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Analysis of Factors Affecting to the Development of Sub-Production Industry of the Republic of Kazakhstan

DINAR SIKHIMBAYEVA¹, AZIZ ZULKHARNAY², ALTYNBEK ZHAKUPOV³, ASSYLKHAN YESSILOV⁴ and MIRAS KUTTYBAY⁵

¹ Professor, Doctor of Economic sciences of Karaganda Economic University of Kazpotrebsoyuz, Karaganda, Kazakhstan, e-mail: sdinara2007@yandex.ru, ORCID ID: 0000-0003-3822-6200

² PhD student of Karaganda Economic University of Kazpotrebsoyuz, Karaganda, Kazakhstan, e-mail: aziz_-_90@mail.ru, ORCID ID: 0000-0002-8306-2789

³ PhD, Associate Professor of Kazakh University of technology and business, Nur-Sultan, Kazakhstan, e-mail: jakupov.altynbek@yandex.kz , ORCID ID: 0000-0002-0381-6799

⁴ PhD, Associate Professor Kazakh University of technology and business, Nur-Sultan, Kazakhstan, e-mail: a.esilov@yandex.kz , ORCID ID: 0000-0002-4477-3780

⁵ PhD, Prorector of Karaganda State Technical University, Karaganda, Kazakhstan, e-mail: miras777@inbox.ru ORCID ID: 0000-0001-6285-0375

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ABSTRACT

The entry of non-mining companies into the world market raises the problems of strategic planning and company management especially significant in a market economy. The considered model of strategic planning and management is versatile and suitable to the development strategy of companies taking into account regional and national interests. The aim of the study is to develop recommendations for the application of modern methods of strategic management in the non-mining companies to determine the main routes for the development of this industry in a pandemic. The information base of current investigation includes legislative and other normative acts of the Republic of Kazakhstan, statistical data of the Agency of the Republic of Kazakhstan on Statistics, analytical materials, materials of scientific economic literature and periodicals, materials of scientific and practical conferences, data of electronic resources, as well as financial statements of Top 40 foreign companies. Research methods. In this work, the following methods such as abstract-logical, economic-statistical, monographic, as well as methods of system analysis, economic comparison, expert assessments, economic and mathematical modeling were used. Conclusions: The main provisions and conclusions given in this work can be used in the development and implementation of strategic management policy and further planning of non-mining companies. In the process of analyzing the non-mining industry, a forecast was identified for the development of strategic planning for their further activities, since oil companies-subsoil users are basically important and active agents of economic and social development, receiving income as a result of the development and use of oil fields in Kazakhstan. Research out-comes: Using the provided statistical data on the indicators of non-mining companies, we analyzed the influence of some

factors affecting the final results of companies' activities by creating a regression model, and also analyzed the impact of investments in fixed capital in the non-mining industry of the Republic of Kazakhstan on the production volume (goods and services) achieved by this industry.

INTRODUCTION

The relevance and efficiency of strategic management of enterprises and numerous industries in modern economic conditions has been proven by varied previous scientific works. The key mechanisms of strategic management of enterprises in various sectors of the economy should take into account the main trends and specifics of the industry development; it is also necessary to adapt them to modern economic conditions. These circumstances confirm the feasibility of improving the processes and mechanisms of strategic management of enterprises, industrial complexes, as well as further investigations in this area. The developed non-mining industry traditionally demonstrates the technological power of the state. Nowadays, this sector is no longer a source of large-scale growth in employment and jobs in developed countries. However, it still remains as one of the key development tools in developing countries. To bring new industries into the zone of industrial activity, since 2010 the Republic of Kazakhstan has been implementing an industrial policy that aimed at creating a highly productive and export-oriented manufacturing industry including the non-mining industry.

The strategic importance of the country's non-mining industry predetermines the need of creation more flexible management structures and effective integration mechanisms to ensure the development of enterprises and industries that are part of it. The production efficiency and development of modern non-mining companies is largely determined by the degree of their adaptation to ongoing changes in the environment of functioning and development. The processes that characterize the domestic economic situation often do not suit into the framework of the generally accepted theory. Therefore, in order to solve the problems arising in these conditions, the enterprise is required to search for new and non-standard solutions and approaches.

The post-COVID reality is changing the economy, and the mining industry is no exception. The market is demanding that mining become more dynamic and flexible. Now there is a need to create the production that would work autonomously and be distinguished by an unprecedented level of efficiency and productivity. Such a "model company" invests in innovation and employees who clearly see their goals and realize the value of the result, and their workplace is as safe as possible not only for them, but also for the environment. Companies that can build fully interconnected supply chains will not only eliminate the silos of operational processes, but also ensure their transparency and reduce costs.

1. LITERATURE REVIEW

The problems of understanding the strategic future of an enterprise is always attracted interest in multiple scientific fields. A review of modern sources made it possible to highlight some definitions of strategic planning. I.A. Lieberman (2016) noted that *"the strategy is presented as a master plan of action, which determines the priorities of strategic objectives, resources and a certain algorithm of action in order to achieve strategic goals"*. A group of economists T.N. Litvinova, I.A. Morozova and E.G. Popkova concluded that strategic planning is aimed at the management aspect of changes in the enterprise. The outcome of strategic planning is a strategic outline that determines the stages and resources that are needed to achieve strategic goals (Ivanova, 2016).

Yu.N. Ivanov emphasizes that modern competition has promoted the development of adequate models of firms' behavior, which led to start and continue intensive work on research in the field of strategic planning (Litvinova et al., 2016). I. Ansoff (1989) defines strategy as a complex and potentially powerful tool with which a modern firm can withstand changing environmental conditions. Financial planning undoubtedly influences to the financial strength of companies. In this case, it seems relevant to analyze available strategic tools that aimed at improving the efficiency of the enterprise and searching

for new methodological techniques to managing the development strategy of economic entities, taking into account the state of the external and internal environment, the current conjuncture of the Kazakhstan and world markets based on the materials of the oil and gas industry. According to the author, changes in any economic system are caused by the influence of the external environment, and also affect it. To avoid chaos, uncertainty and possible errors in system management, the international management practice actively employs the category and process of strategic management. Including the analysis of the environment, the definition of the mission and goals of the system, the choice of strategy, its implementation and evaluation make it possible to streamline and systematize all elements of the system and ensure its controllability. According to L.G. Zaitsev and M.I. Sokolova, "strategic management" is concluded as:

- type, scope of management activities consisting in the implementation of the selected long-term goals throughout making changes in the organization;
- the process by which the organization interacts with its environment;
- the area of scientific knowledge that studies techniques and tools, the methodology for making strategic decisions and ways in practical implementation of this knowledge (Zaitsev, Sokolova, 2015).

The non-mining industry is the most significant branch of the primary sector, that includes extraction, processing and enrichment of raw materials - energy, ore, mining chemical construction materials. Its fraction in the total industrial production of developed countries and countries with transitional economy is around 8-10% (in Australia, Norway and Canada - 15-20%, in most developing countries - 30-50%, in some of those - over 80%, for example, Persian Gulf countries, Zambia). The export quota of mining products in developed countries usually does not exceed 5% (exceptions are the above developed countries and South Africa). This number fluctuates from 15-20 to 80% (or above) in developing countries. As the most important field, high-quality and efficient development of mining resources requires broad cooperation with the world's largest oil companies, which have a great experience in geological exploration, production, and processing of hydrocarbons, as well as their transportation. According to V.A. Kulakovskaya (2016), the positioning of the non-mining industry as an income-generating sector of the economy is due to several factors such as the presence of massive reserves of minerals, existing structure of the domestic economy and system of the industry taxation. A.I. Dmitrieva (2017) stated that the key task of the firm's strategy should be develop a model for searching, adapting and introducing innovations that create a steady stream of investments and innovations that provide competitive advantages and achieve the strategic goals.

By forming the priority directions of the region's industrial policy, it is essential to take into account that the resulting indicators should be achieved at the level of key industrial companies in the region. This makes it necessary to increase their profitability and innovativeness in a strategic perspective (Zhogova et al., 2017). Consequently, the efficiency of production and development of modern non-mining companies is largely defined by the degree of their adaptation to the ongoing changes in the environment of functioning and development (Krasnikova, 2019). Innovative and investment indicators of the development of the world economy were analyzed by many scientists over the past ten years. These display in search of competitive advantages and effective technological solutions, the world's largest corporations have begun to increase investments in R&D (Ivanova and Mamedyarov, 2019). G. Zervas et al. (2017) reported that the development of the phenomenon of the shared economy, the intensification of a use of outsourcing, the changing role of small and medium-sized enterprises in a number of industrial and high-tech sectors of the economy where the non-mining industry occupies an important position.

2. METHODOLOGY

Kazakhstan's economic and investment policy was created from scratch as a bold market and supporting a wide layer of local and foreign subsoil users. Within the framework of the adopted legislation, individual contracts are concluded with them, where the task of increasing production and export of hydrocarbons is solved by creating an investment climate suitable for investors. That will subsequently ensure the emergence of over 200 contracts for oil and gas subsoil use.

Kazakhstan's investment policy is aimed at ensuring that the volume of capital investments attracted to the country grows not only because of super-projects, but also as a result of an increase in the total number of subsoil users and contractors, as evidenced by the following data (Figure 1) (Data of the Committee on Statistics of the Republic of Kazakhstan for 2010-2019).

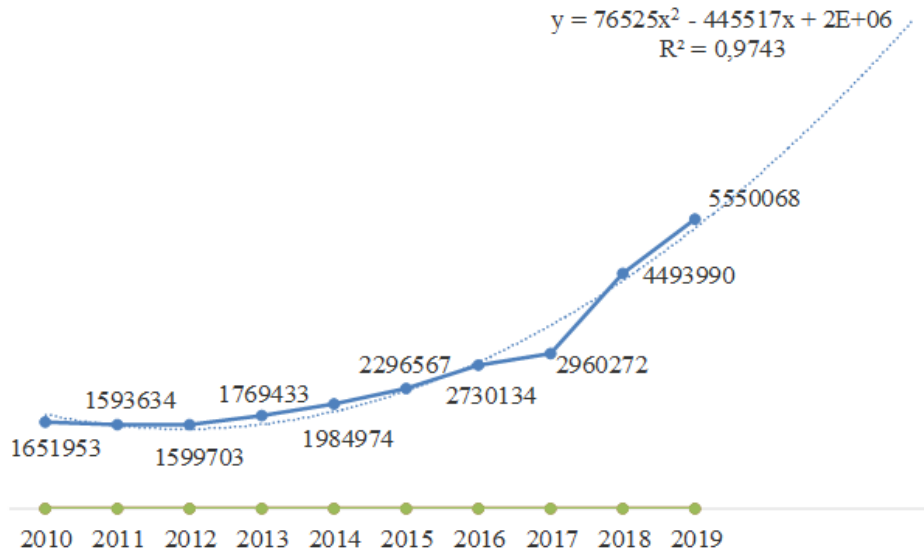


Figure 1. Fixed capital investments in the non-mining industry of the Republic of Kazakhstan for the period of 2010 to 2019, million KZ tenge.

Source: Compiled by authors based on the source: Electronic resource: Data of the Committee on Statistics of the Republic of Kazakhstan for 2010-2019 (2019)

There is of great interest to determine the influence of investments in fixed capital in the non-mining industry on the production volume (goods and services) achieved by this industry. It is natural to assume that the benefit on investment does not occur immediately, but after a certain period of time there is likely to attain a profit. Thereby, it is advisable to use a dynamic model with a distributed lag (assuming a lag value of three) for the analysis (Sedelev, 2009):

$$y_t = \alpha + \beta_0 x_t + \beta_1 x_{t-1} + \beta_2 x_{t-2} + \beta_3 x_{t-3}, \quad (1)$$

Where:

- the volume of services rendered by the placements (mln. KZ tenge);
- investments in fixed capital (mln. KZ tenge).

Graphical analysis (Figure 1, Figure 2) suggests that the lag structure has a polynomial form, as a result of this, the Almon method (Data of the Committee on Statistics of the Republic of Kazakhstan for 2010-2019) can be used to estimate the model parameters.

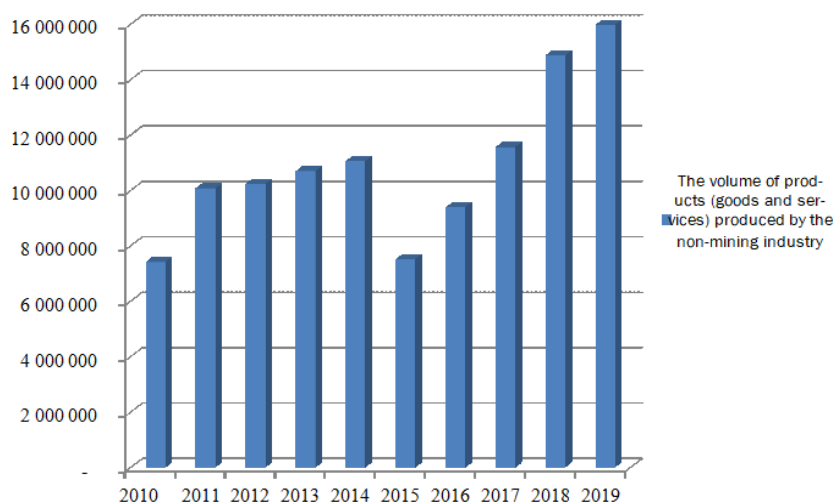


Figure 2. Dynamics of the production volume (goods and services) in the non-mining industry of the Republic of Kazakhstan for 2010-2019.

Source: Compiled by authors based on the source: Electronic resource: Data of the Committee on Statistics of the Republic of Kazakhstan for 2010-2019 (2019)

The statistical data presented in Table 1 were used to build this model.

Table 1. Dynamics of the investments in fixed capital and production volume of the non-mining industry for the period of 2010-2019

Year	The production volume (goods and services) in the non-mining industry	Fixed capital investments in the non-mining industry
2010	7 419 550 330	1 651 953
2011	10 081 254 022	1 593 634
2012	10 242 052 603	1 599 703
2013	10 696 926 187	1 769 433
2014	11 060 179 488	1 984 974
2015	7 521 179 590	2 296 567
2016	9 397 618 601	2 730 134
2017	11 568 784 610	2 960 272
2018	14 877 068 476	4 493 990
2019	15 978 061 372	5 550 068

Source: compiled by authors

The implementation of the Almon method made it possible to obtain the results depicted in Table 2. A model with a distributed lag was built, the relative coefficients and the average lag were determined.

Table 2. Results of constructing a dynamic model with a distributed lag

Distributed lag model: $y_t = -9121201,051 - 0,511x_t - 4,131x_{t-1} + 1,216x_{t-2} + 15,528x_{t-3} + \varepsilon_t$		
Relative ratios, %	current time	-0,042
	within a year	-0,341
	after two years	0,100
	after three years	1,283
Average model lag		3,709

Source: compiled by authors

Analysis of the resulting dynamic model allows us to conclude that investments in fixed capital of the non-mining industry lead to a rise in the production volume of this industry within a three-year period. Thus, for the non-extractive industry, one of the most important aspects is the need to optimize approaches to pricing and implement regulatory reforms which can attract new investment in an extremely competitive environment in the global market, and in order to pave the way to successful integration within the EAEU. Oil companies-subsoil users are important and active agents of economic and social development, as they receive income as a result of the development and use of oil fields in Kazakhstan. According to the contracts concluded with subsoil users, they are obliged not only to use in their activities the goods and services produced by domestic producers, but also to train Kazakhstani specialists at the expense of income from subsoil use.

The economy of Kazakhstan today has a “raw materials orientation” and, in the near future, the situation will not change significantly. Harmless production allows focusing not on maximum production volumes, but also a use of energy and water resources with minimal harm to the environment. This policy is followed by the transition from manual control to automated processes with their self-organization and self-control. Under these conditions, employees are shifting to remote control, and production to flexible management with a focus on demand and sales. According to the National Bank of the Republic of Kazakhstan, at the end of 2019, the net inflow of direct investments in the oil and gas industry of the Republic of Kazakhstan preliminary amounted to USD 5,664.6 million of the total volume of direct investments in Kazakhstan. In the period of 2016–2018, the inflow of investments in the oil and gas industry of the Republic of Kazakhstan increased by 95.9% (by USD 2,012.2 million) (Figure 3) (Data of the National Bank of the Republic of Kazakhstan for 2016-2019, 2019).

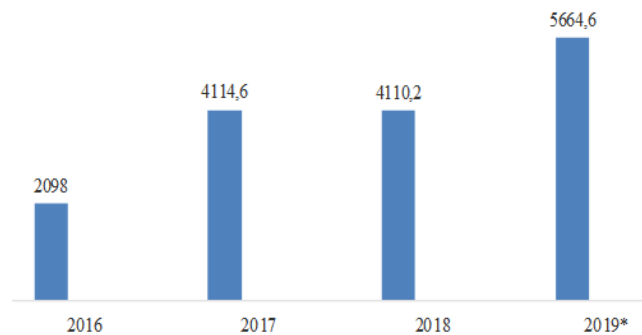


Figure 3. Net inflow of direct investments in the oil and gas industry of Kazakhstan, million US dollars

Source: Created from source: Electronic resource: Data of the National Bank of the Republic of Kazakhstan for 2016-2019, (2019)

According to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan as of 2019, 315 companies engaged in the production of crude oil and natural gas were registered in Kazakhstan, of which 187 are operating. Of the total number of companies involved in the production of crude oil and natural gas, they are divided into:

- large enterprises (more than 250 employees) - 22 (including 22 operating);
- medium-sized enterprises (from 101 to 250 employees) - 23 (including 20 operating);
- small businesses (from 5 to 100 employees) - 270 (including 145 operating).

In terms of the geography of the location of companies in the country as follows:

- Almaty - 89 (of which 52 are operating);
- Mangistau region - 30 (17);
-
- Aktobe region - 27 (9);
- Kyzylorda region - 14 (8);
- Zhambyl region - 13 (9).

At the beginning of 2019, the actual headcount at the enterprises for the production of coke and petroleum products amounted to 8.1 thousand people. Regionally, the largest number (67.9%) is concentrated in Atyrau, Pavlodar regions and Shymkent. This is due to the fact that in these regions there are 3 large domestic oil refineries - «Atyrau refinery» LLP (Atyrau), «Pavlodar oil chemistry refinery» LLP (Pavlodar) and PetroKazakhstan Oil Products LLP (Shymkent). Considering the foreign experience in the development of the non-mining industry, we would like to note that 40 of the largest mining companies are quite successfully overcoming the difficulties that have befallen them due to the COVID-19 pandemic - they certainly coped with the situation better than many other sectors of the economy, as evidenced by the following data (Figure 4) (Mining industry, 2020).

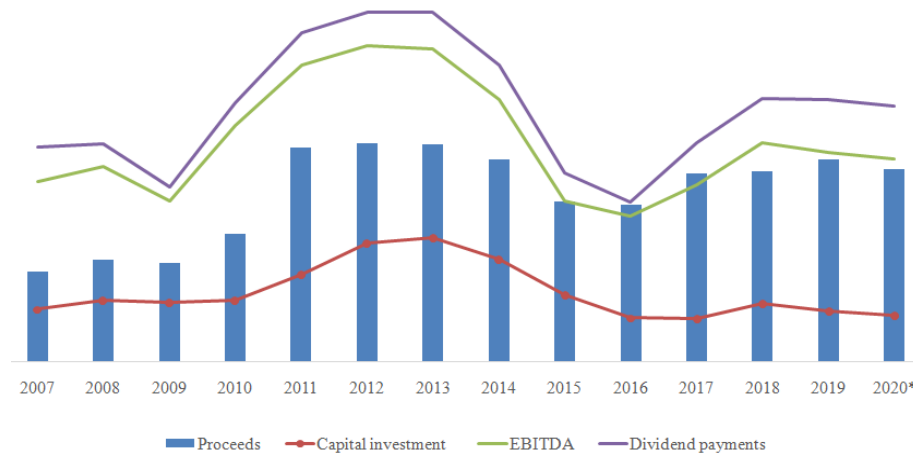


Figure 4. Dynamics of indicators of 40 largest mining companies, billion US dollars

Source: Compiled by authors based on the source: Electronic resource: Mining, (2020)

Top 40 companies generated revenues of USD 692 billion in 2019, i.e. increased by 4% compared to last year - mainly as a result of rising commodity prices (Figure 5) (Mining industry, 2020).

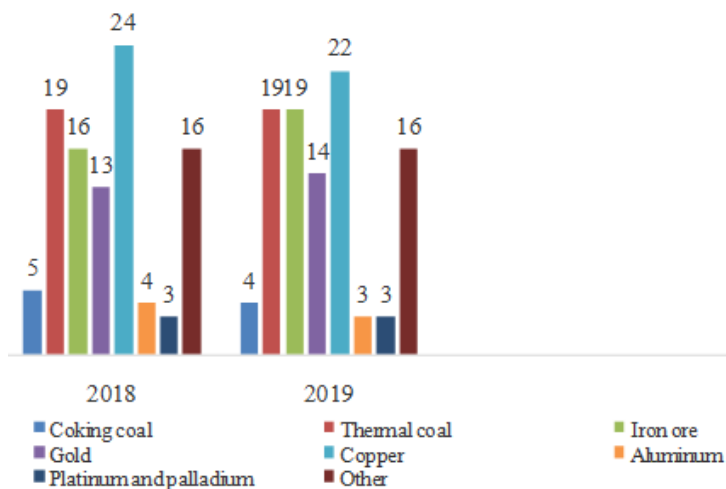


Figure 5. Maintaining the revenue structure of Top 40 companies by commodities for 2018-2019, in %.

Source: Compiled by authors based on the source: Electronic resource: Mining, (2020)

The pandemic revealed that the resilience of the industry and the role that mining companies play in supporting local communities and the economy as a whole. Although there is still a long way out of the crisis. Mining companies are already analyzing the lessons they have experienced from the current situa-

tion. The coal sector's contribution to total revenues remained at the level of the previous year, while the share of the iron ore sector increased, mainly due to the price. It reached the peak over the past five years and amounted to almost \$ 130 per tonne.

The price of iron ore, which dramatically decreased in production due to the tragic events in Brazil, further reduced due to falling demand and a trade war between the United States and China. As for Kazakhstan, the situation with the volume of production in current prices in the context of the regions of the non-mining industry indicates that among the regions by:

- Karaganda region is the leader in coal and lignite mining;
- Atyrau and Mangystau regions are leading in the production of crude oil and natural gas;
- mining of metal ores - Aktobe, Kostanay, Pavlodar regions;
- mining of iron ore - Kostanay region;
- mining of non-ferrous metal ores - Aktobe, East Kazakhstan regions;
- other branches of the mining industry - Atyrau, Zhambyl, Kostanay regions (Table 3) (Data of the Committee on Statistics of the Republic of Kazakhstan for 2010-2019).

The pandemic has affected the prices of various commodities in different ways: for some it fell, for others it increased. However, some prices remain relatively stable. Non-ferrous metal prices have declined significantly since January 2020 due to weakening demand and uncertainty over the dynamics of economic development. The decline in prices for copper, nickel and zinc since December 2019 has been expressed as a percentage in double digits. Large mining companies expect the demand for non-ferrous metals to weaken in the remainder of the year, and some of them have moderately cut their production forecasts in response to this. Thus, some of Top 40 companies have lowered their forecasts for copper, nickel and zinc mining by an average of 6-7%. Some commodity prices may decline further after COVID-19 restrictions are lifted that affect production. Since the price of gold rises during the crisis, gold mining companies are in an advantageous position - in recent months there has been a recovery in stock prices.

Table 3. Global production and the impact of COVID-19 on the activities of mining companies

A country	Copper	Gold	Iron ore	Coal	Nickel
USA	7	6		9	
Canada	7	5			
Brazil			19		
Peru	12				
Argentina	28				
Congo	7				
South Africa				3	
Russia		9	4	4	10
China	13	8	14	46	
India			8	10	
Philippines					16
Indonesia				7	30
Australia		10	37	6	7
New Caledonia					8

Source: Compiled by authors based on the source: Electronic resource: Mining, (2020)

The price of iron ore has remained above \$ 80 per tonne throughout the entire coronavirus outbreak. Some huge iron ore mines reached record production levels in the 1st quarter of 2020 as China began to recover from the crisis and recover business activity. China is expected to increase its budget for infrastructure projects to support a weakened economy. Undoubtedly, mining companies operating in the same geographic region, in the same market and offering a single product are more likely to be affected by an event such as the COVID-19 pandemic than diversified businesses. While some mining companies have simplified their asset portfolios to focus on efficiency gains, it is important to ensure the right balance of unified and diversified operations (Appendix A). In the context of large markets such as

China and India that are driving global economic growth, mining companies should ask themselves how they can diversify their customer base and strengthen demand (Table 3) (Mining industry, 2020).

Table 4. The largest organizations engaged in the extraction of non-fuel minerals in Kazakhstan

<i>Organization</i>	<i>Main product type</i>	<i>Own</i>
«NMC Tau-Ken Samruk» JSC	Copper, gold, iron ore and so on	State owned
NAC «Kazatomprom» JSC	Uranium, rare metals	State owned
EurasianResourcesGroup (headquarters in Luxembourg)	Ferroalloys, iron ore, aluminum, copper, cobalt, coal	With state participation (40% of shares belong to the Committee for State Property and Privatization of the Ministry of Finance of the Republic of Kazakhstan, 60% are divided between the three founders and members of the board)
ArcelorMittal (headquarters in Luxembourg)	Iron ore, coal	Private enterprise (37.38% of shares are held by HSBC Trustee (C.I) Limited, 62.44% - to other public shareholders)
«Corporation Kazakhmys» LLC (headquarters in Kazakhstan)	Coal	Private enterprise
KAZ Minerals (headquarters in Kazakhstan)	Copper	Private enterprise
LLC «Kazzinc» (headquarters in Kazakhstan)	Zinc and lead	Privately Held (69.61% owned by Glencore International AG headquartered in Switzerland)

Source: Compiled by authors based on the source: Electronic resource: Reforming the mining industry in Kazakhstan: investments, sustainable development, competitiveness, (2019)

The mining industry in Kazakhstan is largely represented by a number of large foreign and state-owned enterprises involved in the extraction of non-fuel minerals, and in some cases by their subsidiaries. The dominant position in the industry is occupied by the Samruk Kazyna National Welfare Fund, whose portfolio companies are NAC KazAtomProm JSC and Tau-Ken Samruk NGK JSC - one of the greatest state-owned enterprises. Apart from, the state owns Kazgeology JSC, which is engaged in mineral exploration, and the Ministry of Finance of Kazakhstan owns 40% of Eurasian Resources Group shares. Table 4 represents some of the key enterprises engaged in the extraction of non-fuel minerals in Kazakhstan (Reforming the mining industry in Kazakhstan: investment, sustainable development, competitiveness, 2019).

Currently, Kazakhstan is an attractive country for attracting foreign investment in the oil and gas sector, since the country's position in the overall ratings of the business environment is generally favorable and growing in comparison with other countries. Taking this into account, the use of strategic planning for oil and gas companies will be able to successfully resist new global challenges and threats (National Energy Report Kazenergy, 2019). Kazakhstan is rich in hydrocarbon raw materials, has always strived to develop the deep processing sector in order to reorient its raw material potential towards the production of products with high added value. Over the years, in a country that annually increases oil and gas production, special programs have been developed and adopted to develop the hydrocarbon processing sector and obtain products with high added value.

Kazakhstan has developed a Concept for the Development of the Fuel and Energy Complex (FEC) until 2030, developed in June 2014, which is a key document that defines the strategic goals of the exploration and production sector. According to this concept, in the future until 2030 in the oil industry will be:

- economic incentives have been created to attract investments in geological exploration and effective technological development of oil production;
- the personnel potential of the oil and gas industry is ensured;
- technology transfer in the oil production segment was provided;
- the domestic market of petroleum products was ensured, the capacities for oil refining were expanded;
- developed a competitive market for oil products and oil refining.

The most important factor in the development of the mining industry is the use of innovative technologies to transform core business models and key production processes. Innovations will provide an opportunity to attain a completely new level of efficiency and safety, which are achieved through the integration of processes and the use of artificial intelligence. Another development factor is a new approach to working with staff and partners. This contributes to the formation of new values, more flexible conditions for interaction and personalization of processes. Finally, such changes will make it possible to modernize the business processes of mining companies by switching to remote control (Industry analysis report 2019).

More than 12 key stages of production (from exploration to shipping) can become autonomous from direct human involvement. The correct choice of such stages in each company is based on three criteria including the importance of the business process, its complexity, and the time required for its implementation. Based on the study of the activities of non-mining companies, certain conclusions were drawn:

- An important element of the company's strategic planning is an increase in the volume of capital investments and investments aimed at increasing the level of production, and proven reserves of the company by investing additional funds in the development of new technologies and geological exploration, as well as in improving the financial performance of the company.
- The direction of the energy policy of companies is obvious to stimulate investments in the development of alternative energy.
- Development of international cooperation is one of the priority areas of the oil and gas industry.

In general, the results of the study were achieved, as follows:

- the general trend of development of the modern non-mining industry, both in the Republic of Kazakhstan and taking into account foreign experience;
- provided its characteristics as one of the main sectors of the economy of Kazakhstan;
- it has been proven that the non-mining industry is the driving force behind the ongoing socio-economic reforms in Kazakhstan, and the conductor of modern innovative and management decisions;
- using the construction of a regression model, we analyzed the impact of investments in fixed capital of the sub-mining industry on the production volume (goods and services), its transportation.

CONCLUSION

According to experts, the non-mining industry occupies a strong position in the context of COVID-19 on the global economy and production. Mining companies are financially strong and most of them continue to operate, albeit with increased levels of precaution and preventive control. However, the long-term consequences of the pandemic are still unknown. Top 40 mining companies need to take advantage of current financial stability to rethink their strategy, which will increase business resilience in the future.

In this regard, the non-mining complex of Kazakhstan requires the implementation of the following measures:

- further attraction of investments for the reproduction and development of the mineral resource base;
- renewal of fixed capital in the mineral resources sector using the latest advances in equipment and technology;
- use of the depreciation fund exclusively for the intended purpose;
- increasing the economic efficiency of production and sales activities of non-mining companies, reducing costs in the production, distribution and marketing of hydrocarbons;
- improving the financial condition of the mineral resource complex;
- ensuring full financial transparency of the activities of non-mining enterprises to identify (Sikhimbaeva, 2011).

Considering the risks of COVID-19 in enterprises, companies may outsource some functions. For instance, replace IT functions to the cloud or outsource non-core operational functions to contractors. Such changes can reduce operating costs and eliminate maintenance costs. The main directions of development for industrial companies will be:

- automatic movement of materials (unmanned loaders and cranes);
- automation of repetitive tasks, including assembly (for example, industrial robotics);
- predictive service (using the Web and artificial intelligence).

Most industrial companies are going to strengthen their digital presence in response to the increased demand on the Internet, which will continue after the crisis, so the main challenge for industrial enterprises is structural adaptation to the new market realities, which implies:

- building new supply chains with a greater focus on national contractors (which will minimize problems in the event of quarantine measures and border closures);
- changing working conditions for employees with an emphasis on the transition of some employees (where possible) to the format of remote work;
- a serious revision of the product line and, where it seems appropriate, the reorientation of production to the healthcare and smart industries;
- the widespread introduction of robotics and artificial intelligence in production and management to reduce dependence on quarantine measures and the ability to quickly and painlessly scale production of products depending on the demand situation;
- changing models and channels for selling and promoting products with a shift to the online environment, where an increase in the range of solutions is expected, taking into account the specifics of the sectors;
- continuous monitoring of macroeconomic conditions and demand, changes in consumer behavior using artificial intelligence technologies;
- creating long-term relationships with suppliers of sanitary protection solutions (personal protective equipment, cleaning) (Digest. Impact of the COVID-19 pandemic on industry and the environment, 2020).

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Appendix A. Volume of production (goods and services) in current prices in the context of regions of the non-mining industry

(in thousand tenge)

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
The Republic of Kazakhstan	7 419 550 330	10 081 254 022	10 242 052 603	10 696 926 187	11 060 179 488	7 521 179 590	9 397 618 601	11 568 794 610	14 877 068 476	15 978 061 372
Akmola region	22 146 270	29 567 091	45 973 602	44 333 335	47 677 700	53 470 523	69 221 995	54 957 966	59 372 762	75 897 044
Aktobe region	739 735 712	981 644 944	1 024 466 748	984 788 175	896 515 882	658 564 807	822 406 237	954 056 761	1 149 744 235	1 142 089 899
Almaty region	6 613 429	7 673 712	7 699 183	9 342 088	11 645 147	14 994 903	13 882 861	12 143 386	11 555 000	14 577 293
Ayrau region	2 832 566 513	3 988 163 946	3 852 908 343	4 245 164 480	4 502 527 807	3 052 481 615	3 948 896 927	4 931 030 025	6 411 495 450	7 268 682 061
West-Kazakhstan region	881 695 048	1 344 777 763	1 498 907 720	1 482 062 197	1 657 346 095	1 146 628 333	1 388 588 609	1 690 284 309	2 213 469 221	2 114 621 342
Jambyl region	8 651 131	12 967 286	17 141 431	18 766 577	21 818 878	23 288 140	35 970 914	43 586 663	49 334 091	57 777 122
Karaganda region	88 461 119	134 426 171	134 653 117	193 647 709	281 371 474	159 861 739	209 385 885	287 805 257	355 034 682	400 265 192
Kostanay region	279 935 973	368 070 252	269 745 444	279 580 176	240 313 714	161 269 735	236 453 124	296 037 471	366 149 722	501 961 043
Kyzylorda region	756 951 759	1 000 462 903	1 032 466 324	1 066 725 741	880 763 024	475 356 805	515 061 166	583 804 839	778 607 510	669 337 455
Mangystau region	1 538 594 091	1 927 283 584	2 037 069 437	2 023 476 213	2 150 787 444	1 358 046 905	1 613 869 200	2 037 105 064	2 594 926 768	2 600 970 545
South-Kazakhstan region	72 776 169	81 339 594	140 238 114	146 024 760	149 421 529	193 505 205	216 924 144	152 742 977	..	..
Pavlodar region	75 089 345	89 534 007	100 470 907	104 755 951	113 235 467	119 247 709	202 725 501	340 443 104	376 231 718	420 910 959
North-Kazakhstan region	387 788	799 342	1 540 354	1 785 886	2 001 116	1 558 116	3 170 806	2 063 802	2 760 006	4 594 005
Turkestan region	..	..	..	..	..	..	..	..	188 989 763	224 503 886
East-Kazakhstan region	115 945 983	114 542 579	78 675 657	96 471 817	104 533 875	102 905 055	121 061 232	162 722 986	318 865 490	481 202 689
Nur-Sultan city	..	848	11 217	1 072	..	..	..	..	..	..
Almaty city	..	..	85 005	..	220 336	..	..	..	..	..
Shymkent city	..	..	..	..	..	..	..	..	532 058	670 837
Mining of coal and lignite										
The Republic of Kazakhstan	130 585 989	182 656 456	195 036 869	207 005 546	219 282 250	213 521 406	232 703 098	292 079 360	342 996 228	357 768 139
Akmola region	1 702 456	2 941 713	5 819 492	5 090 849	2 903 137	966 110	448 480	871 228	..	..
Aktobe region	6 830	10 860	10 622	..	..	..	..	..	..	..
Almaty region	39 246	46 345	62 763	75 854	91 037	112 719	127 110	159 264	x	x
Jambyl region	807 889	858 813	222 160	166 240	153 572	45 482	49 365	51 795	x	724 303

Karaganda region	47 869 703	85 659 440	82 269 773	92 156 918	100 891 266	97 796 936	110 556 691	144 981 011	178 305 040	192 442 968
Kostanay region	118 476	74 005	60 236	6 312	-	-	-	34 701	x	-
Mangistau region	-	-	-	-	-	-	-	-	-	-
South-Kazakhstan region	-	-	-	-	-	-	-	-	-	-
Pavlodar region	71 059 425	83 571 776	95 291 976	96 575 375	101 668 173	98 424 906	103 719 540	123 633 583	136 996 313	133 820 361
North-Kazakhstan region	..	..	..	..	..	..	..	..	-	-
East-Kazakhstan region	8 981 964	9 493 504	11 299 847	12 933 988	13 575 065	16 175 253	17 801 912	22 347 778	x	30 561 948
Shymkent city	..	..	..	..	..	..	..	..	-	-
Extraction of crude oil and natural gas										
The Republic of Kazakhstan	6 195 386 180	8 572 794 725	8 720 733 578	9 036 471 043	9 164 094 733	5 880 227 129	7 409 929 215	9 202 732 776	12 060 235116	12 653 589 432
Aktobe region	520 172 503	703 033 529	727 819 069	701 454 417	576 948 877	372 506 011	541 607 513	596 087 223	743 264 885	692 367 888
Ayrau region	2 744 667 107	3 857 404 578	3 744 047 179	4 152 270 397	4 369 105 095	2 921 390 144	3 763 126 907	4 716 819 043	6 140 391 378	7 019 078 796
West-Kazakhstan region	859 317 201	1 326 435 984	1 472 388 876	1 435 908 484	1 605 757 424	1 069 772 118	1 276 176 932	1 614 829 855	2 154 013 998	2 044 536 605
Jambyl region	1 672 720	2 256 289	4 697 304	4 684 419	4 726 032	4 994 985	7 266 339	13 207 931	x	13 090 301
Kyzylorda region	711 330 342	938 557 053	954 870 964	971 722 984	763 244 830	379 165 651	415 600 476	476 431 932	674 522 510	583 241 929
Mangistau region	1 358 226 307	1 745 097 444	1 816 896 606	1 768 177 473	1 839 928 675	1 128 120 255	1 398 580 100	1 776 375 214	2 316 306 859	2 290 522 881
East-Kazakhstan region	-	9 848	13 580	2 252 869	4 383 800	4 277 965	7 570 948	8 981 578	x	10 751 032
Extraction of crude oil										
The Republic of Kazakhstan	6 154 112 810	8 519 705 866	8 639 057 158	8 955 085 020	9 078 512 779	5 757 048 120	7 293 084 725	8 994 914 135	11 819 914670	12 256 876 373
Aktobe region	519 607 254	701 997 219	726 943 528	700 776 267	575 489 139	369 095 348	538 497 171	543 433 221	681 994 984	630 727 896
Ayrau region	2 744 667 107	3 857 404 578	3 744 047 179	4 152 270 397	4 369 105 095	2 921 037 851	3 759 443 391	4 686 866 597	x	6 846 804 320
West-Kazakhstan region	838 737 153	1 296 159 635	1 411 287 948	1 377 618 292	1 541 106 904	974 192 663	1 205 585 527	1 542 977 724	2 071 905 608	1 945 564 999
Jambyl region	132 862	173 413	606 408	622 659	588 540	758 530	1 050 179	1 177 114	x	964 147
Kyzylorda region	708 586 941	936 099 992	952 585 014	966 054 520	759 968 797	378 806 222	415 029 052	475 915 749	674 072 800	582 356 051
Mangistau region	1 342 381 493	1 727 861 181	1 803 573 501	1 757 576 388	1 831 896 328	1 113 040 120	1 373 417 691	1 744 499 017	2 278 158 148	2 250 378 256
East-Kazakhstan region	-	9 848	13 580	166 497	357 976	117 386	61 714	44 713	x	x

Extraction of natural gas													
The Republic of Kazakhstan	41 273 370	53 088 859	81 676 420	81 386 023	85 581 954	123 179 009	116 844 490	207 818 641	240 320 446	396 713 059			
Aktobe region	565 249	1 036 310	875 541	678 150	1 459 738	3 410 663	3 110 342	52 654 002	61 269 901	61 639 992			
Ayrau region	-	-	-	-	-	352 293	3 683 516	29 952 446	x	172 274 476			
West-Kazakhstan region	20 580 048	30 276 349	61 100 928	58 290 192	64650520	99579495	70591405	71 852 131	82 108 390	98 971 606			
Jambyl region	1 539 858	2 082 876	4 090 896	4 061 760	4 137 492	4 236 455	6 216 160	12 030 817	x	12 126 154			
Kyzylorda region	2 743 401	2 457 061	2 285 950	5 668 464	3 276 033	359 429	571 424	516 183	449 710	885 878			
Mangistau region	15 844 814	17 236 263	13 323 105	10 601 085	8 032 347	15 080 135	25 162 409	31 876 197	38 148 711	40 144 625			
East-Kazakhstan region	-	-	-	2 086 372	4 025 824	4 160 579	7 509 234	8 936 865	x	x			
Mining of metal ores													
The Republic of Kazakhstan	652 602 840	794 453 856	722 893 143	789 832 524	863 139 286	740 258 462	969 193 040	1 188 391 467	1 474 218 362	1 908 282 087			
Akmola region	15 372 625	20 896 486	31 604 858	29 633 124	32 428 175	35 628 367	47 166 600	37 210 799	40 584 628	55 130 852			
Aktobe region	141 978 850	180 937 534	178 437 612	180 200 372	193 676 382	204 194 438	217 698 581	247 770 151	285 218 274	306 013 492			
Almaty region	606 592	190 789	100 842	235 395	509 682	528 253	131 429	103 606	-	-			
Jambyl region	107 842	534 308	1 158 986	4 050 066	7 771 559	6 576 636	4 415 876	3 332 874	1 735 942	3 933 627			
Karaganda region	35 323 685	40 567 768	40 202 146	84 728 330	160 267 653	42 009 665	78 908 327	111 836 518	129 293 468	157 859 183			
Kostanay region	270 180 794	355 854 981	254 820 621	263 450 195	220 475 434	143 241 794	210 224 310	264 697 955	323 116 647	452 540 033			
Kyzylorda region	16 215 493	18 307 909	28 310 530	31 290 290	32 786 342	39 065 066	50 950 111	40 079 447	x	35 994 932			
South-Kazakhstan region	69 636 605	78 695 280	129 657 384	135 581 543	141 455 925	180 972 042	204 810 745	138 512 755	-	-			
Pavlodar region	2 035 096	3 443 231	1 455 473	3 037 647	5 035 437	14 754 645	90 591 230	206 039 153	225 778 616	271 653 273			
North-Kazakhstan region	53 264	388 016	794 849	543 481	435 546	187 419	56 735	152 975	x	1 743 771			
Turkistan region	-	-	-	-	-	-	-	-	-	-			
East-Kazakhstan region	101 091 994	94 667 554	56 369 842	57 082 081	68 297 151	73 100 137	84 239 096	138 695 234	253 435 133	410 474 780			
Iron ore mining													
The Republic of Kazakhstan	257 726 883	338 431 665	235 763 247	254 451 742	223 536 863	136 571 839	194 827 776	244 023 794	291 173 061	415 898 376			
Akmola region	2 001 369	3 442 139	2 723 599	2 234 172	2 320 192	1 697 685	2 423 567	3 014 097	x	4 734 187			
Aktobe region	164 997	269 555	782 658	1 232 604	1 529 591	102 243	1 195 490	1 420 000	x	x			
Almaty region	-	190 789	58 742	235 395	-	-	104 069	-	-	-			

Karaganda region	7 266 035	11 402 699	14 023 150	18 734 295	21 384 644	12 312 956	16 649 923	24 761 893	29 998 241	30 723 615
Kostanay region	248 294 182	323 126 483	248 175 098	232 015 276	198 128 350	122 316 571	173 682 496	214 363 567	253 835 825	373 441 658
South-Kazakhstan region	-	-	-	-	-	-	-	44 611	-	-
Turkistan region	-	-	-	-	-	-	-	-	x	47 296
East-Kazakhstan region	-	-	-	-	174 086	142 384	772 231	429 626	-	-
Extraction of non-ferrous metal ores										
The Republic of Kazakhstan	394 876 257	456 022 191	487 129 896	535 380 782	639 602 423	603 686 623	794 365 264	944 367 673	1 183 045 301	1 492 383 711
Akmola region	13 371 256	17 454 347	28 881 259	27 388 952	30 107 983	33 930 682	44 743 033	34 196 702	x	50 396 665
Altkobe region	141 813 853	180 667 979	177 654 954	178 967 768	192 146 791	204 092 195	216 503 091	246 350 151	x	299 061 872
Almaty region	606 592	-	42 100	-	509 682	528 253	27 360	103 606	-	-
Jambyl region	107 842	534 308	1 158 986	4 050 066	7 771 559	6 576 636	4 415 876	3 332 874	1 735 942	3 933 827
Karaganda region	28 057 650	29 165 069	26 178 996	65 994 035	138 883 009	29 696 709	62 258 404	87 074 625	99 295 227	127 135 568
Kostanay region	21 886 612	32 728 498	36 645 523	31 434 919	22 347 084	20 925 223	36 541 814	50 344 388	69 280 822	79 098 375
Kyzylorda region	16 215 493	18 307 909	28 310 530	31 290 290	32 786 342	39 065 066	50 990 111	40 079 447	x	35 994 932
South-Kazakhstan region	69 636 605	78 695 280	129 657 384	135 581 543	141 455 925	180 972 042	204 810 745	138 468 144	-	-
Pavlodar region	2 035 096	3 443 231	1 435 473	3 037 647	5 035 437	14 754 645	90 591 230	206 039 153	225 778 616	271 653 273
North-Kazakhstan region	53 264	358 016	794 849	543 481	435 546	187 419	56 735	152 975	x	1 743 771
Turkistan region	-	-	-	-	-	-	-	-	x	212 890 848
East-Kazakhstan region	101 091 994	94 667 554	56 369 842	57 082 081	68 123 065	72 967 753	83 486 865	138 225 608	253 435 133	410 474 780
Other sectors of the mining industry										
The Republic of Kazakhstan	76 853 226	121 984 308	122 873 130	111 466 217	136 670 954	154 573 107	175 693 575	191 988 321	265 709 458	248 734 573
Akmola region	5 045 705	5 559 466	7 374 617	8 548 700	11 364 759	14 934 386	16 280 562	11 539 918	11 319 682	10 448 926
Altkobe region	7 948 392	9 169 093	10 909 440	11 889 989	16 137 892	13 685 304	15 564 417	24 138 250	25 538 066	28 047 677
Almaty region	5 967 591	7 436 578	7 390 269	8 574 125	9 975 360	12 972 229	12 242 086	10 069 754	9 969 205	12 213 599
Aytau region	21 374 700	47 534 351	40 468 208	26 791 062	42 650 772	53 475 288	54 438 095	58 865 686	122 229 535	88 015 596
West-Kazakhstan region	189 575	406 200	333 989	567 478	794 322	825 416	921 788	913 439	732 754	1 118 366
Jambyl region	5 165 630	8 161 219	9 967 333	8 095 632	7 731 835	9 968 127	21 860 305	25 605 097	28 407 947	30 750 862
Karaganda region	4 874 009	7 253 423	7 823 867	9 243 936	13 065 267	11 725 051	9 021 135	11 002 914	12 780 139	14 091 666

Kostanay region	9 636 703	11 122 512	13 734 652	13 369 202	14 225 433	14 951 907	20 674 600	22 521 051	x	28 326 816
Kyzylorda region	2 763 638	3 183 656	3 119 773	2 984 050	2 081 623	1 467 861	1 926 593	2 291 490	x	3 208 922
Mangystau region	4 233 189	10 563 862	7 486 036	5 546 089	4 474 856	4 514 320	4 520 622	4 527 218	4 425 790	5 132 723
South-Kazakhstan region	2 343 231	2 644 314	4 249 816	4 870 192	3 423 293	5 047 149	5 221 568	5 288 080	..	..
Pavlodar region	1 994 824	2 492 496	3 480 960	4 360 465	4 727 116	5 274 390	5 786 986	7 977 744	9 537 590	10 650 030
North-Kazakhstan region	334 524	441 326	731 398	1 222 495	1 061 053	969 796	1 108 214	1 414 236	x	2 269 181
Turkestan region	..	..	..	..	..	..	..	..	4 484 816	5 635 895
East-Kazakhstan region	4 981 515	6 024 964	5 791 137	5 401 730	4 737 057	4 761 883	6 134 604	5 833 494	6 696 806	8 153 477
Nur-Sultan city	-	848	11 217	1 072	-	-	-	-	-	-
Almaty city	-	-	718	-	220 336	-	-	-	-	-
Shymkent city	532 058	670 837

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