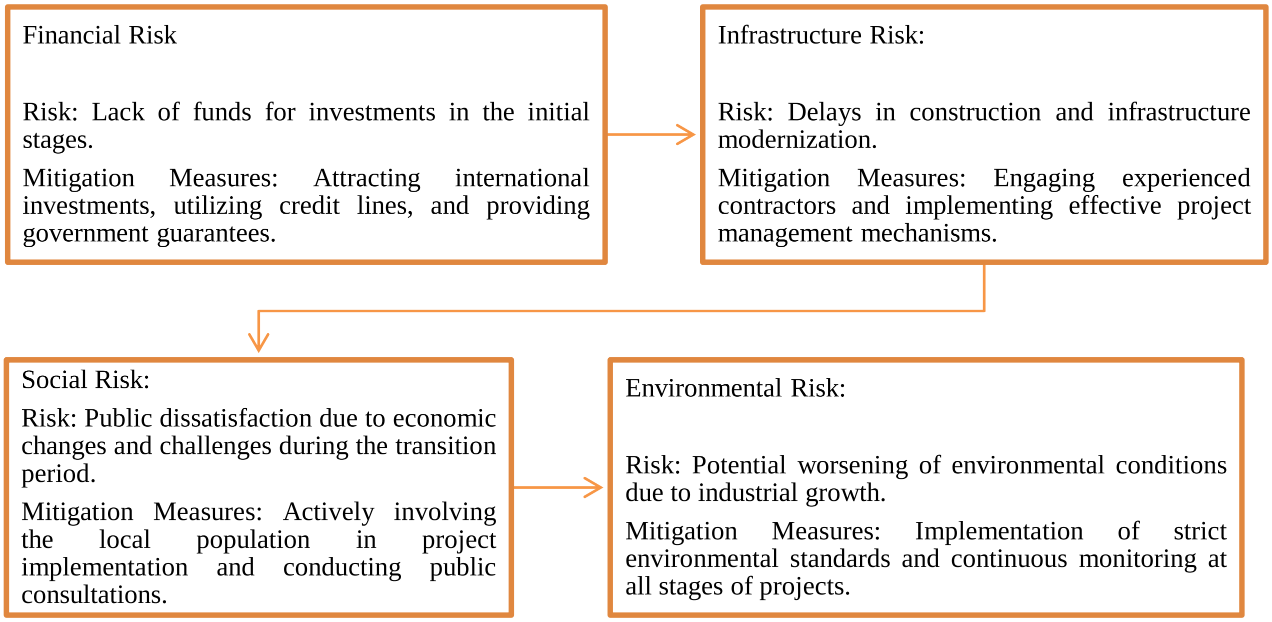

Figure 9. Risks of Implementing the Diversification Model

Note: Compiled by the author

Thus, cooperation with local authorities, maintaining transparency, and enhancing responsibility of all process participants are necessary for the successful execution of the stabilization fund and other programs. Reform resistance can be reduced and support can be increased by involving local leaders and taking local interests into account. Mangystau has historically concentrated on the extractive industries, but the need to lower risks related to the volatility of global oil and gas prices is driving a trend toward diversification. The suggested techniques are relevant and economically feasible because the region has the resources to build alternative industries including tourism, agro-industry, and renewable energy.

The implementation of research and educational initiatives that honor regional customs and unique features can enhance worker competencies and promote societal acceptance of novel economic frameworks. By emphasizing the training of experts in green energy and industrial innovations, local centers of competence will be established and serve as the cornerstone of sustainable growth. The suggested diversification strategies account for potential roadblocks including early financial difficulties and a lack of investing activity. The purpose of proposed lending and tax incentive programs is to reduce these risks and facilitate a more seamless execution under Mangystau's unique circumstances. It is worth mentioning that the area has prior experience implementing international methods to some extent, such as in the field of oil and gas technologies.

Mangystau is starting a policy to grow its manufacturing sector with the goal of building an export-oriented, large-scale production enterprise. The program, which also stresses the need to grow internal production to boost the nation's economic independence and enhance manufacturing to suit domestic requirements, is not without contradictions, though. Disagreements exist within the Kazakh government on how to balance export orientation in industrial strategy with import substitution and self-sufficiency. According to research, import substitution policies impede the industrialization and diversification process. Kazakhstan's import substitution strategies have resulted in ineffective industrial strategy over the last 20 years. Generally, import substitution entails limiting imports through the use of customs and non-customs obstacles, as well as offering other forms of government assistance, in order to safeguard indigenous manufacturers.

The state's job in a mature market economy is to set up the framework for fair competition between imported and native goods. It becomes unrealistic to artificially sustain a national producer's company through government involvement if that producer is unable to compete with high-quality, reasonably priced imports. These policies frequently have a negative financial impact on taxpayers through subsidies and increased prices for consumers as a result of import restrictions.

The goal of an export-oriented industrial policy is to establish an environment in which the amount of medium- and high-tech goods and services exported outweighs the number of comparable products imported. By focusing on high-tech exports outside of the resource industry, this strategy enhances international competitiveness and fosters economic resilience.

A local manufacturer should file for bankruptcy rather than relying on government-provided "greenhouse conditions" that perpetuate inefficiency if it is not export-focused or cannot compete with lower-cost imports. In conclusion, Mangystau's economic diversification objectives can be more effectively supported and the region's competitiveness in the global market increased by moving away from import substitution and toward an industrial policy that is driven by exports. By concentrating on high-tech exports, one can promote sustainable development and lessen dependency on the gas and oil industry. Examination of Past Research Experiences:

1. Lebdioui provided evidence that Chile has effectively diversified its economy by lowering its dependency on copper exports and fostering the growth of high-tech and agricultural industries [17].

Similar to what has been suggested for Mangystau, the Chilean experience emphasizes the significance of government assistance with an emphasis on export-oriented manufacturing and investments in new industries.

2. Mishrif detailed the aggressive development of non-resource sectors, such as tourism and renewable energy, in the United Arab Emirates and Saudi Arabia. These nations, in contrast to Mangystau, have made significant investments in technology advancement and enhancing the business climate. These efforts might be extended to Mangystau, particularly in theareas of infrastructure development and the encouragement of burgeoning businesses [16].

3. Kok Seng and Siripipatthanakul's report from 2024 stressed the value of developing industrial parks and drawing in foreign capital for economic diversification. Mangystau can benefit from this experience by creating special economic zones that encourage innovation and provide tax breaks [18].

The analysis shows that in order to successfully diversify the Mangystau region, it is necessary to adapt strategies taking into account local characteristics, paying attention to improving the business environment, supporting innovation and developing human capital. It is important to continue research to assess the long-term effects of the proposed measures and explore additional aspects such as digital technologies and eco-tourism.

It is necessary to seriously reconsider the approach to direct government support for business. Currently, such assistance distorts market incentives to improve competitiveness, in particular by increasing productivity. Protection from external competition and direct government assistance in the form of subsidies and benefits contribute to the formation of business dependence on the state. Instead of maintaining such anti-market support, the Government should direct resources to the development of physical and market infrastructure, human capital, as well as scientific research, innovation and R&D.

Next, we will perform a statistical analysis of the dependence of the Mangystau region on the oil and gas sector in comparison with other sectors (Figure 10).

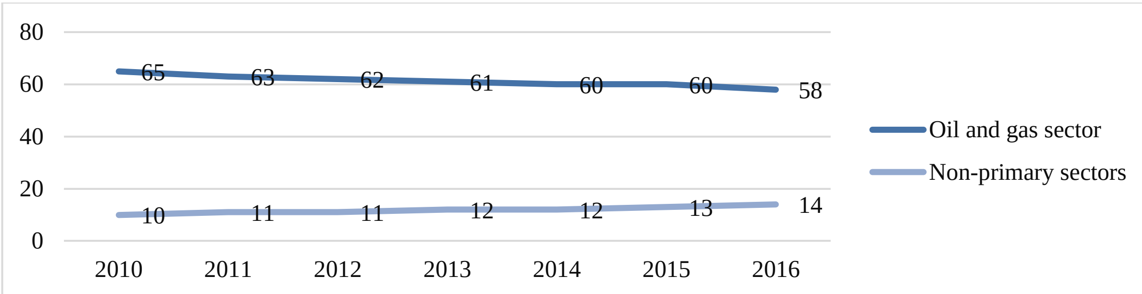

Figure 10. Analysis of the dependence of the Mangystau region on the oil and gas sector in comparison with other sectors, %

Note: Compiled by the author

The graph shows how the economy of Mangystau is becoming less dependent on the oil and gas industry. The share of this sector decreased from 65% to 50% from 2010 to 2023, while other sectors such as industry, agriculture and tourism increased from 10% to 19%. This indicates that the region is successfully diversifying its economy.

Next, let's look at the GDP structure of the Mangystau region (Figure 11).

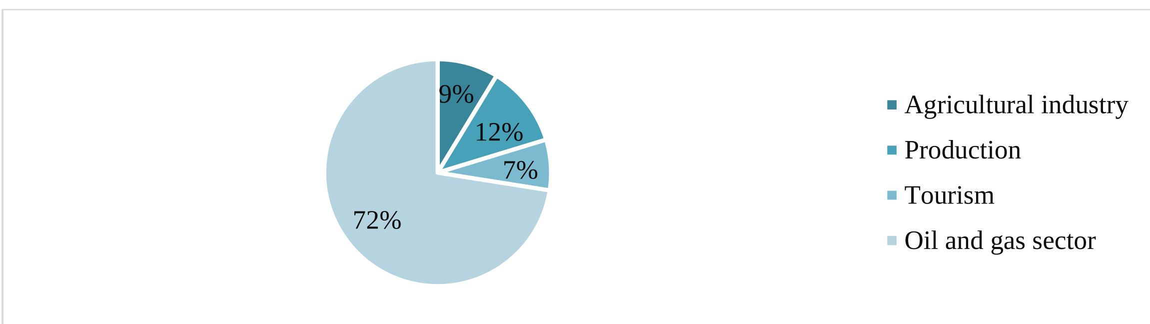

Figure 11. The structure of the Mangystau region's GDP for 2023

Note: Compiled by the author

The chart shows the structure of the Mangystau region's GDP for 2023. The oil and gas sector still occupies a significant part (50%), but the share of manufacturing, agriculture and tourism is also growing, amounting to a combined 20%. These changes indicate a gradual decrease in dependence on the hydrocarbon sector and an increase in the contribution of non-resource industries to the region's economy.

Exports of goods always exceed imports, and during this period increased from 7,000 to 15,000 conventional units. Imports are also increasing, but not so fast. Exports of services also gradually increased from 2,000 to 3,500 units, while imports of services increased from 1,500 to 3,000 units, remaining below exports. This indicates positive changes in the foreign trade of the region, where exports of goods and services exceed imports.

Figure 12 shows the growth of non-resource sectors in Mangystau over the past 10 years.

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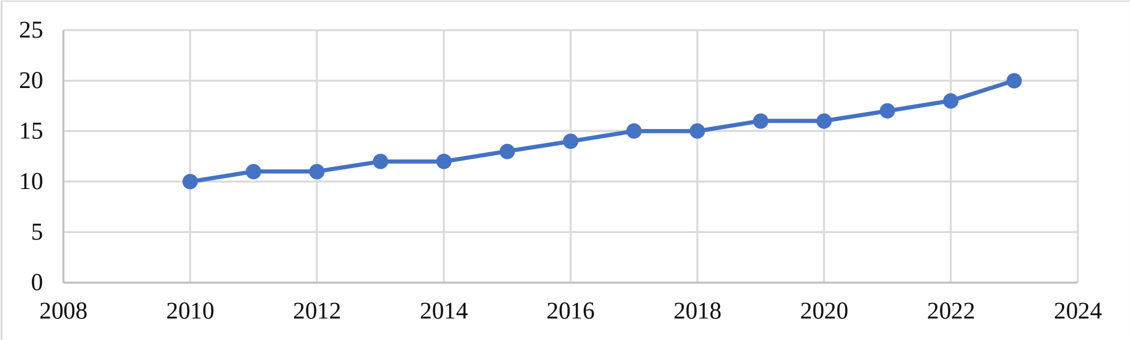

Figure 12. Growth of non-resource sectors in Mangystau, %

Note: Compiled by the author

Let's consider the forecast of growth of non-resource sectors in Mangystau (Figure 13).

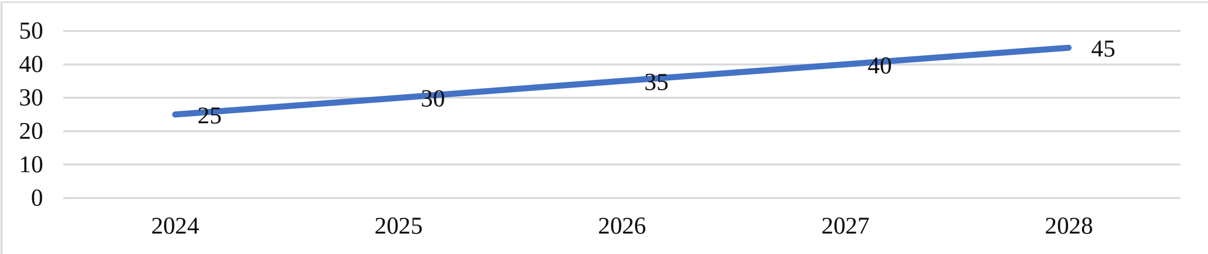

Figure 13. Forecast of growth of non-primary sectors in Mangystau, %

Note: Compiled by the author

The forecast shows that in the next five years (from 2024 to 2028), the share of non-resource sectors in the Mangystau economy will continue to grow. The share of manufacturing industry is expected to grow from 9% to 13%, agriculture from 7% to 11%, and tourism from 6% to 10%. These industries will become more important, gradually reducing the region's dependence on oil and gas.

In the process of diversifying the economy of Mangystau, several main industries can be identified that are developing by reducing dependence on the oil and gas sector:

1 Production of high-value-added goods, for example, the petrochemical and machine-building industries, which helps to reduce the export of raw materials and increase the competitiveness of the region.

2 Agriculture is developing through the introduction of new technologies and methods of processing products, which improves food security and creates new jobs.

3 Tourism is growing due to natural resources such as the Caspian Sea coast. In the future, we can expect the development of ecological and cultural tourism, which will attract tourists and improve the image of the region.

4 Renewable energy sources such as wind and solar power plants are being developed, which reduces dependence on oil and gas and contributes to the environmentally friendly development of the region.

5 The IT sector and digital technologies open up new opportunities to create jobs and improve the efficiency of other industries.

6 Diversification creates favorable conditions for small and medium-sized businesses, especially in the service sector, tourism and processing. Government support, such as subsidies and tax breaks, plays an important role in this process.

7 Improving transport infrastructure, including the construction of roads and ports, helps to develop logistics and increase foreign trade, which supports the region's economy.
All these areas help reduce dependence on oil and gas, create new jobs and contribute to the economic growth of the region.

The forecast shows that the region's GDP will grow steadily, increasing from 25,000 to 37,500 conventional units, which indicates healthy economic development. The share of non-primary industries will also increase from 20% to 45%, thanks to successful diversification. Employment growth implies an increase in jobs from 50,000 to 66,000, which will improve the standard of living of the population. At the same time, the volume of investments will increase from 5,000 to 9,000 units, confirming the growing attractiveness of the region for investors. These data show positive prospects for the further development of non-resource industries and the attraction of capital.

Businesses become more dependent on the state when they are shielded from outside competition and get direct government assistance in the form of benefits and subsidies. The government should direct resources on building market and physical infrastructure, human capital, scientific research, and innovation rather than continuing to promote anti-market policies.

Evaluation of Research Restraints and Possible Hazards while Applying Suggested Approaches:

1. The distinct features of the Mangystau region might not have been adequately taken into account by the data utilized for study. Models that have been effectively applied in Australia and Norway could not work as well in Mangystau because of variations in the country's legal systems, degrees of economic growth, and appeal to investors. This raises the possibility that the strategies won't work as well as they did in the nations where they were prototyped.

2. The populace, local government, and companies that are used to the current system can oppose the implementation of new economic models. Strategies may take longer to implement and need more administrative resources if there are difficulties in altering the regulatory environment and the requirement for legal adaption. Securing the effective shift to a diversified economy will depend on overcoming these obstacles.

3. The execution of major infrastructure projects and assistance initiatives for small and medium-sized enterprises may be severely hampered by the absence of early investments and adequate funding. Because of its reliance on outside investment, the region is more susceptible to changes in the world economy, which might impede or even reverse efforts to diversify.

4. External economic crises, shifts in the energy markets, and variations in commodity prices may cause the shift to renewable energy sources and industrial diversification to be gradual. These elements can make the suggested adjustments less stable and cause the rate of economic growth to slow down. It will take careful preparation and adaptability to manage these risks in the face of volatility in the global market.

Other Strategies:

1. The region should concentrate on localizing output and boosting value addition within already-existing industries, such the oil and gas industry, rather than pursuing broad diversification.

2. A cluster-based strategy, which focuses on creating new businesses around established ones, might be less hazardous and more natural.

3. By boosting human capital, investments in social infrastructure—such as healthcare and education—could lay a solid groundwork for sustained economic growth.

4. Including local business owners in public-private partnerships (PPPs) and using them to finance and carry out new initiatives can lessen reliance on foreign investment and promote regional growth.

Regardless of governmental preferences, it is imperative to guarantee fair circumstances for all businesses operating in the non-resource sector, including services. It is imperative for authorities to desist from providing partial support to specific industries, given Kazakhstan's previous history of industrial-innovation growth, which indicates that misaligned objectives frequently result in substantial losses of public cash.

5. Conclusions

By putting the suggested solutions into practice, the Mangystau region's reliance on raw material exports can be lessened, and sustained economic growth can be laid. The establishment of a regional stabilization fund with the goal of funding creative initiatives and infrastructure development is a very important suggested action. To train staff for growing sectors, educational programs should be developed, and tax incentives and subsidies should be used to encourage the growth of small and medium-sized firms (SMEs) in the near future. Future studies ought to evaluate how these actions affect the region's level of living and social stability.

The primary findings suggest that Mangystau's dependence on the hydrocarbon sector may be lessened and the expansion of non-resource businesses might be encouraged by modifying the economic models of Australia and Norway. The idea's main features include creating a stability fund to finance long-term initiatives, making investments in infrastructure development and renewable energy, and assisting SMEs via public-private partnerships. This region can also benefit from Australia's expertise in fostering an entrepreneurial atmosphere and using innovation to diversify the economy. In order to put the suggested techniques into practice, the state must actively support creative ideas and update current infrastructure.

The creation of a regional stabilization fund will offer projects aimed at economic diversification long-term financial stability and support. To lessen dependency on the oil and gas industry and promote sustainable growth, infrastructural expansion and the development of renewable energy sources are essential. Local innovation and entrepreneurship will be fostered by public-private partnerships and focused assistance for small and medium-sized enterprises, resulting in the expansion of non-resource industries. Adopting educational and research initiatives will ensure long-term regional competitiveness by developing human capital in developing industries like technology and green energy. In the Mangystau region, it is anticipated that the effective implementation of these policies will raise living standards, increase economic resilience, and diversify the region's economic structure.

1. To reduce financial risks and support a range of projects, a regional investment bank and a stabilization fund established with oil earnings would help develop a Sustainable Financial Base. Effective resource management will be the main goal of these steps in ensuring financial stability.

2. By putting initiatives for the growth of ecotourism and renewable energy into practice, the Mangystau region will enhance its environmental conditions, provide new employment opportunities, and become less dependent on hydrocarbons. These actions boost the competitiveness of the area and encourage sustainable development.

3. Creating industrial and economic zones to lessen dependency on the extraction of oil and gas, as well as investing in machinery, the chemical industry, and non-resource sectors, are the goals of developing Mangystau's Industrial Base.

4. Modernizing transportation and logistics networks to improve infrastructure will increase trade efficiency, draw investments, fortify home markets, ease access to foreign markets, and promote economic activity.

5. Fostering Science and Education: Funding research centers and colleges that specialize in cutting-edge technology will support the development of fresh ideas in the area and assist produce a trained labor force.

6. Supporting Small and Medium-Sized Enterprises (SMEs) will encourage the growth of SMEs in non-resource industries including tourism and agro-industry by creating a business-friendly environment that includes tax breaks and finance availability.

7. Increasing Living Standards and Social Programs: Including social and healthcare programs will boost social stability and raise people's standard of living.

In addition to steps to lower administrative obstacles and promote entrepreneurship, it is advised to set up a stabilization fund to assist emerging sectors. Subsequent investigations may examine the enduring economic and societal consequences of the suggested actions, alongside investigating supplementary facets of diversification including the advancement of digital technologies and ecotourism. The results of the conducted research highlight the necessity of an all-encompassing strategy for economic diversification that incorporates tactics for promoting entrepreneurship, developing infrastructure, and managing natural resources. By putting the suggested model into practice, the region will become less dependent on the resource-based economy, be more resilient to changes in the economy, and have a higher quality of living for its people. If the suggested strategies are implemented successfully, the Mangystau region will have a solid basis for long-term, sustainable development, improving its socioeconomic standing and acting as a role model for other regions looking to diversify their economies.

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Annex I: The Questionnaire

1 How do you assess the current state of the Mangystau region's economy? What are the key challenges and opportunities you see?
Dependence on the oil and gas industry makes the economy vulnerable
There are opportunities for the development of tourism and the agro-industrial complex
Infrastructure modernization is needed

I find it difficult to answer

2. In your opinion, which sectors of the Mangystau economy have the greatest potential for diversification?
Tourism
Agriculture
Production and processing
Others

3. What do you think can stimulate the development of non-resource sectors?
Infrastructure investments
Government support (subsidies, tax benefits)
Development of educational programs
4. What role do government programs and initiatives play in supporting economic diversification? What are the most effective measures?
Creation of industrial parks
Direct investments in infrastructure
Subsidizing enterprises
Difficult to estimate

5. What measures or policy changes could contribute to more successful diversification?
Improving legislation and transparency for investors
Increased funding for educational programs
Attracting international partners
Others

6. How do you assess the current conditions for investing in non-resource sectors in Mangystau? Are there any problems with attracting investments?
Conditions are gradually improving, but problems remain
There is not enough information about the possibilities
Political instability scares investors away
Conditions are favorable

7. What sources of financing are most relevant for the diversification of the region's economy?
Government grants
Private investments
International financial institutions
Public-private partnership

8. What social and cultural factors can influence the process of diversification? What changes are needed?
The habit of traditional industries slows down changes
Lack of qualified personnel
Increased awareness of new opportunities is required

9. What educational and human resources are required to maintain diversification?
Development of educational programs in new industries
Training of specialists to work in new sectors
Improving the quality of technical education \

10. What recommendations could you give to improve the current strategies for diversifying the Mangystau economy?
Strengthening government support for new industries
Infrastructure improvement
Stimulating private investment and creating benefits
Others