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BUSINESS INDEX NORTH – BIN ARCTIC

OVERVIEW OF RUSSIA'S ARCTIC INVESTMENTS IN 2017-2022

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MAJOR FINDINGS

- Russia stands for 50-60% of all Arctic investments. The rest 40-50% is distributed among seven other Arctic nations.
- The largest Russian Arctic investments are placed in Yamal-Nenets focusing on natural gas extraction, production and transportation.
- Russian Arctic regions demonstrated varied investment activity, but total Arctic investments declined by 3,3% in average per year during 2017-2022
- Chukotka demonstrated remarkable investment growth. The region's investment index surged nearly fourfold by 2022 compared to the base year 2017.
- Extraction of natural resources remains the highest priority in the economy of the Russian Arctic. The share of investments in this sector in the Russian Arctic is close to 60% (16,8% for Russia as a whole).
- Plans for future Arctic investments in Russia are very ambitious including further development of the energy and transport infrastructure, extraction of natural resources, but also science and technology and sustainable socio-economic development.
- The future investment plans are accompanied by significant challenges such as geopolitical tensions, financial restraints and technological barriers, climate and environmental concerns, demographic shortages, and infrastructure challenges.

WHAT METHOD DID WE USE FOR THE CALCULATION?

We used Gross Fixed Capital Formation (GFCF) as indicator of investments. According to the Organisation for Economic Co-operation and Development (OECD), GFCF is defined as the acquisition of produced assets (including purchases of second-hand assets), including the production of such assets by producers for their own use, minus disposals. GFCF data were accessed via public online sources of Rosstat – Russia’s official statistics agency. For international comparisons we accessed GFCF data published by the official statistics agencies of all eight Arctic countries.

Development of GFCF in the Russian Arctic was analysed for period 2017-2022. To assess dynamics (change rate) of the investments we calculated index comparing values to the base year 2017 with assigned index value 100. The values were adjusted to

inflation. In doing so we applied deflators which were calculated based on the publications of Rosstat.

According to the [official definition](#), Arctic zone of the Russian Federation includes parts of Arkhangelsk Oblast, Republic of Karelia, Komi Republic, Krasnoyarsk Krai, Republic of Sakha Yakutia. The regions as Murmansk Oblast, Nenets Autonomous District, Yamal-Nenets Autonomous District, Chukotka are included in the Arctic Zone in their whole. In our analysis we focused on whole territories of all these regions, excepting Krasnoyarsk Krai where we focused only on its Northern district (hereafter referred as Krasnoyarsk North).

Economy of the Arctic Zone is approximately 75% of the economy of all the Arctic regions included in our analysis.

To compare investments across eight Arctic countries we converted the values to comparable US dollars in purchasing power parities (PPP) based on conversion rates provided by the World Bank. These evaluations were not inflation adjusted as we needed them only to visualize proportions of the investments across countries.

We used current prices and compared averages for 2017-2021 based on the available data.

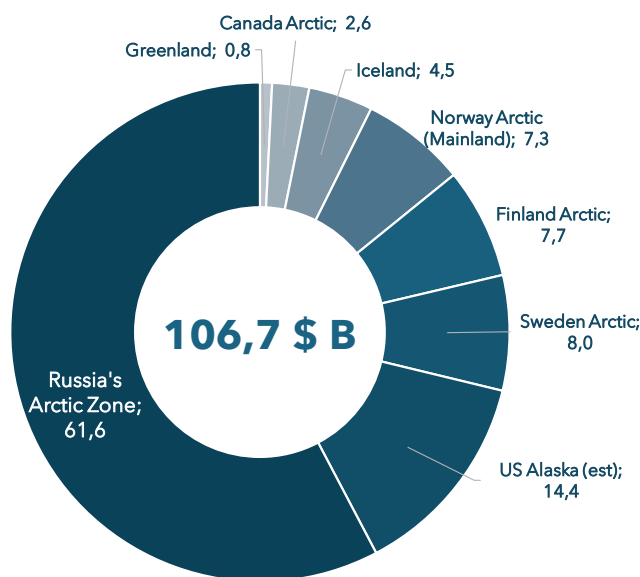
The following Arctic regions besides Russia were considered: Norway (Nordland, Troms and Finnmark), the United States (Alaska), Sweden (Norrbotten and Västerbotten), Finland (Kainuu, Lapland, and North Ostrobothnia), Canada (Northern Territories, Yukon, and Nunavut). Iceland and Greenland were included as whole countries.

RUSSIA STANDS FOR 50-60% OF ALL ARCTIC INVESTMENTS

The Arctic Zone of the Russian Federation (AZRF) is the northernmost part of the European and Asian parts of the Russian Federation, located along the shores of the seas in the Arctic Ocean: Barents, Kara, Laptev, East Siberian and Chukchi. It is Russia's most extended maritime boundary. This whole area is home to approximately 2,5 mill people, which is about 45%

of the total Arctic population across all eight Arctic countries. Russia's Arctic coastline accounts for approximately [53% of the total Arctic Ocean coastline](#). As it comes to investments, Russia stands for 50-60% of all Arctic investments. The rest 40-50% is distributed among the seven other Arctic nations.

Arctic investments, Bill USD per year
(average 2017-2021, USD PPP)



Most of the Russian Arctic investments are related to the development of natural resources and their transportation. A heavy reliance on natural resources such as oil and gas, minerals, seafood and fisheries is common for Arctic economies from an international perspective.

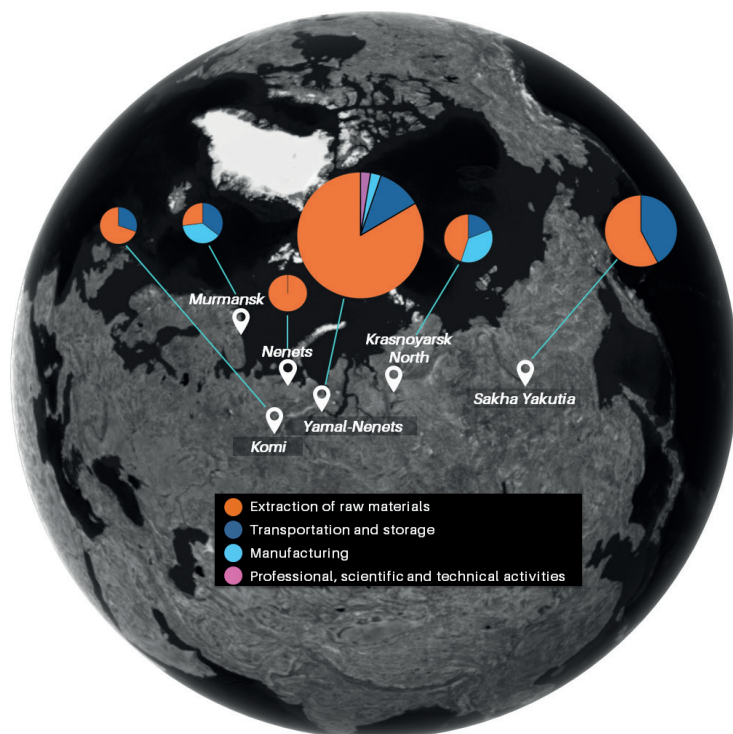
The figure shows average GFCF (investments) for 2017-2021 in Bill USD PPP (Current prices). The value for Arctic Norway (regions of Nordland, Troms and Finnmark) does not include investments in offshore oil and gas as they are registered in national accounts, not regional accounts. If taken into account, offshore oil and gas investments related to the Norwegian Arctic would add about 1,5 Bill USD PPP. The value for the United States (Alaska) is estimated based on strong correlations between the regional Gross Value Added (GVA) and the GFCF across Arctic regions and countries. State level data on GFCF in the United States are not available.

WHERE ARE THE LARGEST RUSSIAN ARCTIC INVESTMENTS?

The most investment-intensive segments of the Russian Arctic are resource extraction and transportation industries in Yamal-Nenets, Sakha Yakutia, Krasnoyarsk North, Komi, Nenets, and Murmansk. In addition, essential investments are made in the manufacturing sector in Murmansk,

Krasnoyarsk North, Yamal-Nenets. Yamal Nenets also receives substantial investments in the sector of Professional, scientific and technical activities. In total 68,4 billion USD PPP (representing 80% of all Russian Arctic investments) was invested in these regions and industries during per year in 2017-2022.

THE MOST INVESTMENT-INTENSIVE REGIONS AND INDUSTRIES IN THE RUSSIAN ARCTIC



The map shows six most investment-intensive spots where 80% of all Russian Arctic investments were concentrated during 2017-2022.

Invested values are represented by sector pie diagrams for each of the six regions. Space volumes are proportional to the amounts invested.

Total amount of investments represented on the map is 68,4 Bill USD PPP in average per year. Yamal-Nenets received 57,4% of this amount - 39,3 Bill USD PPP; Sakha Yakutia - 11,7 Bill, Krasnoyarsk North - 6,1 Bill, Murmansk Oblast - 4,9 Bill, Komi Republic - 3,3 Bill, and Nenets Autonomous Okrug - 3,1 Bill.

Oil and gas production is the foundation of the economy of Yamal-Nenets Autonomous Region. In addition to the conventional petroleum industry, one of the latest trends is the production, liquefaction and transportation of natural gas.

Largest investments in the Russian Arctic (2017-2022)

Region and industry	Investments, Bill USD PPP (average 2017-2022)	Share of Russian Arctic investments, %
Yamalo-Nenets Autonomous Okrug	39,3	45,5 %
Extraction of raw materials	32,8	38,0 %
Manufacturing	1,1	1,2 %
Transportation and storage	4,4	5,1 %
Professional, scientific and technical activities	1,0	1,2 %
Sakha Yakutia	11,7	13,5 %
Extraction of raw materials	6,7	7,8 %
Transportation and storage	4,9	5,7 %
Krasnoyarsk north	6,1	7,1 %
Extraction of raw materials	2,7	3,2 %
Manufacturing	2,2	2,5 %
Transportation and storage	1,2	1,3 %
Murmansk Oblast	4,9	5,7 %
Extraction of raw materials	1,3	1,5 %
Manufacturing	1,8	2,1 %
Transportation and storage	1,7	2,0 %
Komi Republic	3,3	3,9 %
Extraction of raw materials	2,3	2,7 %
Transportation and storage	1,0	1,2 %
Nenets Autonomous Okrug	3,1	3,6 %
Extraction of raw materials	3,1	3,6 %



Natural gas processing plant in Sabetta, Russia (Yamal LNG plant).
Photo: iStock [KadnikovValerij](#)

Yamal liquefied natural gas plant (Yamal LNG) is located in the North-Eastern part of the Yamal peninsula in the Yamalo-Nenets Autonomous District. Yamal LNG is an integrated project encompassing natural gas production, liquefaction and transportation. The project is based on the South-Tambeyskoye field discovered in 1974. Sabetta on the eastern coast of Yamal Peninsula is the home base for the project. The development of Yamal LNG infrastructure and the shipping of LNG have become key drivers for the Northern Sea Route.

NATIONWIDE INVESTMENT GROWTH WHILE DECLINE IN THE ARCTIC

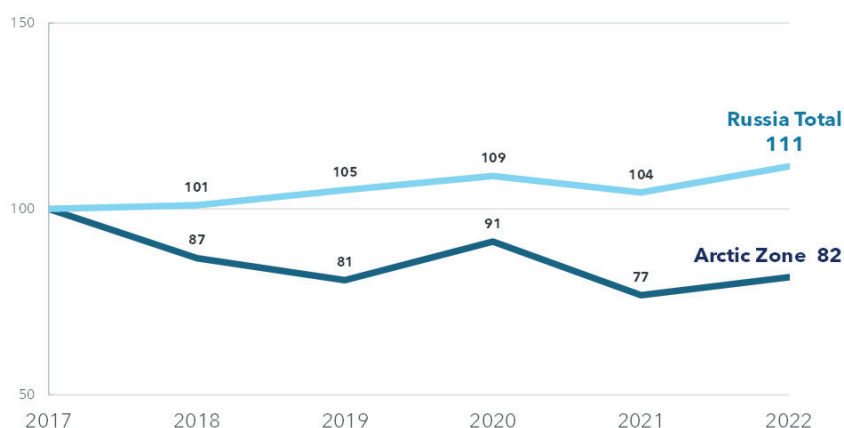
Looking within the Russian Arctic Zone, we observe a mosaic of investment stories among its regions. While relatively small economies of Chukotka and the Republic of Karelia have seen growth in investments, larger regions like Arkhangelsk Oblast, Yamalo-Nenets Autonomous Okrug and Skaha Yakutia have experienced more subdued progress or even decline. Petroleum based regions of Nenets and Komi have experienced the most significant decline in investments in the Russian Arctic. Less oil dependent regions of Murmansk, Krasnoyarsk-North maintained stable investments levels during 2017-2022 apparently due to the solid industrial sector, and the development of transportation infrastructure. For instance, the Murmansk region is known for its mining sector, particularly in nickel and platinum group metals ([Nornickel's Kola Division](#)). In Krasnoyarsk-North, key industrial activities include Nornickel's nickel production in Norilsk and the development of Vostok Oil project by Rosneft. The construction of the oil terminal is an

important facility of the new seaport "Sever Bay" to ensure the transshipment of oil for Vostok Oil project. Additionally, port activities in Dudinka play a significant role in supporting these industrial projects.

All in all, the total volume of Arctic investments declined by 18% when comparing 2022 with 2017 (in average - 3,3 % per year). Possible explanations of this are diminishing of foreign investments (due to sanctions) and nation-wide decline in investments in the Extraction industries during the period.

In contrast, investments for whole Russia grew by 11% during the same period, despite a general country-wide decline in investments in the extraction of natural resources. The main drivers for increased investments in Russia were Transportation and Storage, Manufacturing, Electricity and Energy, Information and Communication, Construction, and Public Administration and Defence.

**Decline in Arctic investments
Growth for Russia**



The figure compares development of investments in terms of index for 2017-2022. Index values for 2018-2022 are compared to the base year index 2017 = 100.

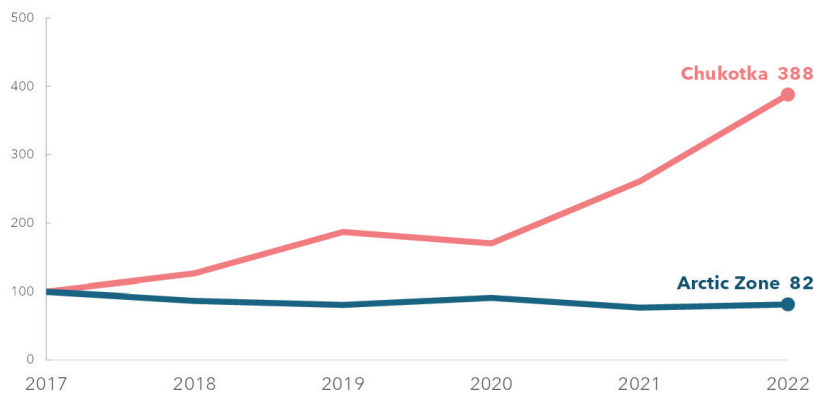
Calculations and graphics - Business Index North, based on data published by Rosstat.

CHUKOTKA DEMONSTRATED TREMENDOUS INVESTMENT GROWTH

During 2017-2022, Chukotka has transformed from a relatively quiet Arctic region into a bustling hub of investment and development. Chukotka is the easternmost region of the Russian Arctic, with a maritime border on the Bering Strait with the U.S. state

of Alaska. The region's investment index has surged nearly fourfold since 2017, reflecting a strategic push to unlock its vast potential and making Chukotka a focal point for Russia's economic and geopolitical ambitions in the Arctic.

Chukotka's tremendous investment growth



The figure compares development of investments in terms of index for 2017-2022. Index values for 2018-2022 are compared to the base year index 2017 = 100.

Calculations and graphics - Business Index North, based on data published by Rosstat

The sharp increase in investment in the Chukotka Autonomous Okrug since 2017 is associated with large projects within mining (gold and copper production), energy (floating nuclear thermal power plant in Pevek), and the Northern Sea Route infrastructure (new maritime terminal development).

Professional, scientific, and technical activities also saw substantial investments. Conversely, sectors such as administrative support, accommodation and food services, and other service activities received comparatively minimal investments, reflecting a strategic prioritization of resource extraction and infrastructure over other industries.



Anadyr, Russia - July 27, 2019: View of residential quarters and church of the city of Anadyr. Shooting from above drone. Photo: iStock [KadnikovValerij](#)

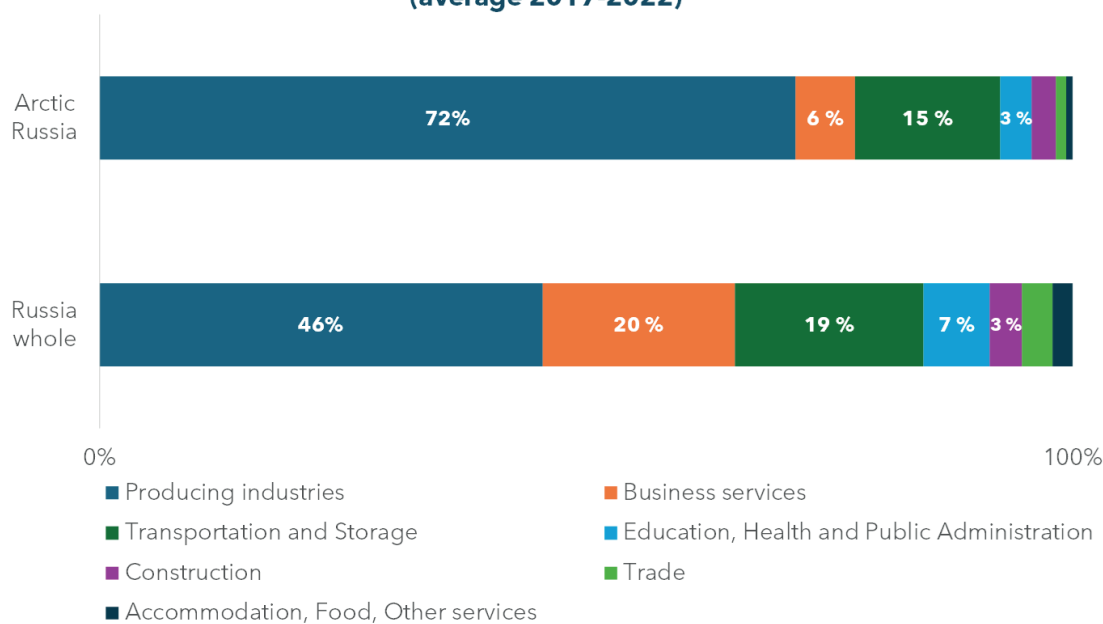
Anadyr is a port town and the administrative center of Chukotka Autonomous Region. This is Russia's Easternmost town. Most of its buildings are on stilts due to permafrost. According to Rosstat, population of Anadyr by January 2024 is 13 043.

CONTINUED DEPENDENCE ON ARCTIC NATURAL RESOURCES

The Arctic is an important resource base for the Russian economy, domestic consumption and manufacturing, and of course, exports. Investments in the Arctic Producing industries constitute 72% of total Arctic investments while the corresponding figure for the whole of Russia is 46%. Producing industries include Extraction of raw materials, Manufacturing, Agriculture, Forestry and Fisheries, Electricity, Water Supply and other sectors. Extraction of raw materials

accounts for 83,4% of investments in Producing sector and therefore 60% of total Arctic investments. For the whole of Russia, the extraction of raw materials is only 36,7% of investments in the Producing sector - 16,8% of total Russia's investments. Another 16,2% of Russia's total investments are directed to the manufacturing industry, while the corresponding figure for the Arctic is only 6,4%.

**Structure of investments in MAJOR SECTORS
(average 2017-2022)**



Investments in Business services (which is knowledge intensive, gender balanced sector with high added value) is just 6% of total investments in the Russian Arctic. For Russia this sector accounts for 20% of all investments. While overall Russia's investment activity

is diversified (with high shares of investments in manufacturing and knowledge intensive sectors), the Arctic economies continue to be heavily dependent on natural resources.

WHAT ARE THE PLANS FOR FUTURE RUSSIAN ARCTIC INVESTMENTS?

Russia's key investment priorities in the Arctic for the future include the development of infrastructure, the extraction of natural resources, environmental protection, and ensuring sustainable socio-economic development of the regions. These ambitious plans are accompanied by significant challenges such as geopolitical tensions, financial restraints and technological barriers, climate and environmental concerns, demographic shortages, and infrastructure challenges. One should also assume significant investments plans in the defence sector (this topic is not covered in the present article).

Transport and Energy Infrastructure Development

Further development of the Northern Sea Route (NSR) as a crucial transport artery is given a top priority. Key tasks include the construction and modernization of ports, the icebreaker fleet, and the creation of transport

and logistics hubs. Besides, an important focus is the development of gas and oil pipelines, as well as energy generation and distribution facilities to ensure reliable energy supply to Arctic regions. Key examples include [Vostok Oil](#) by Rosneft, with the project's resource base of 6.5 billion tons of premium low-sulphur oil.

Resource Extraction

Following the [Strategy for the Development of the Arctic Zone of the Russian Federation and Ensuring National Security until 2035](#), the Arctic shelf remains a priority region for the development of new oil and gas fields. Significant investments are expected in the exploration and production of hydrocarbons. It is important to ensure the country's technological independence, exploring and extracting mineral resources, rare-earth elements, and precious metals such as nickel, cobalt, and platinum.



Container vessel near Dudinka port. Photographer: Antonina Tsvetkova

Ecology and Sustainable Development

The Russian government has acknowledged the need to minimize the environmental impact of industrial activity in the Arctic, particularly in oil, gas, and mining sectors. According to the “Strategy for the Development of the Arctic Zone of the Russian Federation and National Security until 2035, projects are being directed to the monitoring and protection of the Arctic ecosystem, improving the quality of life of the indigenous people, and the development of social infrastructure (education, healthcare).

Science and Technology

Science and technology play a critical role in Russia’s Arctic strategy. Important and nontrivial task is the development of scientific research in the Arctic, including systematic risk analysis of Arctic development, climate studies, and the introduction of innovative

technologies for the development and protection of Arctic territories.

According to [R. Badilevich publication](#) Western companies are withdrawing their assets from joint Arctic projects. It has been established that the divestiture of Western investors from joint Arctic projects bears not only financial risks related to finding new sources of investment. It also runs technological risks to develop alternative options for receiving necessary equipment. To overcome the challenges of Western investors exiting from the Arctic projects, Russia could enhance direct state financing of infrastructure projects, as well as focus efforts on creating intergovernmental mechanisms for financing large Arctic projects with the partner countries.

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Will Russia manage to meet its ambitious Arctic objectives in the new geo-political reality? What are the future perspectives?

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AUTHORS: Andrey Mineev, Maria Kourkouli, Alina Kovalenko,
Sakib Jawhar, Liidia Yevmenchikova

LAYOUT: Iris Ørnhaug

Front cover photo: A view of Settlement Ugolnye Kopi and Anadyr airport, Chukotka, Russia. Shutterstock / Andrei Stepanov

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