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## THE ROLE OF CHINESE INVESTMENTS IN THE OIL AND GAS SECTOR IN THE DEVELOPMENT OF THE ECONOMY OF WESTERN KAZAKHSTAN

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### ABSTRACT

*Background:* Western Kazakhstan, endowed with natural resources, cultural heritage, tourism resorts, and geopolitical advantages, plays a critical role in Kazakhstan's economic development. Entrepreneurship is considered one of the most important factors to facilitate economic growth and development.

*Purpose of the research:* This study aims to explore the role of entrepreneurship with Chinese investment in oil and gas sector in boosting the regional economy of western Kazakhstan, hence further benefiting the national economy.

*Methodology:* This study employs qualitative secondary analysis method that uses existing data to examine the link between opportunity-driven and innovation-oriented entrepreneurship versus economic growth in western Kazakhstan.

*Findings:* The research finds that Chinese entrepreneurship in oil and gas sector is an essential driving force for the regional economic growth. The proposed growth model can be applied as a paradigm for economic development in other business sectors in Kazakhstan.

*Originality/value of the research:* The growth model is constructed to explain how entrepreneurship with Chinese investment in a specific sector in a region facilitates the local economy. The economic assessment model integrated in this paper serves as another contribution to the generic research on economic growth.

*Keywords:* western Kazakhstan, China, entrepreneurship, oil and gas sector, economic growth model.

### INTRODUCTION

Kazakhstan, indicated by its highest Gross Domestic Product (GDP) per capita, and the highest ranking of Human Development Index (HDI) among Central Asian countries, is evidently the most developed economy in this region. Typically speaking, Kazakhstan has substantial mineral resources which are unlocking huge economic growth potential [1-2].

Kazakhstan takes on great diversities in its various regions. Western Kazakhstan, the focus region of this paper, is endowed with natural resources (especially oil and gas), cultural heritage, tourism resorts, and geopolitical advantages, playing a critical role in Kazakhstan's economic development. The region encompasses four oblasts: West Kazakhstan, Atyrau, Mangystau, and Aktobe. The four capital cities are Uralsk, Atyrau, Aktau, and Aktobe, respectively [3].

In the domain of economic research, a wide variety of factors are widely discussed which can affect economic growth and development (see Appendix 1). Entrepreneurship (or the activity of starting up and operating a business) is reckoned as one of the crucial factors to stimulate economic growth as it propels innovation, improves competitiveness, enhances productivity, facilitates business diversity, creates new employment, etc. [4-6]. Entrepreneurship is indispensable in sustainable economic growth in that it holds the key to the emergence and prosperity of a vibrant private sector in a society [4].

In view of the above, the Kazakh government has already started to pay high attention to and implement considerable investment in its domestic entrepreneurship. The government supported 30,000 projects in connection with small and medium-sized enterprises (SMEs) in 2025, accounting for a total budget of US\$3.4 billion [7].

Further, on the international level, Kazakh-Chinese relations have been developing fast, steadily, and prosperously for years. Among the compelling accomplishments are the “Belt and Road Initiative” (BRI) proposed by Chinese president Xi Jinping on 7 September 2013, and the mutual visa-free regime effective from 10 November 2023. BRI aims to strengthen policy communication, road connectivity, trade facilitation, currency circulation, and people-to-people bonds among the countries along the ancient Silk Way. The Visa-free regime allows the citizens of both countries to stay up to 30 days for private, business, and tourism purposes in the visited country. The programs and agreements have greatly expanded mutual trade, boosted business contacts, increased mutual investment, deepened cooperation, and unlocked the potential of future collaboration between the two nations [3]. During the recent 25<sup>th</sup> Shanghai Cooperation Organization (SCO) summit held in Tianjin, China, Kazakh President Kassym-Jomart Tokayev stated that “The Kazakhstan-China permanent comprehensive strategic partnership is entering a new golden age, driving the sustainable economic and social development of both countries, benefiting the two peoples, and serving as a model of relations between countries [8].”

China has been actively investing or conducting business activities in western Kazakhstan for decades. The main scope of investment includes the sectors of oil and gas, energy, mining, manufacturing, agricultural machinery, medicine, construction, infrastructure, logistics, and power toward more diversification in areas like energy infrastructure, green industry, digital economy, scientific and technological innovation, and artificial intelligence (AI) [9-10].

As can be inferred from the above, entrepreneurship with Chinese investment has substantial potential in enhancing the regional economic development of western Kazakhstan. Nevertheless, entrepreneurship remains a relatively under-researched and under-appreciated domain in the context of Kazakhstan on the general basis. Hence, this paper is focused on entrepreneurship with Chinese participation in oil and gas sector in western Kazakhstan with an aim to explore the driving force of Chinese entrepreneurship to enhance the regional economic prosperity.

## LITERATURE REVIEW

A large and even growing body of literature stresses the importance of entrepreneurship in economic prosperity [4]. In the precedent research, it was discovered that new business creation serves as a critical factor sustaining the economic growth and increasing the competitiveness of a country in market [5-6].

It is well known that economies with higher levels of entrepreneurial performance tend to develop faster. However, not all studies found significant or positive relationship between aggregate entrepreneurship and economic growth, partly due to the heterogeneity of entrepreneurship in nature, as well as to the specific features of the macro-economic conditions in which the economic development occurs [4-6,11].

Among the above-mentioned findings, for example, Acs [12] observed an S-shaped link between entrepreneurship and economic development, which is similar to the results of Wennekers', et al. [13] research. The link tells that in the initial stage of economic growth, entrepreneurship does play an evidently positive role, but its effect increases at a descending speed as the efficiency stage takes hold. However, as the economy moves from the efficiency-driven stage to the innovation- or knowledge-driven stage, entrepreneurship reassumes a more significant role which increases at an upward rate.

Naudé [14] and Sautet [15] both claimed some incompliance between entrepreneurial activity and economic growth in developing countries. A large portion of entrepreneurial initiatives in these economies is driven by necessity due to a lack of favorable job opportunities, and featured by lower quality. So, it does not boost economic growth in this case. In relatively advanced economies, on the other hand, entrepreneurs proactively harness business opportunities to gain economic gains. In this scenario, entrepreneurship remarkably contributes to economic growth as innovative potential and motivation create new ventures and employment vacancies. It leads to enhanced productivity and competitive edge in these developed countries [16].

Specifically in the business context of western Kazakhstan, considerable business opportunities have been created due to the huge demand from the oil and gas industry, and innovation acting as the competitiveness engine is always highly prioritized for the SMEs to be viable and sustain in long run. That is to say, opportunity-driven and innovation-oriented entrepreneurship in the region have a solid foundation and potential inspired by the external environment. Besides, along with the vibrant cooperation between Kazakhstan and China, an

ever-growing number of Chinese entrepreneurs are coming to seek opportunities and perform businesses featured with innovative technologies.

Hence, in light of the above discussions, this paper proposes the following hypotheses:

H1. The opportunity-driven entrepreneurship with Chinese investment in oil and gas sector in western Kazakhstan has a positive impact on the regional economic growth.

H2. The innovation-oriented entrepreneurship with Chinese investment in oil and gas sector in western Kazakhstan has a positive impact on the regional economic growth.

## RESERARCH METHODOLOGY

This section presents the research methodology and the corresponding materials used for conducting the analysis in detail.

### *Research method*

Constrained by the insufficient time for gathering primary data, this explorative study employed the qualitative secondary analysis (QSA) method that involves collecting and analyzing the pre-existing information from sources like government reports, industry reports, national statistics, academic journals, research papers, books, influential media, and websites [17]. QSA helps to gain a broader view and understanding of an issue, identify gaps in the body of knowledge, and hence discover further primary research directions. Following this method, the research shed light on the economic conditions of the region of western Kazakhstan, and the current status of Chinese investment and entrepreneurial activities in this region. Accordingly, the secondary data were collected.

### *Economic conditions of Kazakhstan and western Kazakhstan*

Generally speaking, owing to its rapid economic growth, stable political environment, and good social order, Kazakhstan has turned into an increasingly popular destination for foreign investment, despite the high corruption, bureaucracy, a lack of transparency, weak rule of law, etc. [18]. Oil and natural gas extraction acts as the backbone of the Kazakhstani energy industry and plays a dominant role in the national economy. Two (2) out of the 13 special economic zones in this country are located in the western region, i.e., the Industrial Petrochemical Technology Park Special Economic Zone in Atyrau oblast and the Aktau Sea Port Special Economic Zone in Mangystau oblast [2].

Aligning with the generic conditions in Kazakhstan, the four oblasts of western Kazakhstan are politically stable with effective governance, investment-stimulating policies, and favorable investment climate. The region places high emphasis on financial support, technological advancement, innovation, and economic development. The region boasts sound infrastructures (including railways, roads, water transport, and airports), abundant natural resources (including oil and gas), tourism resources (including historical sites, cultural heritage, museums, monuments, theaters, churches, parks, coastlines), a strong agricultural foundation, and excellent ecological conditions. The region has higher education institutions in each oblast. Climate is extremely continental or semi-arid; precipitation is low [3].

Specifically speaking, the four oblasts and capital cities have distinctive features which are described below one by one.

West Kazakhstan approximately has a population of 695,000 and a land area of 151,339 sq. km. abundant in minerals including oil and gas. The capital city of Uralsk is endowed with Karachaganak oil and gas condensate deposit. The primary business in the oblast and Uralsk includes (petroleum) engineering, machine-building, leather, footwear, meatpacking, stock breeding, crops, food and flour-grinding, light and construction industries. The Ural River (1,082 km), flowing from Russia to the Caspian Sea through the region, is the border between Asia and Europe [3].

Atyrau oblast has a population of around 713,872 and a land area of around 118,600 sq. km. rich in oil. It is the primary center for the production and conservation of black caviar. The capital city of Atyrau has a large expatriate population from the major oil companies operating locally. It is a hub for the oil-rich Caspian depression with massive oil fields like Tengiz and Kashagan as well as Atyrau Refinery. The city has oil and gas engineering, petrochemical industry, fishing industry, construction industry, agro-industrial complex and oil pipelines. The city annually hosts the oil and gas exhibition named "Global Oil&Gas Atyrau" [3].

Mangystau has a population of about 814,072 with around 165,600 sq. km. of land area. The great Silk Way passed through the whole territory of Mangystau for 2,000 years. The oblast has major oil and gas fields, as well as mining industry. Aktau, the capital city, is called the “sea gate of Kazakhstan” and has Kazakhstan’s key port and oil hub. It is the home to China National Petroleum Corporation (CNPC), China Petroleum and Chemical Corporation (Sinopec), China International Trust and Investment Corporation (CITIC), Heidelberg Cement, Tenaris, Schlumberger, Halliburton OMC, Arcelor Mittal, Maersk Oil, Saipem, etc. Aktau is a popular resort with beaches and scenic views of the Caspian Sea [3].

Aktobe oblast has a population of around 953,687 and occupies an area of about 300,600 sq. km. It is one of the most significant industrial areas in Kazakhstan. The oblast has large deposits of oil and gas, chromite, nickel-cobalt ores, phosphorite, potassium salts, copper, irrigated agriculture, and renewable energy sources. Aktobe city, the oblast capital, is the vital center for energy production and heavy industry, extraction and processing of oil and gas, coal mining, and metallurgy. The city is the home to the famous Kazakh singer Dimash Qudaibergen [3,19].

*Chinese investment and Chinese entrepreneurship in the oil and gas sector in western Kazakhstan*

Kazakhstan’s petrochemical industry boasts a complex and diverse structure, supported by abundant oil and natural gas resources. The reserves are primarily concentrated in the pre-Caspian basin and the Mangyshlak-Ustyurt basin in west. Both crude oil pipelines and natural gas pipelines in the country reach nearly 10,000 kms in total. Kazakhstan’s major refineries include Shymkent Refinery (with production of 6 million tons per year), Atyrau Refinery (5.5 million tons per year), Pavlodar Refinery (5.5 million tons per year), and Aktau Asphalt Plant (1 million tons of output per year). Overall, oil and gas extraction and processing have injected strong momentum into Kazakhstan’s economic development [2].

Kazakhstan’s abundant natural resources and strategic location have attracted significant attention and investment from Chinese companies. Over the past few decades, China has invested US\$27 billion in Kazakh economy, more than 6,000 companies with Chinese capital working in the country [2]. Western Kazakhstan which holds 16% of Kazakhstan’s investment potential (primarily focused on oil and natural gas extraction) is steadily gaining importance in the national economy. Chinese state-owned or public companies (shown in Table 1) like CNPC, Sinopec, China National Offshore Oil Corporation (CNOOC), CITIC, Jao-Jade, etc. are among the major world oil investors in this region [18,20].

Table 1 – Major oil and gas projects with Chinese investment in western Kazakhstan

Region	Project	Ownership
Atyrau	Zhylyoi Subsoil Area	CNOOC (50%)
	Maten Petroleum & Kozhan	Jao-Jade (95%)
Mangystau	Buzachi Operating	CNPC (50%), Sinopec (50%)
	MangystauMunaiGas	CNPC (50%)
	KMK	CITIC (50%)
Aktobe	AktobeMunaiGas	CNPC (94.47%)
	Kazakhoil Aktobe	Sinopec (25%)
	Sagiz Petroleum Company	Sinopec (100%)

Note – compiled by the author based on [2,18,20].

However, there is a severe lack of data on Chinese-invested entrepreneurship and SMEs in western Kazakhstan. As observed and reported by the mainstream media, Chinese enterprises are performing business activities, solely or jointly with local entrepreneurs, providing equipment or rendering services for the major oil companies as mentioned above. These investments display diverse forms, including factory, construction, engineering, international trade, etc. The Chinese entrepreneurs – some of whom are collaborating with local partners – are conducting opportunity-driven and/or innovation-oriented business activities in pursuing firm development with sustainability [2].

Through these major projects and investments, China has offered Kazakhstan considerable opportunities in terms of technology transfer and establishment of joint ventures that could help Kazakhstan move up in the value

chain. Chinese companies bring in foreign currency, equipment, expertise, and international standards. Taken together, these factors are making western Kazakhstan a growing point of interest for investment among Central Asian countries [21]. As trends continue, western Kazakhstan is expected to become a model for how a region can rise to the global stage through profound strategy, smart partnership, and bold investment policies [22].

## RUSULTS AND DISCUSSIONS

The fact that entrepreneurship delivers benefits, however, is largely neglected by economists partly because of its tremendous diversity in nature [4]. Thus, with this study, the author attempts to call for more attention to entrepreneurship and Chinese entrepreneurs investing and operating in Kazakhstan. Particularly, the author advocates to facilitate Chinese entrepreneurship in oil and gas sector in western Kazakhstan.

### *Entrepreneurship and economic growth*

As drawn from the above materials, oil and gas industry, the most important sector of Kazakhstan's economy, has created huge opportunities attracting foreign investors to come to play. Western Kazakhstan with tremendous deposit of oil and gas, inevitably has become one of the concentrated regions for Chinese entrepreneurial investment and business activities. Besides, only through development of innovated technology in products and services, can the enterprises survive and thrive in the long term. Thus, the opportunity-driven and innovation-oriented entrepreneurship with Chinese investment are playing a positive role in enhancing the regional economy. On the other hand, the SMEs generate employment opportunities, stimulate innovation, and create wealth, providing prospects for various industries in the country. Besides, localization is the smart strategy for the Chinese entrepreneurs going abroad to pursue business success as Kazakh government is deeply devoted to promoting the local content as the stimulating policy and protective measures. The collaboration, therefore, between the Chinese and Kazakh entrepreneurs, is becoming a leading and driving force in facilitating the comprehensive economic development in Kazakhstan.

The benefits of stimulating Chinese entrepreneurship for (western) Kazakhstan are evident. Kazakhstan gains access to China's vast supply market and advanced technology. Major initiatives like the BRI were framed not as Chinese expansion but as a shared opportunity for development [21]. The increase of Chinese entrepreneurship in oil and gas sector for regional economic growth can serve as a paradigm for other sectors in the national economy of Kazakhstan.

The paradigm growth model for "SMEs in the oil and gas sector driving regional economic growth" is conceptualized in Appendix 2.

The comprehensive theoretical model is constructed from a system dynamics perspective [23] which views complex problems not as isolated events, but as interconnected systems, and helps people to make better decisions when confronted with complex and dynamic systems.

The model includes core elements, action paths, and cyclical mechanisms. This model aims to explain how SMEs and entrepreneurship (the driving core) in the oil and gas industry chain can form a positive feedback loop with the regional economy through five core paths: (1) industrial chain penetration (vertical deepening and horizontal expansion), (2) technology and knowledge spillover (diffusion), (3) employment and human capital enhancement, (4) local fiscal revenue and investment cycle, as well as (5) economic diversification and risk resilience, ultimately driving regional economic growth. The SMEs are in any of the forms: (1) technical services, (2) equipment manufacturing and maintenance, (3) production services and logistics, and (4) environmental protection and resource recycling. The regional economic system acts as the supporting base composed of hard and soft environment. The critical resource (capital, technology, and talent) flows are effective in the mechanisms.

### *Economic development model of China's oil cities*

Further to the economic growth model, the development model of China's oil cities mainly goes through the following four stages in sequence: (1) resource dependence, (2) the industrial agglomeration, (3) the integration of urbanization and industrialization, and (4) the green and low-carbon transformation. As evidenced from Chinese experience, Chinese entrepreneurship in oil and gas sector can boost the improvement and growth in other aspects such as infrastructure, relevant industries, service sector, and green energy. Similarly, the pillar of Kazakhstan's economy, oil and gas sector, is expected to be an engine to drive the diversification in other sectors and make significant contributions to Kazakhstan's economic development [2].

### *Chinese entrepreneurial spirit*

In China, the “Daqing Spirit”, characterized by its “doing where conditions permit, and creating the conditions where they are not available” and the “Iron Man Spirit”, centered on “patriotism, pioneering pragmatism, and dedication” are widely accepted as a symbol and spiritual treasure of the oil industry.

Besides, the “Four Thousand Spirit”, the strong entrepreneurial spirit of Zhejiang, interpreted as “traveling thousands of miles, thinking of thousands of ways, speaking thousands of words, and enduring thousands of hardships”, embodies the qualities of Chinese entrepreneurs, i.e., their courage to reform, their ability to fight, their fearlessness of hardship, etc.

These striving spirits which are deeply rooted in the entrepreneurial culture in China can be adopted and propagated across the business community in Kazakhstan.

### Implications for policy-makers in Kazakhstan

Chinese entrepreneurs are confronted with many challenges in doing business in Kazakhstan. To name a few, the challenges include corruption, bureaucracy, red-tape, devaluation of local currency of Tenge, price fluctuations, environmental concerns, work permit (labor quota restrictions), laws and regulations, licensing, cultural clash, language, business mindset, values, etc. [24].

The policy of creating an enabling business environment is crucial for long-term sustainable economic growth. It is important for Kazakh government to launch policies aiming to promote and safeguard the entrepreneurial investment and business activities.

In response to the above challenges and the proposed model, the following measures are suggested for the policy-makers to take: (1) fostering an industrial ecosystem to cultivate specialized, refined, and innovative SMEs; (2) building an enabling platform to reduce innovation costs for SMEs; (3) improving transparency and fairness in market competition; (4) addressing geopolitical and security concerns protecting the rights and interests of investors; (5) offering conveniences for business startup and development; (6) strengthening the legal and institutional framework to attract more investment; (7) implementing more supportive financial instruments against currency devaluation; (8) diversifying the areas for collaborations between Kazakh and Chinese investors, further promoting local integration; (9) opening more to Chinese entrepreneurship and encouraging more investors to come; (10) enhancing the infrastructure conditions; (11) promoting cultural communications between the two peoples; and (12) harnessing opportunities to propagate more of Kazakhstan to China.

## **SUMMARY AND CONCLUSION**

Kazakhstan and China have reached the highest level of bilateral relations during the past decades. Kazakhstan with its abundant resources has already become the most attractive country in Central Asian area for Chinese investors. Chinese state-owned companies, as a major force, are already investing and operating business in the country.

However, the role of Chinese entrepreneurship was underestimated in Kazakhstan. Since the oil and gas sector in western Kazakhstan represents the pillar of national economy, this paper explored the importance of Chinese entrepreneurship in the sector as a stimulating factor for economic growth and development in Kazakhstan.

The research finds that opportunity-driven and innovation-oriented entrepreneurship with Chinese investment can positively facilitate the regional economic growth, and in turn can drive the prosperity of other business sectors in this country. The incorporation of Chinese entrepreneurship with local entrepreneurship in the sector can serve as a paradigm for the regional economic growth.

The conceptual framework between the oil the gas sector development versus national economy is constructed, and measures for policy-makers are suggested for the promotion of Chinese entrepreneurship in Kazakhstan.

### *Further research*

Future research will be focused on primary data collection and analysis as well as case studies on specific Chinese entrepreneurship in oil and gas sector (and other sectors) in western Kazakhstan and the whole country. Also, general foreign entrepreneurship is supposed to gain more attention and research in the context of Kazakhstan.

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Appendix 1

Factors that affect economic growth and development

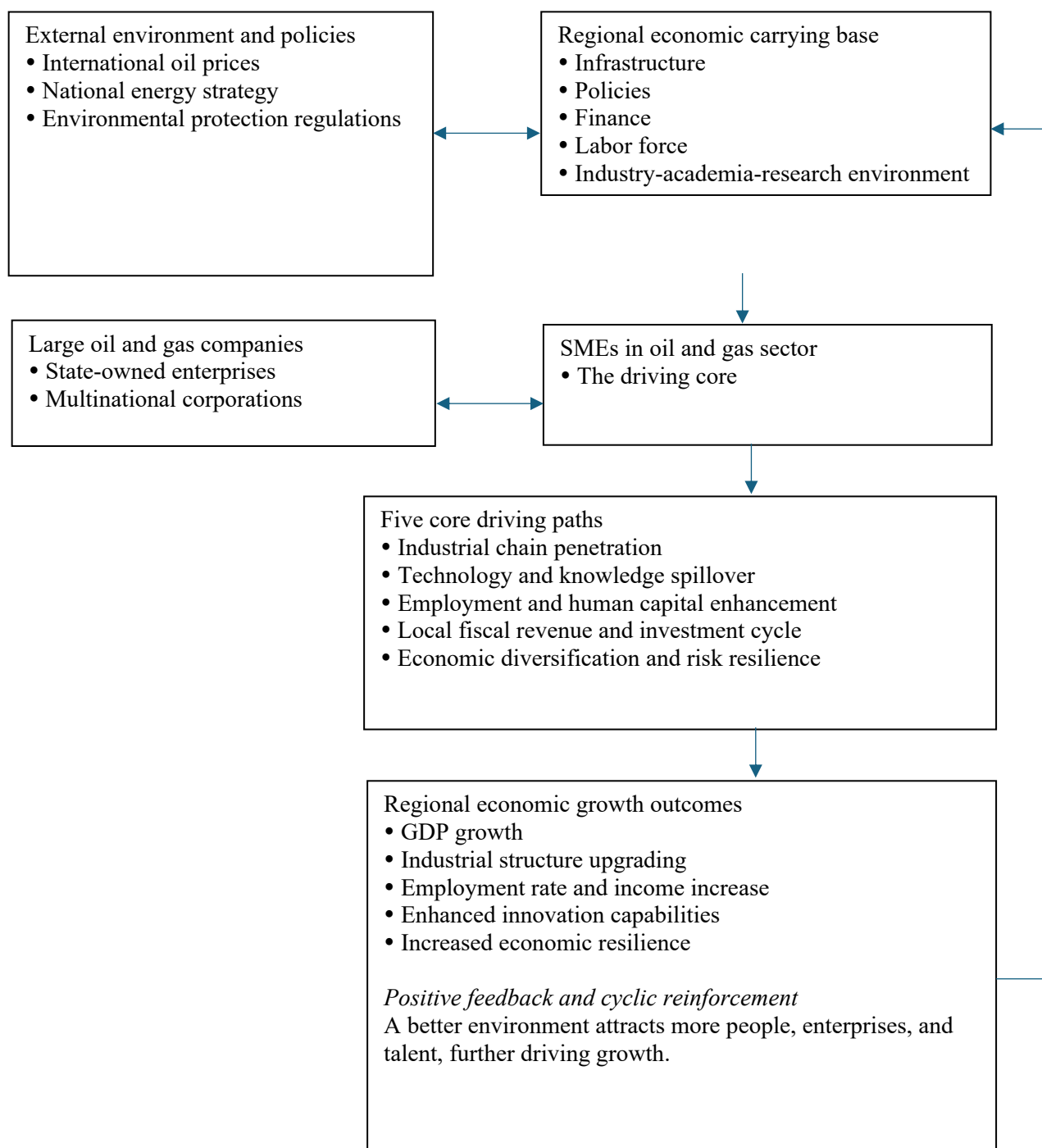
Factor	Explanation
Political factors	
Political stability	Political stability is essential for attracting foreign direct investment (FDI), thus fostering economic growth and development. Unstable political systems, conflicts, and security issues lead to economic instability (such as inflation, currency devaluation, disrupting trade, etc.).
Governance	Transparent and accountable governance leads to efficient use of resources and effective decision-making, thus promoting economic development.
Institutions	Functioning government institutions (legal system, property rights, tax rates and system, control of market monopolization, etc.) promote economic growth and development.
Corruption	Corruption diverts funds to certain groups that have bribed or lobbied officials resulting in projects that deliver a low level of growth and development. Corruption impedes investment.
Sociocultural factors	
Demographics	Population growth, age distribution, and workforce skills impact economic development. A youthful population can be a demographic dividend if properly harnessed for economic growth.
Human capital	Human capital refers to the knowledge, skills, and abilities of the workforce. Rich labor resources and active labor mobility increase potential output.
Healthcare	Access to healthcare influences overall well-being Healthy workforces improve productivity, output, and income.
Human rights	Respect for human rights and freedom is closely tied to social progress and economic development.
Education and training	High levels of education and training increase productivity. A skilled and educated workforce is crucial for innovation and economic diversification Social overheads (such as schools, universities, technical institutions, medical colleges, hospitals, and public health facilities) promote health, productivity, and responsibility of the workforce.
Social cohesion	Social harmony and inclusivity contribute to economic stability and social progress. Social cohesion leads to positive social attitudes and social values.
Culture	Cultural norms, customs, traditions, beliefs, and values influence entrepreneurship, innovation, and economic activities.
Technological factors	
Technological advancement	Technological advancement increases productivity, innovation, and firm competitiveness, which leads to sustained long-run economic growth. Investment in research and development (R&D), education, and technological infrastructure enhances technological advancement.
Environmental factors	
Natural resources	Access to and effective utilization of natural resources (such as land, soil, forests, oil, gas, minerals, and other energy resources) can significantly impact economic growth and development Be alert to “resource curse” where an economy is stuck in producing primary products without incentives to diversify the economy. Heavy reliance on natural resources may lead to fluctuations due to changes in global demand and prices.
Infrastructure	Infrastructures (such as transportation, communication, power and water supply systems, etc.) are vital for economic growth and competitiveness. Good infrastructure system can reduce business costs, improve efficiency, enhance connectivity, attracts FDI, and makes it easier to generate economic activities.
Geography and climate	It is harder for landlocked countries to achieve economic growth. Good geography and climate can lead to lower transportation and administration costs. Geographic location and climate conditions can impact agriculture, trade, and vulnerability to natural disasters.
Environmental sustainability	Environmental policies and practices can affect long-term sustainability and economic resilience

Financial factors	
Fixed capital	Fixed capital is divided into active (such as machinery, equipment) and passive (such as production buildings, structures) kinds. It serves as an important means of labor used in the production process.
Inward investment (or FDI)	High levels of capital inflow and benefits of attracting multinational companies can increase economic development.
Level of savings/capital	Higher savings result in higher investment and economic growth, which further increases even higher savings as explained by Harrod-Domar model. It is opposite to a “low-income trap” when an economy gets caught in low growth and struggles to break out.
Flight of capital	Capital flight occurs when investors move assets out of a country due to economic instability or unfavorable conditions. It can deplete a country’s resources and may lead to financial crises
Foreign currency gap	A foreign currency gap arises when a country’s imports exceed its foreign exchange reserves. It can lead to trade deficits, currency depreciation, and economic instability .
Debt	High levels of public or external debt can lead to debt servicing burdens, reducing resources for development.
Credit and banking	Limited access to credit and banking services can hinder investment, entrepreneurship, and economic growth.
Commercial factors	
Primary product dependency	A barrier to growth occurs if a country is too dependent on a narrow range of primary commodities (e.g., oil and gas, minerals, agricultural goods). It increases vulnerability to price fluctuations as demand and prices for primary commodities can be volatile.
Mutual trade	Exports and imports
Macroeconomic stability	Macroeconomic stability encourages FDI and economic development. It brings low rates of inflation and exchange rate stability .
Market protectionism	For developing economies stuck in producing primary products, there is a strong case for temporary tariffs to enable new infant industries to develop For developed economies, protecting strategies do not help liberalize trade.
Entrepreneurship	Entrepreneurship involves the use of resources (such as labor, nature and finance) The literacy of entrepreneurs in a country can directly contribute to maximum economic growth. The rise of new entrepreneurs is a result of modern philosophy, beliefs, and attitudes that lead to new discoveries and breakthroughs.
Tourism	For developing economies with an attractive climate and environment, tourism can be an important source of foreign earnings and incentive to develop infrastructures, new hotels, and other relevant sectors.
Regional effect	Economic development is strongly influenced by the development of economic neighbors If a neighbor does well, there tends to be spill-over effects (such as increased trade and FDI)

Note – compiled by the author based on [25-30].

Appendix 2

The theoretical model of SMEs in the oil and gas sector driving regional economic growth



Note – Constructed by the author based on a system dynamics perspective [23].

## БАТЫС ҚАЗАҚСТАН ЭКОНОМИКАСЫНЫҢ ДАМУЫНДАҒЫ МҰНАЙ-ГАЗ СЕКТОРЫНА САЛЫНҒАН ҚЫТАЙ ИНВЕСТИЦИЯЛАРЫНЫҢ РӨЛІ

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### Аңдатпа

*Зерттеудің алғышарттары:* Табиғи ресурстарға, мәдени мұраға, туристік аймақтарға және геосаяси артықшылықтарға бай Батыс Қазақстан Қазақстанның экономикалық дамуында маңызды рөл атқарады. Кәсіпкерлік экономикалық өсу мен дамуды ынталандыратын маңызды факторлардың бірі ретінде қарастырылады.

*Зерттеудің мақсаты:* Бұл зерттеу Батыс Қазақстанның өңірлік экономикасын дамытудағы, сондай-ақ ұлттық экономикаға оң әсер етудегі мұнай-газ секторындағы қытай инвестициялары бар кәсіпкерліктің рөлін зерттеуге бағытталған.

*Әдіснама:* Зерттеуде Батыс Қазақстандағы мүмкіндіктерге және инновацияларға бағытталған кәсіпкерлік пен экономикалық өсудің арасындағы байланысты талдау үшін қолданыстағы деректерді пайдаланатын сапалық екінші реттік талдау әдісі қолданылды.

*Нәтижелер:* Зерттеу мұнай-газ секторындағы қытай кәсіпкерлігінің өңірлік экономикалық өсудің маңызды қозғаушы күші екенін көрсетті. Ұсынылған өсу моделін Қазақстанның басқа бизнес салаларындағы экономикалық даму үлгісі ретінде қолдануға болады.

*Зерттеудің түпнұсқалығы/құндылығы:* Белгілі бір өңірдегі нақты секторға салынған қытай инвестициялары бар кәсіпкерліктің жергілікті экономиканы қалай дамытатынын түсіндіретін өсу моделі әзірленді. Мақалада біріктірілген экономикалық бағалау моделі экономикалық өсуді зерттеуге қосылған тағы бір үлес болып табылады.

*Түйін сөздер:* Батыс Қазақстан, Қытай, кәсіпкерлік, мұнай-газ секторы, экономикалық өсу моделі.

## РОЛЬ КИТАЙСКИХ ИНВЕСТИЦИЙ В НЕФТЕГАЗОВОМ СЕКТОРЕ В РАЗВИТИИ ЭКОНОМИКИ ЗАПАДНОГО КАЗАХСТАНА

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### Аннотация

*Предпосылки исследования:* Западный Казахстан, обладающий природными ресурсами, культурным наследием, туристическими курортами и геополитическими преимуществами, играет важную роль в экономическом развитии Казахстана. Предпринимательство рассматривается как один из важнейших факторов, способствующих экономическому росту и развитию.

*Цель исследования:* Данное исследование направлено на изучение роли предпринимательства с китайскими инвестициями в нефтегазовом секторе в стимулировании региональной экономики Западного Казахстана и, следовательно, в дальнейшем содействии развитию национальной экономики.

*Методология:* В исследовании применяется метод качественного вторичного анализа, использующий существующие данные для изучения взаимосвязи между предпринимательством, ориентированным на возможности и инновации, и экономическим ростом в Западном Казахстане.

*Результаты:* Исследование показывает, что китайское предпринимательство в нефтегазовом секторе является важной движущей силой регионального экономического роста. Предложенная модель роста может быть применена как парадигма экономического развития и в других секторах бизнеса Казахстана.



*Оригинальность/ценность исследования:* Разработана модель роста, объясняющая, каким образом предпринимательство с китайскими инвестициями в определённом секторе и регионе способствует развитию местной экономики. Интегрированная в статью модель экономической оценки представляет собой дополнительный вклад в общее исследование экономического роста.

*Ключевые слова:* Западный Казахстан, Китай, предпринимательство, нефтегазовый сектор, модель экономического роста.

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#### ҚАРЖЫ ИНСТИТУТТАРЫНЫҢ ИНВЕСТИЦИЯЛЫҚ ПОРТФЕЛЬДЕРІН ТӘУЕКЕЛГЕ БАҒДАРЛАНҒАН ӘРТАРАПТАНДЫРУ

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#### АНДАТПА

*Зерттеудің мақсаты* – экстремалды нарықтық ауытқуларды ескере отырып, тәуекелдерді басқарудың заманауи әдістері негізінде қаржы институттарының инвестициялық портфельдерін тәуекелге бағдарланған әртарандыруды дамыту және практикалық тұрғыдан негіздеу.

*Әдіснамасы* – зерттеуде заманауи портфельдік теорияның әдістері, тәуекелге бағдарланған оңтайландыру модельдері (Risk Parity, Hierarchical Risk Parity, Conditional Value at Risk), экономикалық-статистикалық және салыстырмалы талдау әдістері, сондай-ақ инвестициялық портфельдердің тиімділігін бағалау көрсеткіштері қолданылды.

*Зерттеудің бірегейлігі / құндылығы* – тәуекелдерді басқарудың заманауи модельдерін үйлестіруге негізделген және нарықтық белгісіздік жағдайында портфельдік стратегиялардың тұрақтылығын арттыруға бағытталған қаржы институттарының инвестициялық портфельдерін әртарандырудың кешенді тәуекелге бағдарланған тәсілін қалыптастырумен айқындалады.

*Зерттеу нәтижелері* – тәуекелге бағдарланған портфельдердің классикалық стратегиялармен салыстырғанда тәуекел-табыстылық арақатынасының анағұрлым тұрақты екенін және «құйрықтық» тәуекелдерге төмен деңгейде ұшырайтынын дәлелдейді.

*Түйін сөздер* – инвестициялық портфель, әртарандыру, тәуекелге бағдарланған тәсіл, тәуекелдер паритеті, CVaR, қаржы институттары.

#### КІРІСПЕ

Қазіргі заманғы қаржы жүйесі жоғары белгісіздік, жоғары құбылмалылық және әлемдік нарықтардың өзара байланысының артуы жағдайында жұмыс істейді, бұл инвестициялық портфельді басқару процестерін айтарлықтай қиындатады. Ұзақ мерзімді инвестициялық көкжиегі бар қаржы институтта-

