

INDUSTRY ANALYSIS

2.1. Economy outlook

COVID-19 is gradually fading from its position as the headliner of world news. On the agenda are the war in Ukraine, the worsening food crisis, the disruption of supply chains and rising global inflation. In the post-pandemic period, central banks around the world tried to raise rates to keep inflation in check, but the shock of the war made matters worse. The geopolitical backdrop creates even more uncertainty for the global economy outlook.

As a consequence of a series of shocks, Kazakhstan's economic growth has slowed in 2022, while inflation accelerated further. GDP grew by 3.6% year-on-year through August, down from 4.3% in 2021. The slowdown reflects temporary disruptions in oil production. While Russia's war in Ukraine has had limited impact on output, its spillovers have exacerbated inflationary pressures. In September, inflation rose further to 17.2%, well above the 4–6% target range of the National Bank of Kazakhstan (NB RoK), driven by both external factors and domestic demand.

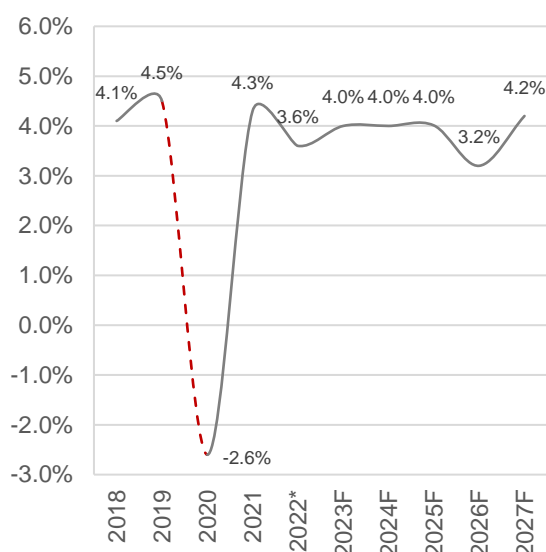


Figure 2-1. Real GDP growth, %

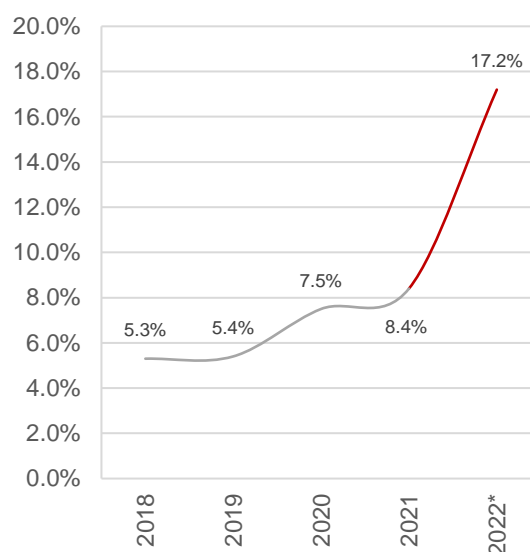


Figure 2-2. Inflation (CPI), %

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

The authorities have taken various measures to preserve stability and support the economy. NB RoK has raised the policy rate by 500 basis points since mid-2021 and intervened in the foreign exchange (FX) market to limit excessive exchange rate volatility. It also restricted exports of physical foreign currency cash and gold by households, while the government introduced a subsidy on tenge deposits to prevent a rise in dollarization. In the face of social demands and the outbreak of the war in Ukraine, initiatives announced by the President led to a revision of the 2022 budget, with increased public spending by about 3% of GDP, financed by higher oil revenues. To contain price pressures, the government put in place temporary export restrictions on several goods and extended fuel price freezes introduced in January 2022.

Alternatively, to the RoK Ministry of National Economy's above-mentioned economy forecast, according to IMF, growth is projected to pick up, but downside risks remain substantial. Growth is projected at between 2.5% and 2.8% in 2022 and 4.5% in 2023 - 2024 and would then stabilize around 3.5%. Inflation would peak around 17% in early 2023 and remain above 6% until 2024. The current account would reach a surplus of about 3% of GDP in 2022 and then record modest deficits in the medium term, as oil prices moderate. However, aggravated spillovers from the war in Ukraine may lead to lower growth, higher inflation, and social tensions. Exports could be severely affected by a durable interruption of the Caspian Pipeline Consortium pipeline, while

adverse global conditions could lower oil prices and raise borrowing costs. Global decarbonization makes Kazakhstan’s reliance on fossil fuels a key long-term concern. On the upside, high commodity prices would support substantial fiscal and external buffers.

According to the Ministry of National Economy of the RoK for 6 months of 2022, the growth of the economy of Kazakhstan amounted to 3.6%. The volume of industrial production increased by 3.5%: in manufacturing – by 5.8%, in mining - by 1.9%. The decline in production was recorded in the supply of electricity – by 0.4%. Agriculture grew by 1.4%, trade - by 6.2%, transport and warehousing - by 6.2%, communications - by 12.6%.

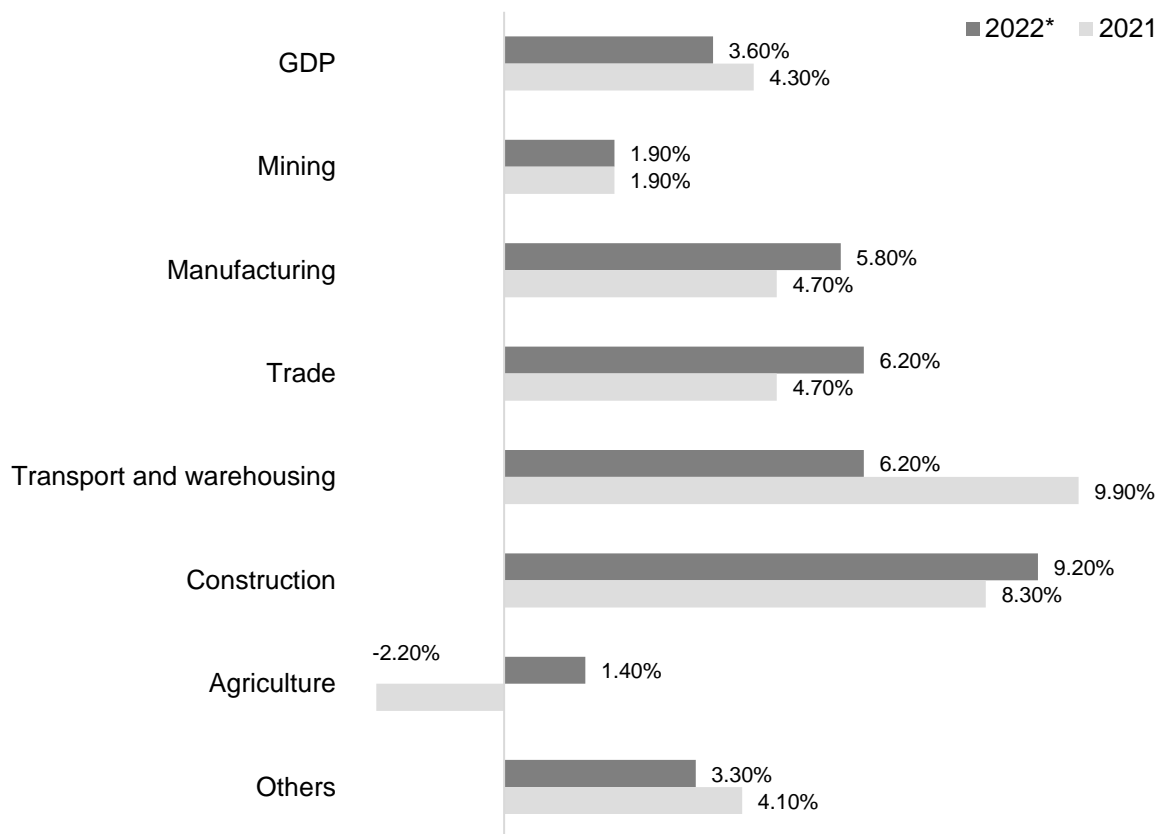


Figure 2-3. GDP drivers in 2019-2020, %

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

Despite sanctions against Russia and possible world commodity markets access restrictions, Kazakhstan’s foreign trade turnover for 4 months of 2022 amounted to 39.7 bln USD, with an increase of 40.8% compared to the corresponding period of 2021. Exports amounted to 26.5 bln USD (1.6 times), imports reached 13.2 bln USD (+13.7%). The pressure of the sanctions, coupled with the disruption of supply chains, are the main threats to the foreign trade.



Figure 2-4. Trade turnover, bln USD

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

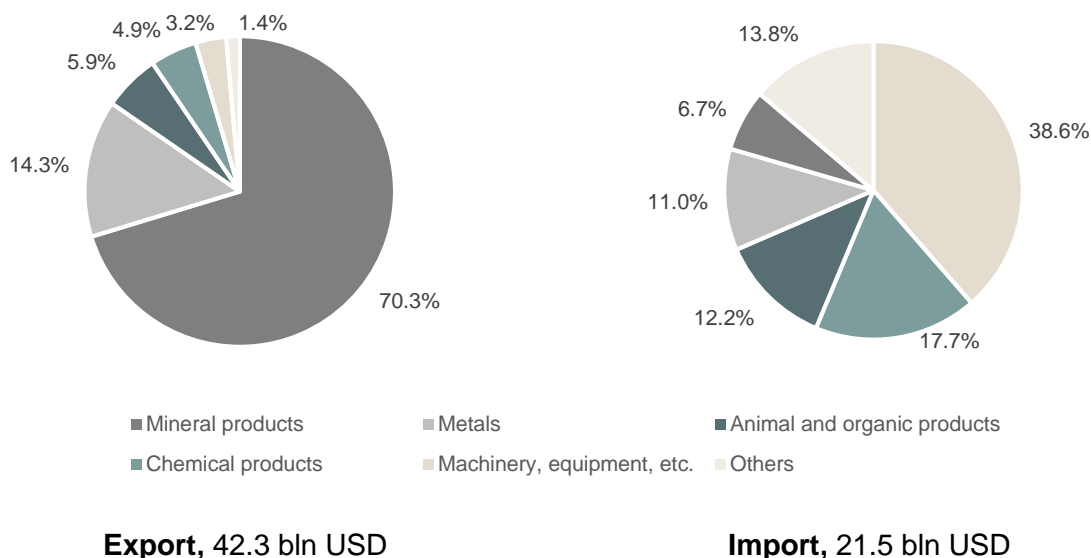


Figure 2-5. Export and Import structure in 2022, %

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

The sanctions embargo on Russian commodities and restrictions on imports to Russia led to a temporary strengthening of the Russian ruble against the U.S. dollar, which causes significant volatility in the exchange rate of the national currency. The Russian ruble absorbs shocks in oil prices and the global value of money and influences the tenge through the exchange rate channel. In fact, external shocks have a weaker impact on the dynamics of the tenge than the behavior of the Russian ruble, which is shown by the dynamics of the current year. The weakening of the anchor in the form of the ruble will become possible with the acceleration of the process of diversification of Russian imports, the share of which dropped to 38.5% from 41% in the same period last year.

The global rise in inflation is projected onto consumer goods, whose prices in May 2022 rose by 14% year-on-year, industrial prices - by 29% and agriculture - by 19.7%. Obviously, achieving the inflation target of the NB RoK at 4-6% this year will be impossible with the existing structure of Kazakhstani imports.

In the period from 1993 to the first half of 2022, the volume of gross inflow of foreign direct investment in the economy of Kazakhstan amounted to 395.9 bln USD. According to NB RoK, in the first half of 2022, the gross inflow of foreign direct investment (FDI) into Kazakhstan amounted to 14.5 bln USD, demonstrating an increase of 28.2% compared to the same period last year.

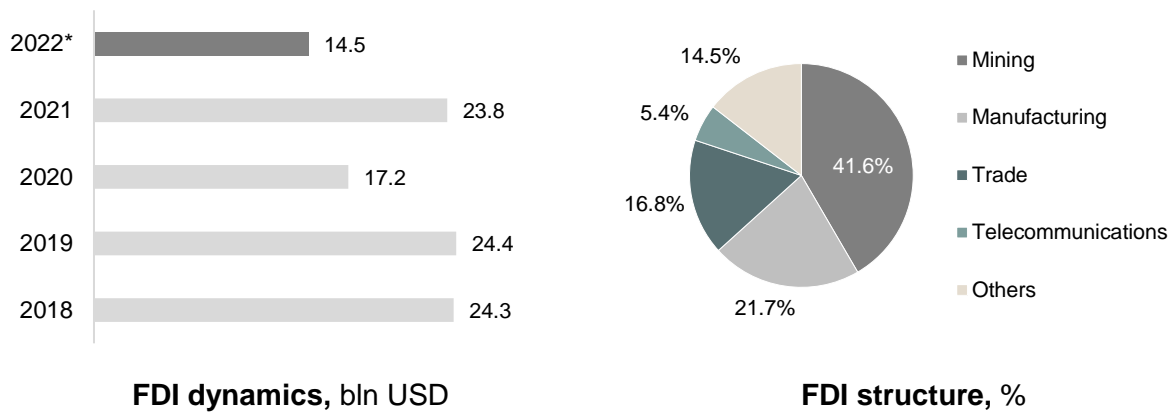


Figure 2-6. Foreign Direct Investments (FDI)

Source: NB RoK

Note: 6 months of 2022

2.2. RoK Machine building industry outlook

Despite the high growth potential, currently RoK machine building industry is playing a rather insignificant role in the country's economy with respective share of 3.4% of GDP in 6 months of 2022 and 2.2% on average in the last decade. Mainly, after the end of investment cycle driven by State support program SPAIID (State Program for Accelerated Industrial and Innovative Development of the Republic of Kazakhstan (ГПФИИР)), share of the machine building industry in GDP in 2015 decreased sharply from 2.3% to 1.6%. Since then, the industry has shown a stable positive trend.

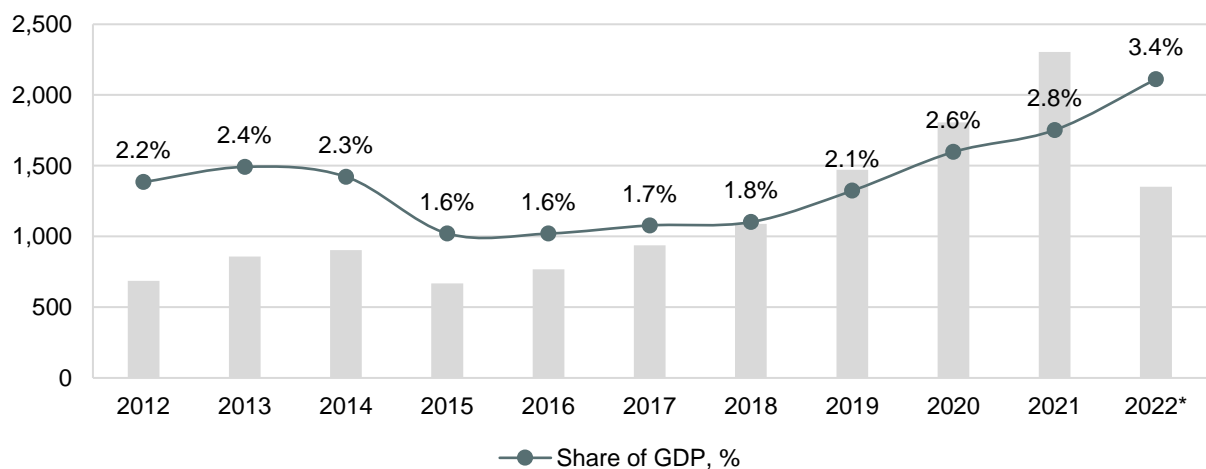


Figure 2-7. RoK Machine building industry Gross value added / Output, bln KZT

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

Machine building output is structured by 6 production streams. During the last decade, in average, the shares of these streams in the industry's output structure were as follows: manufacturing of computers; electronic and optical equipment (2.9%); manufacturing of electrical equipment (10.4%); manufacturing of machinery and equipment not included in other categories (13.1%); manufacturing of cars, trailers and semi-trailers (19.2%); manufacturing of other equipment (11.9%); repair and installation of machinery and equipment (37.3%).

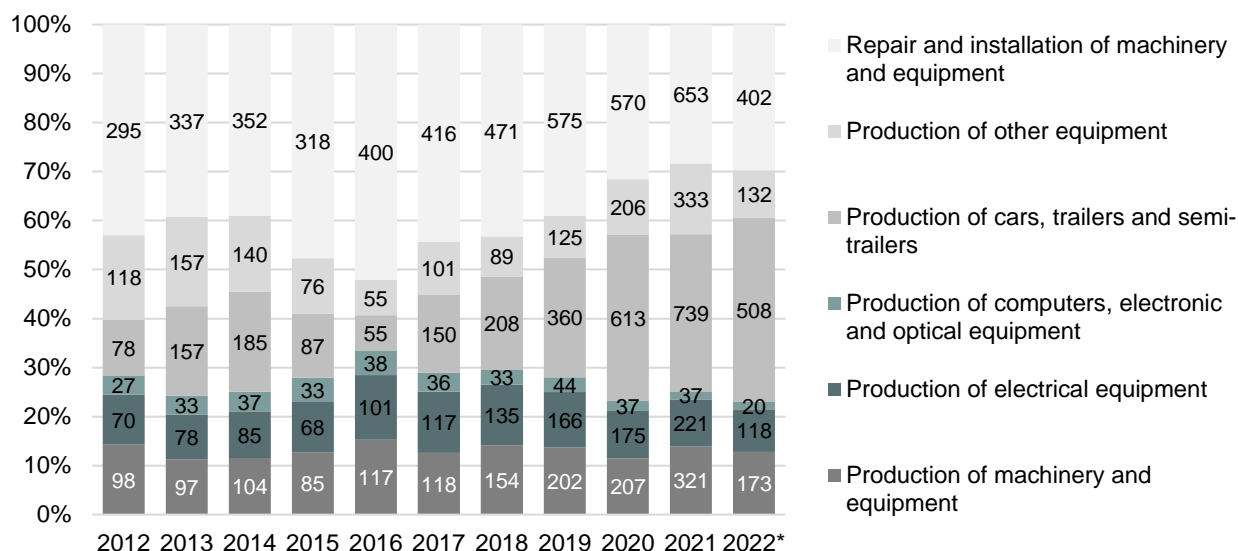


Figure 2-8. RoK Machine building industry Output by structure, %

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

Almost half of the industry output is produced in three regions: Kostanay oblast (21.6%), Almaty (17.1%) and Astana (10.8%). Overall, the industry production indicators are higher in northern and eastern regions of Kazakhstan.

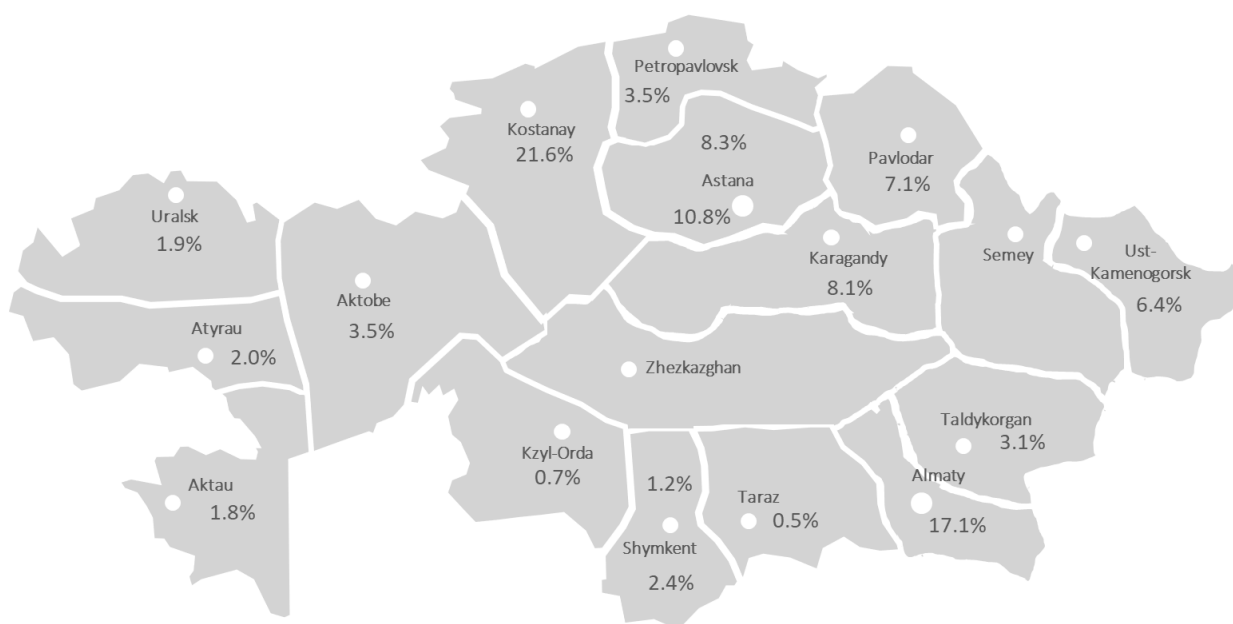


Figure 2-9. RoK Machine building industry Output in 2022* (1.4 tln KZT) by region, %

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

RoK Machine building industry is highly import-concentrated. During the last decade, on average import volumes were 12-13 times higher than export volumes. However, export volumes growth rates are higher than import volumes.

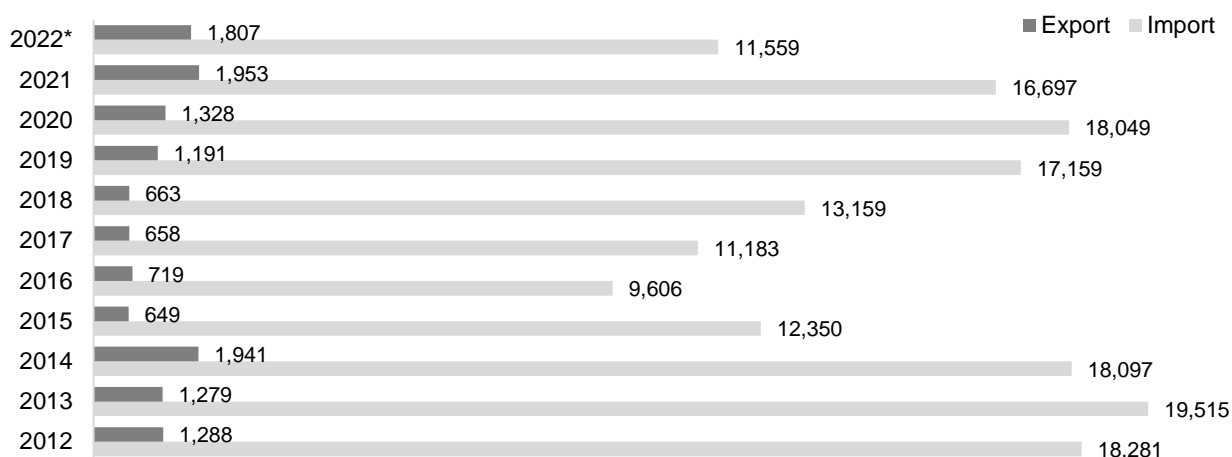


Figure 2-10. RoK Machine building industry Trade balance, mln USD

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

Almost 50% of export volumes in 2022 were accounted for aircraft, spacecraft and suborbital vehicles (27.8%), passenger and other motor vehicles (9.8%) and parts of railway moving stock (7.3%).

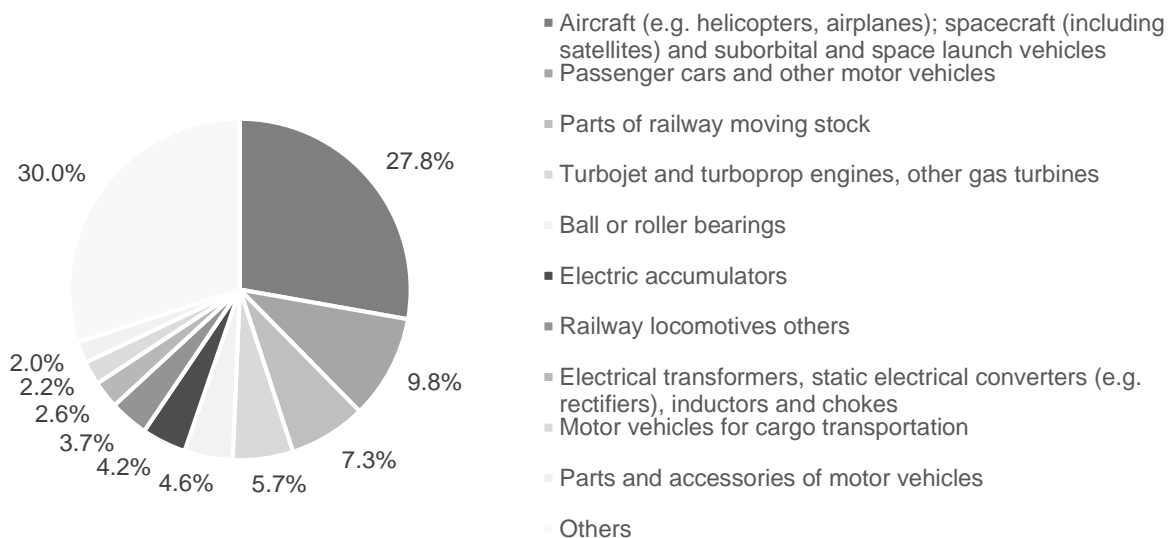


Figure 2-11. RoK Machine building industry Export structure in 2022, mln USD

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

While one quarter of import volumes were accounted for refrigerators, freezers and other equipment (10.3%), air or vacuum pumps, air or gas compressors and fans (7.5%) and telephone and other communication equipment (7.1%).

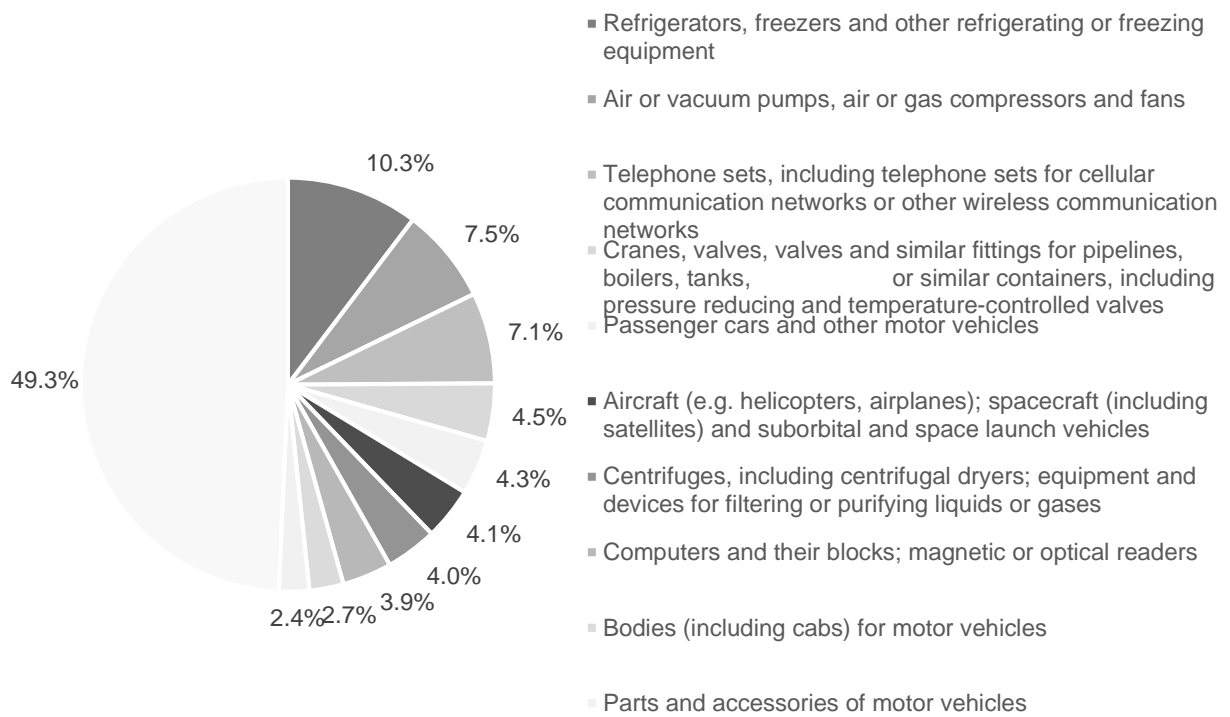


Figure 2-12. RoK Machine building industry Import structure in 2022, mln USD

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

Same as the share of output in overall country economy, share of machine building industry in volumes of foreign direct investment (FDI) is significantly low and during the last decade were around 1% of total FDI inflows. Sharp increase of the industry's share in total FDI in 2015 was mainly due to the devaluation of the national currency.

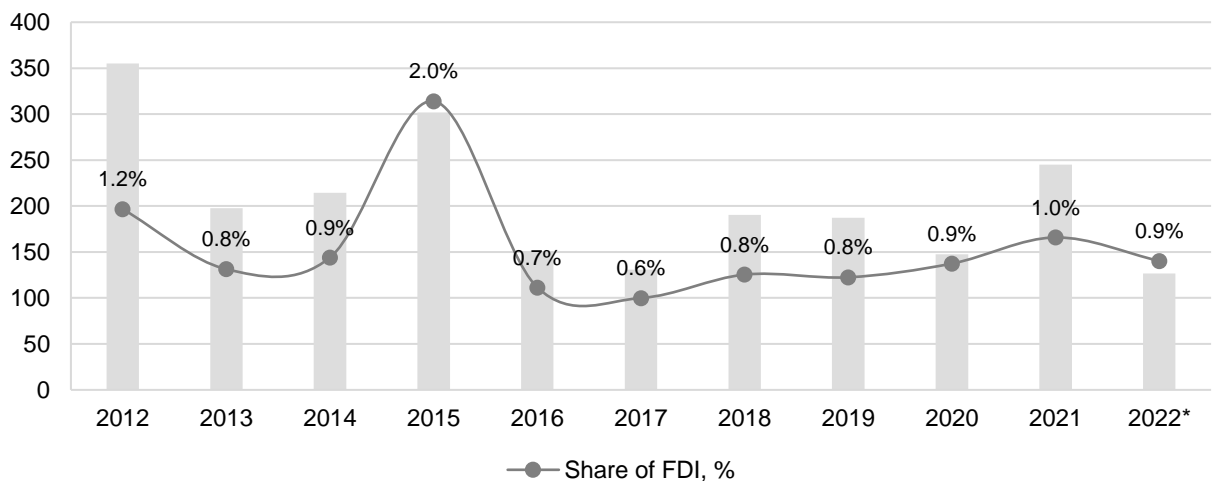


Figure 2-13. RoK Machine building industry FDI, mln USD

Source: Bureau of National Statistics (BNS) ASPIRE RoK

Note: 6 months of 2022

RoK machine building industry has a high growth potential in the following 10 years. The industry's multiplier to GDP is 1.44 (every 1 USD output generated in the industry leads to 1.44 USD input to GDP) that indicates high inter-relation with other economy sectors. Increased joint efforts towards sustainable development of all industry stakeholders such as operators of large oil and

gas projects, machine building manufacturers, responsible government bodies, agencies and relevant authorities may accelerate the industry growth rate from 2 to 2.5 times. Consequently, higher industry output growth rates may lead to economic effect from 15 to 25 bln USD during the next decade.

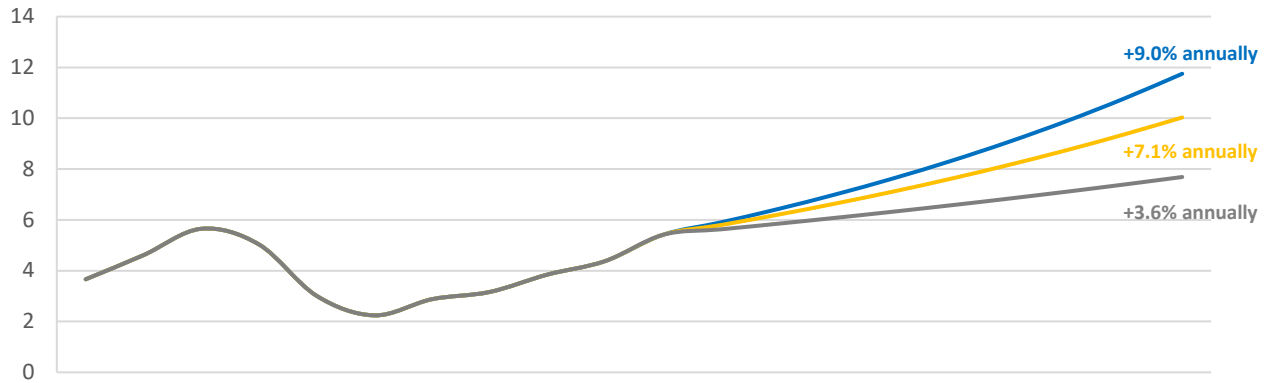


Figure 2-14. RoK Machine building industry output (with scenario forecast), bln USD

Source: IMBC

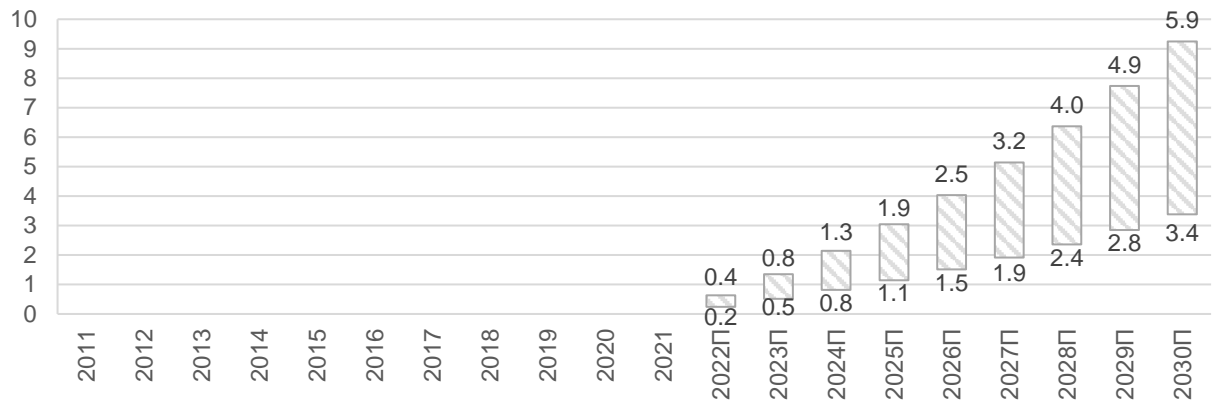


Figure 2-15. Effect* to RoK GDP, bln USD

Source: IMBC

*difference between selected scenario GDP forecast and inertial scenario GDP as per preceding graph

2.3. Oil & Gas Machine building

2.3.1. RoK Oil & Gas Machine building industry outlook

Oil & gas machine building is a part of machinery industry that produces technological equipment, as well as special complete technological lines and installations for the oil & gas industries (oil & gas complex), chemical and petrochemical industries.

Oil & gas machine building may be considered as one of the key parts of the RoK machine building sector due to the presence of large oil & gas fields in the country. The main reason for the prospects of the oil & gas machine building sector is the latent demand for oil & gas machine building products, which may be attributed to the expansion of large oil fields such as Tengiz, Karachaganak and Kashagan.

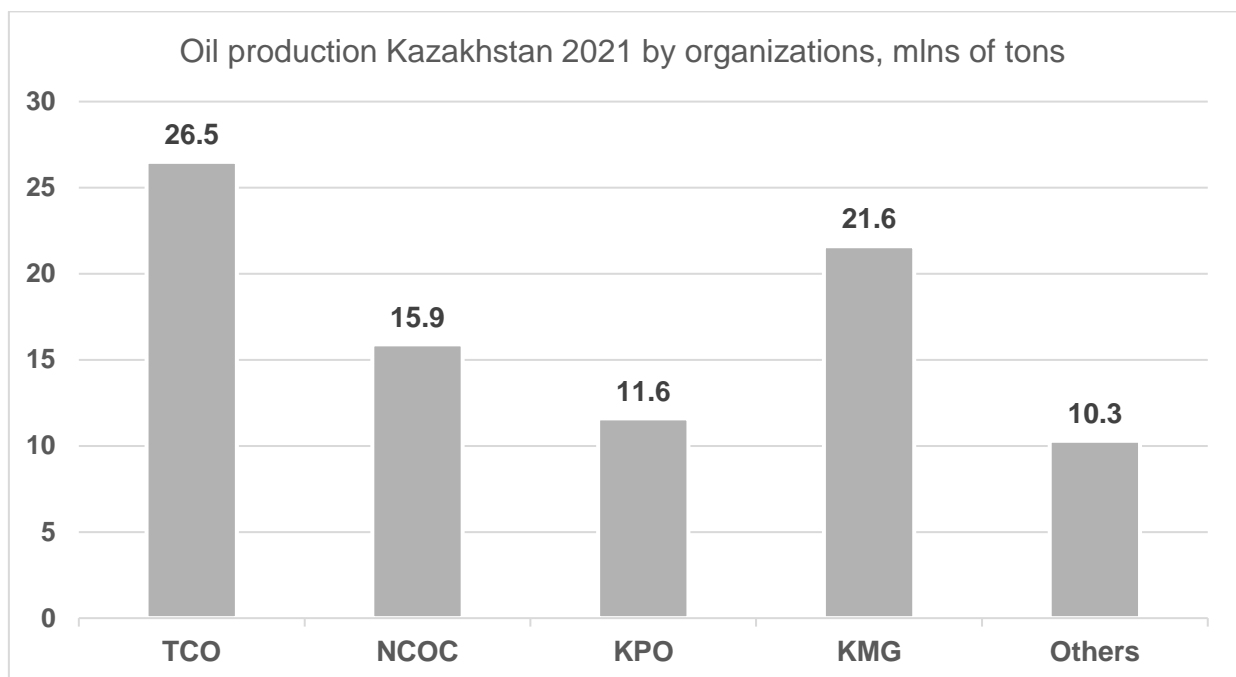


Figure 2-16. Kazakhstan's oil production in 2021, mln of tons

Source: *MoE RoK & KMG*

By the end of 2021, the share of the volume of oil production by TCO, NCOC and KPO projects together accounted for more than 63% of total oil production in RoK and more than 80% of the volume of gas respectively.

The integrated Future Growth Project (FGP) will keep the existing Tengiz plants full by lowering the flowing pressure at the wellhead and then boosting the pressure to the inlet requirements of the six existing processing trains. FGP is worth 45.2 BUSD and is being implemented at the Tengiz field, which will increase oil production by 12 mln tons per year. The project is expected to be completed in 2023 (*Source: Chevron*).

Karachaganak Expansion Project Phase 1A has also been kicked off. The project is aimed at further maintaining the level of production of liquid hydrocarbons in the range of 10-11 mln tons per year, considering the introduction of an additional 5th gas reinjection compressor.

In 2021, a design capacity was launched for the Kashagan expansion project, that consider: 800 mln cubic meters/year of commercial gas, as well as with the aim of creating new jobs (for the period of construction for 2,800 people, for the period of operation 600 people).

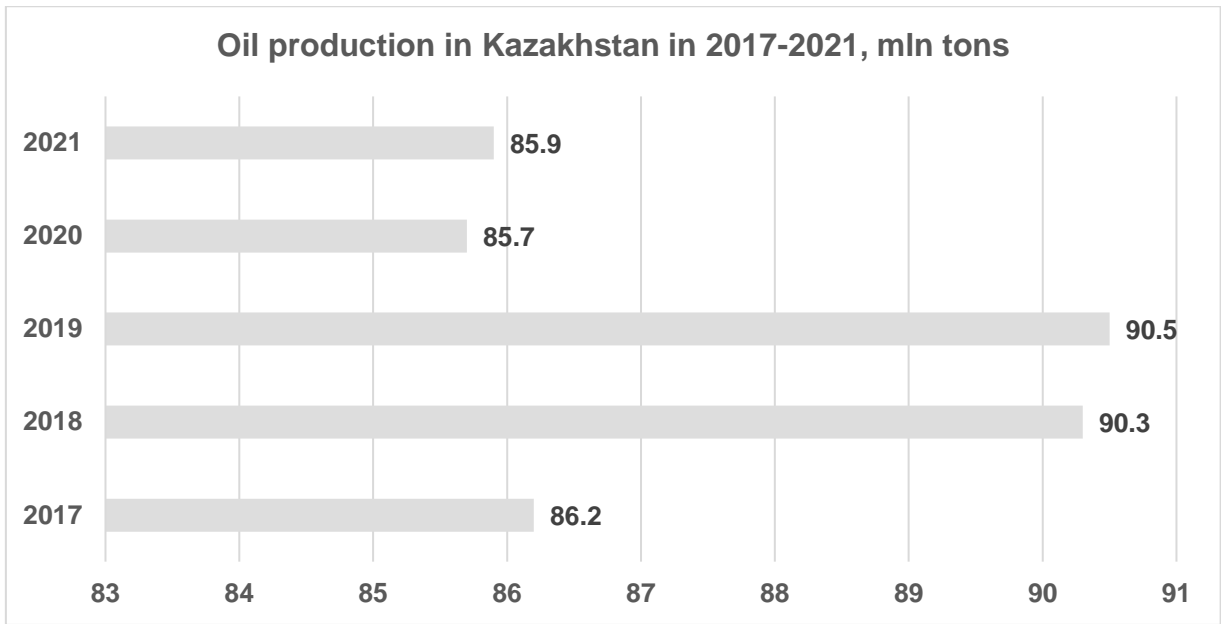


Figure 2-17. Oil production in Kazakhstan, mlns of tons

Source: MoE RoK

The main driver of the oil & gas machine building market is the increase in oil & gas production in the country. In 2021, the volume of oil production amounted to 85.9 mln tons. In the period from 2017 to 2021, this indicator decreased with an average annual rate of decline of 0.1%. However, according to forecasts, by 2030 the level of oil production will increase to 104 mln tons, with a CAGR of 2.1%.

Favorable forecast of oil production in Kazakhstan for the long term correlates with global trends, according to the forecast until 2025, oil consumption as the main energy resource in the transport sector will not fall below 90% of the total share of consumption.

Due to the growing volumes of oil and natural gas production in the country and the undergoing and planned expansion of the largest oil and gas fields in the country, the demand for the oil & gas machine building goods is expected to increase respectively.

2.3.2. Oil & Gas industry procurement

In 2021, TCO, KPO and NCOC accounted for 77% of all procurement of Goods, Works and Services (GWS) by the RoK oil & gas industry. The amount of procurement by the RoK oil & gas industry has decreased in 2021 compared to 2020 from 5.3 to 4.6 tln KZT respectively. (Source: *Energy Monitor, 2022*).

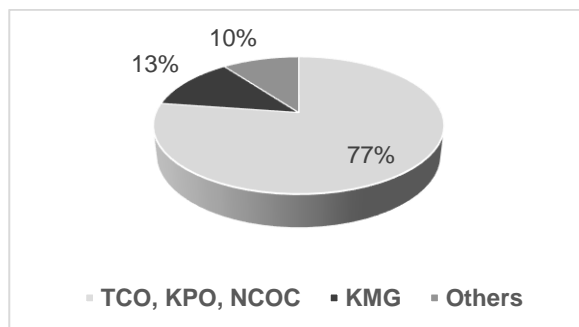


Figure 2-18. Total procurement in Oil & Gas in 2021

Source: *Energy Monitor*

Name	Goods	Works & Services
TCO, KPO, NCOC	9%	61.5%
KMG Group	53%	90%
Private companies	27.3%	83.4%

Table 2-19. ICV in the procurement of GWS

Source: *Energy Monitor, 2022*

The volume of purchases of oil and gas machine building products in the oil & gas industry by the end of 2021 amounted to 1.2 BUSD, which is 37% lower than in 2020, 1.9 BUSD respectively.

By the end of 2021, the volume of import purchases in the oil & gas machine building market in the RoK amounted to 857.5 MUSD, while the indicator of Kazakhstan local manufacturers reached 330.2 MUSD with a share of LC of 21.2% (251.9 MUSD).

Top 10 consumers of goods

#	Name	Amount, MUSD	% of goods In purchases	Share in %	Local Content, %
1	TCO	495.7	7.7	41.8	7.8
2	KPO	150.0	18.3	12.6	8.6
3	CNPC Aktobemunaigaz	83.1	27.2	7.0	18.3
4	NCOC	81.2	8.3	6.8	17.9
5	Mangystaumunaigaz	69.7	12.2	5.9	53.3
6	Ozenmunaigaz	61.7	15.8	5.2	54.6
7	Embamunaigaz	31.2	18.2	2.6	68.1
8	Total E & P Dunga	15.5	19.2	1.3	2.4
9	SP Kazgermunai	15.3	25.7	1.3	59.3
10	Torgai-Petroleum	13.7	37.7	1.1	29.0
	Other	170.9	-	14.4	-
	Total	1,187.2	11.2	100	21.0

Table 2-20. Top 10 Consumers

Source: *Energy Monitor*

At the end of 2021, the oil & gas machine building market made purchases of goods worth over 1.2 BUSD, which is 37% lower than in 2020 (1.9 BUSD). The first 7 enterprises listed in the table above were present in the top ten largest customers by the end of 2020.

The procurement leader, TCO, reduced the amount of purchases compared to the value 2020 by more than 2 times (from 1.1 BUSD to 496 MUSD). KPO also significantly reduced the amount of purchases: from 278 MUSD to 150 MUSD.

The cumulative volume of reduction in purchases of goods from other 6 players who were among the 10 largest customers in the last 2 years amounted to 16% (477 MUSD in 2021 against 568 MUSD in 2020).

2.3.3. Import and export of Oil & Gas machine building goods

One of the main indicators used to analyze and forecast economic processes in Kazakhstan is the index of actual volume of industrial production (VI).

A volume index is most presented as a weighted average of the proportionate changes in the quantities of a specified set of goods or services between two periods of time; volume indices may also compare the relative levels of activity in different countries (OECD 2022).

Over the last 5 years the RoK VI has displayed volatile trends and reached 112% in 2021 indicating a slight decrease in industry activity.

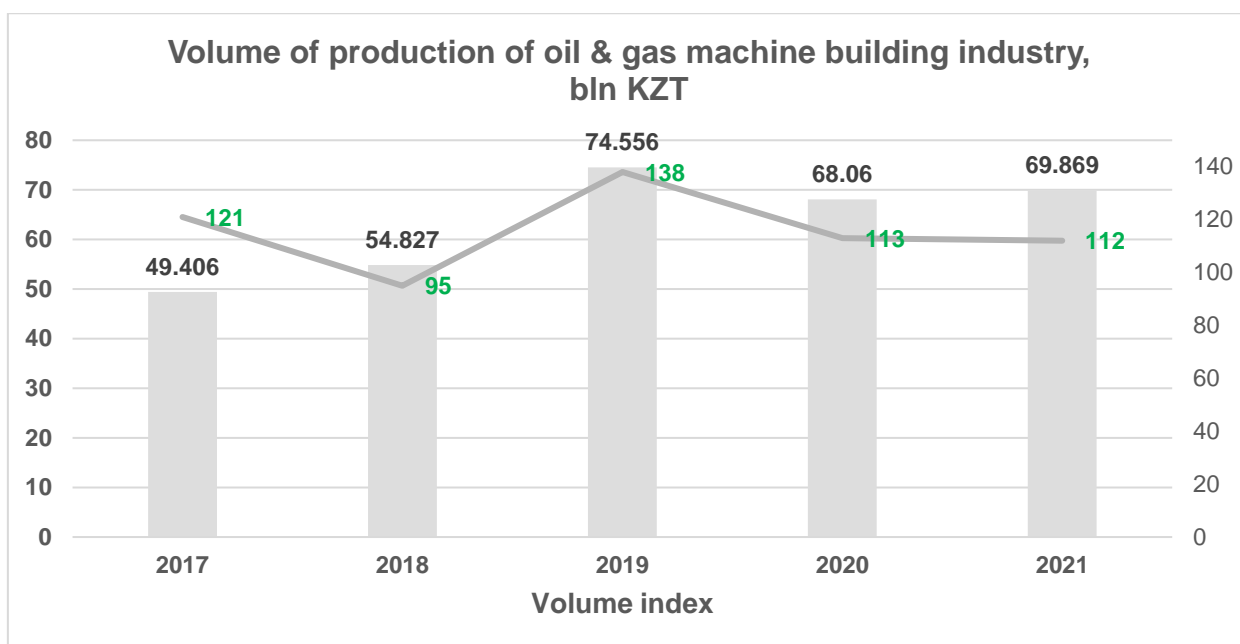


Figure 2-19. Volume of production of oil & gas machine building industry, bln KZT

Source: AKMI

The Program for the Development of In-Country Value and export-oriented manufacturing approved by the Decree of the Government of the RoK dated June 30, 2022 No. 452, states that oil & gas machine building industry needs to attract investments for the implementation of niche projects for the manufacturing of pumps, valves for pipelines, vessels, filtration equipment in oil & gas machine building.

Imports & Export of oil & gas machine building goods

Imports of oil & gas machine building goods in 2021 amounted to 1.6 BUSD. In accordance with the analysis of the Program for the Development of In-Country Value and export-oriented manufacturing, the share of oil & gas machine building in the total volume of the machine-building industry of RoK equals 3% (68.5 bln KZT), local manufacturing covers only 9.4% of the local market demand.

Exports of oil & gas machine building goods in 2021 amounted to 74.5 MUSD. The main exported goods are valves, fittings for pipelines and tanks; other machines; pumps and compressors; fuel pumps, oil pumps; equipment for filtering oil or fuel in an internal combustion engine. At the same time, export of oil & gas machine building goods for 6 months of this year amounted to 40.8 MUSD and 31.6 MUSD for the same period last year, respectively.

2.3.4. Overview of manufacturers in the field of oil & gas machine building

The table below summarizes the top 20 companies importing goods for further supply to the needs of the RoK oil & gas industry in 2021.

#	Supplier-importer	Main products	Amount in bln KZT
1	KISCO	Reinforcement products (armature)	15.5
2	Aktobe Neftemash LLP	Pipes, drilling equipment	15.3
3	Sumitomo Corporation of America	Pipes	11.9
4	NUOVO PIGNONE SRL	Compressors	10.2
5	SIEMENS AG	Compressors	8.8
6	Schneider Electric	Electrical equipment	8.7
7	FAI Officine Di Carvico Spa	Pipes, heat exchangers	8.5
8	Thomas Kurze GMBH	Metal products	6.7

9	PERAR SPA	Valves	6.2
10	MRC	Reinforcement products	5.9
11	Petrolvalves SpA	Valves	5.4
12	Norsec Delta Projects LLP	IT	4.9
13	Cameron	Downhole equipment	4.8
14	Schlumberger Reservoir Products	Chemistry	4.4
15	MAGNETRON LLP	Electrical equipment	3.7
16	Emerson Process Management Ltd	Measuring instruments	3.6
17	MAN ENERGY SOLUTIONS SE	Electrical equipment	3.5
18	AKSAIGASSERVICE JSC	Chemistry	3.2
19	Hi Air Korea Co, LTD	Ventilation	3.1
20	Intekno SG LLP	Chemistry	3.1

Table 2-3. Top 20 exporters of oil & gas machine building

Source: *Energy monitor 2022*

The total volume of sales by the 10 largest suppliers of oil & gas machine building products with CT-KZ certificates confirming that the country of origin of the goods is Kazakhstan decreased by 39% in 2021 compared to 2020 (303 MUSD).

#	Manufacturer	Production	Amount, bln KZT	Total share (%)
1	Kaskor-Mashzavod JSC	Pipes	7.8	6.5
2	KCOI LLP	Metal structures	7.3	5.6
3	KSP Steel LLP	Pipes	5.8	3.1
4	Aktobe Oil Equipment Plant	Pipes	4.9	3.0
5	PSI ENERGY & CONTROL LLP	Electrical equipment	3.7	2.3
6	Euro Power Invest LLP	Pumps	2.9	1.9
7	Almaty Heavy Machinery Plant	Downhole equipment	2.5	1.5
8	Munaymash JSC	Pumps	2.4	1.4
9	Proizvodstvenna firma Electroservice LLP	Electrical equipment	2.3	1.4
10	LCI-MK LLP	Reinforced concrete products	1.2	1.0

Table 2-4. Top 10 suppliers with CT-KZ certificate

Source: *Energy Monitor 2022*

2.3.5. Human capital in the oil & gas machine building sector

Human capital consists of the knowledge, skills, and health that people invest in and accumulate throughout their lives, enabling them to realize their potential as productive members of society.

The actual number of personnel in the production of machinery and equipment not included in other groupings for the second quarter of 2022 – 15.3 thousand people which is 5.3% in a share of the total number of workers in the manufacturing industry.

Sector	2Q 2018	2Q 2019	2Q 2020	2Q 2021	2Q 2022
Industry	622,7	625,9	604,8	606,7	610,8
Manufacturing industry	284,6	291,1	278,7	282,3	286,2
Oil & Gas machine building	13,4	14,2	14,3	14,2	15,3

Table 2-5. The actual number of workers in the manufacturing industry by occupation
 Source: Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

Average monthly nominal wages of workers in the production of machinery and equipment not included in other groupings in the Republic of Kazakhstan.

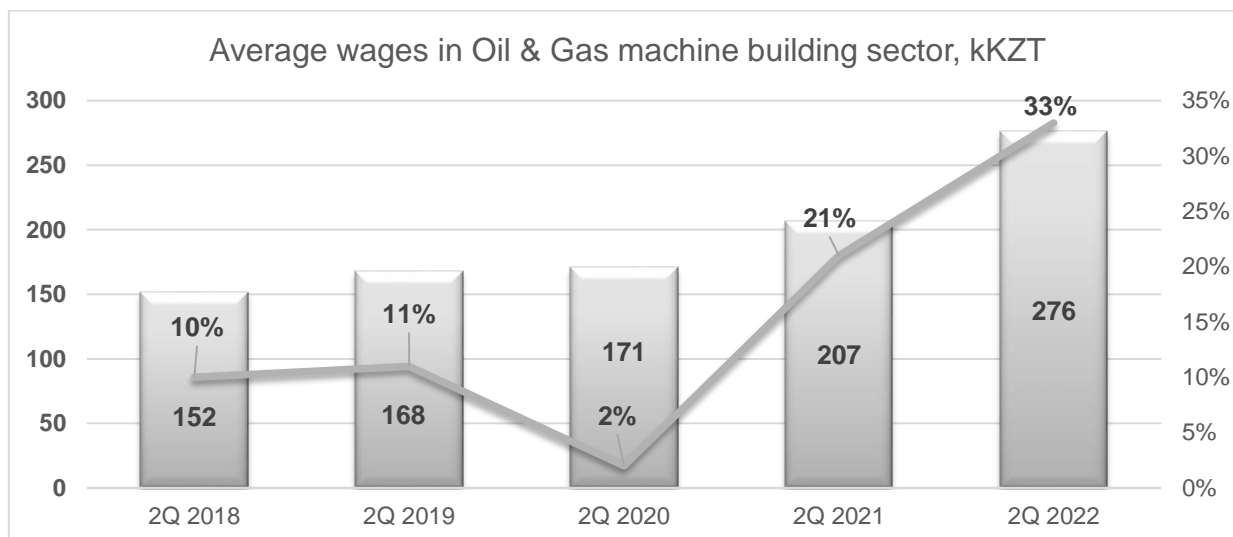


Figure 2-20. Average wages in Oil and Gas machine building sector
 Source: Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

The average annual growth rate of the number of manufacturing workers for the period of 2Q 2018 and 2Q 2022 amounted to 0.1%, and for workers in the production of machinery and equipment not included in other groupings, the CAGR for the same period also amounted to 0.1%. As of the 2Q 2022, the average nominal salary of manufacturing workers amounted to 327 kKZT, which is 27% more than in the same period of 2021. The average nominal salary of workers in the production of machinery and equipment, not included in other groupings, it reached 276 kKZT in 2Q 2022.

2.3.6. World experience in supporting manufacturers

According to the Program's analysis, there is no open import substitution policy in foreign countries, but a "latent" mechanism of domestic market protectionism is used through a policy of stimulating national industry by expanding ways to guarantee the sale of products produced in the country.

The main instruments of such a policy are tax incentives, public procurement, customs and tariff regulation, state subsidies and standardization.

The tools are used to achieve different goals depending on the circumstances.

For example, in segments with a low share of imports, tax incentives or subsidies can be applied both to increase the volume of local production and the subsequent entry of companies into export markets, and to modernize enterprises in order to maintain the level of competitiveness. In import-dependent sectors, the same mechanism will allow not to support, but to increase the competitiveness of enterprises.

Within the framework of tax incentives, the use of accelerated depreciation of high-tech equipment and the provision of tax holidays for income and property taxes for new industrial enterprises are considered promising types of tax incentives.

Public procurement, as reflected by world experience, can act as an effective instrument of import

substitution policy. Given that the public procurement market in many countries' accounts for a significant part of GDP, the ability of local companies to access government orders on priority terms provides domestic producers with long-term contracts.

In accordance with US law (the "Buy American Act"), any supply of foreign-made goods and services for government needs is limited.

In the countries of the European Union (hereinafter referred to as the EU), there is a single customs tariff, which is characterized by escalation – an increase in the rate of customs duty as the degree of processing of goods increases.

In the United States, the market for certain products is regulated by associations, for example, the National Fire Protection Association develops standards designed to minimize the risk and consequences of fire, setting criteria for the construction, design, maintenance and installation of equipment. Standards for a specific product can be developed by different associations and it is very difficult to determine their list without having experience.

In the EU, environmental regulations of the importing country have become serious non-tariff barriers. Non-compliance with the established requirements leads to the introduction of various quantitative restrictions (first of all, temporary import bans, termination of the license), restriction of checkpoints of goods across the customs border and a number of other measures.

At the same time, some import substitution programs (the Russian Federation and Belarus) are characterized by the fact that a product-project approach was applied from the standpoint of organizing the production of priority and critical types of products for the local market, primarily for industrial consumers.

In this regard, industry programs were additionally developed with such support measures as special investment contracts, an industry development fund, subsidiary support measures aimed at attracting private investment in industry, and an export support infrastructure was created (Program for the Development of In-Country Value and export-oriented manufacturing 2022).