



Arctic Prospecting: Measuring China's Arctic Economic Footprint

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Abstract

This report is part of a series of reports that CNA produced at the request of the Office of the Secretary of Defense to fulfill requirements outlined in the FY 2020 National Defense Authorization Act (NDAA, Sec. 1260E). The FY 2020 NDAA mandates that a federally funded research and development center “complete an independent study of Chinese foreign direct investment [FDI] in countries of the Arctic region, with a focus on the effects of such foreign direct investment on United States national security and near-peer competition in the Arctic region.” This paper quantifies Arctic FDI, including providing a survey of Arctic projects that are Chinese funded in critical industries such as public infrastructure; minerals, oil, and gas; shipping; and telecommunications. It documents the overall scope of People’s Republic of China (PRC) FDI and broader PRC economic activity in Arctic states and highlights the important distinction between FDI and economic activity for US and other Arctic policymakers.

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Executive Summary

This report is part of a series that CNA produced to fulfill requirements outlined in the fiscal year (FY) 2020 National Defense Authorization Act (NDAA), Sec. 1260E. The FY 2020 NDAA mandates that a federally funded research and development center “complete an independent study of Chinese foreign direct investment [FDI] in countries of the Arctic region, with a focus on the effects of such foreign direct investment on United States national security and near-peer competition in the Arctic region.”¹ The Department of Defense selected CNA to conduct this analysis, for which CNA produced four reports. In this report, we examine the nature and scope of PRC investors’ FDI in the Arctic contextualized by activity by investors in other states.²

Our analysis of economic activity in the Arctic by PRC-based actors assessed the issue from two perspectives:

1. FDI in the Arctic, with FDI strictly scoped
2. Broader large-scale economic activity with Arctic implications

Key Findings

Distinguishing between FDI and other forms of economic activity yields a novel finding in the study of economic activity in the Arctic originating in the PRC:

FDI in the Arctic from PRC-based sources appears to be an important but niche tool, whereas large-scale economic activities with Arctic implications and involvement by PRC-based firms are more substantial than investments.

This finding leads to several important conclusions. First, concerns about FDI from PRC-based entities are likely spurred in part by the accurate perception of broadly high overall PRC regional economic activity. Second, US and other Arctic policy-makers have a clear window within which to implement further rules or structures to mitigate risks of highly concentrated investments controlled by PRC-based entities. Third, policy-makers concerned with overall

¹ H.R.6395 - William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, (Jan. 1, 2021), <https://www.congress.gov/bill/116th-congress/house-bill/6395/text>.

² The three other CNA papers assess the regulatory environment for Arctic FDI, assess the strategic objectives of the PRC’s Arctic economic activity, and provide recommendations for US policy-makers. All reports for this project can be found at www.cna.org/ArcticFDI. The summary report and recommendations document by Joshua Tallis, Mark Rosen, and Cornell Overfield is *Arctic Economic Security: Recommendations for Safeguarding Arctic Nations against China’s Economic Statecraft*.

PRC economic activity in the Arctic face a much broader and more complex set of obstacles to implementing countervailing policy measures.

PRC FDI in the Arctic

FDI is qualitatively different from other forms of financial and economic activity. An FDI transaction implies the potential for clear, direct, and legal control over entities and resources. A PRC-based firm building a port, for example, is qualitatively different from a PRC-based firm owning that port. Both can imply certain types of potential coercive risks, but the mechanisms and legal remedies are distinct. As a result, the policy fixes for addressing FDI are often different from those regarding the management of other forms of financial activity.

Based on our Chinese Arctic Activity Tracker (CAAT), PRC FDI in the Arctic does not appear to be increasing overall. PRC FDI is likely on the rise in the Russian Arctic, although a steep decline in 2020 after an all-time peak in 2019 (perhaps related to COVID-19 and its effect on dealmaking or the oil market) complicates an understanding of the trend in Russia.

Broadly, investment counts and values in the Arctic are relatively static, apart from in Russia. Successful investment in the Canadian Arctic by PRC-based actors has been nonexistent since some investments in the early 2010s. In all other Arctic states, CNA's CAAT recorded few investment counts (zero to four per year); notably, no successful investments occurred in Alaska.

Currently, the CAAT does not register any pending investments in the Canadian Arctic from PRC-based investors. In Denmark/Greenland, Chinese National Petroleum and China National Offshore Oil Company were reportedly interested in bidding on fields the Greenlandic government was considering for foreign bidding. It is not clear when the Greenlandic government intends to open these blocks or whether PRC-based companies will still be interested. Meanwhile, Russia has several pending investments from PRC-based funders.

Two explanations likely account for the gap between observed PRC Arctic FDI and perceptions of China's investment stakes in the region.

First, some forms of economic activity that do not provide PRC-based firms with formal control over companies or assets may be misunderstood as investments. Although they are an important part of the economic landscape, contracts to provide services or build infrastructure have different effects than equity sales—the latter grant PRC-based investors direct control over local firms or infrastructure whereas the former do not. Policy-makers should take care to clarify whether they are concerned about overall economic activity or specific FDI-level control over select resources or assets.

Second, PRC-based investors and local firms often announce newsworthy, high-value deals that are ultimately either watered down or never consummated. This trend is the most notable in Russia, but examples of this pattern exist in every location examined.

PRC economic activity in the Arctic

Our CAAT dataset and our analysis of PRC Arctic strategy³ underscore that PRC non-FDI economic activity in the Arctic is an important political tool for PRC engagement in the region. An aggregate level of high economic activity, apart from strict FDI, can therefore pose meaningful concerns for Arctic states and their strategic autonomy. These concerns are valid even if much of that economic activity does not qualify as FDI or if some of that activity is Arctic-related but not specifically Arctic in geography.

One example of significant non-FDI economic activity is the Berelast Logistics Center 30 kilometers north of Moscow. The terminal is Russia's largest rail logistics station and serves as the rail connecting hub between Russia and China's "Belt and Road" network. It services seven lines and consists of distribution centers, warehousing, customs clearance, and distribution services.⁴ It was built jointly by a Russian company and Yingkou Port of Liaoning Port Group at a stated cost of \$238 million.⁵

Other prominent examples of PRC economic activity that are not strictly FDI are PRC-based firms' participation in telecommunications systems. These activities are rarely FDI but can pose real concerns about intelligence collection. In one example, Huawei partnered with Tele Greenland in 2016 to 2017 to lay a 100G network subsea cable in the Arctic⁶ to connect remote parts of the territory and upgrade existing telecommunication lines that link

³ Heidi Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*, CNA, 2021.

⁴ Seetao, "Berelast Logistics Center Realizes Normal Operation of China-Europe Express," Nov. 2, 2020, accessed July 19, 2021, <https://www.seetao.com/details/45280.html>.

⁵ Eng.rzd.ru (Full Russian Link could not be downloaded)

⁶ Huawei, "Huawei Marine Partners with Tele Greenland to Deploy 100G Submarine Network in the Arctic," Dec. 21, 2016, accessed July 19, 2021, <https://www.huawei.com/us/news/2016/12/huaweimarine-100g-submarine-network-arctic>.

Greenland with Canada and Iceland.⁷ PRC-based firms also supply 5G equipment to two of the three Iceland telecommunications companies (Syn and Nova).⁸

What are the long-term risks of rising PRC FDI in the Arctic?

Because FDI is a limited but important tool for PRC economic statecraft in the Arctic, policy-makers should ensure that existing frameworks limit risky FDI from PRC sources. PRC economic activity can produce risks for the US and other Arctic states in the following ways:

1. Political influence

Given low levels of corruption in all Arctic states bar Russia, FDI and other economic activities are unlikely to be the principal route to PRC political influence in Arctic states. Instead, bilateral diplomacy with small Arctic states will likely provide greater political influence for Beijing.

2. Military risks

As detailed in our companion report on PRC Arctic strategy,⁹ China's military is not active in the Arctic, but dual-use infrastructure and capabilities (including space communications ground sites and shipping infrastructure) are of particular concern for analysts as a springboard for PRC military activity.

3. Coercive or corrupt business practices

Although corruption is unlikely in most Arctic states, PRC-based firms may enjoy decisive advantages over US and local firms thanks to subsidies, scale, or direct diplomatic pressure from the PRC. Any resulting dominance could enable coercive behavior, whether to the advantage of PRC-based firms or the PRC state.

4. Exploiting vulnerable populations and economies

Many rural communities may find cheap capital from the PRC state or PRC-based firms attractive, particularly in the absence of local or Western alternatives. Our analysis of Arctic regulatory conditions (found in a companion report)¹⁰ did not

⁷ Paul Stronski and Nicole Ng, *Competition: Russia and China in Central Asia, the Russian Far East, and the Arctic*, Carnegie Endowment for International Peace, 2018, <https://carnegieendowment.org/2018/02/28/cooperation-and-competition-russia-and-china-in-central-asia-russian-far-east-and-arctic-pub-75673>.

⁸ Iceland Monitor, "Two Telecom Companies in Iceland Use Huawei Products," Oct. 22, 2020, accessed July 19, 2021, https://icelandmonitor.mbl.is/news/news/2020/10/22/two_telecom_companies_in_iceland_use_huawei_product/.

⁹ Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*.

¹⁰ Cornell Overfield et al., *Foreign Direct Investment Screening in the Arctic*, CNA, DRM-2021-U-030426, 2021.

find evidence that Indigenous or semiautonomous communities enjoy significant independence when it comes to regulations on FDI.

5. **Noncompliance with local environmental or labor laws**

A PRC-based company operating in the West is subject to the same local environmental and labor laws and regulations as any other company operating in that state. Moreover, the PRC government imposes regulations on PRC-based firms operating abroad to direct compliance with local labor and environmental regulations. Nevertheless, vigilance on environmental compliance is wise, given that a major industrial accident or ship casualty involving hazardous cargoes could have disastrous effects on the Arctic marine environment.¹¹

6. **Control over critical minerals**

PRC investment in the Arctic is of most immediate concern around access to critical resources, particularly rare earth elements. Advanced technology relies heavily on refined rare earth elements, and the PRC has used its dominance in this market as a tool in diplomatic contests.¹² The Arctic contains both rich rare earth element deposits and locations with bountiful energy necessary to make refining economically efficient.

Implications

The above findings yield two implications for US and Arctic policy-makers.

Arctic states can still prevent PRC-based entities from using direct investment to capture key Arctic industries. As CNA's companion report on legal frameworks for FDI screening points out, most Arctic polities have robust screening regulations (Greenland being the main exception).¹³ However, in some states, these rules or enforcement could benefit from reinforcement. The limited investment to date found by CNA means that Arctic policy-makers still have time to implement reforms.

Non-investment economic activity by PRC-based firms is substantial, is part of PRC economic statecraft, and involves different risks and countermeasures. CNA's research indicates that PRC-based entities are heavily involved in non-investment economic activity in

¹¹ Talal Husseini, "Oil Spills in The Ocean: Why the Arctic is Particularly Vulnerable," *Offshore Technology*, Aug. 14, 2018, accessed July 19, 2021, <https://www.offshore-technology.com/features/oil-spills-in-the-ocean-arctic/>.

¹² June Teufel Dreyer, "China's Monopoly on Rare Earth Elements—and Why We Should Care," *FPRI*, accessed July 19, 2021, <https://www.fpri.org/article/2020/10/chinas-monopoly-on-rare-earth-elements-and-why-we-should-care/>.

¹³ Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

the Arctic. Compared to direct investment, non-investment economic activity poses different risks and demands different solutions. Effectively tackling the challenge of PRC economic statecraft in the Arctic will require Arctic policy-makers to appreciate the difference between FDI and other economic activity, and hone policies to screen the latter as well as the former.

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1. Introduction

The fiscal year (FY) 2020 National Defense Authorization Act (NDAA), Sec. 1260E, requires that a federally funded research and development center “complete an independent study of Chinese foreign direct investment [FDI] in countries of the Arctic region, with a focus on the effects of such foreign direct investment on United States national security and near-peer competition in the Arctic region.”¹⁴ Given prior CNA work examining People’s Republic of China (PRC)-based investments around the world, including the 2017 report *Unconstrained Foreign Direct Investment: An Emerging Challenge to Arctic Security*, the Office of the Secretary of Defense asked CNA to execute the analysis described in the NDAA.¹⁵

In response, CNA produced four reports, each tackling a different question:

1. What is the nature and scope of current PRC FDI in the Arctic?
2. What are the legal conditions that govern FDI in the Arctic countries?¹⁶
3. How does PRC Arctic FDI relate to the PRC’s strategic regional objectives?¹⁷
4. How can the US mitigate negative implications of PRC Arctic FDI?¹⁸

1.1 Research statement

This research memorandum examines the first question, “What is the nature and scope of current FDI in the Arctic?” Specifically, Section 1260E of the FY 2020 NDAA calls for this study to identify projects in the Arctic directly and indirectly funded by PRC-based entities and compare that FDI with that from other countries, particularly India, Japan, South Korea, the

¹⁴ *National Defense Authorization Act for Fiscal Year 2020*, 2019. § 1260E(b)(2)

¹⁵ Mark Rosen and Cara Thuringer, *Unconstrained Foreign Direct Investment: An Emerging Challenge to Arctic Security*, CNA, COP-2017-U-015944-FINAL2, 2017.

¹⁶ Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

¹⁷ Heidi Holz et al., *Exploring the Relationship between China’s Investment in the Arctic and Its National Strategy*. All reports are available at www.cna.org/ArcticFDI.

¹⁸ Tallis et al., *Arctic Economic Security: Recommendations for Safeguarding Arctic Nations against China’s Economic Statecraft*.

Netherlands, and France.¹⁹ Readers can visit www.cna.org/ArcticFDI to access the other three reports.

CNA initially approached the current study with the hypothesis that PRC investment in the Arctic would be significant, particularly in sectors such as mining and infrastructure. Instead, CNA found an important distinction between actual PRC FDI in the Arctic, which remains quite limited, and other forms of economic statecraft practiced by the PRC in the region.

Two explanations likely account for the gap between observed PRC Arctic FDI and perceptions of China's investment stakes in the region.

First, some forms of economic activity that do not provide PRC-based firms with direct formal control over companies or assets may be misunderstood as FDI (which requires and entails control over decisions). Although they are an important part of the economic landscape, contracts to provide services or build infrastructure have different effects than equity sales—the latter grant PRC-based investors direct control over local firms or infrastructure whereas the former do not.

Second, PRC-based investors and local firms often announce newsworthy, high-value deals that are ultimately either watered down or never consummated. This trend is most notable in Russia, but examples of this pattern exist in every location examined.

Despite a notable degree of PRC economic activity in the Arctic, PRC-based firms have not yet captured critical industries or deep-rooted influence through investments. US policy-makers should regard this finding as positive because they still have time to implement safeguards against investments that threaten national security.

1.2 Methodology

The NDAA tasking is data intensive, requiring CNA to both conduct original research and draw upon existing datasets. In response to this tasking, the research team developed the Chinese Arctic Activity Tracker (CAAT) to understand inflows of PRC FDI into Arctic states, based on the following definitions.

¹⁹ William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Jan. 1, 2021.

1.2.1 Definitions

This paper hinges in part on several important definitional distinctions. One involves the Arctic as a geographic, political, and economic space. Another involves the difference between FDI and other forms of economic activity.

Arctic

For the purpose of this study, CNA's "narrow" focus on the Arctic captures all economic activity in Iceland, Norway, and Greenland (with context added from the larger Danish economy). We did not subdivide those countries for two reasons. First, subnational data was challenging to access at sufficient scale. Second, if we had limited our investigation to only areas north of 66.33 degrees north latitude, we would have excluded Iceland (as well as large parts of Alaska, northern Canada, and northern Russia). For the larger countries of the US, Russia, and Canada, subnational datasets were available, so we limited our analysis to areas north of 60 degrees north latitude. For the second portion of this paper, we slightly expand the definition of what makes a project "Arctic" in character, including projects south of 60 degrees north latitude that may directly relate to Arctic development (e.g., a port enabling northern sea route traffic).

Types of economic activity

Generally, international economic activity ranges on a spectrum from FDI to trade. In FDI, a foreign firm takes direct control of a value chain in another country. In trade, the foreign firm maintains distance and simply receives goods or services from host nation firms. In between trade and FDI are nonequity modes of production, which are ways that foreign firms may acquire control over local firms without taking equity stakes.

CNA took a strict approach that differentiates between FDI and other forms of international economic activity, including nonequity modes of production.

FDI

The United Nations Conference on Trade and Development (UNCTAD), which tracks global FDI, defines *FDI* as "an investment involving a long term relationship and reflecting a lasting interest and control" that allows the investor to "exert a significant degree of influence" on the target firm's management and can include equity capital and debt transactions.²⁰ (More on concepts of control and their legal interpretations in Arctic states can be found in the companion report on Arctic regulatory frameworks.)²¹ Based on this definition, CNA coded an

²⁰ *Methodological Note: World Investment Report, 2020, 2021*, https://unctad.org/system/files/official-document/wir2020chMethodNote_en.pdf.

²¹ Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

activity as FDI only when PRC-based investors took equity stakes in local firms, whether through capital injections, joint ventures, or debt.

Other economic activity

CNA defines *broader economic activity* in this paper as nonequity modes of production and development, significant trade, and PRC contracting for local firms and projects.

Nonequity modes of production are a mid-point between trade and investment where a foreign firm gains effective control over a nominally independent firm with contractual language or extreme bargaining leverage. UNCTAD formally defines *nonequity modes of production* as “when a [foreign firm] externalizes part of its operations to a host-country-based partner firm in which it has no ownership stake, while maintaining a level of control over the operation by contractually specifying the way it is to be conducted.”²² These modes of production represent the ways foreign interests can gain effective control over nominally independent firms without acquiring an equity stake. UNCTAD notes that these ways can include subcontracting, management contracts, turnkey arrangements, franchising, licensing, and product sharing.²³ Because these arrangements are not considered acts of FDI, CNA will combine nonequity modes of production with other forms of international activity, particularly contracting in which PRC-based firms perform services or deliver goods for local firms.

FDI poses different potential national security concerns than other forms of economic activity, such as construction or service contracts. First, different transaction types provide different levels of legal durability. FDI, as defined in this study, provides investors with an enduring role in the local economy as long as the investor does not divest. Other forms of economic activity, particularly bids to build but not own infrastructure or provide services, do not necessarily entrench PRC-based firms. When contracts end, the contracted PRC-based firm no longer has an assured role in the local economy. Second, the direction of control is different across transaction types. FDI, whether majority or minority stakes, provides some degree of influence over the local firm’s business decisions. At an extreme, foreign investors with a controlling stake can dictate behavior (each Arctic state maintains its own definition of what constitutes a controlling stake). Contracts, nonequity modes of production, and other major economic activities confer no such direct control, but they may provide leverage and influence. For these reasons, this paper has one section addressing FDI and another focused on broader economic activity.

²² *World Investment Report 2011, 2012, 127.*

²³ *Ibid.*

1.2.2 CAAT

The CNA CAAT built on previous data collected on PRC economic activity in the Arctic, including prior CNA datasets from our 2017 study on regional investment. CNA's CAAT is a composite of data from four sources:

- RWR Advisory Group's IntelTrack service, an analytic tool that tracks the global operations of PRC-based and Russian enterprises
- The American Enterprise Institute's China Global Investment Tracker, a public dataset covering the PRC's global investment and construction
- The Polar Institute at the Wilson Center's Arctic Infrastructure Inventory, which catalogs critical infrastructure in the Arctic
- CNA data, compiled through on-the-ground discussions with business leaders and from ongoing data gathering through English and native-language press reports

The data spanned from 2009 to 2021, giving us 10-plus years of information on PRC FDI and other economic activity in Arctic nations. Table 1 provides an example of the collected data. Because of a lack of public information on many transactions, CNA was not able to identify the value of some investments, so these are included in the dataset with empty value fields.

To categorize transactions by PRC-based firms and provide more context for each one, the dataset included additional field designations, including "Event type" and "Sector." Event type records whether the transaction was an investment as defined above or another kind of economic activity. Sectors include energy, mining, transportation, financial, agriculture, construction, space, tourism, telecommunication, and healthcare. The dataset also tracked the PRC-based entity for each transaction and whether it is a state-owned enterprise (SOE). To maximize accuracy and completeness, we also spoke with business leaders and Arctic state academics and analysts to gather details on unreported or underreported deals that. The data have some inherent gaps but provide reasonable insights into the conclusions provided in this report with greater quantitative accuracy than prior work on this subject.

Table 1. Sample CNA CAAT data

Country	Year	Value (USD, millions)	Chinese entity	Sector	Event type	State-owned enterprise
Canada	2009	1,500	China Investment Corporation	Mining	Investment	Yes
Canada	2009	1,740	China National Petroleum Corporation	Energy	Investment	Yes
Canada	2015	Unknown	Chengdu Spaceon Technology Company	Technology	Non-Investment	No

Source: CNA.

CNA's CAAT has a few important constraints that factor into our interpretation of the data.

- **Divestments.** The CAAT does not capture divestments. Thus, the dataset cannot describe PRC net FDI flows or stocks from year to year.
- **Yearly statistics.** The CAAT records activities for the year in which they were announced. When high-value investments are announced in one year but executed over several years, the tracker records that investment once in the first year, creating large spikes of investment in some years.
- **Arctic scale.** The CAAT records activities by PRC-based firms across Iceland, Denmark/ Greenland, and Norway but only in more specific areas of Russia, Canada,

and the United States. Activities are recorded this way partially because of data access issues and partially because of economies' varying sizes. The result is that comparisons across states should not be read as like cases in all instances.

1.2.3 Contextual data

To understand the relative scale of PRC FDI in the Arctic, CNA contextualized our PRC Arctic FDI data with data from external sources on total annual FDI flows and regional gross products.

For FDI flows, CNA used data from the Organization for Economic and Cooperative Development (OECD), which breaks down annual FDI positions by partner country and industry in US dollars for Canada, Denmark, Iceland, Norway, and the United States.²⁴ Change year on year in these values reflects the total amounts invested less the total amount divested in a given year. These values both illuminate shifts in foreign holdings over time and illustrate whether the investments CNA has identified were outweighed by divestments, which CNA did not track.

The OECD data have certain limitations. The statistics cannot establish specific amounts invested (or divested) from one state into another in any given year but rather can illuminate the scope of foreign investment positions. The data are not broken down on subnational regional levels. The data also do not include Russia because Russia is not an OECD member. The data exist in their most modern form dating back to only 2014, and some Arctic states (particularly Norway) have limited data. Finally, OECD data exclude certain categories of transactions (e.g., real estate). Despite these imperfections, the data are a useful comparison point for our analysis.

CNA also used gross domestic product (GDP) figures to contextualize PRC investments. CNA drew national GDP figures for Denmark/Greenland, Iceland, and Norway from the OECD. To contextualize investments in Canada and Russia, CNA compiled regional GDP figures from national statistical agencies. For Canada, we calculated the cumulative product of Nunavut, the Yukon, and the Northwest Territories. For Russia, we summed the gross regional products (GRPs) of all federal subjects with territory in the Arctic. Because some federal subjects, such as the Sakha Republic, include extensive land outside the Arctic, the resulting figures somewhat overstate the Russian Arctic's GRP.

²⁴ OECD, *FDI Statistics By Partner Country and By Industry - Summary*, May 19, 2021, https://stats.oecd.org/Index.aspx?DataSetCode=FDI_CTRY_IND_SUMM#.

1.2.4 Roadmap

The paper begins by considering overall PRC FDI in the geographic areas of interest. The second section examines sectoral trends in international FDI in the Arctic states. Next, we offer a broader look at PRC economic activity in and near the Arctic. This section provides an analysis of overall PRC economic interests across the Arctic region, deemphasizing the distinction between FDI and other kinds of transactions. The final analytic section considers trends of the past two years, including the implications of COVID-19. The paper concludes with the implications of PRC FDI, focusing on the long-term potential risks that a rise in PRC regional FDI could produce. The appendixes provide additional information about PRC Arctic economic activity, details on the unique features of PRC SOEs, case studies of prominent PRC-based firms active in the Arctic region, and added details on the economic activities of other non-Arctic states in the region.

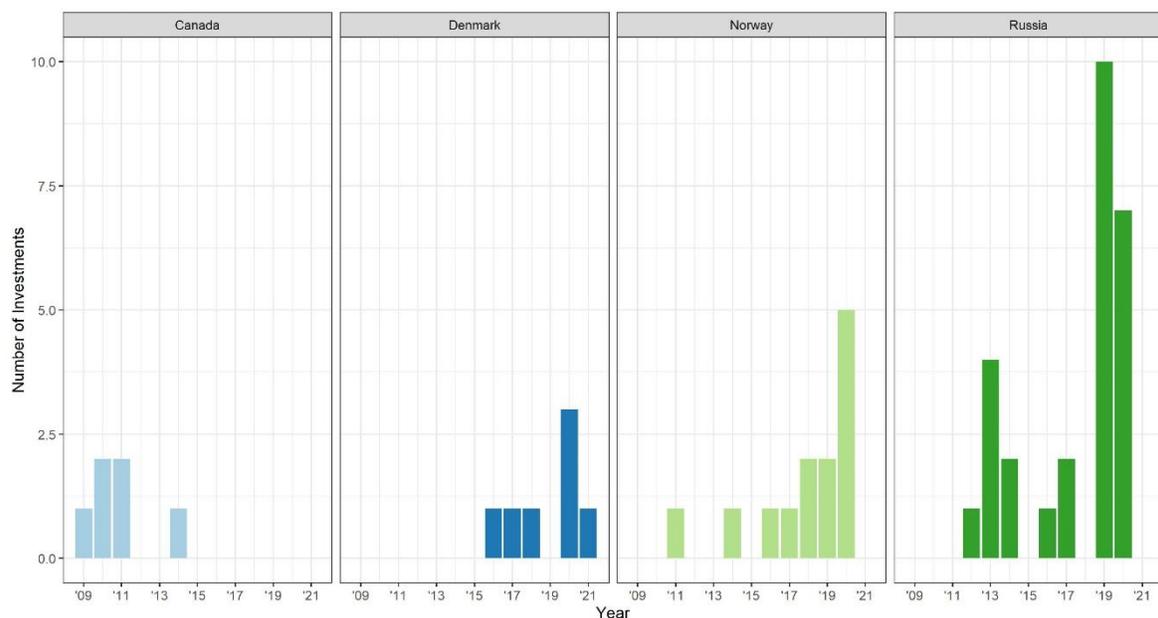
2. PRC Arctic FDI by Country

Across every country, we found limited instances of FDI, both in absolute terms and relative to the size of the local economies. The instances we did identify were often concentrated in industries that present concerns to US and Arctic nation policy-makers, including energy, mining, and critical infrastructure.

2.1 Overview

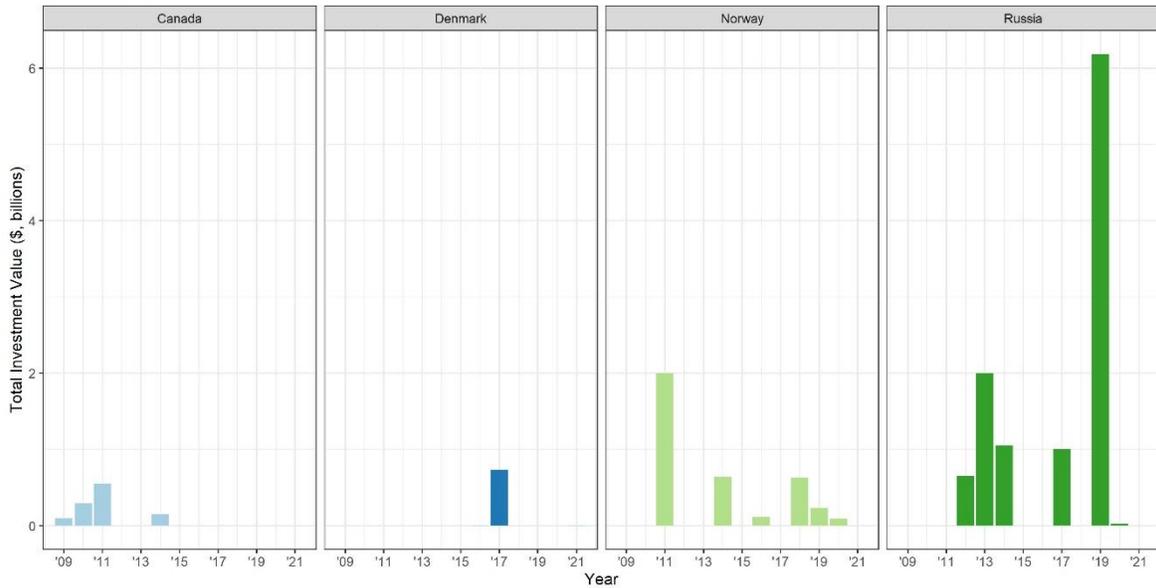
CNA's CAAT records 28 instances of FDI, including instances of foreign equity investment, mergers and acquisitions, and subsidiary formation, between 2011 and 2020. Figure 1 illustrates the count of PRC investments in Denmark/Greenland, Iceland, Norway, and parts of Canada, Russia, and the United States, whereas Figure 2 illustrates the value of identified investments when transaction values are known.

Figure 1. Count of PRC FDI in Denmark, Norway, the Canadian Arctic, and the Russian Arctic, 2011–2020



Source: CNA CAAT.

Figure 2. Value of PRC FDI in Denmark, Norway, the Canadian Arctic, and the Russian Arctic, 2011–2020



Source: CNA CAAT.

PRC FDI (strictly defined) in the Arctic does not appear to be increasing overall. PRC direct investment is likely on the rise in the Russian Arctic, although a steep decline in 2020 (perhaps related to COVID-19 and its effect on dealmaking or the oil market) after an all-time peak in 2019 complicates an understanding of the trend’s direction. Broadly, investment counts and values in the Arctic are relatively static, apart from in Russia. PRC investment in the Canadian Arctic has been nonexistent since a few investments in the early 2010s. In all other Arctic states, the CAAT records few investment counts (zero to four per year) and low dollar values.

2.2 United States (Alaska)

PRC FDI is not a concern in the US Arctic. CNA found no instances of completed PRC investment in Alaska. Two deals announced in 2017 and 2018 would have given PRC-backed state-owned

firms roles in Alaska gas development, but no PRC-based firms ultimately participated in the proposed projects.²⁵

2.3 Iceland

China's actual investment activity in Iceland is much like the PRC's 500-person embassy in Reykjavik—much discussed but not yet substantial. PRC acquisitions and investments are practically nonexistent in every year of the past decade. CAAT records no completed PRC investments in Icelandic firms over the past decade, although a PRC-based firm did acquire an Icelandic aluminum smelting facility through its takeover of a Norwegian firm.²⁶ Iceland's high environmental standards play some role in this absence. China's state-owned offshore oil firm proposed investment in Icelandic offshore oil in 2014 but withdrew because of Iceland's high environmental and safety standards.²⁷

OECD data on net FDI positions in Iceland for select countries, visualized in Figure 3, confirms this lack of activity. The PRC's FDI position in Iceland has essentially been static since at least 2013. Because the CAAT records PRC investment in all of Iceland, OECD FDI position data are particularly informative. Every year between 2013 and 2019, China's net FDI inflow (the difference between investments and divestments) in Iceland was effectively zero, in contrast to its significant investments and divestments in countries like the United States and the Netherlands over the same period.²⁸ Furthermore, China's net FDI position in Iceland is roughly level with that of the Netherlands, 12 times smaller than the US FDI position, and 8 times smaller than the United Kingdom's (UK's) position.

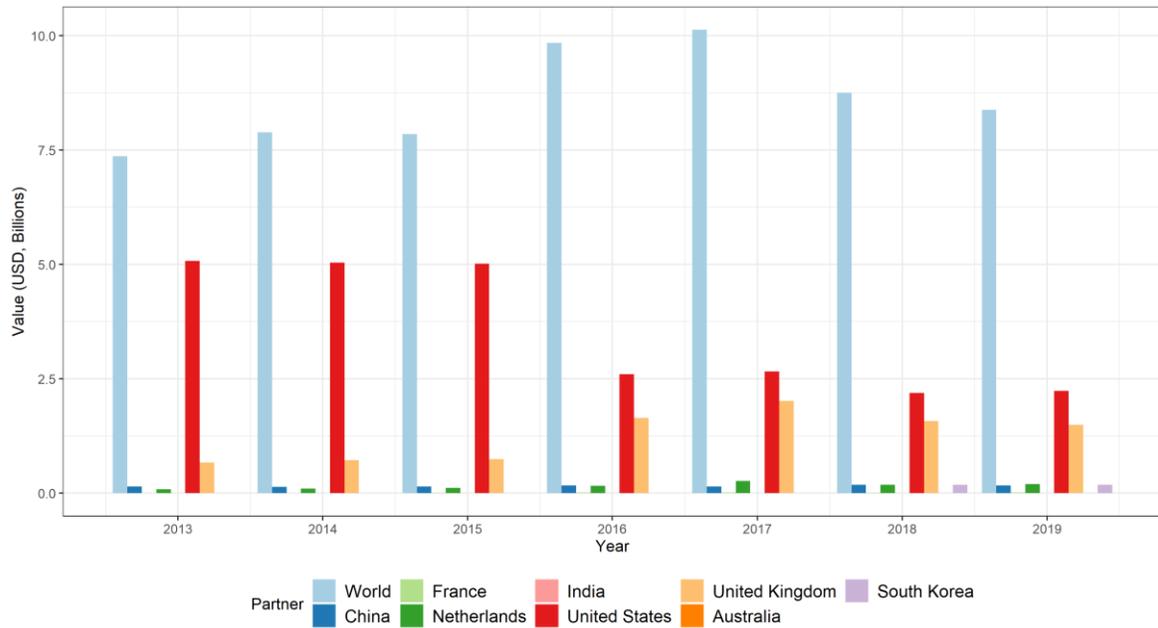
²⁵ Elwood Brehmer, "Sinopec Drops Interest in Managing AK LNG Construction," *Alaska Journal of Commerce*, Aug. 1, 2018, <https://www.alaskajournal.com/2018-08-01/sinopec-drops-interest-managing-ak-lng-construction>; Elwood Brehmer, "AGDC President Outlines Path Forward; China Deal is Dead," *Anchorage Daily News*, July 25, 2019, <https://www.adn.com/business-economy/energy/2019/07/25/agdc-president-outlines-path-forward-china-deal-is-dead/>.

²⁶ "Chinese Company Buys Elkem, Including Iceland Smelter," Invest in Iceland, accessed July 20, 2021, <https://www.invest.is/press--media/news/invest/chinese-company-buys-elkem-including-iceland-smelter/128>.

²⁷ Alma Ómarsdóttir, "Óvíst um framhald rannsókna á Drekasvæðinu," Ruv, Jan. 22, accessed July 20, 2021, <https://www.ruv.is/frett/ovist-um-framhald-rannsokna-a-drekasvaedinu>.

²⁸ Ranging between a net investment of \$20 million and a net divestment of \$8.4 million.

Figure 3. Net FDI position in Iceland for select countries, 2013–2019

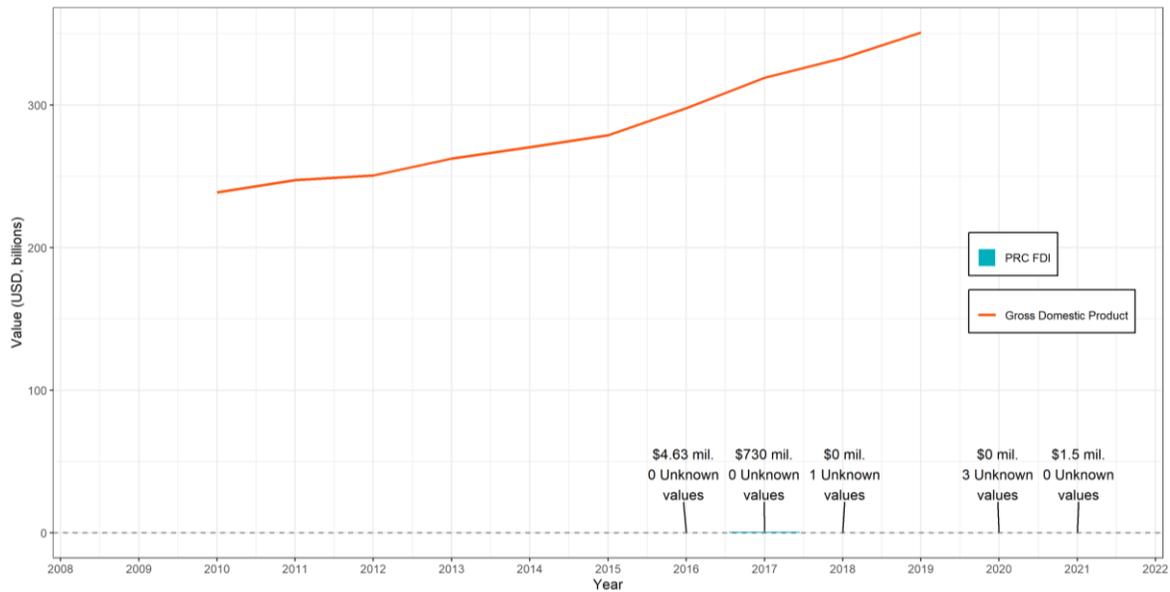


Source: OECD.

2.4 Denmark/Greenland

CNA found only seven cases of PRC FDI in Denmark/Greenland over the past decade. When known, transaction values were miniscule, particularly in comparison with Denmark/Greenland’s overall economy, as shown in Figure 4. Those investments without values targeted small companies and thus were likely of relatively low value. Only two confirmed deals involved Greenland—PRC-based-firms’ acquisitions of stakes in the Isua iron and Kvanefjeld uranium mining projects. Neither acquisition has borne fruit for PRC-based investors. The Isua project remains stalled, and the Kvanefjeld project appears dead in light of the 2021 Greenlandic elections, when voters repudiated uranium mining.

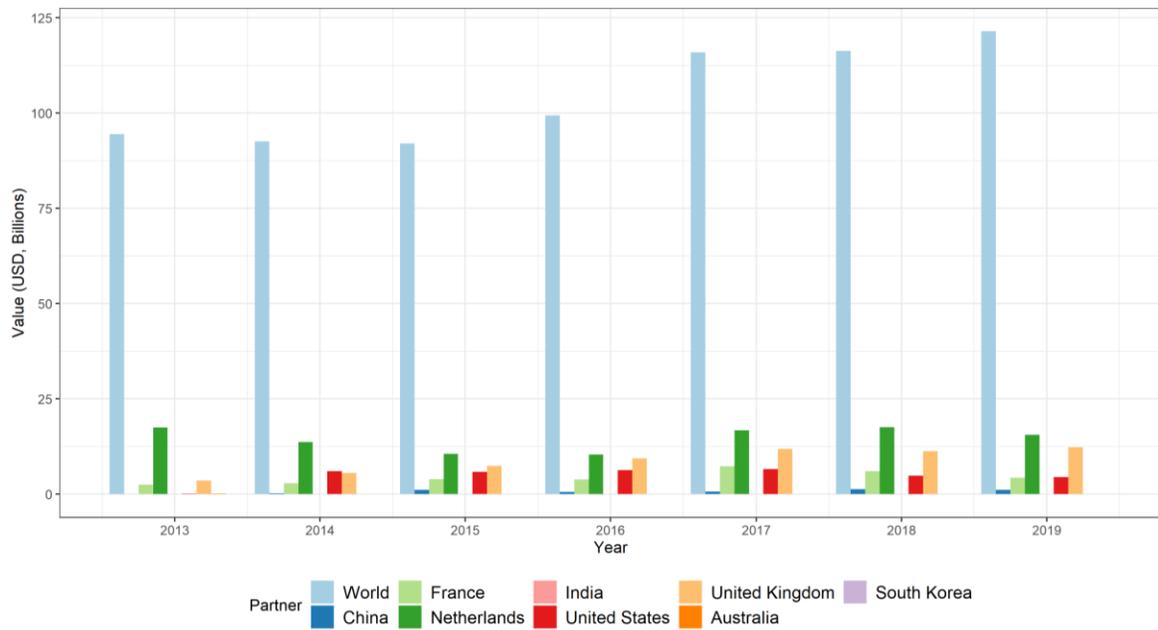
Figure 4. Danish GDP and PRC investments in Denmark



Source: CNA CAAT, OECD.

As in Iceland, China’s FDI position in Denmark/Greenland (Figure 5) is negligible compared to that of other states. China’s investment position barely registers, particularly compared to states like the Netherlands, France, the United States, and the UK. In 2019, the Netherlands’ FDI stock in Denmark/Greenland was more than 13 times that of China’s, the UK’s was 10 times China’s position, and France and the United States each still had 3 times China’s position. At the decade’s end, China still represented less than 1 percent of FDI in Denmark/Greenland.

Figure 5. Net investment position for select countries in Denmark/Greenland

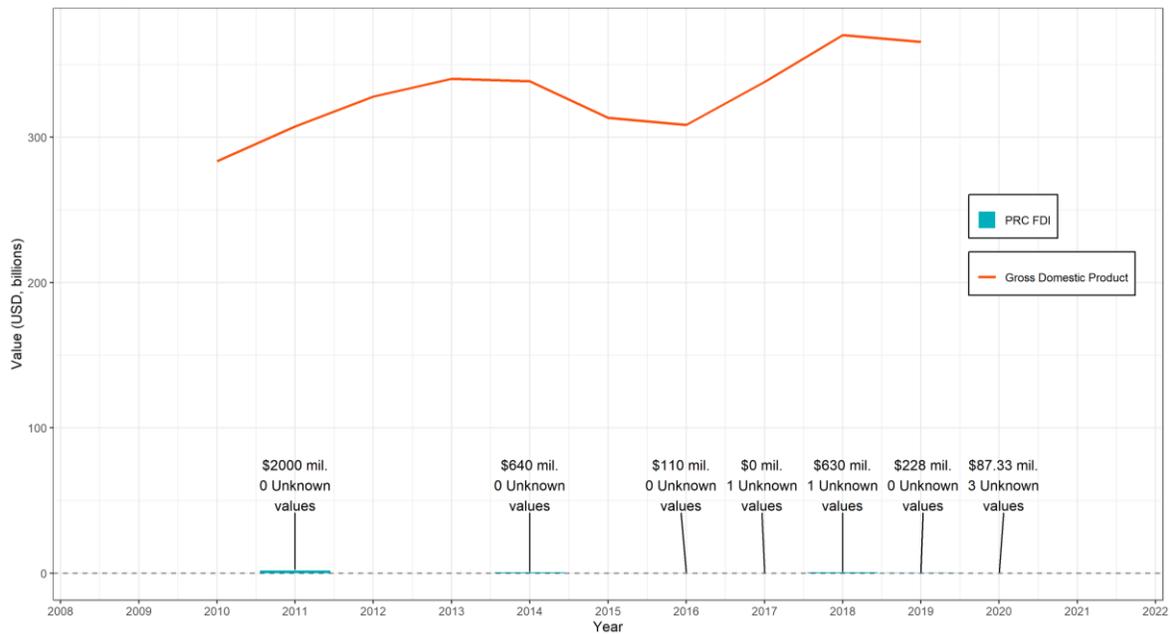


Source: OECD.

2.5 Norway

As in the cases of Iceland and Denmark/Greenland, PRC investment in Norway is small compared to Norway’s overall GDP (Figure 6). CAAT records 13 cases of completed PRC investments, the largest being PRC-based National Bluestar’s \$2 billion acquisition of Elkem, a Norwegian silicon and alloy producer, in 2011. Elkem also possessed an aluminum smelter in Iceland. Several recent acquisitions involved the troubled Norwegian Air carrier; the value of these are unknown. Other acquisitions include a video game studio, a recliner manufacturer, and part of a web browser service.

Figure 6. Norwegian GDP and PRC investments in Denmark

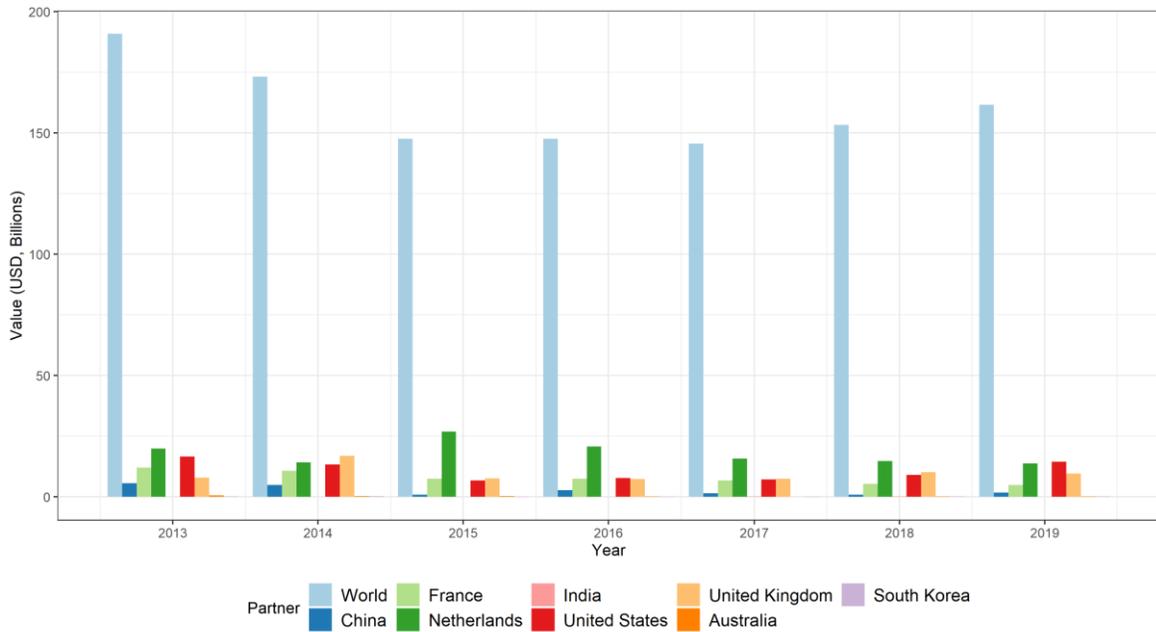


Source: CNA CAAT, OECD.

As in Denmark/Greenland and Iceland, China’s FDI position in Norway is limited compared to that of US allies. Figure 7 illustrates that China’s holdings in Norway have actually decreased in value since 2013. As of 2019, US investments in Norway were worth 8 times as much as PRC investments; Dutch, British, and French holdings were 7, 5, and 3 times as large as PRC holdings, respectively. PRC-based firms may yet target strategically important firms in the Norwegian economy, but they clearly have not made significant inroads to date. According to Norwegian business persons, PRC-based firms seem to now have the greatest interest in two areas in which Norway is perceived to have made significant advances: quiet diesel engines and ammonia fueled engines.²⁹

²⁹ Norway Field Discussion (Panel), 20210624, Field Discussion #1

Figure 7. Net investment position for select countries in Norway



Source: OECD.

2.6 Canada

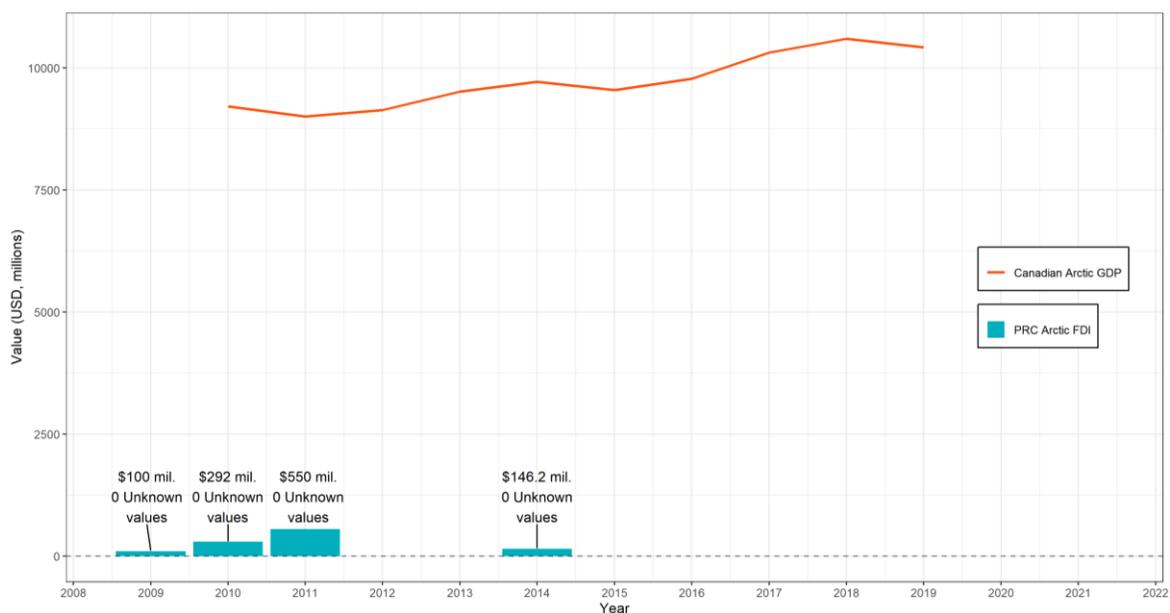
In Canada, CNA identified six completed PRC investments in the Canadian Arctic, all in the natural resource sector. One is in Nunavut, two are in the Yukon, and three involve the same mining project in the northern tip of Quebec.³⁰ Only the Quebec mines are producing, and PRC-based investors have already divested of two of the other projects.³¹ As Figure 8 illustrates,

³⁰ Reuters Staff, "Canadian Royalties Accepts Sweeter Jien Canada Bid," Reuters, Oct. 16, 2009, accessed July 14, 2021, <https://www.reuters.com/article/cbusiness-us-canadianroyalties-idCATRE59F3MD20091016>; Reuters Staff, "China's Wuhan Iron Buy Stake in Consolidated Thompson," Reuters, Mar. 30, 2009, accessed July 14, 2021, <https://www.reuters.com/article/instant-article/idUSTRE52T3G320090330?edition-redirect=uk>; Proactive Investors, "Selwyn Closes \$100 Million Joint Venture with Chihong for Zinc-Lead Mine in Yukon," accessed July 14, 2021, <https://www.proactiveinvestors.com/companies/news/73866/selwyn-closes-100-million-joint-venture-with-chihong-for-zinc-lead-mine-in-yukon-7782.html>; Jackie Hong, "Yukon Government, Creditor Take Disputes Over Wolverine Mine to Supreme Court of Canada," *CBC*, June 7, 2021, accessed July 14, 2021, <https://www.cbc.ca/news/canada/north/yukon-government-welichem-wolverine-mine-1.6057020>.

³¹ Hong, "Yukon Government, Creditor Take Disputes Over Wolverine Mine to Supreme Court of Canada."

these projects were spread out across the early 2010s. They never amounted to more than 5 percent of the Canadian Arctic provincial gross products (ignoring that half the projects and the most valuable investments targeted Quebec and assuming that the entire investment sum exclusively benefited the local province/territory and in a single year). In 2020, China’s Shandong Gold sought to buy TMAC Resources, the operator of the Hope Bay gold mine, but the Canadian government blocked the acquisition after a national security review.³²

Figure 8. PRC investments in the Canadian Arctic and Canadian Arctic GDP, 2010–2019



Source: CNA CAAT, OECD.

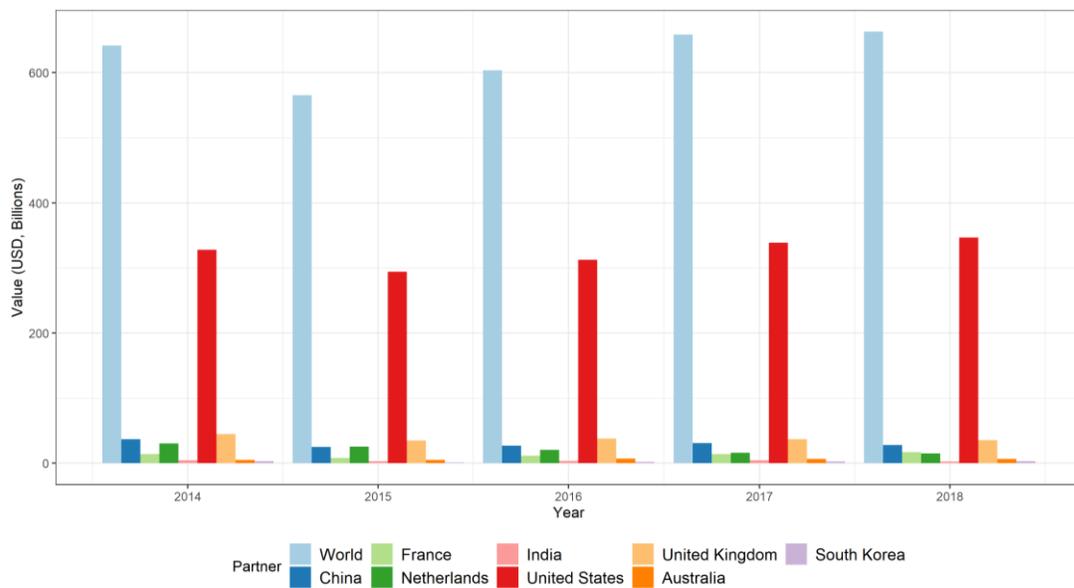
Canada offers a good case for how the association of certain countries with the Arctic can lead to mistaken impressions of acquisitions by PRC-based firms in that region. CNA noted at least 80 additional PRC investments in Canadian companies that involved firms across industries but with locations south of 60 degrees north latitude. China has certainly invested widely in a broad swath of the Canadian minerals industry. These acquisitions, however, largely target firms based and operating well outside the Arctic. Targets include companies working the oil sands of Alberta, most notoriously China National Offshore Oil Corporation’s (CNOOC’s) \$15 billion takeover of Nexen in 2013, but also companies in British Columbia and Quebec or even

³² Walter Strong, “Ottawa Blocks Chinese Takeover of Nunavut Gold Mine Project after National Security Review,” CBC, Dec. 22, 2020, accessed July 19, 2021, <https://www.cbc.ca/news/canada/north/canada-china-tm-1.5851305>.

farther afield in Colombia or the Congo.³³ Likewise, PRC-based investors offered start-ups funding in fields ranging from medicine to bird population control. These start-ups, however, are exclusively located in Canada’s non-Arctic cities of Montreal, Toronto, and Vancouver.

PRC-based firms’ direct investment position in Canada remained relatively flat between 2014 and 2019, even as the total global FDI stock in Canada’s economy grew (Figure 9). Unsurprisingly, US firms remained a dominant force in the Canadian economy, controlling more than half of all investment positions in Canada throughout this period. In contrast to the situation in the European Arctic states, however, China’s FDI position in Canada was larger than that of France or the Netherlands, and the UK FDI position in 2019 was only 28 percent larger than China’s. Still, PRC-based firms held a mere 1 percent of foreign investment in the Canadian economy in 2019.

Figure 9. Net FDI position for select countries in Canada



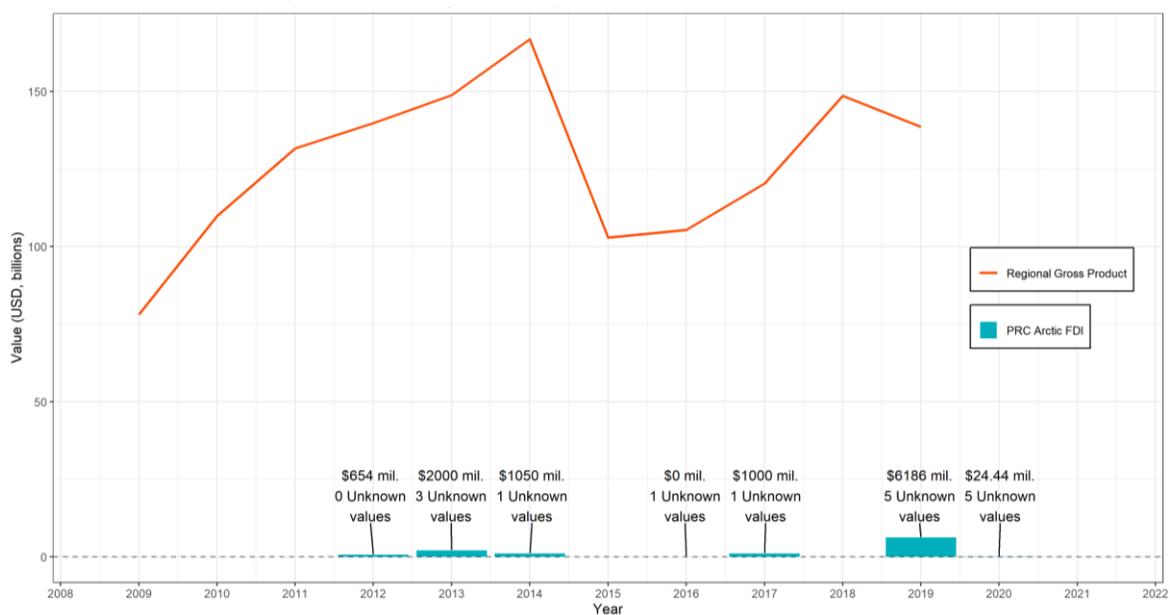
Source: OECD.

³³ BBC News, “Nexen Sale to China’s CNOOC Backed By Canada Government,” Dec. 7, 2021, accessed July 19, 2021, <https://www.bbc.com/news/business-20649456>.

2.7 Russia

Like in Canada, PRC investments in the Russian Arctic are concentrated in the resources sector, and the majority of this sector is still based outside the Arctic, meaning that more PRC acquisitions and investments have taken place outside the Arctic than within it. PRC-based firms also embarked on joint ventures with Russian partners in sectors including logistics, manufacturing, and telecommunications that may have implications for the Arctic but that are not Arctic specific. Figure 10 puts PRC investments in the Russian Arctic in context with GRP.

Figure 10. PRC investments in the Russian Arctic and GRP in regional Arctic



Source: CNA CAAT, OECD.

Russian firms, whether associated with the state or not, have avoided exclusive reliance on PRC-based investors, despite Western sanctions since 2014. This diversity is most notable in the energy sector, where Rosneft, a flagship Russian energy firm, considered selling substantial stakes to PRC-based investors between 2016 and 2018 but ultimately sold to Swiss, Qatari, and

Indian partners.³⁴ Russian and PRC-based investors have also announced several initiatives to pool funding for strategic investments in Russia's central region and the Russian Far East. The exact ownership structure and targets of these funds are unclear. Although some investment from such funds may go to the Russian Arctic, CNA found only investments in other regions, particularly on the Russia-China border.

Russian-PRC FDI ties also seem often affected by the dynamic, in which headlines trumpet large proposed investments that ultimately, quietly, never materialize. Exploratory talks and preliminary agreements to exchange large sums for chunks of Russian firms are commonplace and often secure major headlines. Many of these deals and talks, however, never get off the ground. These negative developments rarely garner significant coverage, particularly in English-language media. Arctic and non-Arctic examples range from the high stakes, such as how repeated efforts to sell parts of Rosneft to PRC-based investors collapsed, to the prosaic, such as when a court shut down a PRC water bottling plant on Lake Baikal after local environmental protests.³⁵

Russian statistical agencies do not publicize FDI positions or flows by country, but even so, the partnership with China appears not to have grown to the level expected in the wake of 2014. PRC investment in Russia has trended upward over the past 10 years. Combining previous analyses with current data shows PRC FDI increasing from only \$3 billion in 2006, accounting for less than 5 percent of FDI into Russia.³⁶

³⁴ Igor Sechin, "Russia's Rosneft sells 15% in Vankorneft to India's ONGC," *TASS*, Sept. 3, 2015, accessed July 14, 2021, <https://tass.com/economy/818658>; Polina Devitt and Darya Korsunskaya, "Kremlin Says Glencore, Qatari Fund to Buy 19.5 Pct Stake in Rosneft," *Reuters*, Dec. 7, 2016, accessed July 19, 2021, <https://www.reuters.com/article/us-russia-rosneft-privatisation-idUSKBN13W2QG>.

³⁵ Lenta, "Суд признал незаконным строительство китайского завода на Байкале," June 25, 2020, <https://lenta.ru/news/2020/06/25/bayikial>.

³⁶ Libor Khroska and Yevgeniya Korniyenko, "China's Investments in Russia: Where Do They Go and How Important Are They?," *China and Eurasia Forum Quarterly* 6, no. 1 (2008).

3. PRC Arctic FDI by Sector

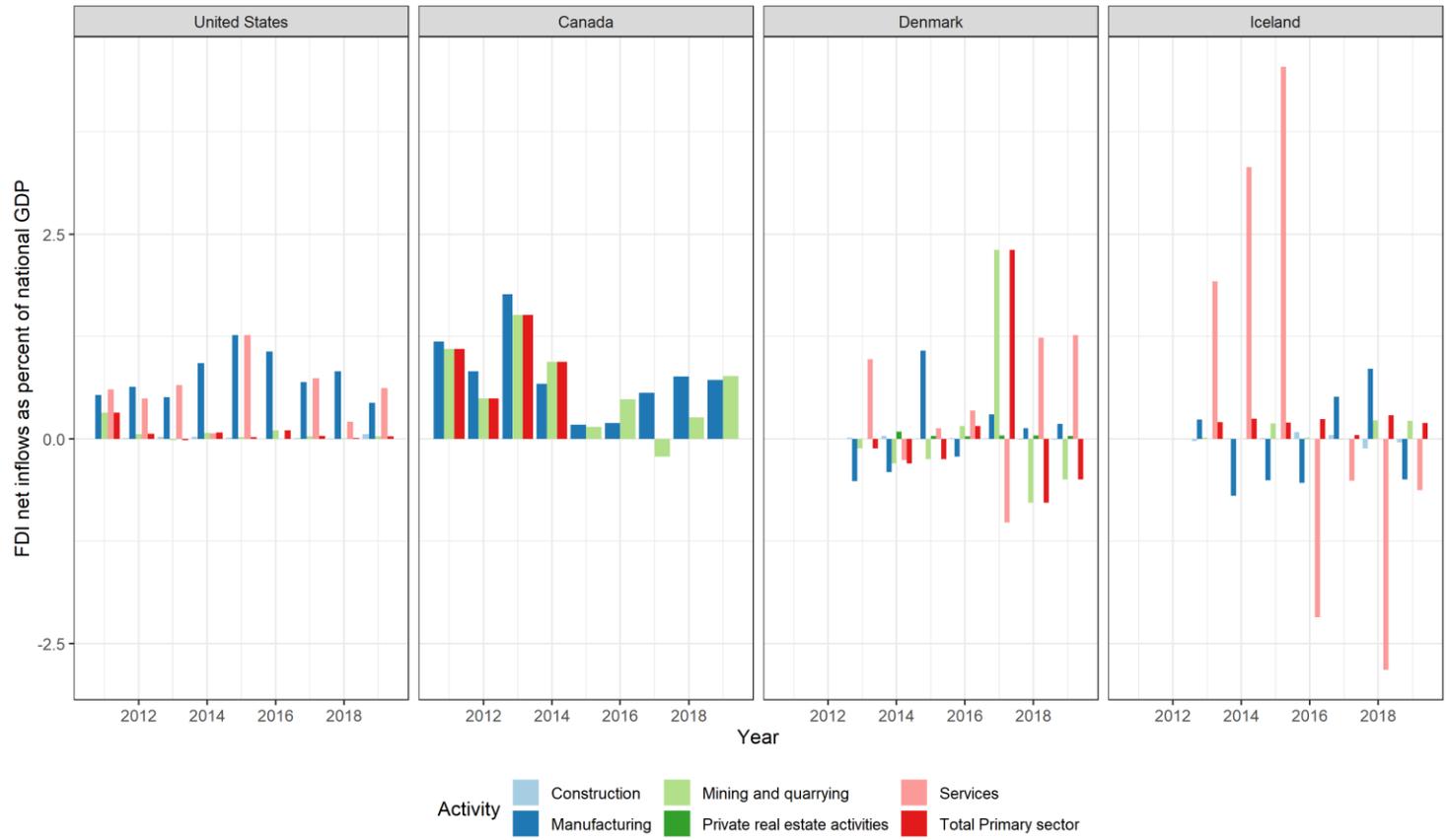
Aggregate levels of investment in a country are only one means by which PRC FDI could be construed as granting the PRC a strategically concerning level of economic and political influence. An alternative concern is the concentration of PRC influence within a specific industry. To account for that concern, this section of the report identifies critical sectors in the Arctic region and then catalogs actual and prospective large-scale PRC investments in select sectors of Arctic states. Our data-collection efforts included all sectors specified in the NDAA, and the presentation of data below also reflects categories used by the OECD.

3.1 Critical FDI sectors

To contextualize our dataset of PRC-based firms' economic activity in select sectors, CNA used OECD data from 2010 to 2019 covering investment in Denmark/Greenland and Iceland, as well as the entirety of Canada and the United States, because the OECD and national statistics do not break down FDI on a regional basis. (Norway did not report sectoral data to the OECD.) The OECD does not break down sector-specific flows and positions by investing country.

Overall, global FDI in Arctic nations has concentrated on the manufacturing, mining and quarrying, and services sectors, as depicted in Figure 11. FDI values reflect economy sizes—the US has consistently drawn the most foreign investment, whereas Iceland has drawn the least.

Figure 11. FDI flows by sector and year as a percentage of national GDP



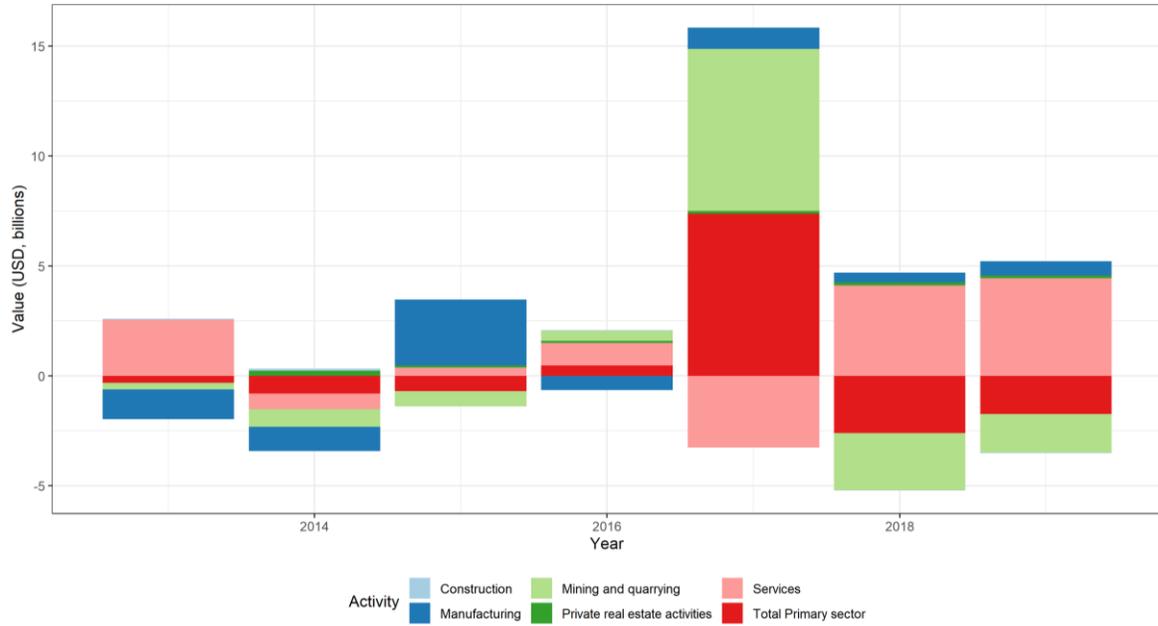
Source: OECD.

In Canada, another of the Arctic's major economies, the mining and quarrying sector is a good example of an area of high attraction that is not restricted to the Arctic. Mining and quarrying is historically one of the largest FDI sectors in the Canadian economy. Indeed, our initial data on PRC economic activity in Canada's mining sector uncovered a large number of PRC investments in Canadian firms engaging in mining activities. Yet only an estimated 21 percent of Canada's mineral resources are in the Arctic regions,³⁷ and Canadian mining firms are a globalized industry. Much of the data we collected on PRC investments confirm this status, with many of the actual mining projects taking place outside of the Canadian Arctic and even well outside of Canada. These entries are not included in the final analyses reflected here or the appendixes but speak to some of the data distinctions that complicate assessments of PRC Arctic FDI versus FDI in nations with Arctic territory. A similar example is Canada's manufacturing sector, which has been a major destination for foreign investment but which is almost exclusively located outside of the Arctic in Canada's southern provinces.

In Denmark/Greenland (Figure 12), no single sector dominates net FDI inflows, and reversals are common. For example, net investments into manufacturing have slowed after a rise in 2015. Similarly, the mining and primary sectors saw multibillion-dollar influxes in 2017 before foreign investors divested several billion from the same sectors in 2018 and 2019.

³⁷ Government of Canada, "Minerals and the economy," Mar. 18, 2021, accessed July 19, 2021, <https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-metals-facts/minerals-and-the-economy/20529>

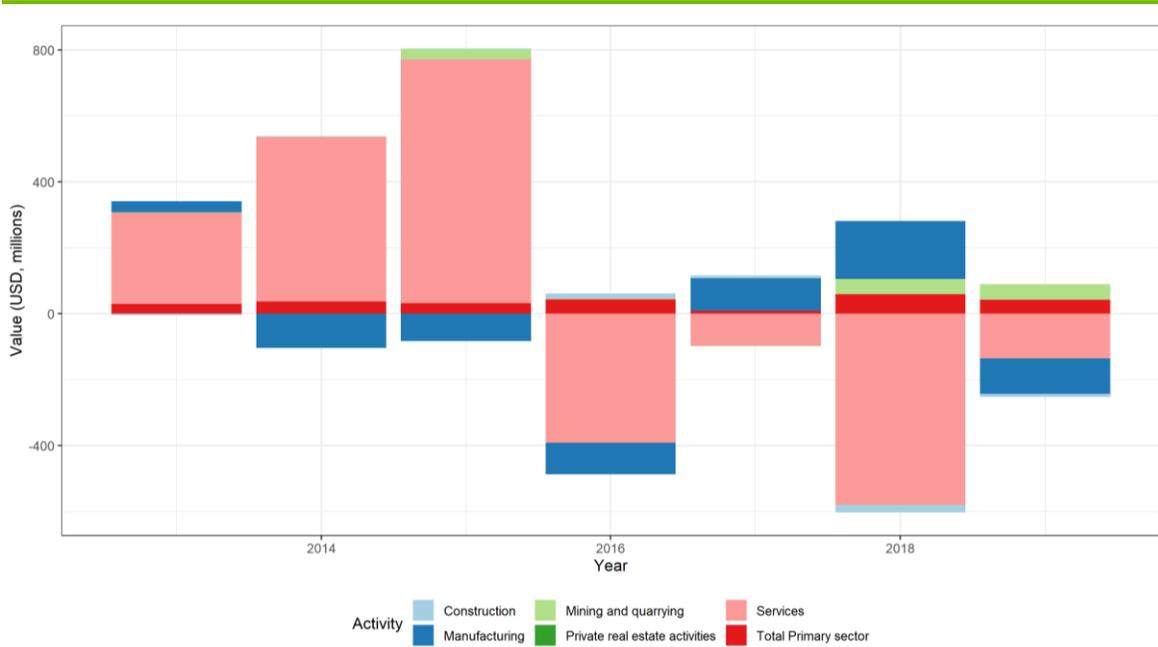
Figure 12. Annual FDI flows in Denmark by sector



Source: OECD.

Iceland's FDI flows (Figure 13) demonstrate the importance of services such as tourism and banking in the country's economy. After a period of rapid growth in foreign investments in Iceland's service sector early in the 2010s, foreigners withdrew from the sector in the latter half of the decade. Manufacturing also stands out as the other key industry for flows, although at much lower values than those seen in the service sector.

Figure 13. Annual FDI flows in Iceland by sector



Source: OECD.

3.2 Sector case studies

Aggregate counts of PRC sector-level investments per country can tell us only so much about the prospective economic or political influence that the PRC state may derive from regional economic investments. Even one investment, if large enough and in an important sector, could theoretically reshape a sector or a country’s relationship with the PRC government. The next sections provide some examples of activities across extractive industries (energy, mining), critical infrastructure (shipping, ports, airports), and telecommunications.

3.2.1 Extractive industries

- Yamal liquefied natural gas (LNG) and associated infrastructure (Port of Sabetta).** In addition to investments in LNG and oil extraction plants, the China National Petroleum Corporation (CNPC) and the China Silk Road Fund have a 29.9

percent stake in the seaport and associated infrastructure. The reported costs of the port and associated infrastructure are about \$3 billion.³⁸

- **Yamal 2.**³⁹ Yamal 2 is a series of floating LNG liquefaction plants and logistics support structures that have the capacity to provide pier and vessel services to three LNG tankers. The large platforms were mostly constructed in Russia, with technical assistance from Italian, French, and Norwegian firms, but PRC shipyards built compressors and generator modules for the large plants. The value of the work was roughly \$437 million. The CNPC and CNOOC together own 20 percent in the overall project. A pool of Asian and Russian banks is providing loans on roughly 51 percent of the project's construction costs.⁴⁰
- **Russkoye and Yurubcheno-Tokhomskoye fields.** In 2015, an agreement on cooperation was signed by Russia's Rosneft and China Petrochemical for the joint development of Russkoye and Yurubcheno-Tokhomskoye fields. Sinopec Group has the option to acquire a 49 percent stake in East Siberian Oil and Gas Company and Tyumenneftegaz. Tyumenneftegaz has the exploration licenses for both Russkoye and Yurubcheno-Tokhomskoye fields.⁴¹ The status of this project has not been updated recently, but Rosneft's 2019 report states that the development of Yurubcheno-Tokhomskoye field is still taking place.⁴²
- **Payakha oil field.** In 2019, the China National Chemical Engineering Group (CNCEC) and Russian firm Neftegazholding signed an agreement on the development of Payakha oil field. CNCEC pledged to invest \$5 billion over a four-year period. The Payakha oil field project includes "the construction of six crude oil processing facilities, a crude oil

³⁸ Offshore Energy, "Russia Reveals Sabetta Port Construction Contractors," July 21, 2014, <https://www.offshore-energy.biz/russia-reveals-sabetta-port-construction-contractors/>.

³⁹ Malte Humpert, "Novatek Arctic LNG 2 Project Remains on Schedule Despite Impact Of Covid-19," High North News, June 20, 2020, accessed July 19, 2021, <https://www.highnorthnews.com/en/novatek-arctic-lng-2-project-remains-schedule-despite-impact-covid-19>.

⁴⁰ The Russian banks VEB.RF, Sberbank and Gazprombank will cover half and a pool of foreign banks, consisting of China Development Bank (CDB), the Export-Import Bank of China, and the Bank of Japan for International Cooperation (JBIC), Intesa Sanpaolo and Raiffeisen Bank International will cover the other half. See: Thomas Nilsen, "Arctic Lng 2 Aims to Raise \$11 Billion in a 50/50 Split Between Domestic and Asian Banks", Barents Observer, Apr. 1, 2021, accessed July 19, 2021, <https://thebarentsobserver.com/en/arctic-lng/2021/04/novatek-aims-raise-11-billion-arctic-lng-2-5050-split-between-domestic-and>.

⁴¹ Rosneft, "Rosneft and Sinopec Agree on the Joint Development of Russkoye and Yurubcheno-Tokhomskoye Fields," Sept. 3, 2015, accessed July 19, 2021, <https://www.rosneft.com/press/releases/item/176069/>.

⁴² Rosneft, *Annual Report*, 2019, https://www.rosneft.com/upload/site2/document_file/a_report_2019_eng.pdf

port capable of handling 50 million tonnes a year, 410 kilometers of pressurized oil pipelines, and a 750-megawatt power station and an oil storage facility.”⁴³

- **Yuzhno-Russkoye oil field.** In 2020, China’s Zhongman Petroleum and Natural Gas Group Company signed a contract worth approximately \$26.6 million with Russia’s Yargeo, a subsidiary of Novatek, for a drilling project in the Yuzhno-Russkoye oil field. The oil field is in the northern part of the Yamal-Nenets Autonomous Region.⁴⁴
- **Nunavik Nickel Project.** In 2007, Canadian Royalties launched the Nunavik Nickel Project. In 2010, Jilin Jien Nickel Industry acquired a majority stake in Canadian Royalties. Jilin Jien Nickel became involved in the Nunavik Nickel Project, which included the engineering and construction of the mine. In 2011, Jilin Jien Nickel invested \$446 million in the project. The mine started operating in 2013.⁴⁵
- **Ironbank.** Greenland’s Ironbank selected China Nonferrous Metal Industry’s Foreign Engineering and Construction (NFC) to develop the Citronen Fjord Zinc Mine Project. Citronen, located 2,100 kilometers north of Nuuk, is considered among the world’s largest undeveloped zinc-lead resources. NFC will facilitate the funding for the project and will have an option to acquire 20 percent.⁴⁶
- **The Kvanefjeld Uranium and Rare Earth Mineral Project.** This project in Greenland has not yet begun, and its status is currently in limbo. The project is valued at \$1.4 billion. Shenghe Resources, a SOE and one of the largest producers of rare earth minerals globally, owns 12.5 percent of the project. They acquired 125 million shares for \$4.625 million.⁴⁷
- **Elkem.** In 2011, China National Bluestar executed an agreement to purchase Norwegian silicon producer Elkem from Orkla for \$2 billion. The deal gave Bluestar

⁴³ Zhang Chung, “China’s ‘Arctic Silk Road’ Projects,” China Dialogue Ocean, Jan. 9, accessed July 19, 2021, <https://chinadialogueocean.net/12569-chinas-arctic-silk-road-projects/>

⁴⁴ “中曼石油：签订16.98亿卢布俄罗斯钻井项目合同 [Zhongman Petroleum: Signed Russian drilling project contract of 1.698 billion rubles].” CNPC.com. Feb. 7, 2020.

⁴⁵ Canadian Press, “Chinese Firm to Double Investment in Quebec Nickel Mine,” CBC, Aug. 29, 2011, accessed July 19, 2021, <https://www.cbc.ca/news/canada/montreal/chinese-firm-to-double-investment-in-quebec-nickel-mine-1.1076484>; Rena Gu, “Jilin Jien Nickel’s Canada Project Starts Operations,” Fastmarkets MB, Mar. 19, 2014, accessed July 19, 2021, <https://www.metalbulletin.com/Article/3320900/Jilin-Jien-Nickels-Canada-project-starts-operations.html>.

⁴⁶ NS Energy, “Citronen Lead-Zinc Project,” accessed July 19, 2021, <https://www.nsenergybusiness.com/projects/citronen-lead-zinc-project/>

⁴⁷ Jacob Gronholt-Pedersen and Eric Onstad, “Geopolitics is Making Two Rare Earths Mining Projects in Greenland More Complicated,” ArcticToday, Mar. 3, 2021, accessed July 19, 2021, <https://www.arctictoday.com/how-geopolitics-is-complicating-two-greenland-rare-earths-mining-projects/>.

access to an abundance of raw materials and additional technology to upgrade its plants in the PRC. Elkem manufactures solar grade silicon, alloys, carbon, and microsilica.⁴⁸

3.2.2 Critical infrastructure

- **Finnafjordur.** In 2017, Iceland announced plans to construct a new deepwater port in the northeast area of Iceland known as the Finnafjordur Project. This particular port has a strategic location at the North Sea terminus of the Northern Sea Route (NSR) and the “over the top” route, which may displace the NSR as the preferred route for transit shipping as further ice regression occurs. Initial press reporting suggested that the German port developers were soliciting PRC-based investors⁴⁹ and would seek a large shipping company like the China Ocean Shipping Company (COSCO) to serve as an “anchor tenant” for use of the port. However, the Finnafjord Port Development Company, founded in 2019 to build and operate the port, is majority-owned by the German firm Bremenport (66 percent of shares), with the rest held by Icelandic interests (26 percent by an Icelandic engineering consultancy and 8 percent by municipalities).⁵⁰
- **Halogaland and Batastadsander Bridges.** This project does not meet our stricter definition of FDI but is included for context (the bridge was built by PRC-based entities but remains owned by the municipalities). In 2013, Sichuan Road and Bridge Group (SRBG) and Serbia’s VNG International won a contract to build the Halogaland Bridge in Narvik, a northern port in Norway. The contract was valued at \$96 million. Construction began in 2015, and the bridge officially opened in 2018.⁵¹ SRBG was later awarded another contract by the Norwegian Public Roads Administration for construction of the 580-meter Batstadtsander Bridge in another county in northern Norway, Nord-Trøndelag. The contract was valued at \$32 million.

⁴⁸ Joachim Dagenborg and Victoria Klesty, “Orkla Sells Elkem to China’s BlueStar for \$2 Billion,” Reuters, Jan. 11, 2011, accessed July 19, 2021, <https://www.reuters.com/article/us-orkla/orkla-sells-elkem-to-chinas-bluestar-for-2-billion-idUSTRE70A13Q20110111>.

⁴⁹ Haraldur Guðmundsson, “Funduðu Með Kínverskum Skiparisa Um Finnafjarðarverkefnið,” *Visir*, Sept. 5, 2017, <https://www.visir.is/g/2017170909468>.

⁵⁰ Malte Humpert, “Iceland Invests in Arctic Shipping With Development of Finnafjord Deep-Water Port,” *High North News*, Apr. 16, 2019, <https://www.highnorthnews.com/en/iceland-invests-arctic-shipping-development-finnafjord-deep-water-port>.

- **Arkhangelsk.** PRC-based firms have promised roughly \$20 billion in funding to connect a deepwater port in Arkhangelsk⁵² on the White Sea to Siberia. The port will be interconnected with the Belkomur Railway Project.⁵³ China Poly Group pledged \$79 million. COSCO, a SOE, has also expressed interest in the project. Arkhangelsk is located close to Finland. This project has not yet progressed from the planning stages.⁵⁴

3.2.3 Telecommunications

- **100G submarine cable.** This project does not meet our stricter definition of FDI but is included for context. China’s Huawei partnered with Tele Greenland from 2016 to 2017 to lay a 100G network subsea cable in the Arctic⁵⁵ to connect remote parts of the territory and upgrade existing telecommunication lines that link Greenland with Canada and Iceland.⁵⁶ The actual value of the project is not reported, although comparable projects cost multiple billions of dollars.
- **5G network.** This project does not meet our stricter definition of FDI but is included for context. PRC-based firms currently control significant amounts of the 5G capacity in Iceland as suppliers of 5G equipment to two of the three Iceland telecommunications companies (Syn and Nova),⁵⁷ and Huawei has signed a memorandum of agreement with Nova to conduct multiple 5G operational trials.

The examples provided illustrate the scale and potential implications of some current and prospective projects in the Arctic with investment from PRC-based firms. In contrast to the overall modest figures associated with PRC FDI in the Arctic, these examples include several projects with potential importance that could shape Arctic nations’ relationships with China. The examples also demonstrate how some categories of activity (such as PRC-based firms active in telecommunications and 5G industries) can affect Arctic politics without necessarily

⁵² Stronski and Ng, *Competition: Russia and China in Central Asia, the Russian Far East, and the Arctic*; Barents Observer, “New Barents Sea Port and 500 km Railway Link Could Help Connect Asia with the Arctic,” May 27, 2020, <https://thebarentsobserver.com/en/arctic/2020/05/new-barents-sea-port-will-get-railway-connecting-asia-arctic>. In 2016 the Arctic Transport and Industrial Centre Arkhangelsk signed an agreement of intent with the Beijing based Poly International Holding Co. on the deep-sea port construction.

⁵³ This was a homegrown Russian project which suffered from lack of funding. In 2017 China’s Poly Group Corporation and China’s Exim Bank confirmed a willingness to finance the railway. China’s COSCO has also expressed interest in operating in the Arkhangelsk port once it is constructed (another PRC-based investor). Stronski and Ng, *Competition: Russia and China in Central Asia, the Russian Far East, and the Arctic*.

⁵⁴ “China’s ‘Arctic Silk Road’ Projects.”

⁵⁵ “Huawei Marine Partners with Tele Greenland to Deploy 100G Submarine Network in the Arctic.”

⁵⁶ Stronski and Ng, *Competition: Russia and China in Central Asia, the Russian Far East, and the Arctic*.

⁵⁷ “Two Telecom Companies in Iceland Use Huawei Products.”

counting as FDI. For that reason, we turn in the next section to a broader examination of PRC-based firms' economic activities in the Arctic.

4. Wider Assessment of PRC Arctic Economic Activity

As noted previously, the amount of PRC FDI in the Arctic region appears limited when a strict definition of FDI and a filter for Arctic geography are applied. This finding can be construed as positive for US and Arctic policy-makers should they seek to actively reduce the future risks of high concentrations of PRC FDI in vulnerable economies or critical industries. PRC-based firms are not yet significantly entrenched across the Arctic region.

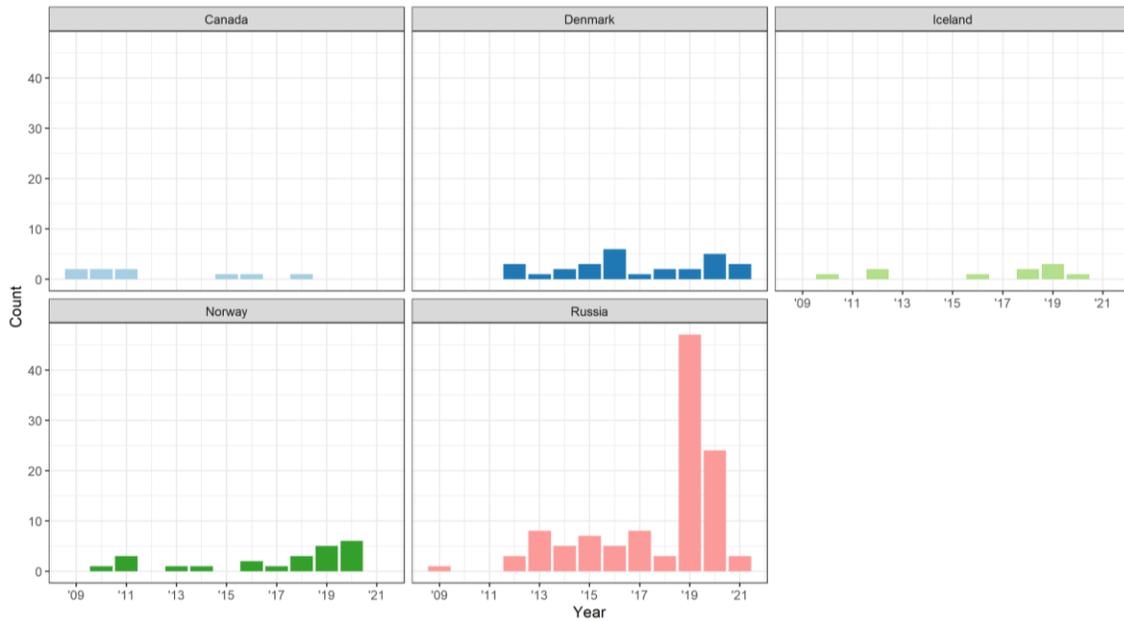
Still, this finding is likely at odds with the perceptions of many observers, in part because overall PRC economic activity in or related to the Arctic region is larger than simply FDI. Distinguishing FDI's role is important because FDI affords a level of control in economic decision-making in invested firms that is legally and qualitatively distinct from other forms of economic activity. Nevertheless, an aggregate level of economic activity can also pose concerns for Arctic states and their strategic autonomy. For that reason, this section provides a broader look at PRC economic activity in Arctic states.

In this analysis, we relaxed our strict definition of FDI and included a broader swath of economic activities (these data therefore include the data depicted in the prior sections along with other projects). We also expanded our geographical focus area. Generally, we focused on economic activity in the regions captured by the prior sections' analysis. Yet the data in this section include some projects south of 60 degrees north latitude if those projects appeared to be directly related to Arctic activities. Some entries speak to investments outside of the Arctic but with Arctic implications (such as port or railroad projects aimed at facilitating Arctic transport routes). The dataset also includes some prospective deals.

4.1 PRC Arctic economic activity by country

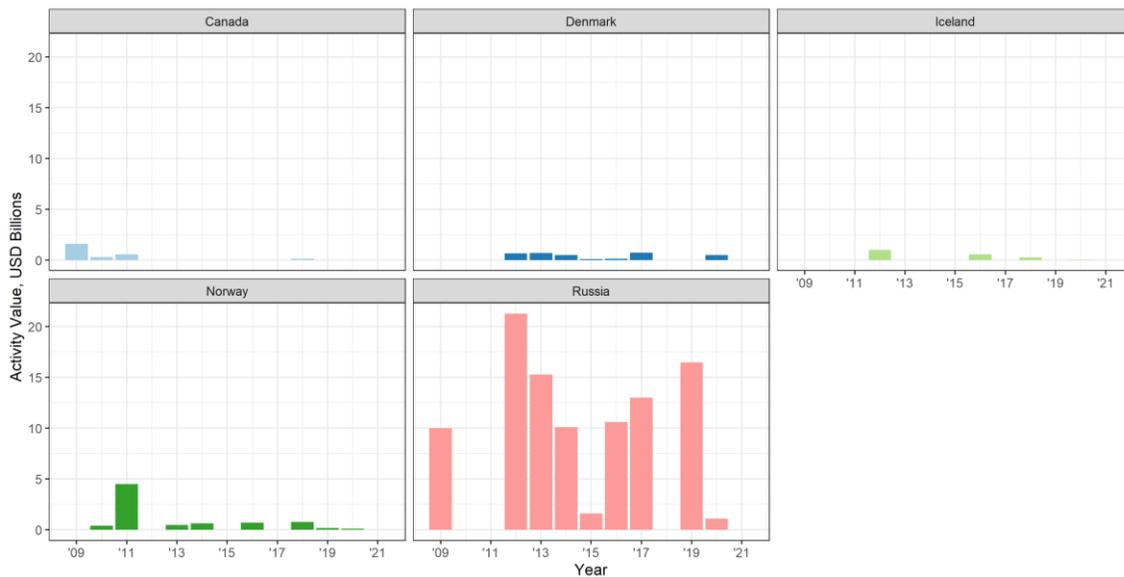
CNA's CAAT captures China's wider economic activity in the Arctic region. Figure 14 shows the number of annual transactions by China in the Arctic by country. Figure 15 shows the value of China's economic activity from 2008 to 2020 in Denmark/Greenland, Iceland, Norway, parts of Canada, and Russia by year.

Figure 14. Count of PRC activity in the Arctic



Source: CNA CAAT.

Figure 15. Value of major PRC economic activity in Arctic regions



Source: CNA CAAT.

4.2.6 United States (Alaska)

PRC-based firms have pursued fewer major economic activities in the US Arctic (i.e., Alaska) than in the other countries in this assessment.

When PRC-based firms have attempted major financial transactions in Alaska, it has often been with an eye toward energy interests. In 2018, the Alaska Gasline Development Corporation (AGDC) nominated the Bank of China (BoC) and Goldman Sachs as global capital managers of the AGDC's Alaska LNG project. Alaska LNG is a gas project in Prudhoe Bay that consists of a 1,300-kilometer pipeline to southern Alaska.⁵⁸ The BoC and Goldman Sachs were to aid AGDC with raising equity and debt financing to advance the development of Alaska LNG. In 2020, AGDC stated that it was taking part in ongoing negotiations with several parties that had shown interest in the project, including a possible joint development agreement with China's Sinopec, China Investment Corporation, and the state-owned BoC.⁵⁹ The total expected transaction amount could be approximately \$43 billion, but it is unclear what percentage of that would be related to direct investment from PRC-based entities.⁶⁰ Currently, the project is on hold, although AGDC is expected to review and determine whether the project will still move forward and under what conditions.⁶¹ To date, the US has not approved any projects in Alaska with major involvement by PRC-based firms.

4.2.3 Iceland

Over the last decade, Iceland and China have taken significant steps to strengthen their relationship and economic partnership. Both countries have conveyed the desire to grow their shipping industry via the Arctic. Icelandic companies have also expressed interest in China as a potential market.⁶² Iceland was hit hard during the 2008 global financial crisis. Its economy was largely finance dependent, and as a result of the crisis, three of Iceland's largest commercial banks defaulted. Iceland turned to the European Union (EU) for financial

⁵⁸ Brehmer, "Sinopec Drops Interest in Managing AK LNG Construction."

⁵⁹ Reuters, "BP, Exxon to help advance Alaska LNG export project -Alaska Gasline," Mar. 10, 2019, <https://www.reuters.com/article/us-usa-alaska-lng/bp-exxon-to-help-advance-alaska-lng-export-project-alaska-gasline-idUSKBN1QR0WQ>

⁶⁰ "Nathaniel Herz and Alex DeMarban, "Alaska Gas Line Agency Reaches Deal With Chinese Oil Company, Financial Institutions," Anchorage Daily News, Nov. 10, 2017, accessed July 19, 2021, <https://www.adn.com/politics/2017/11/08/report-alaska-gas-line-agency-signs-agreement-with-chinese-oil-company-financial-institutions/>.

⁶¹ Brehmer, "AGDC President Outlines Path Forward; China Deal is Dead."

⁶² Guðbjörg Ríkey Th. Hauksdóttir, "Pressure in the Arctic: China-Iceland Relations in the Era of U.S-China Rivalry," Institute for Security and Development Policy, Dec. 4, 2019, <https://www.isdp.eu/pressure-in-the-arctic-china-iceland-relations/>

assistance but withdrew its application to join the EU because of a disagreement regarding EU fishing quotas. Iceland ultimately received significant assistance from China in recovering from the global financial crisis.⁶³

In 2013, Iceland became the first European country to sign a free trade agreement with China. The agreement sought to increase fishery exports from Iceland to China. It also aimed to bring the geothermal industry in Iceland to China. In 2018, China became the second largest exporter to Iceland after Norway.⁶⁴ Iceland and China have also expanded their scientific cooperation in the Arctic. In 2018, the Polar Research Institute of China, along with an Icelandic organization, opened the China-Iceland Arctic Research Observatory (CIAO) in Kahroll, located in northeastern Iceland. CIAO is a research center that focuses on natural sciences in the Arctic.⁶⁵

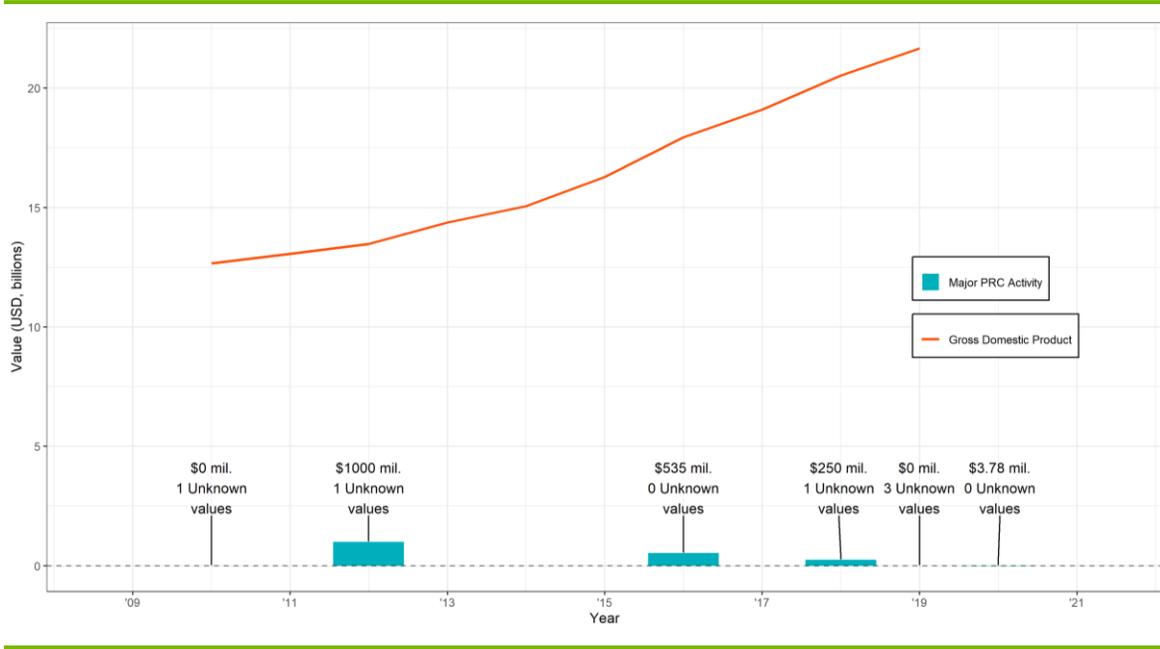
Despite this foundation, China's commercial presence in Iceland is sparser than it is in other Arctic countries. Over the past decade, none of China's economic activity constitutes FDI. When casting a slightly wider net, we find that PRC-based firms made a small number of transactions in Iceland and signed a few agreements with Iceland that could lead to future economic activity. As shown in Figure 16, PRC-based firms transacted more than \$1.7 billion in Iceland across 10 transactions from 2010 to 2020, primarily in the energy and mining sectors.

⁶³ Ties Dams, Louise van Schaik, and Adája Stoetman, *Presence Before Power: China's Arctic Strategy in Iceland and Greenland*, Clingendael Institute, 2020, <https://www.clingendael.org/pub/2020/presence-before-power/3-iceland-what-is-china-doing-there-and-why/>.

⁶⁴ Ibid.

⁶⁵ EU Inter-Act, "China Iceland Arctic Research Observatory," accessed July 19, 2021, <https://eu-interact.org/field-sites/karholl-research-station/>.

Figure 16. Major PRC economic activity in Iceland and Icelandic GDP



Source: CNA CAAT, OECD.

4.1.2 Denmark/Greenland

A 2019 Danish Defense Intelligence Service report assesses: “There are certain risks related to large-scale PRC investments in Greenland due to the effect that such investments would have on an economy the size of Greenland’s.”⁶⁶ Greenland’s GDP in 2019 was roughly \$3.3 billion,⁶⁷ and even though the values for many of China’s transactions in Greenland are not publicly reported, Greenland’s modest GDP means that any large-scale transaction by China could have significant effects on the country’s economy.

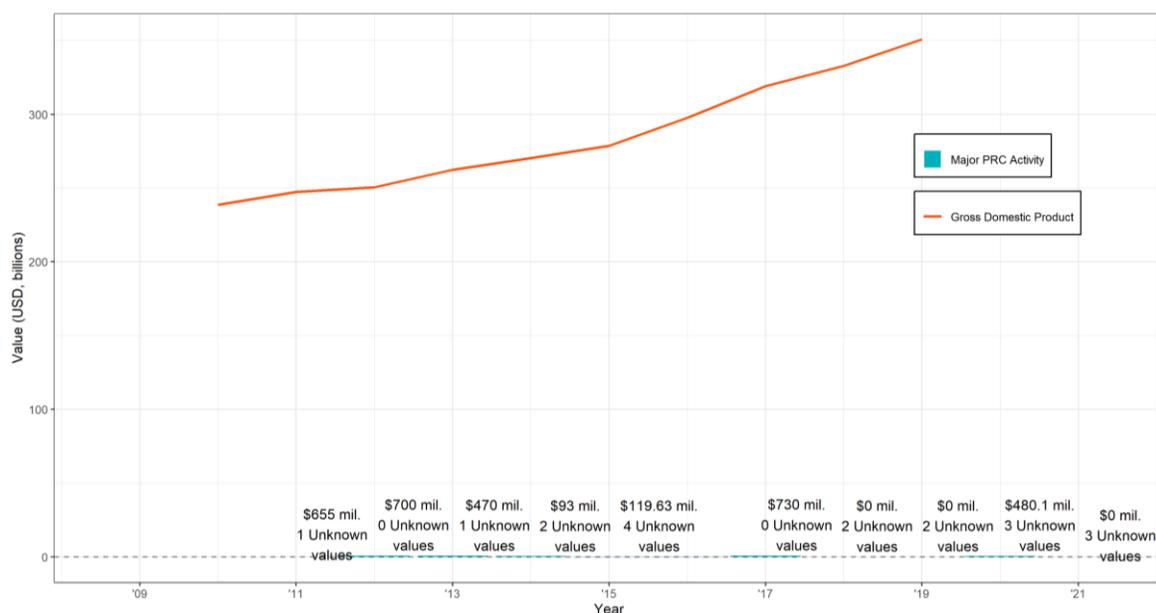
Figure 17 illustrates China’s economic activity in Denmark/Greenland compared to its annual GDP. Our data capture roughly \$3 billion in PRC economic activity in Denmark/Greenland across 28 transactions from 2011 to 2020. Four of the 28 transactions took place in Greenland. The majority of PRC-based economic actors participating in major transactions in Denmark are SOEs, which on average executed deals or economic activities valued at twice those of non-SOE

⁶⁶ Danish Defense Intelligence Service, *Intelligence Risk Assessment 2020*, 2020, https://feddis.dk/en/produkter/Risk_assessment/riskassessment/riskassessment2020/

⁶⁷ Statista, “Gross Domestic Product (GDP) of Greenland from 2011 to 2019,” accessed July 19, 2021, <https://www.statista.com/statistics/805932/gdp-of-greenland/>

PRC-based firms. The total value of major PRC economic activity in Denmark/Greenland originating from SOEs was lower in 2017 to 2020 than it was over the previous four years (2013 to 2016), but a steady rise in activity from non-SOE entities has kept overall values trending upward.

Figure 17. Major PRC economic activity in Denmark and Danish GDP



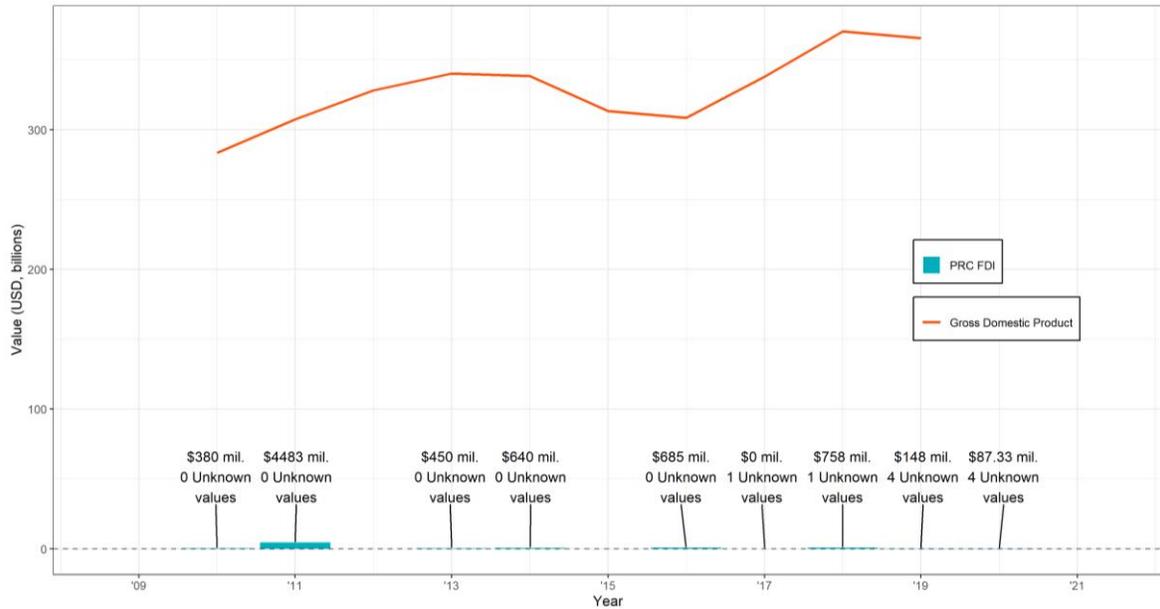
Source: CNA CAAT, OECD.

4.2.4 Norway

As seen in Figure 18, from 2012 to 2017, CAAT records a mere handful of major PRC economic activities in Norway. Since 2017, PRC-based firms have played major roles in between three and six Norwegian projects per year. This is notable given PRC-Norway relations only improved in 2016, when government officials from both countries met and announced an end to the diplomatic stalemate dating to 2011.⁶⁸ This activity continued even in the face of COVID-19, as seen in the 2020 data.

⁶⁸ Bjørnar Sverdrup-Thygeson and Marc Lanteigne, “China and Norway: Unpacking the Deal”, Diplomat, Dec. 25, 2016, accessed July 19, 2021, <https://thediplomat.com/2016/12/china-and-norway-unpacking-the-deal/>

Figure 18. Major PRC economic activity in Norway and Norwegian GDP



Source: CNA CAAT, OECD.

The known values of PRC-based firms’ annual economic activity are illustrated in Figure 18, but many values are broadly unavailable. According to statistics released by the Ministry of Commerce of the People’s Republic of China, major economic activity from PRC-based firms in Norway in 2019 was around \$745 million.⁶⁹ We found that PRC-based firms engaged in major transactions in Norway at least 23 times between 2008 and 2020. The PRC-based conglomerates that have been the most active in Norway include COSCO, China National Bluestar, and Elkem Group. Economic activity is likely to continue to increase because in March 2021, trade negotiators from both Norway and China met to discuss the creation of a free trade agreement between the two countries.

Despite a roughly equal split between SOEs and non-SOEs, the average value of activity in Norway by PRC SOEs was much larger than that by non-SOEs, where data are available. This data caveat is important because transaction amounts for most activity from non-SOEs are not publicly reported. PRC SOEs also often have access to larger amounts of capital and have the

⁶⁹ Chinese Academy of International Trade and Economic Cooperation, Embassy of the People’s Republic of China in the Kingdom of Norway Office for Economics and Commerce, and Ministry of Commerce Department of Foreign Investment and Economic Cooperation, *Foreign Investment Cooperation Country (Regional) Guidebook, Norway, 2020 Edition, 2020*, <http://www.mofcom.gov.cn/dl/gbdqzn/upload/nuowei.pdf>.

capacity to invest in large-scale projects, which often garner more reporting and public reporting requirements.

4.1.1 Canada

Canada is a large economy that is open to sources of PRC economic activity, although Canadian politicians and regulators have grown increasingly suspect of some forms of PRC investments. In 2018, Huawei executive Meng Wanzhou was arrested in Canada, which sparked increased skepticism of business practices by PRC-based firms.⁷⁰ In April 2019, the House of Commons expressed a desire for Canada to “engage with the Government of China to understand their growing interest in the Arctic.”⁷¹

Canada also passed the Invest Canada Act, which provides the government with the opportunity to review and block non-Canadian investments. The companion report on Arctic regulatory frameworks addresses this issue in detail.⁷² The result has been a series of high-profile rebuffs to PRC investment attempts. In 2018, the Canadian government rejected China Communications Construction Company’s proposed purchase of Canada’s Aecon, citing national security concerns. In 2020, PRC SOE Shandong Gold Group attempted to purchase the Canadian mining company TMAC Resources and its Hope Bay gold mine in northern Nunavut for \$149 million. The Cabinet of Canada ordered a national security review of Shandong’s acquisition and ultimately blocked the sale on national security grounds.⁷³

Figure 19 shows China’s economic activity in the Canadian Arctic as it relates to Canada’s overall GDP. According to available transaction data, PRC economic activity amounted to approximately \$2.5 billion in Canada from 2008 to 2020, with nine major transactions or activities captured over that period. Despite occasional blocks in select sectors, PRC economic activity in Canada as a whole appears to be increasing. Canada’s mining sector has seen the most significant growth in such activity, although a majority is directed toward mining activity beyond the Canadian Arctic.⁷⁴ Since 2011, China has invested less than \$1 billion in mineral extraction projects in the Canadian Arctic, compared to more than \$40 billion in projects and firms elsewhere in Canada. According to the *Foreign Investment Cooperation Country*

⁷⁰ Gloria Dickie, “China Wants to Invest in the Arctic. Why Doesn’t Canada?,” *Walrus*, Jan. 29, 2021, accessed July 19, 2021, <https://thewalrus.ca/china-wants-to-invest-in-the-arctic-why-doesnt-canada/>.

⁷¹ “Cosco Energy Unit Suspends Trading, Oil Transport Orders Canceled After U.S. Blacklisting,” *Wall Street Journal*, Sept. 26, 2019, <https://www.wsj.com/articles/chinas-cosco-tries-to-weather-storm-from-u-s-tanker-blacklisting-11569515370>.

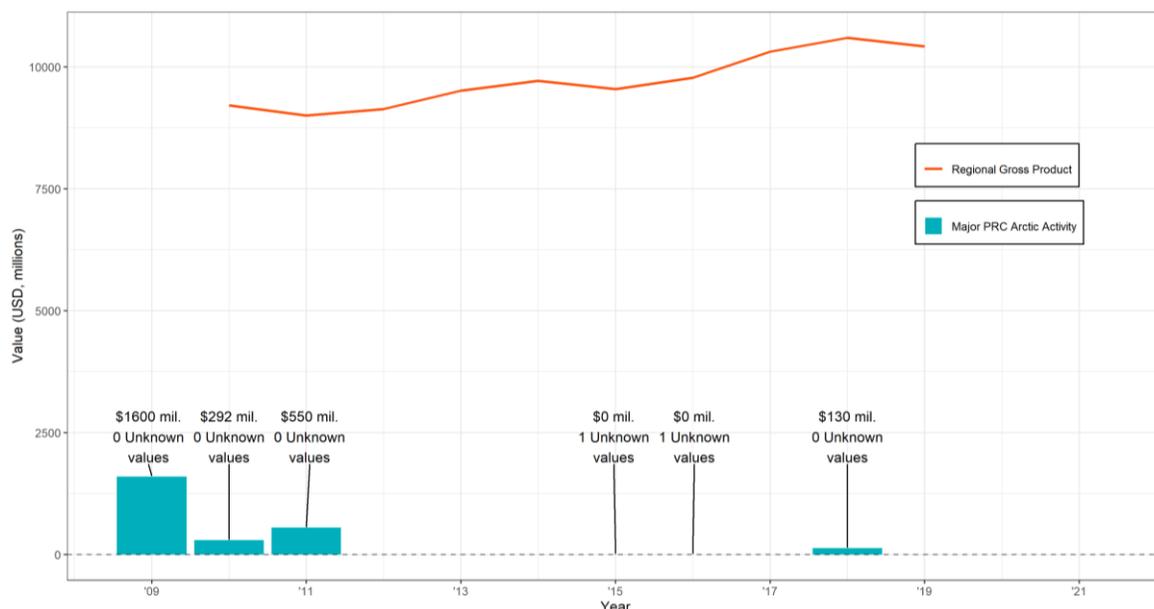
⁷² Cornell Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

⁷³ “Ottawa Blocks Chinese Takeover of Nunavut Gold Mine Project after National Security Review.”

⁷⁴ “China Wants to Invest in the Arctic. Why Doesn’t Canada?”

(Regional) Guidebook published by the PRC Ministry of Commerce, PRC-based FDI in Canada was \$475 million in 2019, none of which took place within the Canadian Arctic.⁷⁵

Figure 19. Major PRC economic activity in Canadian Arctic and Canadian Regional Gross Product



Source: CNA CAAT, Statistics Canada.

4.2.5 Russia

Because this portion of our analysis takes a broad lens to PRC economic activity, our categorization of activities in the Russian Arctic is relatively wide. Moreover, when PRC activity in Russia did not have a reported location, we included it in the dataset. For these reasons, the data here overstate the scope of PRC economic activity in the Russian Arctic.

Approximately 53 percent of the Arctic Ocean’s coastline falls within Russia’s borders. Russia is the third main producer of hydrocarbon resources globally, and these resources account for more than 50 percent of Russia’s federal budget. Russia’s Arctic regions make up roughly 90

⁷⁵ Chinese Academy of International Trade and Economic Cooperation, Embassy of the People’s Republic of China in Canada Office for Economics and Commerce, and Ministry of Commerce Department of Foreign Investment and Economic Cooperation, *Foreign Investment Cooperation Country (Regional) Guidebook, Canada, 2020 Edition, 2020*, <http://www.mofcom.gov.cn/dl/gbdqzn/upload/jianada.pdf>.

percent of Russia's natural gas production and 10 percent of its oil production.⁷⁶ In the Arctic, Russia and China's interests largely converge around resource extraction and the growth of the NSR. Both countries have expressed interest in expanding their long-term economic development ventures and share a similar view about Western multilateral bodies and financial institutions (compounded by US-led sanctions directed against Russia).⁷⁷ A high reliance on extractive industries, including many with a large Arctic footprint, and Western pressure from sanctions make a Russia-China economic partnership strategically important for the Russian economy.

As seen in Figure 20, major PRC economic activity in the Russian Arctic is uneven. Most years saw a few meaningful transactions, but a spike occurred in 2019. In 2019, PRC-based firms engaged in at least 47 transactions in the Russian Arctic. It is too soon to tell whether that increase is the beginning of a trend. From 2008 to 2019, PRC-based firms engaged in more than \$81 billion worth of business across at least 114 transactions in the Russian Arctic. This number is likely greater because many of the values of PRC-based firms' economic activities in the Russian Arctic have not been disclosed. One trend is clear, however—the large role of PRC SOEs in the Russian Arctic. Five times as many individual transactions were made by SOEs as by non-SOEs in our dataset. Data on reported transaction values from non-SOEs are too few to say definitively that SOE transactions were larger, although anecdotally that would appear likely.

⁷⁶ The Arctic Institute, "Russia," June 19, 2020, accessed July 19, 2021, <https://www.thearcticinstitute.org/countries/russia/>.

⁷⁷ Elizabeth Buchanan, "There Is No Arctic Axis," *Foreign Policy*, July 21, 2020, accessed July 19, 2021, <https://foreignpolicy.com/2020/07/21/no-arctic-axis-china-russia-relationship-resources-natural-gas-northern-sea-route/>.

Figure 20. Major PRC economic activity in Russian Arctic and Russian Regional Gross Product

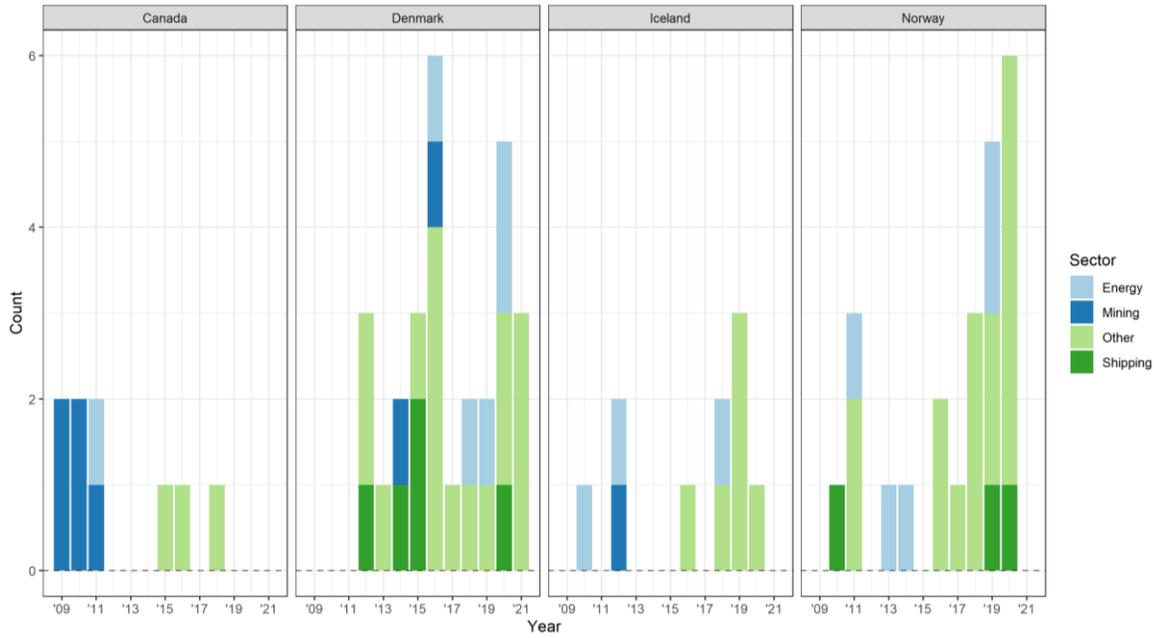


Source: CNA CAAT, Russian Statistics.

4.3 PRC Arctic economic activity by sector

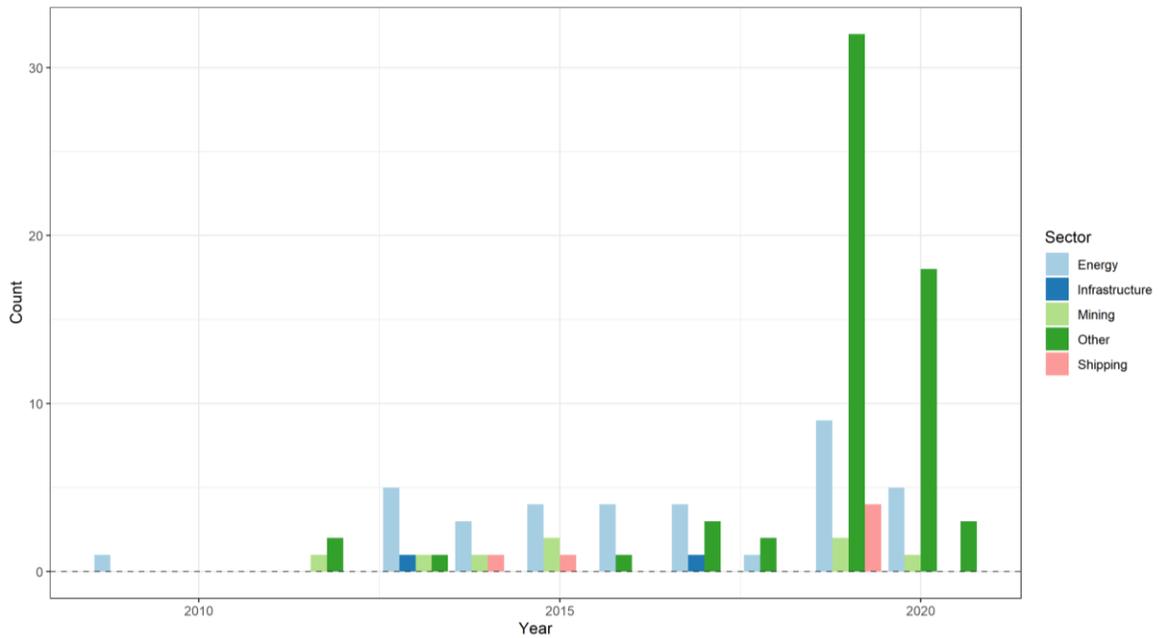
CNA’s CAAT tracks PRC economic activity in numerous sectors (including those listed in the NDAA) and found particularly high levels of activity in extractive sectors (energy and mining) and infrastructure (including shipping). Figure 21 shows the count of PRC economic activity in all of the Arctic countries by sector except for Russia. Figure 22 looks at the count of transactions involving PRC-based firms by sector in Russia. We chose to display Russia separately because of the larger volume of PRC economic activity there.

Figure 21. Count of major PRC economic activities by sector and country



Source: CNA CAAT.

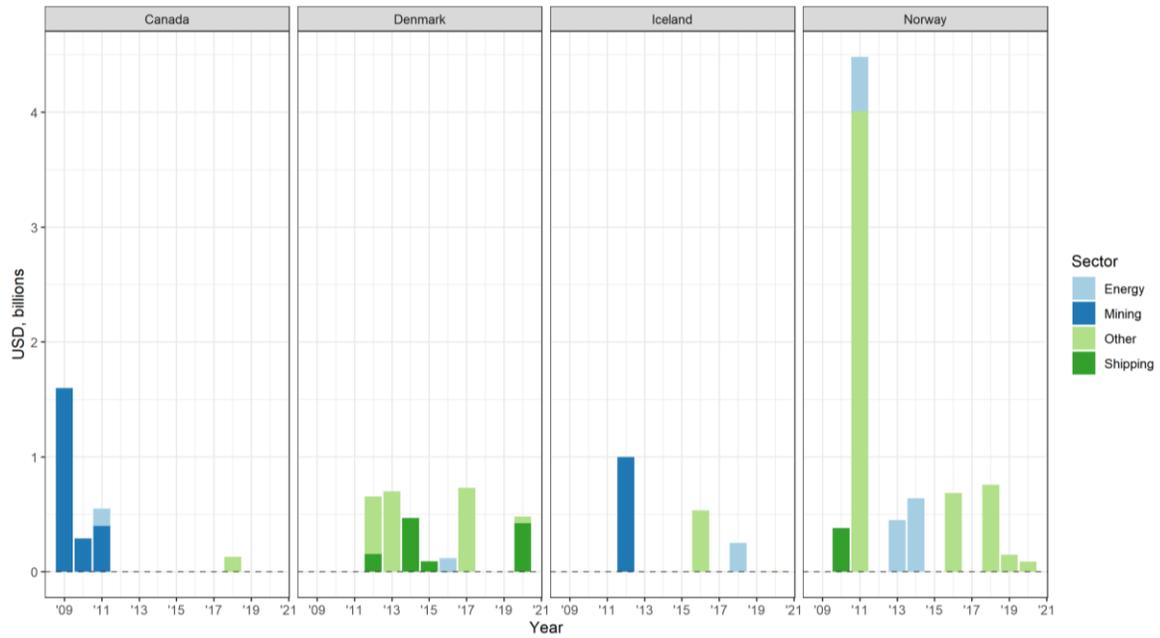
Figure 22. Count of China's economic activity by sector in Russia



Source: CNA CAAT.

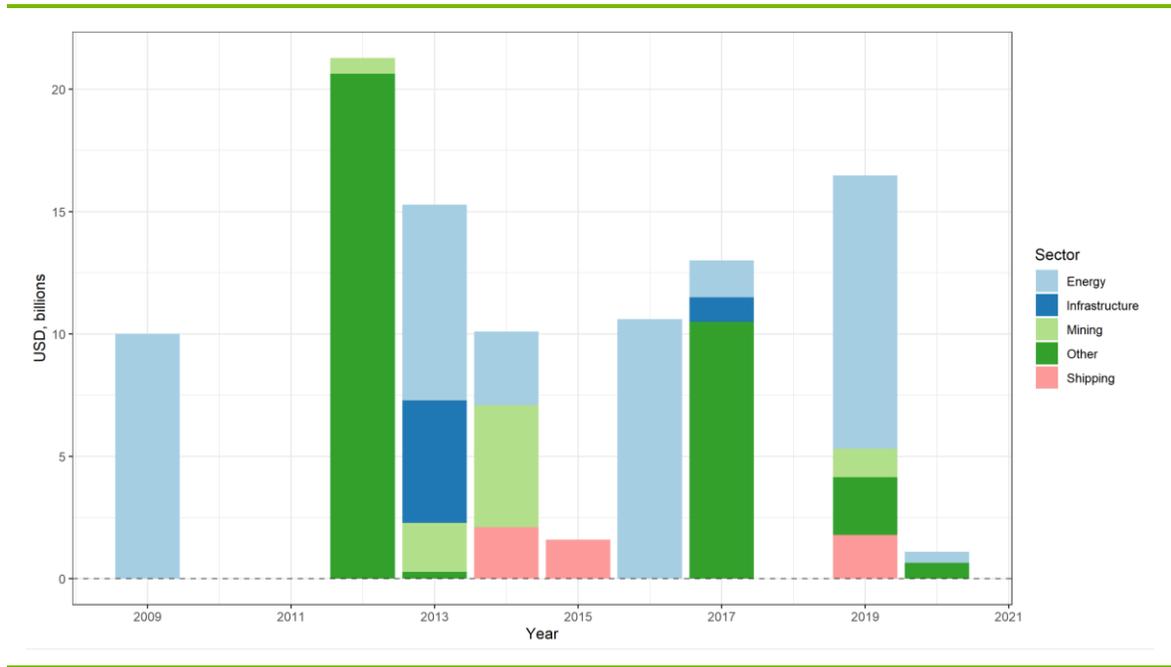
Figure 23 depicts the value of China's economic activity by sector in the five Arctic countries except for Russia, and Figure 24 illustrates the value of PRC economic activity by sector in Russia. The values that accompanied many of the transactions were not publicly disclosed and thus are not included in our figures.

Figure 23. Value of China's economic activity by sector in Arctic countries minus Russia



Source: CNA CAAT.

Figure 24. Value of China’s economic activity by sector in Russia



Source: CNA CAAT.

4.3.1 Energy

China is one of the leading foreign economic actors in energy projects globally, with one report cataloging PRC-based firms as ranking fourth in energy sector FDI from 2010 to 2016.⁷⁸ Between 2007 and 2016, two of China’s main policy banks, Chinese Development Bank (CDB) and Export-Import Bank of China, funded roughly \$196.7 billion in the energy sector overseas.⁷⁹

In the Arctic, PRC economic activities often focus on the energy sector. China’s Arctic Policy notes that “the utilization of sea routes and exploration and development of the resources in the Arctic may have a huge impact on the energy strategy and economic development of China.”⁸⁰

⁷⁸ Chuyu Liu and Johannes Urpelainen, *Why The United States Should Compete with China on Global Clean Energy Finance*, Brookings, 2021, <https://www.brookings.edu/research/why-the-united-states-should-compete-with-china-on-global-clean-energy-finance/>.

⁷⁹ Ibid.

⁸⁰ *China’s Arctic Policy*, The State Council Information Office of the People’s Republic of China, 2018, https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/wjzcs/t1529332.shtml

In most years, PRC-based firms' activity in the energy sector exceeded activity in any other sector. This large amount of activity is especially evident in 2019, during which PRC-based firms were economically active in at least seven energy projects in Arctic states. This trend faced strong headwinds during the COVID-19 pandemic, during which global oil prices collapsed. According to Guggenheim, China is expected to continue to direct significant funds into new energy endeavors in the Arctic. They predict that the new energy projects could cost up to \$50 billion.⁸¹

China's activities in energy projects span the Arctic region. However, most PRC activities in energy projects have taken place in Russia. The most notable is Russia's Yamal LNG project, in which China invested billions to extract energy from the Yamal Peninsula. Russia is planning a second LNG project that is expected to be just as large as the first, and PRC-based companies have already been asked to participate.⁸² China has also participated in energy projects in Canada, Denmark/Greenland, Finland, Iceland, and Norway. PRC SOEs, including CNOOC, CNPC, and China Petroleum & Chemical Corporation (also known as Sinopec), have participated in many of these transactions. In July 2021, Greenland announced a moratorium on gas extraction because of climate concerns.

4.3.2 Infrastructure

PRC-based firms have participated in numerous large-scale infrastructure projects in the Arctic. Infrastructure is a large umbrella category that includes construction, transportation, telecommunications, and the building of shipping ports and undersea cables. From 2017 to 2019, there was a large spike in the activity of PRC-based firms. And although there was a lull in this sector in 2020, the activities by PRC-based firms so far in 2021 have a higher value than all of the infrastructure projects since 2014.

Because of sparse transportation infrastructure in some parts of the Arctic, access roads and other transport facilities are often needed as precursors to further regional economic development.⁸³ One analysis holds that there is a \$1 trillion funding gap in Arctic infrastructure (over a 15-year period) and that maritime infrastructure projects alone will require \$16 billion.⁸⁴ Both Russia and Finland have sent welcoming messages to the private sector inviting

⁸¹ Xie Wenwen and Caixin Globus, "For Chinese Companies, Investment in Arctic Infrastructure Offers Both Opportunities and Challenges," *ArcticToday*, June 17, accessed July 20, 2021, <https://www.arctictoday.com/for-chinese-companies-investment-in-arctic-infrastructure-offers-both-opportunities-and-challenges/>

⁸² "China Invests In Game-Changing Arctic LNG Project," May 4, <https://oilprice.com/Energy/Natural-Gas/China-Invests-In-Game-Changing-Arctic-LNG-Project.html>.

⁸³ Scott MinerD, Global Chief Investment Officer, Guggenheim Partners. "For Chinese Companies, Investment in Arctic Infrastructure Offers Both Opportunities and Challenges."

⁸⁴ *Ibid.*

that type of investment. Yet this investment will not be unprecedented, and it is not taking place in isolation. It will build off of past regional successes, such as the 2015 partnership between Russia and China to strengthen satellite navigation and interoperability between the countries' GLONASS and BeiDou systems.

Still, much infrastructure must start from scratch, and China is one of the few countries that can match companies and financing at the necessary scale.⁸⁵ Because infrastructure projects often straddle the public and private sectors, they are novel cases to use as proxies for determining how PRC-based firms may approach economic activities across other Arctic sectors, in part because local economic and political sensitivities factor into such initiatives.

According to our dataset, China is currently involved in numerous infrastructure projects in Arctic states. Many of the projects that we learned about during our research do not have a reported value.⁸⁶ Furthermore, some facilities (excluded from our narrower definition of Arctic geography in the previous section) may register as relevant to Arctic economies in a broader analysis. One example is logistics hubs that support Arctic operations, even if located south of 60 degrees north latitude, such as the new Berelast Logistics Center 30 kilometers north of Moscow. Berelast is Russia's largest rail logistics station and serves as the rail connecting hub between Russia and China's "Belt and Road" network. It services seven lines and consists of distribution centers, warehousing, customs clearance, and distribution services.⁸⁷ It was built jointly by a Russian company and Yingkou Port of Liaoning Port Group at a stated cost of \$238 million.⁸⁸

Because China's economic activity around infrastructure has been drawing so much attention over the past five years, some initiatives involving PRC-based firms recently have been blocked (or have become too politically contentious to proceed with). Examples include the withdrawal of a bid for construction of two airports in Greenland and modernization of another⁸⁹ and the

⁸⁵ This statement dovetails with the views of the Pentagon's Office of Net Assessment, which opined, at a Senior Arctic Leaders Conference on March 10, 2010, that China is "modestly" flexing its muscles in the Arctic because the exploitation of the NSR serves its long-term trade interests because of potential bottlenecks in Southeast Asia (Strait of Malacca). China also has excellent polar shipbuilding capability and an excellent Arctic research base. Mr. James Baker, Director, the Office of Net Assessment, Office of the Secretary of Defense.

⁸⁶ First and foremost, if a high value is associated with a project, it is much more likely to attract the attention of the press, regulators, taxing authorities, and, of course, activists who are opposed to many forms of Arctic development. In some cases, the value is not stated because the project has not been fully definitized.

⁸⁷ "Berelast Logistics Center Realizes Normal Operation of China-Europe Express."

⁸⁸ Eng.rzd.ru (Full Russian Link could not be downloaded)

⁸⁹ , "China withdraws bid for Greenland airport projects: Sermitsiaq newspaper," Reuters, June 4, <https://www.reuters.com/article/us-china-silkroad-greenland/china-withdraws-bid-for-greenland-airport-projects-sermitsiaq-newspaper-idUSKCN1T5191>.

collapse of a deal (known as the Dreki Partnership) between CNOOC and Iceland's Eykon to jointly explore for oil in Iceland's exclusive economic zone (near Jan Mayen Island).⁹⁰

4.3.3 Mining

The Arctic contains major reserves of iron ore, copper, nickel, zinc phosphates, diamonds, and rare earth minerals. China is already the global leader in the supply of rare earth minerals (possessing approximately 70 percent of the rare earth mineral reserves in the world),⁹¹ so the prospect of substantial mineral reserves has drawn the interest of many PRC-based companies, resulting in substantial economic activity around the mining sector.

Over the past decade, PRC-based firms have predominantly pursued mining projects in Canada and Russia. PRC SOEs finance a significant percentage of the mining projects, accounting for roughly 65 percent of the transactions in the mining sector. SOEs that are the most active in the mining industry include Zijin Mining Group, Jiangxi Copper Company, and CITIC Group Corporation. In 2011, China's Bluestar, one of the world's largest ferrosilicon companies, purchased Elkem, a Norwegian heavy industry business, for \$2.1 billion, including ownership of a ferrosilicon plant in Iceland.⁹²

In recent years, PRC-based firms have dedicated themselves to locating and extracting rare earth minerals from the Arctic. Much of this activity is directed at Greenland, which has an abundance of precious metals, rare earth minerals, uranium, and gemstones and PRC-based firms involved in some projects, such as rare earth mining in Kvanefjeld/Kuannersuit.⁹³

4.3.4 Shipping

The icecaps in the Arctic are increasingly melting, paving the way for new Arctic Ocean shipping routes that could eventually shave days or weeks off the journey from China to Europe.⁹⁴ China has repeatedly outlined its aspirations to extend the Belt and Road Initiative

⁹⁰ "Óvíst um framhald rannsókna á Drekasvæðinu." The deal's collapse was reportedly due to poor seismic results and some backlash from environmental groups.

⁹¹ Myra Saefong, "US Looks to Ease China's Monopoly on Rare Earths," MarketWatch, Mar. 12, <https://www.marketwatch.com/story/u-s-looks-to-ease-chinas-monopoly-on-rare-earths-11615568838#:~:text=China%20has%20about%2070%25%20of,rising%20demand%2C%E2%80%9D%20he%20says>.

⁹² "Chinese Company Buys Elkem, Including Iceland Smelter."

⁹³ "Geopolitics is Making Two Rare Earths Mining Projects in Greenland More Complicated."

⁹⁴ IndustryWeek, "New Shipping Route Shows China's Arctic Ambitions," Aug. 16, 2013, 2013, <https://www.industryweek.com/supply-chain/transportation/article/21960996/new-shipping-route-shows-chinas-arctic-ambitions>

to the Arctic by developing shipping lanes that are becoming accessible because of the warming climate in the region.⁹⁵

Over the past decade, PRC-based companies have continued to expand their shipping interests in the Arctic. PRC-based firms have been involved in constructing ports, shipyards, ships, and LNG tankers. PRC-based companies also have engaged in several notable shipping-related activities over the span of our dataset. In 2014, the government of Jilin Province, the China Merchants Holding International Company, and Russia's Summa Group (its largest port operator) signed an agreement to build the Zarubino Port in Russia's Primorsky Krai. In 2018, the first stage of this project began.⁹⁶ The Zarubino Port is not in the Arctic but is intended as a major link on the Northeast Passage trade route from Asia to Europe and for the transit of goods from the PRC. It represents a subset of Arctic-related investments not fully captured in this assessment because of questions about geography. PRC-based backers are also partly funding a deepwater port in Arkhangelsk, the largest city on Russia's northern coast near Finland.⁹⁷ In 2021, COSCO announced their plan to invest in three LNG carriers to aid in the transport of LNG for the Arctic LNG 2 project in Russia.⁹⁸

PRC economic interests in Arctic shipping projects have almost solely been driven by PRC SOEs. The most active companies include COSCO and China State Construction Engineering Corporation. COSCO, one of the world's largest shipping companies, has been the leading PRC-based company engaging in the Arctic shipping industry.⁹⁹ The head of COSCO's marketing and sales department reiterated the importance of the Arctic for the company, stating that in the Arctic, "our development strategy is to serve the Polar Silk Road and international trade between the North Atlantic region and the Far East."¹⁰⁰

⁹⁵ Reuters Staff, "China unveils vision for 'Polar Silk Road' across Arctic," Reuters, Jan. 25, 2018, 2018, <https://www.reuters.com/article/us-china-arctic/china-unveils-vision-for-polar-silk-road-across-arctic-idUSKBN1FF0J8>.

⁹⁶ "China's 'Arctic Silk Road' Projects."

⁹⁷ "New Barents Sea Port and 500 km Railway Link Could Help Connect Asia with the Arctic."

⁹⁸ , "COSCO Shipping plans to invest in 3 LNG carriers for "Arctic LNG project"," Jan. 26, 2021, accessed July 20, 2021, <https://www.maritimebusinessworld.com/cosco-shipping-plans-to-invest-in-3-lng-carriers-for-arctic-lng-2-project-2737h.htm>

⁹⁹ Arctic Today, "China's COSCO to Stay Course on Arctic Shipping," May 16, 2019, <https://www.arctictoday.com/chinas-cosco-to-stay-course-on-arctic-shipping/>

¹⁰⁰ Ibid.

5. Recent Trends in PRC FDI and Possible Risks

Our CAAT dataset and our analysis of PRC Arctic strategy (found in a companion report)¹⁰¹ underscore that PRC economic activity in the Arctic is correctly understood as an important political tool for the regime. Therefore, even though this study finds that PRC FDI in the Arctic is a relatively modest tool for PRC-based firms in the Arctic, our analysis also suggests that PRC economic activity in the Arctic should factor into US policy-makers' approach to Arctic security and diplomacy. This section explores potential concerns and uncertainties to account for as the US and other Arctic states consider the relative benefits and risks that accompany an expansion of PRC economic activity in the region.

5.1 COVID-19 and short-term uncertainty

The COVID-19 pandemic upended global investment trends and disrupted dealmaking.¹⁰² Globally, foreign investment plummeted more than 40 percent. This downturn particularly affected the Arctic, given tight restrictions on travel to Canada, Iceland, Greenland, and Norway for much of 2020 and the decline in oil prices at the outset of the pandemic.

The smattering of potential deals in our dataset reinforces the uncertainty of the Arctic development horizon as a result of COVID-19. We do not register any pending PRC investments in the Canadian Arctic. In Denmark/Greenland, one notable publicly known transaction is potentially in the works. As of 2018, CNPC and CNOOC were reportedly interested in bidding on blocks the Greenlandic government is interested in opening to foreign bidding, although in July 2021 the Greenlandic government announced a moratorium on petroleum drilling. It is not clear when the Greenlandic government intends to open these blocks or whether PRC-based companies will still be interested. Meanwhile, Russia has several pending investments from PRC-based funders, although as cataloged previously, these deals often fail to materialize.

¹⁰¹ Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*.

¹⁰² *World Investment Report 2021: Investing in sustainable recovery*, United Nations Conference on Trade and Development, UNCTAD/WIR/2021, 2021, https://unctad.org/system/files/official-document/wir2021_en.pdf.

5.2 Characterizing long-term risks from PRC FDI

Clarifying the specific means by which PRC economic activity in the Arctic can trigger concerns for US and Arctic policy-makers is important for fostering more targeted conversations on reducing political risk. US and Arctic nations' concerns about the concentration of PRC FDI often implicitly focus on six risk clusters: (1) political influence, (2) military or security, (3) coercive and corrupt business practices, (4) the exploitation of vulnerable populations, (5) noncompliance with environmental laws and standards, and (6) endeavors to corner the market on key strategic minerals or commodities.

5.2.1 Political influence

China's need for resources and raw materials, its use of business investments as a means to gain political influence, and the dynamic between these two forces are well documented.¹⁰³ Research by Anne-Marie Brady, among others, has highlighted a "China Inc." approach to business and diplomacy, which combines political influence and assured access to resources.¹⁰⁴ To that end, some PRC-based firms have engaged in corrupt practices to garner economic or political influence, particularly in the Global South. Yet other than Russia, Arctic nations rank very low on corruption indexes, and wide-scale corruption is improbable in the Arctic. Greater risks for political influence efforts stem from China's bilateral diplomacy with small Arctic states. Bilateralism affords China an opportunity to exercise greater weight in its engagements with individual Arctic nations.

5.2.2 Military

As detailed in our companion report on PRC Arctic strategy, China's military is not active in the Arctic, but they are developing underlying capabilities and concepts that could enable future Arctic operations. Dual-use infrastructure and capabilities, items that have commercial or nonmilitary application but can also be used by military forces, are of particular concern for analysts. Such capabilities are also often at the heart of concerns about PRC regional economic activity. PRC development of Arctic shipping routes, expansion of high-latitude satellite ground stations, hydrographic surveying, and icebreaker construction are examples of prospective

¹⁰³ Elizabeth Economy and Michael Levi, *By All Means Necessary – How China's Resource Quest is Changing the World*, (Oxford University Press, 2013).

¹⁰⁴ Anne-Marie Brady, *China as a Polar Great Power*, (Cambridge University Press, 2017), 132. doi: <https://doi.org/10.1017/9781316832004>.

dual-use investments underway by China in or around the Arctic.¹⁰⁵ The operational and regional experience garnered by China through its regional presence in Arctic research stations is another related dual-use concern. Research activities also normalize PRC state presence in the Arctic. Finally, as seen in the debate on Huawei and 5G, US officials widely consider involvement by PRC-based firms in IT to pose explicit risks of intelligence collection. Yet these activities are not, strictly speaking, investments and do not presage immediate permanent deployments of PRC troops and ships to the Arctic region. Over the long term, however, they could contribute to the feasibility of periodic PRC military activity in the Arctic.

5.2.3 Coercive or corrupt business practices

The OECD Convention on Combating Bribery of Foreign Officials in International Business Transactions is the recognized international standard¹⁰⁶ that countries are expected to criminalize the offer or payment of things of value to foreign public officials to acquire publicly financed contracts. Analysts have documented instances of PRC-based firms violating this tenet (although China itself is not a signatory), particularly in Africa¹⁰⁷ but also in central Asia.¹⁰⁸ Given that states in the Arctic (except Russia) consistently rank highest in global anticorruption measures, PRC-based firms active in the Arctic are unlikely to bring significant corruption. Yet some lesser versions of corruption, such as coercive economic tactics, are possible. Where populations are sparse, for example, there is perhaps some risk of importing nonlocal labor to staff labor-intensive projects. Wherever PRC-based firms can dictate terms because of superior economic scale, or can do so in conjunction with pressure from the PRC state, US and other non-PRC-based firms may find themselves unable to compete on price.

¹⁰⁵ Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*.

¹⁰⁶ *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and Related Documents*, OECD, 1997, https://www.oecd.org/daf/anti-bribery/ConvCombatBribery_ENG.pdf.

¹⁰⁷ Irene Yuan Sun, Kartik Jayaram, and Omid Kassiri, *Dance of the Lions and Dragons: How are Africa and China engaging, and how will the partnership evolve?*, McKinsey & Company, 2017, <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Middle%20East%20and%20Africa/The%20closest%20look%20yet%20at%20Chinese%20economic%20engagement%20in%20Africa/Dance-of-the-lions-and-dragons.ashx>. Interestingly, PRC-based business persons felt victimized because they felt they had to pay bribes to conduct businesses while, on the other hand, the African firms said that the PRC nationals were the easiest targets for bribes. PRC-based business persons also felt that “tips” if not bribes are necessary to get things done. (Hereinafter McKinsey.)

¹⁰⁸ Jacob J. Lew et al., *China's Belt and Road: Implications for the United States*, Council on Foreign Relations Independent Task Force, Independent Task Force Report No. 79, 2021, 43, <https://www.cfr.org/report/chinas-belt-and-road-implications-for-the-united-states/>

5.2.4 Exploiting vulnerable populations and economies

Indigenous people comprise approximately 10 percent of the Arctic population¹⁰⁹ and live in areas increasingly prized for their natural resources. Rural Arctic communities often face poverty, challenges accessing substantial capital, and constraints on technical capacity to undertake large projects. As a result, many communities may find cheap capital from the PRC state or PRC-based firms an attractive offer, even if on less-than-favorable terms. Our analysis of Arctic regulatory conditions (found in a companion report)¹¹⁰ did not find evidence that semiautonomous communities or provinces enjoy significant autonomy when it comes to financial regulations on inbound FDI, which mitigates concerns about the most substantial risks from FDI. Nevertheless, the legitimate economic right for vulnerable communities and economies to seek capital, including from China, will continue to force central governments to balance long-term strategic concerns with near-term political demands. Interestingly, many business persons in Finland, Norway, and Russia complained that Indigenous groups are demanding that offshore projects not influence their current way of life, especially as regards grazing and migration patterns. At the same time, there are reports that Indigenous areas are becoming attractive sites for green energy projects.¹¹¹

5.2.5 Noncompliance with local environmental or labor laws

PRC-based firms are not immune to the pressure and constraints that often compel other firms to balance labor and environmental costs with business interests and profit. In other parts of the world, concerns have mounted about the economic and labor practices of some PRC-based firms. Again, practices by PRC-based entities in Africa can be particularly worrisome. One report documented “instances of major labor and environmental violations by Chinese owned businesses [on the continent]. These range from inhumane working conditions to illegal extraction of natural resources including timber and fish.”¹¹² The report authors cite labor and safety violations among PRC SOE-run copper mines in Zambia, illegal logging in Mozambique, and illegal fishing in West African waters.¹¹³ Environmental concerns abound wherever local nations do not have, or do not seek to enforce, environmental standards. PRC-based firms have contributed to deforestation in Indonesia and Brazil because of demand for wood products and

¹⁰⁹ Arctic Center-University of Lapland, “Arctic Indigenous Peoples,” <https://www.arcticcentre.org/EN/arcticregion/Arctic-Indigenous-Peoples>.

¹¹⁰ Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*.

¹¹¹ Field Discussion Finland/Norway 202162.

¹¹² Sun, Jayaram, and Kassiri, *Dance of the Lions and Dragons*, 11.

¹¹³ *Ibid.*, 48-49.

arable land (in the case of Brazil) to export soybeans.¹¹⁴ Yet any PRC-based company operating in the West would be subject to the same local environmental and labor laws and regulations as any other company.

Direct extrapolation from experiences in Africa or Latin America to the Arctic is ill advised because most Arctic polities have a strong environmental ethic and legal structures that deter environmental misdeeds. Still, extreme vigilance on environmental compliance is wise; a major industrial accident or ship casualty involving hazardous or noxious cargoes could have disastrous effects on the Arctic marine environment.¹¹⁵ The Arctic is a uniquely fragile ecosystem, and many extractive activities, refining activities, or industrial operations take place near the Arctic coastline. These factors would make cleanup of an accident extremely difficult and costly. Any firms with evidence of problematic environmental track records seeking to gain entry into the Arctic market should be subject to added scrutiny and monitoring.

5.2.6 Cartel operation and control over critical minerals

Shipping routes and natural resources are among the primary Arctic economic attractions for external investors. The recession of the polar ice pack for increasing periods during the year makes both more accessible. Among the most prized resources in the region are rare earth elements and minerals, which are critical for US military industrial base manufacturing, among other high tech applications. The overwhelming majority (perhaps more than 90 percent) of worldwide rare earth element production comes from PRC-based firms.¹¹⁶ China's dominance in the rare earth element market has sparked concerns about dependence in Western capitals. These concerns are not merely hypothetical—China imposed an embargo of rare earth elements against Japan in 2010 after Japan's arrest of a fishing boat captain for ramming two Japanese Coast Guard vessels in the East China Sea.¹¹⁷ In the most extreme case, a high concentration of PRC control over rare earth extractive firms in the Arctic could further strengthen PRC control over a critical resource, with economic and security implications for the US. Moreover, rare earth element refinement can be an environmentally hazardous process. This issue is salient not only in locations with high concentrations of rare earth minerals, such as Greenland, but also in locations where refinement may be viable. For example, Iceland's abundant geothermal energy could be used to smelt aluminum or to

¹¹⁴ Melissa Chan and Heriberto Araújo, "China Wants Food. Brazil Pays the Price," *Atlantic* Feb. 15, 2020, accessed July 19, 2021, <https://www.theatlantic.com/international/archive/2020/02/china-brazil-amazon-environment-pork/606601/>.

¹¹⁵ "Oil Spills in The Ocean: Why the Arctic is Particularly Vulnerable."

¹¹⁶ "China's Monopoly on Rare Earth Elements—and Why We Should Care."

¹¹⁷ *Ibid.*

perform other energy-intensive refining processes. PRC interest in the Iceland energy sector is thus connected to concerns about mineral control concentration. Control over critical resources is among the most immediately salient concerns about PRC investment in the Arctic because relatively limited investments could yield strategic complications for the US. For this reason, the White House and Department of Defense have already taken measures to foster US-funded alternatives to PRC-based rare earth firms.

6. Conclusion

Our analysis of PRC economic activity in the Arctic assessed the issue from two perspectives:

1. FDI in the Arctic
2. Large-scale PRC economic activity with Arctic implications

CNA's research sheds new, refined light on the scope and risks of PRC economic activity in the Arctic. Arctic investment by PRC investors itself is almost non-existent outside Russia, whereas economic activity by PRC-based firms is common across the Arctic. This finding, combined with analysis in the companion report on FDI screening laws, suggests indicates that the challenge of PRC economic statecraft, and thus the policy solutions, revolve around the more challenging phenomenon of economic activity writ large.¹¹⁸

6.1 Key Findings

FDI in the Arctic from PRC-based investors is minimal, whereas overall economic activity with some relation to the Arctic region and some involvement by PRC-based entities are more substantial than investments.

This finding leads CNA to three conclusions. First, accurate perceptions of high overall PRC activity in the Arctic likely explain misconceptions about the amount and scope of PRC FDI in the region. Second, US and Arctic policy-makers have a clear window within which to implement further rules or structures to mitigate risks of predatory PRC investments. Third, policy-makers concerned with overall PRC economic activity in the Arctic, not strictly FDI, face a much broader and more complex set of obstacles to implementing countervailing policy measures.

6.1.1 PRC FDI in the Arctic

FDI is qualitatively different from other forms of financial activity. An FDI transaction implies the potential for clear, direct, and legal control over entities and resources. A PRC-based firm building a bridge, for example, is qualitatively different from a PRC-based firm owning that bridge. Both can imply certain types of potential coercive risks, but the mechanisms and legal remedies are distinct.

¹¹⁸ Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

One example is the 2013 contract SRBG won alongside Serbia's VNG International to build the Halogaland Bridge in Narvik, a northern port in Norway. SRBG was later awarded another contract by the Norwegian Public Roads Administration for construction of the 580-meter Batstadtsander Bridge in another county in northern Norway, Nord-Trøndelag. The county council of Nord-Trøndelag was opposed to SRBG's involvement but was unsuccessful in stopping SRBG from tendering process.¹¹⁹ Neither project would have met the threshold for formal FDI because after construction services were rendered, ownership of the bridges remained in the hands of the relevant municipalities.

Based on CAAT data, PRC FDI in the Arctic is limited outside the Russian Arctic. PRC direct investment is likely on the rise in the Russian Arctic, though a steep decline in 2020 after an all-time peak in 2019 (perhaps related to COVID-19 and its effect on dealmaking or the oil market) complicates an understanding of the trend's direction in that country.

Broadly, investment counts and values in the Arctic are relatively static, again apart from Russia. PRC investment in the Canadian Arctic has been nonexistent after a smattering of investments in the early 2010s. In all other Arctic states, CAAT recorded few investments (zero to four per year); notably, no successful investments occurred in the US. Relative to other non-Arctic states, PRC FDI in the Arctic is often limited. China's FDI position in Canada overall is somewhat of an outlier and underscores the relative scales at work. PRC FDI in Canada as a whole is larger than that of France or the Netherlands, and the UK FDI position in 2019 was only 28 percent larger than China's. Still, PRC-based firms held only 1 percent of foreign investment in the Canadian economy as of 2019.

Currently, the CAAT does not register any pending PRC investments in the Canadian Arctic. In Denmark/Greenland, one notable transaction is potentially in the works. As of 2018, CNPC and CNOOC were reportedly interested in bidding on blocks the Greenlandic government is considering for foreign bidding. It is not clear when the Greenlandic government intends to open these blocks or whether PRC-based companies will still be interested. Meanwhile, Russia has several pending investments from PRC-based funders.

Two explanations likely account for the gap between observed PRC Arctic FDI and perceptions of China's investment stakes in the region. These explanations have implications for how policy-makers should address economic security in the Arctic.

First, some forms of economic activity that do not provide PRC-based firms with formal control over companies or assets may be misunderstood as investments (which carry a specific connotation of control). Although they are an important part of the financial landscape,

¹¹⁹ Kai Jæger Kristoffersen and Ole Dalen, "Kinesisk firma bygger gigantbru i Narvik: – Forsinkelsene koster kommunen dyrt," NRK, Aug. 3, 2018, accessed July 19, 2021, <https://www.nrk.no/nordland/kinesisk--vant-anbudet-om-halogalandsbrua--na-er-den-forsinket-nok-en-gang-1.14151414>.

contracts to provide services or build infrastructure have different functional effects than equity sales—the latter grant PRC-based investors control over local firms or infrastructure whereas the former do not. Policy-makers should clarify whether they are concerned about overall economic activity or FDI-style control over select resources or assets.

Second, PRC-based investors and local firms often announce newsworthy, high-value deals that are ultimately either watered down or never consummated. This trend is the most notable in Russia, but examples of this pattern exist in every location examined.

6.1.2 PRC economic activity in the Arctic

Separate from FDI, our CAAT dataset and our analysis of PRC Arctic strategy¹²⁰ underscore that PRC economic activity in the Arctic is an important political tool for PRC engagement in the region. As a result, an aggregate level of high economic activity, apart from strict FDI, can pose meaningful concerns for Arctic states and their strategic autonomy. These concerns are valid even if much of that economic activity does not qualify as FDI or if some of that activity is Arctic related but not specifically Arctic in geography. One example is the Berelast Logistics Center in Russia 30 kilometers north of Moscow, which was jointly built by a Russian company and Yingkou Port of Liaoning Port Group at a stated cost of \$238 million.¹²¹ Another example of Arctic-related investments that would not be captured by our narrower approach to the data is the Zarubino Port project, which is not in the Arctic but is intended as a major link on the Northeast Passage trade route from Asia to Europe (including carrying goods from China).

A final category of PRC economic activity that does not meet a stricter definition of FDI is PRC-based firms' participation in telecommunications systems. These activities are often not classically FDI but can pose real concerns about intelligence collection. In one example, Huawei partnered with Tele Greenland from 2016 to 2017 to lay a 100G network subsea cable in the Arctic¹²² to connect remote parts of the territory and upgrade existing telecommunication lines that link Greenland with Canada and Iceland.¹²³ PRC-based firms also service significant amounts of the 5G capacity in Iceland as suppliers of 5G equipment to two of the three Iceland telecommunications companies (Syn and Nova).¹²⁴

¹²⁰ Holz et al., *Exploring the Relationship between Chinese Investment in the Arctic and Its National Strategy*.

¹²¹ Eng.rzd.ru (Full Russian Link could not be downloaded)

¹²² "Huawei Marine Partners with Tele Greenland to Deploy 100G Submarine Network in the Arctic."

¹²³ Stronski and Ng, *Competition: Russia and China in Central Asia, the Russian Far East, and the Arctic*.

¹²⁴ "Two Telecom Companies in Iceland Use Huawei Products."

6.2 Implications

The above findings yield two implications for US and Arctic policy-makers.

Arctic states can still prevent PRC-based entities from using direct investment to capture key Arctic industries. As CNA's companion report on legal frameworks for FDI screening points out, most Arctic polities have robust screening regulations (Greenland being the main exception).¹²⁵ However, in some states, these rules or enforcement could benefit from reinforcement. The limited investment to date found by CNA means that Arctic policy-makers still have time to implement reforms.

Non-investment economic activity by PRC-based firms is substantial, is part of PRC economic statecraft, and involves different risks and countermeasures. CNA's research indicates that PRC-based entities are heavily involved in non-investment economic activity in the Arctic. Compared to direct investment, non-investment economic activity poses different risks and demands different solutions. Effectively tackling the challenge of PRC economic statecraft in the Arctic will require Arctic policy-makers to appreciate the difference between FDI and other economic activity, and hone policies to screen the latter as well as the former.

¹²⁵ Overfield et al., *Foreign Direct Investment Screening in the Arctic*.

Appendix A: PRC Economic Structures and State-Owned Enterprises

PRC SOEs may be uniquely responsive to the policy goals of the PRC state. Such entities are also often large enough to service or invest in major infrastructure projects of the kind that often concern US and Arctic policy-makers. This appendix details qualitative elements of PRC economic activity in the Arctic. It explains the structure of China's mixed economy and focuses in depth on the structure and history of six PRC-based entities that are behind many of the major investments we detected in the region. To determine the magnitude of the risks posed by these notable large PRC-based business entities, we analyzed their ties to the People's Republic of China (PRC) government, the PRC military (People's Liberation Army (PLA)), and the Chinese Communist Party (CCP), and their business practices and conduct globally.

China's mixed economy: SOEs and private companies

PRC economic activity in the Arctic region originates from PRC-based companies owned by private actors and those controlled directly by the PRC government. This bifurcation results from China's status as a "mixed economy," where the state plays a major role within a market economy through public ownership of certain economic assets and SOEs. PRC leaders can exercise control or influence over SOEs and private companies through a diverse array of government ministries and CCP organizations, as well as organizations affiliated with the CCP. The following sections describe SOEs and private companies, elucidating the methods PRC leaders use to exercise control or influence over them.

SOEs

SOEs have functioned as important economic actors since shortly after the founding of the PRC in 1949. As China emerged from a prolonged period of warfare and underdevelopment in the 1950s and 1960s, the CCP used SOEs to undertake a variety of nation-building tasks—to varying degrees of success—that included infrastructure development, agricultural reform,

and broad industrialization. According to one state-owned PRC news publication, the country has approximately 150,000 SOEs that employ more than 30 million people.¹²⁶

The PRC state exercises control over SOEs through the following central and local government ministries and state-owned financial institutions:

- **State-Owned Assets Supervision and Administration Commission (SASAC).** SASAC is a PRC government organization that reports directly to the State Council, the chief administrative authority of the PRC.¹²⁷ It is responsible for managing 93 centrally owned SOEs and their subsidiaries.¹²⁸ This management includes exercising investor responsibilities on behalf of the state, appointing or removing top executives, assessing SOE performance, approving mergers and acquisitions, and drafting laws or regulations governing the operation of SOEs.¹²⁹
- **Provincial and municipal SASACs.** Provincial and municipal governments in China maintain their own SASACs, which are responsible for managing enterprises owned by these governments. Like the central-level SASAC, these government organizations are charged with exercising shareholder responsibilities, appointing or removing personnel, approving mergers or acquisitions, and enforcing laws and regulations governing SOEs.¹³⁰
- **Central Huijin Investment Company (Huijin).** A state-owned investment company, Huijin holds controlling stakes in multiple state-owned banks and financial enterprises.¹³¹ The PRC State Council is the principal shareholder in Huijin and appoints all members of its board of directors.¹³²

¹²⁶ “Shanghai to Shake Up State Enterprises Ownership,” China.com via the Wayback Machine, Feb. 17, 2017, <https://web.archive.org/web/20170217083603/http://english.china.com/news/china/54/20170217/887331.html>.

¹²⁷ “The State Council,” *People’s Daily*, 2021, <http://en.people.cn/data/organs/statecouncil.shtml>; “State Council,” Embassy of the People’s Republic of China to Nepal, October 27, 2004, <http://np.china-embassy.org/eng/ChinaABC/zz/t167478.htm>.

¹²⁸ “Central Enterprise Directory (Yangqi Minglu; 央企名录),” State-owned Assets Supervision and Administration Commission of the People’s Republic of China, Dec. 29, 2017, www.sasac.gov.cn/n2588035/n2641579/n2641645/c4451749/content.html;

¹²⁹ *Ibid.*; “SASAC,” Main Functions, 2017, <http://en.sasac.gov.cn/n1408028/n1408521/index.html>.

¹³⁰ “China’s Reform of State-Owned Assets Management System Is Producing Notable Results,” China.org, November 30, 2004, <http://www.china.org.cn/e-news/news041130.htm>.

¹³¹ “About Us,” Central Huijin Investment Ltd., 2021, http://www.huijin-inv.cn/huijineng/About_Us/index.shtml.

¹³² *Ibid.*

- **Ministry of Finance.** China’s Ministry of Finance regulates a number of centrally controlled banks and financial services organizations.¹³³
- **Ministry of Education.** The Ministry of Education has ultimate responsibility for companies founded by universities under its control, including Peking University, Tsinghua University, and Renmin University of China.¹³⁴

Although measures related to China’s “reform and opening” allowed for the expansion of private enterprises in China, SOEs still maintain a dominant position in China’s economy. For example, by one estimate, the 10 largest companies in China by revenue are all SOEs managed by the central government.¹³⁵ SOEs also control or maintain influential positions in numerous sectors of the PRC economy. In 2006, the State Council identified seven “strategic industries,” namely defense, electricity production, petroleum, telecommunications, coal mining, aviation, and shipping, in which the state must keep “absolute control.”¹³⁶ The State Council also identified “pillar industries” in which the state must maintain “strong influence.” These industries include machinery, electronics, information technology, automobiles, steel, nonferrous metals, chemicals, and construction.¹³⁷ Finally, the state also maintains strong

¹³³ “Particulars of Shareholding of the Top 10 Ordinary Shareholders of the Bank (as of 31 December 2020),” Industrial and Commercial Bank of China (ICBC), 2021, <http://www.icbc-ltd.com/ICBCLtd/Investor%20Relations/Share%20Information/Shareholding%20Structure/>; “History,” China Construction Bank, 2021, <http://en.ccb.com/en/investor/history.html>; “Milestones of ABC,” Agricultural Bank of China, 2021, <http://www.abchina.com/en/AboutUs/AboutAabc/milestones-of-abc/milestones/>; China Huarong Asset Management Co., Ltd. 2015 Annual Report,” China Huarong Asset Management Co., Ltd., 2015, <https://www1.hkexnews.hk/listedco/listconews/sehk/2016/0428/ltn20160428023.pdf>, p. 167.

¹³⁴ “Subordinate Universities,” Ministry of Education of the People’s Republic of China, 2021, http://en.moe.gov.cn/subordinate_universities/; “Company Briefing,” Peking University Resources (Holdings) Company Limited, 2021, <http://en.pku-resources.com/about/company.html>; “About Us (*Guanyu Women*; 关于我们),” Founder Technology Group Co. Ltd. (*Fangzhen Keji Jituan Gufen Youxian Gongsi*; 方正科技集团股份有限公司), 2021, <http://www.foundertech.com/about.html>.

¹³⁵ “Fortune Global 500,” *Fortune*, 2020, https://fortune.com/global500/2020/search/?fg500_country=China.

¹³⁶ *Notice of the General Office of the State Council on Forwarding the Guiding Opinions of the SASAC about Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises (Guowuyuan Bangongting Zhuanfa Guozhiwei Guanyu Tuijin Guoyou Ziben Diaozheng He Guoyou Qiye Zhongzu Zhidao Yijian De Tongzhi*; 国务院办公厅转发国资委关于推进国有资本调整和国有企业重组指导意见的通知),” Peking University School of Law, Dec. 5, 2006, http://www.pkulaw.cn/fulltext_form.aspx?Db=chl&Gid=82473; Wendy Leutert, “Challenges Ahead in China’s Reform of State-Owned Enterprises,” *Asia Policy*, No. 21 (Jan. 2016), <https://www.brookings.edu/wp-content/uploads/2016/07/Wendy-Leutert-Challenges-ahead-in-Chinas-reform-of-stateowned-enterprises.pdf>, p. 85.

¹³⁷ *Ibid.*

influence over the PRC financial sector, since the country's five largest banks are all centrally controlled SOEs.¹³⁸

Private companies

In 1978, the PRC government began enacting several liberalizing policies that loosened its grip over certain sectors of the country's economy and sparked a multidecade period of rapid growth. According to PRC state media, the private sector accounts for 60 percent of the country's GDP, 70 percent of its technological innovation, 80 percent of its employment, and 90 percent of its new jobs.¹³⁹

Although the PRC government has reduced its direct role in certain sectors of the economy, the CCP has undertaken multiple efforts to enhance its influence within private firms:

- **Creation of CCP committees.** In September 2020, the General Office of the Central Committee of the CCP issued guidance calling for an increase in the CCP's influence within China's private sector in part through the creation of internal CCP committees within private companies.¹⁴⁰ This guidance followed a series of policy statements by Xi Jinping during his tenure focused on expanding the CCP's role in private enterprises and PRC society overall. According to the All-China Federation of Industry and Commerce, a chamber of commerce under the leadership of the CCP, the reforms associated with this guidance include granting a private company's internal CCP committee the ability to control human resources decisions, audit the company, and monitor the behavior of individual employees.¹⁴¹
- **Ongoing anticorruption campaign.** The PRC government has arrested and imprisoned multiple executives from private companies on corruption charges.¹⁴²

¹³⁸ "China's Six Largest Banks Suspend Opening New Accounts in Precious Metal Trading," *Global Times*, Nov. 28, 2020, <https://www.globaltimes.cn/content/1208306.shtml>.

¹³⁹ "China's Private Sector Contributes Greatly to Economic Growth: Federation Leader," Xinhua, Mar. 6, 2018, http://www.xinhuanet.com/english/2018-03/06/c_137020127.htm.

¹⁴⁰ "CPC Issues Guidelines for Strengthening United Front Work Involving Private Sector," Xinhua, Sept. 15, 2020, http://www.xinhuanet.com/english/2020-09/15/c_139370791.htm;

¹⁴¹ "Ye Qing: Advancing the Organic Integration of the Party's Leadership Systems and Private Enterprise Governance Systems (*Yeqing: Tuidong Dang De Lingdao Zhidu Tixi Yu Minqi Zhili Tixi Ronghe*; 叶青: 推动党的领导制度体系与民企治理体系有机融合)," All-China Federation of Industry and Commerce, Sept. 17, 2020, https://web.archive.org/web/20210106100349/http://www.acfic.org.cn/ldzc_311/jzhld/yq/yqgzhd/202009/t20200917_245057.html.

¹⁴² "Pei Li and Scott Murdoch, "Tencent Says Exec Being Probed Over Links to 'Personal' Corruption Allegations," Reuters, Feb. 10, 2021, <https://www.reuters.com/article/us-tencent-holdings-china/tencent-says-exec-being->

Although corruption is endemic in China, some of the charged executives were known to have publicly criticized the PRC government, gained too much wealth, or accumulated influence independent of the CCP.¹⁴³

- **Placement of government representatives.** Municipal governments in China also take efforts to enhance their influence in private enterprises through the placement of government representatives. For example, in 2019, the Hangzhou Municipal placed representatives inside 100 private companies operating in the city's technology hub.¹⁴⁴
- **Subsidies and other financial inducements.** China's national and regional government may influence private companies through subsidies and other financial inducements, including direct monetary support, indirect subsidies for electricity consumption, bank loans, tax incentives, and barriers for foreign competition.¹⁴⁵ In the past, the PRC government has gained direct ownership of private companies through bailouts as well.¹⁴⁶

probed-over-links-to-personal-corruption-allegations-idUSKBN2AB07X; Joyce Huang, "Chinese Property Tycoon Ren Zhiqiang Sentenced to 18-Year in Corruption Case," *Voice of America*, Sept. 22, 2020, <https://www.voanews.com/east-asia-pacific/voa-news-china/chinese-property-tycoon-ren-zhiqiang-sentenced-18-year-corruption>; Emily Feng, "How China's Massive Corruption Crackdown Snares Entrepreneurs Across the Country," *NPR*, Mar. 4, 2021, <https://www.npr.org/2021/03/04/947943087/how-chinas-massive-corruption-crackdown-snares-entrepreneurs-across-the-country>; "China Sentences Anbang's Ex-Boss to 18 Years in Jail," *Reuters*, May 9, 2018, <https://www.reuters.com/article/us-china-anbang-trial/china-sentences-anbangs-ex-boss-to-18-years-in-jail-idUSKBN1IB094>.

¹⁴³ Joyce Huang, "Chinese Property Tycoon Ren Zhiqiang Sentenced to 18-Year in Corruption Case," *Voice of America*, Sept. 22, 2020, <https://www.voanews.com/east-asia-pacific/voa-news-china/chinese-property-tycoon-ren-zhiqiang-sentenced-18-year-corruption>; Emily Feng, "How China's Massive Corruption Crackdown Snares Entrepreneurs Across the Country," *NPR*, Mar. 4, 2021, <https://www.npr.org/2021/03/04/947943087/how-chinas-massive-corruption-crackdown-snares-entrepreneurs-across-the-country>.

¹⁴⁴ Josh Horwitz, "China to Send State Officials to 100 Private Firms Including Alibaba," *Reuters*, Sept. 23, 2019, <https://www.reuters.com/article/us-alibaba-china-party/china-to-send-state-officials-to-100-private-firms-including-alibaba-idUSKBN1W80DO>.

¹⁴⁵ Kenji Kawase, "For Some Chinese Companies, Generous State Subsidies Make Up for Losses," *Nikkei Asia*, Apr. 24, 2019, <https://asia.nikkei.com/Spotlight/The-Big-Story/For-some-Chinese-companies-generous-state-subsidies-make-up-for-losses>; David J. Lynch, "Initial US-China Trade Deal Has Major Hole: Beijing's Massive Business Subsidies," *Washington Post*, Dec. 31, 2019, https://www.washingtonpost.com/business/economy/initial-us-china-trade-deal-has-major-hole-beijings-massive-business-subsidies/2019/12/30/f4de4d14-22a3-11ea-86f3-3b5019d451db_story.html; Arjun Kharpal, "As China Cuts Support for Its Electric Carmakers, Auto Firms Could Face a 'War of Attrition'," *CNBC*, June 19, 2019, <https://www.cnbc.com/2019/06/19/china-subsidy-cuts-for-electric-carmakers-could-lead-to-consolidation.html>.

¹⁴⁶ Sean O'Kane, "Nio's Future Depends More on the Chinese Government Than Ever," *Verge*, June 5, 2020, <https://www.theverge.com/2020/6/5/21274457/nio-q1-earnings-deliveries-chinese-government-investment-bailout>.

Mixed-ownership companies

Recent changes in PRC government policy have made it increasingly difficult to distinguish between state-owned and private companies. For years, the PRC government has attempted to improve the efficiency and business practices of SOEs by encouraging “mixed-ownership reform,” a process whereby SOEs can leverage private capital and expertise through the sale of minority ownership shares to private PRC-based companies.¹⁴⁷ However, in practice, state-owned investors such as SOEs, investment funds, or pension plans have increasingly purchased shares in private PRC-based companies.¹⁴⁸

The practice of SOEs buying shares in private companies has become formalized in PRC government policy documents. In June 2020, the CCP’s Central Comprehensively Deepening Reform Commission released a three-year action plan for reforming SOEs. The action plan calls for SOEs to make investments in private companies, stating that “state-owned enterprises must play a leading role and important influence on the healthy development of private enterprises.”¹⁴⁹ State-owned shareholders, even those with minority stakes, may be able to influence the operations of private PRC-based companies. For example, some private companies that have seen an influx of state-owned shareholders have reoriented their activities to support PRC state strategies such as the Belt and Road Initiative, set up internal CCP committees, or replaced board members with those approved by SASAC.¹⁵⁰

¹⁴⁷ Zheng Yibing, “China Unicom Pioneers in Mixed-ownership Reform,” *CGTN*, May 25, 2021, <https://news.cgtn.com/news/2021-05-25/China-Unicom-pioneers-in-mixed-ownership-reform-10yBYICIJKE/index.html>; Ann Listerud, “China’s Mixed-Ownership Reforms in Practice,” Center for Strategic & International Studies, Oct. 1, 2019, <https://www.csis.org/mor-money-mor-problems-chinas-mixed-ownership-reforms-practice>.

¹⁴⁸ Shen Hong, “Beijing Takes Stakes in Private Firms to Keep Them Afloat,” *Wall Street Journal*, Sept. 30, 2019, <https://www.wsj.com/articles/chinas-entrepreneurs-turn-to-state-backed-buyers-for-help-11569835803>.

¹⁴⁹ Lingling Wei, “China’s Xi Ramps Up Control of Private Sector. ‘We Have No Choice but to Follow the Party,’” *Wall Street Journal*, Dec. 10, 2020, <https://www.wsj.com/articles/china-xi-clampdown-private-sector-communist-party-11607612531>; “Hao Peng: Deeply Implement the Three-Year Action Plan of State-Owned Enterprise Reform to Promote High-Quality Development of State-Owned Assets and State-Owned Enterprises (*Hao Peng: Shenru Shishi Guoqi Gaige San Nian Xingdong Tuidong Guoqi Guoqi Gao Zhiliang Fazhan*; 郝鹏: 深入实施国企改革三年行动 推动国资国企高质量发展),” *Qiushi* (求是), Jan. 16, 2021, http://www.gov.cn/xinwen/2021-01/16/content_5580396.htm; “Action Plan to Make Central SOEs Flexible,” The State Council of the People’s Republic of China, Aug. 12, 2020, http://english.www.gov.cn/statecouncil/ministries/202008/12/content_WS5f3326a4c6d029c1c2637980.html.

¹⁵⁰ Lingling Wei, “China’s Xi Ramps Up Control of Private Sector. ‘We Have No Choice but to Follow the Party,’” *Wall Street Journal*, Dec. 10, 2020, <https://www.wsj.com/articles/china-xi-clampdown-private-sector-communist-party-11607612531>.

Challenges distinguishing between SOEs and private PRC-based companies

CNA contracted with Robert Sheldon of Arctic Infrastructure LLC to discuss PRC-based activities in the Arctic with businesspeople and officials in Scandinavia. The PRC government's attempts to control or influence private firms have made it increasingly difficult for Arctic countries to determine the PRC's level of involvement in foreign investment activities. The PRC's involvement was described as particularly opaque in our engagements with non-regulators. For example, most persons with whom we held discussions in Iceland indicated that they were not generally aware whether a particular PRC-based firm was privately held or an SOE, but there was a shared perception that the majority of PRC-based businesses had the backing and support of the PRC government.¹⁵¹ An Icelandic discussant from the tourism and fisheries sector described the capital situation as China "unfairly bringing investment that appears to have no economic cost to their side; the return may really be state building rather than economic." The discussant further said that China is "a threat to open market society and against the EU too."¹⁵²

An Icelandic official from the fisheries sector stated that shipyards in the PRC now build Arctic-capable ships at a highly subsidized cost and technology infusion that, in the official's estimation, indicates a "lower or artificial cost of capital"¹⁵³ in construction cost. The same official parenthetically indicated that differences between the US, Europe, and Iceland about the protection of marine mammals have dominated policy, creating an opening for China to gain "direct access" to fishing projects in Iceland.

Discussants frequently reported the perception that the PRC coordinates economic activities well and that many of the outreach activities are done using research institutions (such as the China-Iceland Arctic Science Observatory in Karholl).¹⁵⁴ This coordination is manifest in "political influence operations," which consist of political contributions to party leaders to curry favor such that, in Iceland, "every significant party is compromised."¹⁵⁵ Discussants from Finland and Norway similarly complained that PRC-based investors were exceptionally well prepared when they met with local business officials; that the PRC government subsidized the

¹⁵¹ Discussion 20210226 0900 #1.

¹⁵² Discussion 20210303 1000 #2

¹⁵³ Discussion 20210302 1030 #1.

¹⁵⁴ The premise that China uses research institutions for national security purposes was confirmed by numerous current and former military officials who participated in the Alaska Command Arctic Senior Leaders Summit in March 2021. The presentations were virtual because of COVID-19, but US Alaska Command organized the event.

¹⁵⁵ Discussion 20210226 0900 #1

travel, lodging, and food costs of the junkets; and that government officials were present in the meetings as “advisors.”¹⁵⁶ Finnish business persons from various sectors characterized PRC-based business persons seeking to do business in Finland as being “relentless in their information acquisition” and perennially acquiring information with no apparent deadlines.¹⁵⁷ This later comment about a long time horizon obviously suggests that state funding could be involved in their activities.

Connections between PRC SOEs, private companies, and the PLA

Despite former Chairman Jiang Zemin’s efforts to curb the PRC military’s economic empire in the 1990s, China’s military, the PLA, ostensibly remains involved in economic activities.¹⁵⁸ Policies such as military-civil fusion seek to enhance the capabilities of the PLA and other state security agencies by granting them access to the technology, expertise, or specialized information possessed by PRC-based businesses and research programs.¹⁵⁹ For example, BGI Group, a developer of COVID-19 test kits, has worked with the PLA to research mass testing for respiratory pathogens and efforts to make PRC military personnel less susceptible to altitude sickness.¹⁶⁰ This collaboration has led to accusations that BGI Group could use foreign genetic data to assist PRC military research.¹⁶¹

Efforts to track corporations collaborating with the PLA

In June 2020, the US Department of Defense (DOD) published a list of “Chinese Communist Military Companies.” To be included on this list, the company had to meet any of the following criteria:

¹⁵⁶ Field Discussion 20210623 #2

¹⁵⁷ Field Discussion 20210622 #31

¹⁵⁸ Christine Chan, “Jiang Demand Threatens PLA Business Empire,” *South China Morning Post*, July 24, 1988, <https://www.scmp.com/article/249182/jiang-demand-threatens-pla-business-empire>.

¹⁵⁹ Elsa B. Kania and Lorand Laskai, “Myths and Realities of China’s Military-Civil Fusion Strategy,” Center for New American Security, Jan. 28, 2021, <https://www.cnas.org/publications/reports/myths-and-realities-of-chinas-military-civil-fusion-strategy>.

¹⁶⁰ Kristy Needham, “Exclusive: China Gene Firm Providing Worldwide COVID Tests Worked with Chinese Military,” Reuters, Jan. 30, 2021, <https://www.reuters.com/article/us-china-genomics-military-exclusive/exclusive-china-gene-firm-providing-worldwide-covid-tests-worked-with-chinese-military-idUSKBN29Z0HA>.

¹⁶¹ Jianli Yang, “China’s PLA Is Involved with BGI Group, World’s Largest Biotech,” *Washington Times*, Feb. 17, 2021, <https://www.washingtontimes.com/news/2021/feb/17/chinas-pla-is-involved-with-bgi-group-worlds-large/>; Leng Shumei and Shen Weiduo, “Gene Firm Refutes Accusations of Ties to Chinese Military,” *Global Times*, Feb. 1, 2021, <https://www.globaltimes.cn/page/202102/1214542.shtml>.

- Owned or controlled by the PLA¹⁶²
- Engaged with the PLA or PRC intelligence services in providing commercial services, manufacturing, producing, or exporting¹⁶³
- Affiliated with a ministry of the government of the PRC¹⁶⁴
- Owned or controlled by an entity affiliated with the defense industrial base of the PRC¹⁶⁵

As of January 2021, DOD has listed 44 companies as maintaining some type of affiliation with the PRC military and the PRC government's policy of military-civil fusion.¹⁶⁶ According to DOD, although many PRC-based companies maintain the trappings of private entities, some of them have collaborated with the PRC government or the PLA through targeted FDI.¹⁶⁷

At least five companies identified on the DOD list are actively pursuing research programs and investment opportunities in the Arctic: Huawei Technologies, Hikvision, the China State

¹⁶² "Strom Thurmond National Defense Authorization Act for Fiscal Year 1999," Library of Congress, Oct. 17, 1998, PUBLIC LAW 105-261, Section 1237, <https://www.congress.gov/105/plaws/publ261/PLAW-105publ261.pdf>, p. 242.

¹⁶³ "Strom Thurmond National Defense Authorization Act for Fiscal Year 1999," Library of Congress, Oct. 17, 1998, PUBLIC LAW 105-261, Section 1237, <https://www.congress.gov/105/plaws/publ261/PLAW-105publ261.pdf>, p. 242.

¹⁶⁴ "Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005," US Government Publishing Office, Oct. 28, 2004, PUBLIC LAW 375, Section 1222, <https://www.govinfo.gov/content/pkg/PLAW-108publ375/html/PLAW-108publ375.htm>.

¹⁶⁵ "Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005," US Government Publishing Office, Oct. 28, 2004, PUBLIC LAW 375, Section 1222, <https://www.govinfo.gov/content/pkg/PLAW-108publ375/html/PLAW-108publ375.htm>.

¹⁶⁶ "Qualifying Entities Prepared in Response to Section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (PUBLIC LAW 105-261)," US Department of Defense, June 12, 2020, https://media.defense.gov/2020/Aug/28/2002486659/-1/-1/1/LINK_2_1237_TRANCHE_1_QUALIFYING_ENTITIES.PDF; "Qualifying Entities Prepared in Response to Section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (PUBLIC LAW 105-261)," US Department of Defense, Aug. 28, 2020, https://media.defense.gov/2020/Aug/28/2002486689/-1/-1/1/LINK_1_1237_TRANCHE-23_QUALIFYING_ENTITIES.PDF; "Qualifying Entities Prepared in Response to Section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (PUBLIC LAW 105-261)," US Department of Defense, Dec. 3, 2020, <https://media.defense.gov/2020/Dec/03/2002545864/-1/-1/1/TRANCHE-4-QUALIFYING-ENTITIES.PDF>; "Qualifying Entities Prepared in Response to Section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (PUBLIC LAW 105-261)," US Department of Defense, Jan. 14, 2021, <https://media.defense.gov/2021/Jan/14/2002565154/-1/-1/0/DOD-RELEASES-LIST-OF-ADDITIONAL-COMPANIES-IN-ACCORDANCE-WITH-SECTION-1237-OF-FY99-NDAA.PDF>.

¹⁶⁷ "Annual Report to Congress on the Military and Security Developments Involving the People's Republic of China 2019," US Department of Defense, May 2, 2019, https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf, p. 10.

Shipbuilding Corporation, CRRC Corporation, and China Telecommunications Corporation (China Telecom). These five business entities have steadily increased their activity in the Arctic since 2017 and have invested in a broad range of sectors, including telecommunications, technology development, transportation, energy, manufacturing, and collaborative research. Collectively, they have invested in almost every Arctic nation. The investments and research collaborations made by these PRC-based business entities with close ties to the PLA or the PRC government present possible risks. They may provide the PRC government or military access to important strategic information about the Arctic environment, access to technologies that may benefit the PLA's modernization, or natural resources that may benefit China's military industrial base.

Potential links between PRC Arctic projects and the PLA

China's scientific research programs and investments may have both political and military applications. For instance, in 2014, the Chinese Academy of Sciences began an Arctic research program that included the placement of sensors for long-term ocean observations. China's supposed civilian ocean observation projects have concerned some Arctic nations, who claim that China's larger strategic motives behind these programs are for them to ultimately serve dual purposes.¹⁶⁸ Danish defense intelligence authorities warned in 2019 that the PRC PLA is increasingly using scientific research as a front for purposes that extend far beyond matters of science. Another example is likely taking place in Sweden. China's first overseas land satellite receiving station, the China Remote Sensing Satellite North Polar Ground Station CNPGS, began operating near Kiruna, Sweden, in 2016. In 2019, a Swedish defense agency warned that the station could be serving the PRC military, stating that "China could be using the station—which relays images of the Arctic regions—to complement military intelligence or provide additional military satellite surveillance should PRC military satellites be disabled in a time of war."¹⁶⁹ In the US, a number of scientists from the PRC were arrested for allegedly hiding their close ties to the PLA on their visa applications.¹⁷⁰

Field discussions with local businesses

The PRC subsidizes PRC-based shipping firms operating in the Arctic through various types of tying arrangements, liberal construction loans, and the use of shipping regulations to stifle

¹⁶⁸ Swee Lean Collin Koh, "China's Strategic Interest in The Arctic Goes Beyond Economics," DefenseNews, May 12, 2020, <https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/>

¹⁶⁹ Nilobon Bantoe, "Satellite Station in Sweden can be Serving Chinese Military," ScandAsia, Jan. 16, <https://scandasia.com/satellite-station-in-sweden-can-be-serving-chinese-military/>.

¹⁷⁰ Nidhi Subbaraman, "US Investigations of Chinese Scientists Expand Focus to Military Ties," Nature, Sept. 3, accessed July 20, 2021, <https://www.nature.com/articles/d41586-020-02515-x>

competition. An Icelandic shipping executive¹⁷¹ said that it was virtually impossible for regional shipping companies to compete because the sheer costs of delivering ships in China are lower because of favorable financing, cheap labor, and, perhaps, operating subsidies. Conversely, regional shipping companies cannot afford the costs of special gearing and reinforced steel to meet the recently enacted International Maritime Organization Polar Code standards, which favor ships that are state owned, operated, or subsidized.

In contrast, most discussants complained that they face high capital costs if borrowing from lending institutions in either Iceland or Greenland.¹⁷² Multiple Icelandic discussants (from the agriculture and fishery sectors) reported that there is no Iceland loan guarantee (such as that given by EXIMBANK or the Small Business Administration in the US) or competitive support mechanism to defray Iceland's relatively high cost of debt and equity financing.¹⁷³ Only a Luxembourg bank known as Cosme¹⁷⁴ offers loans/lines of credit (which are backstopped by the European Investment Fund), but the funding limits in this program are quite modest for most types of enterprises.

Some of our Icelandic discussants also felt that PRC-based firms face advantages in terms of navigating (or ignoring) regulatory conditions. Conversely, discussants in Finland complained that foreign entities can quickly overwhelm local review capacity.¹⁷⁵

This focus on regulatory compliance (and a strong national ethic that favors compliance) made some discussants feel that Icelandic entrepreneurs are at a disadvantage because Russian or PRC-based entrepreneurs come with their own capital and fewer regulatory hurdles. Some similarly believed that knowledge of the rules associated with financing and implementing a development project is a challenge because the rules are not well known or publicized. In addition, Icelandic entrepreneurs lack the scope or financial bandwidth to enter the market and compete with PRC-based entrepreneurs who are well capitalized and have the money to hire consultants.¹⁷⁶ Russian and PRC-based entrepreneurs are also less susceptible to pressure from nongovernmental organizations (NGOs), although any project in Iceland would be liable

¹⁷¹ Discussion 202010303 1110 #3.

¹⁷² Discussion 20210302 1400 #3. In Greenland, most business loans are year to year.

¹⁷³ Discussion 20210225 1600 #2. Developers in Iceland also complain that they are at a disadvantage vis-à-vis business entities from countries like Germany, Norway, and Denmark because Icelandic banks lack the resources to provide necessary trade facilitation services such as letters of credit.

¹⁷⁴ Alpha Bank, "COSME Loan Guarantee Facility (LGF)," <https://www.alpha.gr/en/business/development-programmes/cosme-guarantee-facility>.

¹⁷⁵ Field Discussion 2021062

¹⁷⁶ Field Discussion 20210303 100 #2.

to Icelandic economic and labor regulations.¹⁷⁷ In the oil and gas area, for example, an Icelandic project finance discussant reported that US firms seemed to be almost restrained by the US government from partnering with Icelandic firms to compete in offshore oil and gas leases in the Dreki region because of environmental concerns.¹⁷⁸ The leases reverted to CNOOC and Sinopec's Icelandic partner for the time being.¹⁷⁹

In both Finland and Norway, discussants uniformly reported that PRC-based businesspeople are “highly visible,” and as a consequence, PRC-based business persons have been taking a “bottom up” approach to patiently build consensus around the notion that investment from PRC-based actors is benign.¹⁸⁰

Company risk profiles

This section provides case studies of six large PRC-based entities that are active in the Arctic region. The case studies assess the risk associated with these entities based on their relationships with the CCP, PRC government, defense industry, and PLA. The case studies also assess past business practices and state support both in the Arctic and elsewhere in the world. Case studies were produced in collaboration with CNA's China Economic Statecraft Initiative, which researches and analyzes PRC vernacular sources to identify PRC-based entities of concern under the direct control of, or with close ties to, the PRC party-state, military, or intelligence organizations, and CNA's composite CAAT. These six PRC-based conglomerates were selected because of their activity level in the Arctic, the sectors in which they are investing, and the level of risk associated with them.

We began selection for suitable case study firms with a list of large PRC-based firms active in the Arctic, which included the following:

- China Railway Construction Corporation (CRCC)
- China National Offshore Oil Corporation (CNOOC)
- Huawei Technologies
- China Petroleum & Chemical Corporation (Sinopec)
- China National Petroleum Corporation (CNPC)
- Tencent Holdings

¹⁷⁷ Field Discussion 20210302 1300 #2.

¹⁷⁸ Orkustofunn, “Dreki - Strategic Environmental Assessment,” accessed July 20, 2021, <https://nea.is/oil-and-gas-exploration/the-exploration-area/dreki---sea/>. *ibid.*

¹⁷⁹ Field Discussion 20210302 1300 #2.

¹⁸⁰ Field Discussion 20210623 #2

Because Sinopec, CNOOC, and CNPC are all petrochemical companies, we decided to choose only one (Sinopec) to ensure diversity in our cases. Sinopec is more active in the Arctic than CNOOC and CNPC. To the remaining firms on the list, we added General Nice Group and COSCO Shipping Corporation (COSCO Shipping) because of their high activity level in the Arctic and their historic ties to the PRC government and the PLA.

To understand the potential relationships between these firms, their Arctic activities, and long-term risk prospects, we established the following seven risk categories:

1. Political influence
2. Military risks
3. Coercive or corrupt business practices
4. Exploitation of vulnerable populations
5. Environmental damage
6. Noncompliance with local environmental laws and regulations
7. Human rights

Many of the underlying motives and elements that comprise each risk category overlap. The presence of these risks may increase the likelihood of long-term negative implications for the Arctic hosting country. Additionally, some investments made by PRC-based business entities that are either state owned or have strong ties to the PRC government or the PLA can pose potential risks to the Arctic hosting country.

Huawei Technologies

Huawei Technologies (Huawei) has emerged as one of the preeminent telecommunications technology companies active in the Arctic region. In addition to being the second largest manufacturer of handset devices in the world and the world's largest provider of telecommunications equipment, it is also recognized as a leader in 5G telecommunications technology.¹⁸¹

Huawei's activities in the Arctic region

Huawei has been building up its presence throughout the Arctic region over the past 15 years. It has established operations in Canada, Denmark/Greenland, Iceland, Norway, and Russia.

¹⁸¹ Arjun Kharpal, "Huawei Overtakes Samsung to Be No. 1 Smartphone Player in the World Thanks to China as Overseas Sales Drop," *CNBC*, July 29, 2020, <https://www.cnbc.com/2020/07/30/huawei-overtakes-samsung-to-be-no-1-smartphone-maker-thanks-to-china.html>; David Sacks, "China's Huawei Is Winning the 5G Race. Here's What the United States Should Do to Respond," Council on Foreign Relations, Mar. 29, 2021, <https://www.cfr.org/blog/china-huawei-5g>.

Huawei has been one of the most active PRC-based companies in the Arctic region, with official estimates reaching \$843 million in economic activity.¹⁸² However, Huawei has not publicly disclosed the amount of funds it has contributed to its Arctic projects, obfuscating its true level of activity in the Arctic. Huawei's activities in Arctic countries include the following:

- **Canada.** Huawei has been active in Canada since 2008. It has developed a subsidiary in the country, Huawei Canada, which has built a strong research and development operation that employs hundreds and provided the impetus for the development of Huawei's 5G capabilities. Huawei also intends to launch a 5G pilot project in the country.¹⁸³ In 2019, Huawei partnered with two Canadian companies, ICE Wireless and Iristel, to bring greater telecommunication services to remote areas of Canada.¹⁸⁴
- **Greenland.** Huawei Marine, a subsidiary of Huawei, partnered with Tele Greenland in 2016 to construct a submarine cable connecting Greenland to networks in Iceland, Europe, and North America.¹⁸⁵ The project was completed in 2017. Huawei announced the sale of Huawei Marine to Hengtong Optic-Electric, another company founded by a former member of the PLA, in 2019.¹⁸⁶
- **Iceland.** Two of Iceland's three largest telecommunication companies, Syn (also known as Vodafone Iceland) and Nova, have used Huawei equipment in their systems.¹⁸⁷
- **Norway.** Huawei has been present in Norway since 2009, when a state-controlled telecommunications provider, Telenor, started partnering with Huawei to increase the speed of its 3G network. Telenor worked with Huawei until 2019.¹⁸⁸
- **Finland.** Huawei invested more than \$90 million in a research development center in Helsinki in 2012. Additionally, in 2016, Cinia, a Finnish state-owned communications

¹⁸² CNA's Chinese Arctic Activity Tracker.

¹⁸³ Canada TeleCommunications, "Most Popular Canadian Telecommunication Companies in 2021," Jan. 8, 2021, accessed July 19, 2021, <https://www.ctca.ca/most-popular-canadian-telecommunication-companies/>.

¹⁸⁴ Robin Levinson-King, "Huawei Heats Up the Battle for Internet in Canada's North," BBC News, Sept. 9, 2019, accessed July 19, 2021, <https://www.bbc.com/news/world-us-canada-49415867>.

¹⁸⁵ "Huawei Marine Partners with Tele Greenland to Deploy 100G Submarine Network in the Arctic."

¹⁸⁶ Jack Hasler, "Huawei Marine is Being Sold. That's Unlikely to Change the Threat it Poses," *Washington Post*, June 5, 2019, accessed July 19, 2021, <https://www.washingtonpost.com/politics/2019/06/05/huawei-marine-is-being-sold-thats-unlikely-change-threat-it-poses/>.

¹⁸⁷ "Two Telecom Companies in Iceland Use Huawei Products."

¹⁸⁸ Gwladys Fouche, "Norway Considering Whether to Exclude Huawei from Building 5g Network," Reuters, Jan. 9, 2019, accessed July 19, 2021, <https://www.reuters.com/article/us-norway-huawei-tech/norway-considering-whether-to-exclude-huawei-from-building-5g-network-idUSKCN1P31LJ>

company, chose Huawei Marine to help construct the Arctic Connect sea cable. The sea cable would digitally connect China to Europe through Finland and Russia.¹⁸⁹ Also in 2016, Finland partnered with Huawei to launch 5G Test Network Finland (5GTNF), a two-year project.¹⁹⁰

- **Sweden.** Huawei has partnered with Swedish telecommunication company Telia since at least 2009. They built the world's first commercial LTE network. The partnership lasted for years, launching 5G technologies, but ended in 2019.¹⁹¹
- **Russia.** Huawei has worked with three of Russia's main providers: Mobile Telesystems (MTS), Rostelecom (Tele2), and MegaFon. Additionally, in 2018, Huawei collaborated with Kaspersky Lab in Russia to develop cloud security solutions. In 2019, MTS signed a large deal with Huawei to develop 5G capabilities in Russia.¹⁹² Huawei also promised to "build a digital community with a shared future in Russia," a modified form of Xi's slogan of a "community with a shared future for all mankind."¹⁹³ These activities would include an increase in its purchases from \$392 million to \$800 million, a pledge to train 35,000 Russian IT specialists, and creation of a new research and development center in the country. Russia has been Huawei's fastest growing market, with sales expanding by more than 51 percent annually since 2014.¹⁹⁴

Huawei's connections to the PRC government, CCP, and PLA

Mr. Ren Zhengfei, Huawei's founder and CEO, founded the company in 1987. Since that time, the company has benefited from a wide array of connections with the PRC government, CCP, and PLA.

¹⁸⁹ Cinia, "Cinia is Building Direct Digital Silk Road Between Asia and Europe by Selecting Huawei Transport Platform," Mar. 16, 2016, accessed July 19, 2021, <https://news.cision.com/cinia/r/cinia-is-building-direct-digital-silk-road-between-asia-and-europe-by-selecting-huawei-transport-pla,c9934974>.

¹⁹⁰ 5GTNF, "Home," accessed July 19, 2021, <https://5gtnf.fi/>.

¹⁹¹ Telia Company, "TeliaSonera & Huawei Will Jointly Innovate in 5G," Feb. 19, 2016, accessed July 19, 2021, <https://www.teliacompany.com/en/news/news-articles/2016/teliasonera--huawei-will-jointly-innovate-in-5g/>.

¹⁹² Reuters Staff, "Russia's MTS and China's Huawei Sign Agreement on 5G," Reuters, June 5, 2019, accessed July 19, 2021, <https://www.reuters.com/article/huawei-tech-russia-mts/russias-mts-and-chinas-huawei-sign-agreement-on-5g-idUSR4N23602B>.

¹⁹³ Dimitri Simes, "Huawei Finds Allies in Russia as Kremlin Cuts Reliance on West," NikkeiAsia, Mar. 11, 2020, accessed July 19, 2021, <https://asia.nikkei.com/Business/China-tech/Huawei-finds-allies-in-Russia-as-Kremlin-cuts-reliance-on-West2>

¹⁹⁴ *ibid.*

Huawei's ties to the PRC government

Huawei has enjoyed financial and policy support from the PRC government since its founding. State-owned financial institutions have facilitated Huawei's international expansion by providing credit lines to overseas telecommunications operators to purchase equipment from Huawei. The following are some examples:

- In August 2010, the Industrial and Commercial Bank of China agreed to provide Huawei's clients in Indonesia with 50 million yuan (\$7.35 million) to finance their imports of Huawei's products.¹⁹⁵
- In September 2015, CDB agreed to provide Russia's Rostelecom with long-term financing of up to \$600 million to purchase equipment from Huawei and refinance debt.¹⁹⁶
- In November 2015, the Export-Import Bank of China agreed to lend Cameroon \$330 million to finance the upgrade of the country's broadband telecommunication network by Huawei.¹⁹⁷
- In December 2015, the CDB agreed to provide Ukrainian telecommunications operator Ukrtelecom \$50 million to purchase equipment and technological support from Huawei to upgrade Ukraine's telecommunications network.¹⁹⁸

CDB is probably the financial institution that has offered the most financing for Huawei's international expansion. The bank began to support Huawei's forays abroad in December 2004, when it agreed to provide Huawei with a \$10 billion line of credit for 2005 to 2009. CDB increased the line of credit to \$30 billion for 2009 to 2014.¹⁹⁹ According to Ken Hu, the deputy chairman of Huawei Technologies and chairman of Huawei USA, CDB had loaned \$10 billion to Huawei customers as of October 2012.²⁰⁰

¹⁹⁵ "ICBC, Huawei's Indonesian Clients Sign 50-mln-yuan Export Buyer's Credit Agreement," *Xinhua China Money*, Aug. 23, 2010.

¹⁹⁶ Interfax, "Rostelecom Arranges \$600 mln in Financing with China Development Bank (Part 2)," Sept. 8, 2015.

¹⁹⁷ "Eximbank to Finance Optical Fiber with FCA 198.9 Billion," *CameroonWeb*, Nov. 6, 2015.

¹⁹⁸ "Chinese Bank Signs Loan Deal with Ukraine to Upgrade Telecom Network," *Xinhua's China Economic Information Service*, Dec. 15, 2015.

¹⁹⁹ Henry Sanderson and Michael Forsythe, *China's Superbank: Debt, Oil and Influence - How China Development Bank is Rewriting the Rules of Finance*, (Singapore: John Wiley & Sons, 2013), 159; Stephen Lawson, "Huawei Calls Charge of Government Help 'Hogwash'," *Computer World*, June 17, 2011, <https://www.computerworld.com/article/2509113/huawei-calls-charge-of-government-help--hogwash-.html>.

²⁰⁰ David Barboza, "China Telecom Giant, Thwarted in U.S. Deals, Seeks Inquiry to Clear Name," *New York Times*, Feb. 25, 2011, <http://www.nytimes.com/2011/02/26/technology/26huawei.html?mcubz=3>.

In addition to financial support from state-owned banks, Huawei also benefits from tax incentives and research and development funding provided by the PRC government. A Huawei executive publicly stated in 2012 that Huawei receives tax incentives provided by the central government to high tech enterprises. The company received \$89.75 million in financial support from Beijing in 2010 for research and development.²⁰¹

Huawei also has a working relationship with PRC security organs. For example, in February 2017, it was reported that Huawei established a strategic cooperation framework agreement with the Public Security Bureau of Shaanxi Province.²⁰² During the signing ceremony for the agreement, Huawei introduced a number of applications pertaining to big data and cloud computing technologies for public security systems.²⁰³

Huawei's connections to the CCP

According to the company's website, Ren Zhengfei, Huawei's founder and CEO, is a member of the CCP.²⁰⁴ Furthermore, Huawei has set up an internal CCP committee.²⁰⁵ Huawei contends that the CCP committee is not involved in operational or business decisions and that Mr. Ren is a member of the CCP because it is necessary to be a party member to hold a position of responsibility in China.²⁰⁶ However, the fact that Mr. Ren and other executives are members of the internal CCP committee suggests that the party plays a larger role in Huawei's decision-making. For example, Ren Zhengfei served as a representative at the 12th CCP National Congress, the national legislature of the CCP, in 1982.²⁰⁷ Held every five years, the CCP National Congress draws together party members to elect candidates to senior positions, consider the General Secretary's report, and decide on amendments to the CCP's constitution.²⁰⁸ The head

²⁰¹ Hu, Feb. 2011.

²⁰² Shaanxi Provincial People's Government, "Shaanxi Provincial Public Security Office and Huawei Signed a Strategic Cooperation Framework Agreement, (*Shaanxisheng Gonganting yu Huawei Gongsu Qianshu Zhanlve Hezuo Kuangjia Xieyi*; 省公安厅与华为公司签署战略合作框架协议)." Shaanxi Provincial People's Government. Feb. 16, 2017. http://www.shaanxi.gov.cn/info/iList.jsp?tm_id=166&cat_id=10003&info_id=67427.

²⁰³ Ibid.

²⁰⁴ "Does Huawei Have Ties to the Communist Party of China (CPC)?" Huawei Technologies, 2021, <https://www.huawei.com/en/facts/question-answer/does-huawei-have-ties-to-the-cpc>.

²⁰⁵ Ibid.

²⁰⁶ Ibid.

²⁰⁷ "Mr. Ren Zhengfei," Huawei Technologies, 2021, <https://www.huawei.com/us/executives/board-of-directors/ren-zhengfei>.

²⁰⁸ "19th National Congress of the Communist Party of China," Central Government of the People's Republic of China, 2017, <http://english.www.gov.cn/19thccpccongress/>; David Child, "Explained: National Congress of China's Communist Party, Oct. 17, 2017, <https://www.aljazeera.com/news/2017/10/17/explained-national-congress-of-chinas-communist-party>.

of Huawei's CCP committee, Zhou Daqi, is also the company's chief ethics and compliance officer.²⁰⁹

The CCP plays an unclear role in the ownership structure of Huawei Technologies. According to its website, Huawei is "a private company owned by its employees" through the holding company Huawei Investment & Holding.²¹⁰ The holding company has two shareholders. One is the Huawei employee union, which owns 99 percent of Huawei. The other shareholder is CEO and founder Mr. Ren Zhengfei, who owns 1 percent.²¹¹ However, PRC law requires that all labor unions in China be affiliated with the All-China Federation of Trade Unions (ACFTU), a united front organization ultimately controlled by the CCP.²¹² According to the ACFTU's constitution, "Chinese trade unions are mass organizations of the Chinese working class under the leadership of the Communist Party of China....They serve as a bridge and link between the Party and workers and an important social pillar of the state power."²¹³ Huawei's website does not specify whether the employee union is affiliated with the ACFTU, but the absence of this affiliation would constitute a violation of PRC law, and we are unaware of the existence of any independent labor unions in China, much less one associated with as high profile a company as Huawei.

Huawei's connections to the PLA

Before establishing Huawei, Mr. Ren served for 10 years in the PLA engineering corps, where he eventually rose to the level of deputy director.²¹⁴ According to Alexei Shalaginov, Huawei's deputy manager for sales in Russia, the PLA awarded Huawei one of its earliest contracts for a

²⁰⁹ Huawei Investment & Holding Co., *2016 Annual Report*, 109.

²¹⁰ "Who Is Huawei?," Huawei Technologies, 2021, <https://www.huawei.com/us/corporate-information>.

²¹¹ Ltd. Huawei Investment & Holding Co, *2016 Annual Report*, 99. http://www-file.huawei.com/-/media/CORPORATE/PDF/AnnualReport2016_en.pdf. For a detailed explanation of Huawei's ownership structure, see Colin Hawes and Grace Li, "Transparency and Opaqueness in the Chinese ICT Sector: A Critique of Chinese and International Corporate Governance Norms," *Asian Journal of Comparative Law* 12 (2017), 59-62. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/15ACFIC3AD8DDE0A7A60B34A99900509/S2194607817000084a.pdf/transparency_and_opaqueness_in_the_chinese_ict_sector_a_critique_of_chinese_and_international_corporate_governance_norms.pdf.

²¹² "Constitution of the All-China Federation of Trade Unions," Congressional Executive Commission on China, Sept. 26, 2003, <https://www.cecc.gov/resources/legal-provisions/constitution-of-the-all-china-federation-of-trade-unions-amended>.

²¹³ "The United Front in Communist China: A Technique for Controlling, Mobilizing, and Utilizing Non-Communist Masses," Central Intelligence Agency, May 1957, Approved for Release: Aug. 24, 1999, <https://www.cia.gov/readingroom/docs/CIA-RDP78-00915R000600210003-9.pdf>, p. 35-36.

²¹⁴ "Mr. Ren Zhengfei," Huawei Technologies, 2021, <https://www.huawei.com/us/executives/board-of-directors/ren-zhengfei>.

national military telecommunications project in the 1990s.²¹⁵ Military officials visited Huawei's facilities in the 1990s as well. In 1996, Liu Huaqing, then a vice-chairman of the Central Military Commission, the organization responsible for the overall administration of China's armed forces, took time away from an inspection of PLA troops in Shenzhen to visit Huawei.²¹⁶ A delegation of 70 senior officers from the People's Armed Police, a component of China's armed forces focused on domestic security, spent a day at Huawei in May 1999.²¹⁷

More recently, one scholar has contended that Huawei employees have engaged in collaborative research with elements of the PLA, PRC state security agencies, or the PRC defense industry.²¹⁸ According to the study, Huawei employees have collaborated with members of the armed forces of the PLA on at least 10 research projects involving artificial intelligence, telecommunications, and radio communications.²¹⁹ Huawei has repeatedly denied claims that it works with the PLA or PRC state security agencies.

International reactions to Huawei

Despite Huawei's success expanding its operations in the Arctic, there has been a collective shift by Arctic countries (excluding Russia) away from Huawei, especially those countries that are part of the North Atlantic Treaty Organization (NATO). Recently, several countries have blocked deals with Huawei and are replacing Huawei's technology with components from non-PRC-based vendors. In 2019, Greenland's largest telecommunication company, Tele Greenland, announced that it would no longer use Huawei as a provider for technology and equipment.²²⁰ In 2019, Norway's Telenor ended its partnership with Huawei because of security and privacy concerns.²²¹ In 2020, Sweden's Post and Telecom Authority banned any new use of Huawei

²¹⁵ Bruce Gilley, "Huawei's Fixed Line to Beijing," *Far Eastern Economic Review*, Dec. 28, 2000, http://www.web.pdx.edu/~gilleyb/Huawei_FEER28Dec2000.pdf.

²¹⁶ *Ibid.*

²¹⁷ *Ibid.*

²¹⁸ Christopher Balding, "Huawei Technologies' Links to Chinese State Security," SSRN, July 5, 2019, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3415726.

²¹⁹ Bloomberg, "Huawei Personnel Worked With China Military on Research Projects," June 26, 2019, <https://www.bloomberg.com/news/articles/2019-06-27/huawei-personnel-worked-with-china-military-on-research-projects>

²²⁰ Jacob Gronholt-Pedersen, "Greenland Chooses Ericsson Over Huawei for 5g Rollout," Reuters, Dec. 19, 2019, <https://www.reuters.com/article/us-greenland-telecoms-ericsson-huawei-te/greenland-chooses-ericsson-over-huawei-for-5g-rollout-idUSKBN1YN0XA>.

²²¹ Ice, "Ice Norway ready for 5G with Nokia," Feb. 26, 2019, <https://www.ice.no/om-ice/pressemeldinger/ice-norway-ready-for-5g-with-nokia/>.

products in Sweden and stated that existing uses must be phased out by 2025.²²² In 2019, President Donald Trump issued an executive order that bans US companies from using telecommunications equipment from any foreign entity deemed a risk to national security. The executive order did not expressly mention Huawei, but the US Department of Commerce established an “entity list” related to the order that does include Huawei’s name alongside other PRC-based entities.²²³ The NDAA passed in January 2021 included similar language, stating that Huawei is an “at-risk vendor.”²²⁴

Implications of Huawei’s presence in Arctic countries

The main concern involving Huawei is the risk of cyber abuses, including espionage, intellectual property theft, and other forms of hacking. The PRC government has a reputation of sponsoring intellectual property theft in the cyber domain. For instance, in 2017, a US court found Huawei guilty of stealing T-Mobile technology. Huawei employees were caught spying on T-Mobile’s smartphone testing robots.²²⁵ Cybersecurity experts from a number of countries have noted that Huawei does not adequately protect privacy interests and practices subpar cyber hygiene, putting its partners and customers’ privacy at risk.²²⁶

Another concern is the potential that Huawei could assist PRC security agencies with espionage or intelligence gathering. China’s National Intelligence Law and National Security Law state that all PRC-based companies and their employees must comply with government orders for any national intelligence work and that they must keep their involvement confidential.²²⁷

²²² PTS, “Four Companies Approved for Participation in the 3.5 Ghz and 2.3 GHz Auctions,” Oct. 20, 2020, accessed July 19, 2021, <https://www.pts.se/en/news/press-releases/2020/four-companies-approved-for-participation-in-the-3.5-ghz-and-2.3-ghz-auctions/>.

²²³ Richard Gonzales, “Trump Takes Aim at Huawei, Paves Way for Ban of Foreign Telecom Equipment,” NPR, May 16, 2019, accessed July 20, 2021, <https://www.npr.org/2019/05/16/723824048/trump-takes-aim-at-huawei-paves-way-for-ban-of-foreign-telecom-equipment>

²²⁴ William M. (Mac) Thornberry *National Defense Authorization Act for Fiscal Year 2021*, Jan. 1, 2021.

²²⁵ Rachel Lerman, “Jury Awards T-Mobile \$4.8m in Trade-Secrets Case Against Huawei”, *Seattle Times*, May 18, 2017, <https://www.seattletimes.com/business/technology/july-awards-t-mobile-48m-in-trade-secrets-case-against-huawei/>.

²²⁶ Jack Stubbs, “Britain Says Huawei Security Failings Pose Long-Term Risk: Govt Report,” Reuters, Oct. 1, 2020, <https://www.reuters.com/article/us-britain-huawei/britain-says-huawei-security-failings-pose-long-term-risk-govt-report-idUSKBN26M64S>; Ashley Dutta and Jonathon Marek, “A Concise Guide to Huawei’s Cybersecurity Risks and the Global Responses,” National Bureau of Asian Research, Oct. 3, 2019, accessed July 20, 2021, <https://www.nbr.org/publication/a-concise-guide-to-huaweis-cybersecurity-risks-and-the-global-responses..>

²²⁷ “National Security Law of the People’s Republic of China,” China Law Translate, July 1, 2015, <https://www.chinalawtranslate.com/en/2015nsl/>; “National Intelligence Law of the People’s Republic of China,” China Law Translate, June 27, 2017, https://www.chinalawtranslate.com/en/national-intelligence-law-of-the-p-r-c-2017/#_Toc486408895.

Accordingly, the PRC government could compel Huawei to allow it access to Huawei's stored information and technologies without their partners and clients' knowledge. Although Huawei has not been caught assisting the PRC government with espionage, Huawei employees embedded with cybersecurity forces in Uganda and Zambia have intercepted encrypted communications and used cellular data to track these governments' political opponents.²²⁸

Given Huawei's close relationship with both the PRC government and the PLA, Huawei can act as an entry point into Arctic countries for the PRC government and the PLA to conduct espionage, gather strategic information, or acquire sensitive technologies. Moreover, Huawei operates critical infrastructure and is still largely responsible for providing communication capabilities for some Arctic countries, which poses a risk to vulnerable populations living in rural areas in the Arctic who heavily rely on this technology to stay connected with the world.

Tencent Holdings

Tencent Holdings (Tencent) is another PRC-based technology entity that has heavily invested in the Arctic region. The privately founded company was incorporated in 1998 and became public in 2004.²²⁹ Over the past decade, Tencent has significantly grown and is now a major player in the technology sector, holding a stake in more than 800 companies, and has become one of the highest valued companies in Asia.²³⁰ Tencent also owns the popular communication and social media app WeChat.²³¹

Tencent's activities in the Arctic region

Tencent has been increasingly active in the Arctic since 2016. Tencent has invested in or led more than two dozen major projects in Arctic countries, including Canada, Finland, Norway, and Sweden.²³² It has mostly invested in the technology and communication sectors. Over the past five years, Tencent has invested at least \$2.5 billion in numerous projects in the Arctic

²²⁸ Joe Parkinson, Nicholas Bariyo, and Josh Chin, "Huawei Technicians Helped African Governments Spy on Political Opponents," *Wall Street Journal*, Aug. 15, 2019, <https://www.wsj.com/articles/huawei-technicians-helped-african-governments-spy-on-political-opponents-11565793017>.

²²⁹ "About Us," Tencent Holdings, 2021, <https://www.tencent.com/en-us/about.html#about-con-1>.

²³⁰ Quentin Webb and Jing Yang, "China's Tencent Becomes an Investment Powerhouse, Using Deals to Expand Its Empire," *Wall Street Journal*, Mar. 3, 2021, <https://www.wsj.com/articles/chinas-tencent-becomes-an-investment-powerhouse-using-deals-to-expand-its-empire-11614769545>.

²³¹ Ibid.

²³² CNA's Chinese Arctic Activity Tracker

region (including Sweden) and has likely invested significantly more in both capital and in-kind than what has been reported.²³³

Tencent's connections to the CCP, the PRC state, and the PLA

Mr. Pony Ma founded Tencent in 1998. Since that time, the company has benefited from a number of publicly acknowledged and unconfirmed connections to the CCP, state ministries, and the PLA.

Tencent's connections to the CCP

As a large enterprise with thousands of CCP members, Tencent maintains multiple CCP organizations throughout its corporate structure. According to the CCP constitution, any enterprise, including private companies and subsidiary companies, with at least three or more CCP members is required to form a party cell.²³⁴ Organizations with 50 to 100 party members must form a party branch, whereas those with more than 100 party members must form a party committee.²³⁵ According to a 2016 report from the CCP News Network, a web portal affiliated with the *People's Daily*, 5,593 Tencent employees are members of the CCP.²³⁶ The company currently has 86,000 employees.²³⁷ The company has an overarching CCP committee as well as 12 CCP branches and 106 party cells for subsidiary companies and larger company departments.²³⁸

Tencent connections to the PRC state

Tencent maintains both unconfirmed and public connections to PRC state ministries. According to a December 2020 report from *Foreign Policy*, CIA officials possess “high-confidence reporting” that the technology giant received “seed investment” early in its history

²³³ CNA's Chinese Arctic Activity Tracker

²³⁴ “Constitution of the Communist Party of China,” Xinhua, Oct. 24, 2017, http://xinhuanet.com/english/download/constitution_of_the_communist_party_of_China.pdf.

²³⁵ Ibid.

²³⁶ “The Advancing Deeds of the Tencent Technology (Shenzhen) Co., Ltd. Party Committee (*Tengxun Keji (Shenzhen) Youxian Gongsì Dangwei Xianjin Shiji*; 腾讯科技（深圳）有限公司党委先进事迹),” People's Daily Online – News of the Communist Party of China (*Renmin Wang – Zhongguo Gongchan Dang Xinwen Wang*; 人民网-中国共产党新闻网), July 1, 2016, <http://dangjian.people.com.cn/n1/2016/0630/c117092-28513326.html>.

²³⁷ “Chinese Tech Giants Tencent Expands Footprint in Playa Vista,” *Los Angeles Times*, June 3, 2021, <https://www.latimes.com/entertainment-arts/business/story/2021-06-03/chinese-tech-company-tencent-expands-footprint-in-playa-vista>.

²³⁸ “The Advancing Deeds of the Tencent Technology (Shenzhen) Co., Ltd. Party Committee (*Tengxun Keji (Shenzhen) Youxian Gongsì Dangwei Xianjin Shiji*; 腾讯科技（深圳）有限公司党委先进事迹),” People's Daily Online – News of the Communist Party of China (*Renmin Wang – Zhongguo Gongchan Dang Xinwen Wang*; 人民网-中国共产党新闻网), July 1, 2016, <http://dangjian.people.com.cn/n1/2016/0630/c117092-28513326.html>.

from the Ministry of State Security, China's chief intelligence agency, as the country sought to build out the Great Firewall and online monitoring technology.²³⁹ This same report cited William Evanina, the former director of the National Counterintelligence and Security Center, as stating that PRC-based technology companies such as Tencent play a key role in processing pilfered data from foreign governments and private companies and "making it useful for China's intelligence services."²⁴⁰ Tencent has denied these allegations.²⁴¹

Although Pony Ma is not listed as a member of the CCP, he has served as a delegate to the PRC's National People's Congress (NPC) since 2018.²⁴² The NPC is the national legislature of the PRC. According to the PRC constitution, the NPC has the authority to legislate, oversee the operations of the government, and approve the appointment of state officials.²⁴³ As a deputy to the PRC legislature, Pony Ma has made multiple proposals to the legislature related to regulation of the internet in China. For example, in 2021 Pony Ma introduced a proposal to tighten "government guidance and development" in areas such as online education, online health care, and financial technology.²⁴⁴

Tencent's connections to the PLA

In addition to ties to the CCP and PRC state ministries, Tencent also maintains ties to the PLA through participation in military-civil fusion activities. For example, in 2017, the state-owned media outlet Xinhua reported that Tencent was one of four companies selected by the PRC government to produce artificial intelligence research platforms.²⁴⁵ The selection committee, composed of 15 government ministries or commissions, included participation from the Military Science Research Steering Committee, an agency founded in 2017 that reports directly

²³⁹ Zach Dorfman, "Tech Giants Are Giving China a Vital Edge in Espionage," *Foreign Policy*, Dec. 23, 2020, <https://foreignpolicy.com/2020/12/23/china-tech-giants-process-stolen-data-spy-agencies/>.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² "Demographics of the 13th NPC," NPC Observer, Mar. 11, 2018, <https://npcobserver.com/2018/03/10/demographics-of-the-13th-npc/>.

²⁴³ "National People's Congress," National People's Congress of the People's Republic of China, Feb. 5, 2021, <http://www.npc.gov.cn/englishnpc/c2846/column2.shtml>.

²⁴⁴ "Tencent Boss to Call for Tighter Governance on China's Internet Economy: State Media," Reuters, Mar. 3, 2021, <https://www.reuters.com/article/us-china-parliament-tencent/tencent-boss-to-call-for-tighter-governance-on-chinas-internet-economy-state-media-idUSKBN2AV1YE>.

²⁴⁵ "15 Ministries and Commissions Work Together to Establish the First Batch of Four National Innovation Platforms – A Focus of the Country's Next Generation Artificial Intelligence Development Plan (*15ge Buwei Heili Shoupi Ajia Guojia Chuangxin Pingtai Queli – Jujiao Woguo Xin Yidai Rengong Zhineng Fazhan Guihua*; 15个部委合力首批4家国家创新平台确立——聚焦我国新一代人工智能发展规划)," Xinhua, Nov. 23, 2017, http://www.xinhuanet.com/politics/2017-11/23/c_1122000174.htm.

to the Central Military Commission.²⁴⁶ Few details have been made public about this agency. However, the China Central Television documentary “Carrying Reform Through to the End” suggests that it is envisioned as a PRC version of the United States’ Defense Advanced Research Projects Agency.²⁴⁷

International reactions to Tencent

Tencent’s uptick in activity in the Arctic region raises many concerns. Several individuals and entities have alleged that Tencent negligibly stores its data. Examples include the following:

- In 2019, an individual sued Tencent for data privacy infringement because Tencent shared his data without his consent. The court ruled in the individual’s favor and held that Tencent violated user privacy rights. As a result, the PRC government fined Tencent.²⁴⁸
- In 2020, a research center at the University of Toronto released findings that indicated that data shared between overseas users and users based in China were still subject to content surveillance and censorship by PRC authorities even if the company they used to share data is not state owned. They found that the PRC government continuously demands that Tencent and other technology conglomerates increase and improve their content-filtering and gathering systems.²⁴⁹
- The Trump Administration sought to ban Tencent from operating in the US because of evidence of privacy concerns arising from the way they managed their data.²⁵⁰

Implications of Tencent’s presence in Arctic countries

Tencent’s investments in the Arctic have significant risk implications. Although Tencent is not an SOE, it maintains close relations to the PRC government, CCP, and PLA. Thus, data managed by Tencent could be accessed by the PRC government for strategic purposes, or PRC leaders

²⁴⁶ Ibid.

²⁴⁷ “Carrying Reform Through to the End (*Jiang Gaige Jinxing Daodi*; 将改革进行到底),” Youtube, July 17, 2017, <https://www.youtube.com/watch?v=bJIJCz62h-s>.

²⁴⁸ Iris Deng and Coco Feng, “Beijing Internet Court Rules against Tencent, Bytedance in User Data Infringement Cases,” *South China Morning Post*, Aug. 3, 2020, <https://www.scmp.com/tech/apps-social/article/3095790/beijing-internet-court-rules-against-tencent-bytedance-user-data>.

²⁴⁹ Eva Xiao, “China’s WeChat Monitors Foreign Users to Refine Censorship at Home,” *Wall Street Journal*, May 8, 2020, <https://www.wsj.com/articles/chinas-wechat-monitors-foreign-users-to-refine-censorship-at-home-11588852802>.

²⁵⁰ Ana Swanson, David McCabe, and Jack Nicas, “Trump Administration to Ban TikTok and WeChat From U.S. App Stores,” *New York Times*, Sept. 18, 2020, accessed July 19, 2021, <https://www.nytimes.com/2020/09/18/business/trump-tik-tok-wechat-ban.html>.

may exert strong influence over Tencent's business activities. Tencent's disregard for data privacy rights coupled with the PRC government's ability to access the data coming into China are particularly concerning for those who use Tencent. Because Tencent is active in the Arctic, the PRC government could have access to private data that provide potential strategic benefits.

COSCO Shipping

COSCO Shipping is a PRC SOE that has been active in the Arctic region for more than a decade. It was formed in 2016 after the PRC government merged the state-owned COSCO Group and China Shipping Group to create one of the largest shipping companies in the world.²⁵¹ COSCO Shipping and its affiliates offer container and LNG transportation, marine shipping services, and other transportation services.

COSCO Shipping's activities in the Arctic region

In the Arctic, COSCO Shipping and its subsidiary COSCO Shipyard Group Company have been key investors in both the shipping and the technology sectors. Since 2011, they have invested in projects in the Arctic in countries such as Denmark/Greenland, Russia, and Norway.²⁵² Since 2011, COSCO Shipping and its subsidiaries have spent more than \$1.5 billion in the Arctic.²⁵³

COSCO Shipping's connections to the PRC government, CCP, and PLA

COSCO Shipping has benefited from a myriad of connections to the PRC government, CCP, and PLA before and after the merger between COSCO and China Shipping in 2016.

COSCO Shipping's connections to the PRC government

COSCO Shipping is a central SOE managed by SASAC.²⁵⁴ SASAC is a PRC government organization that reports directly to the State Council, the chief administrative authority of the

²⁵¹ "COSCO SHIPPING Group, the World's Largest Shipping Enterprise, Launched on Feb 18, 2016," State-Owned Assets Supervision and Administration Commission of the State Council, Feb. 16, 2016, http://en.sasac.gov.cn/2020/02/18/c_3719.htm.

²⁵² CNA's Chinese Arctic Activity Tracker

²⁵³ CNA's Chinese Arctic Activity Tracker

²⁵⁴ "Central Enterprise Directory (*Yangqi Minglu*; 央企名录)," State-Owned Assets Supervision and Administration Commission of the People's Republic of China, Dec. 29, 2017, www.sasac.gov.cn/n2588035/n2641579/n2641645/c4451749/content.html.

PRC.²⁵⁵ COSCO Shipping's competitors have complained for decades that the company benefits from a "protective environment" whereby the PRC government provides subsidies to COSCO Shipping and hampers the ability of foreign shipping companies to operate in China.²⁵⁶

The company also maintains personnel ties to other PRC government agencies. One high-ranking COSCO Shipping employee maintains links with the PRC government security agencies. Liu Hongwei, head of COSCO Shipping's Party Discipline Inspection Committee, previously worked for the Ministry of Public Security.²⁵⁷ One of China's leading domestic security agencies, the Ministry of Public Security is charged with supervising the security of state organizations, social organizations, enterprises, and other PRC government institutions.²⁵⁸

COSCO Shipping has invested in 58 terminals, including container terminals, all over the world.²⁵⁹ Its subsidiary COSCO Shipping Ports operates 357 berths at 36 ports worldwide.²⁶⁰ The PRC government has explicitly linked COSCO Shipping to the Belt and Road Initiative, a PRC government effort to build maritime transportation and power generation infrastructure around the world. In 2017, it received \$26 billion from the CDB to support "marine terminal investment."²⁶¹ The company has explicitly linked some of its projects, such as its acquisition of the Greek Port of Piraeus, to the Belt and Road Initiative as well.²⁶²

²⁵⁵ "The State Council," *People's Daily*, 2021, <http://en.people.cn/data/organs/statecouncil.shtml>; "State Council," Embassy of the People's Republic of China to Nepal, Oct. 27, 2004, <http://np.china-embassy.org/eng/ChinaABC/zz/t167478.htm>.

²⁵⁶ Robert Little, "'Controversial Carrier Shipper: Baltimore's Port Is Bullish on COSCO, but Others Regard the Chinese Line as a Rogue Business and a Threat to National Security,'" *Baltimore Sun*, Nov. 8, 1998, <https://www.baltimoresun.com/news/bs-xpm-1998-11-08-1998312108-story.html>; Greg Knowler, "Boosted by Beijing Subsidy, COSCO Expects Hefty 2017 Profit," *Journal of Commerce*, Jan. 30, 2018, https://www.joc.com/maritime-news/helping-hand-beijing-cosco-heads-hefty-profit_20180130.html.

²⁵⁷ "Top Management," China COSCO Shipping Corporation Limited, 2021, <http://en.coscoshipping.com/col/col6919/index.html>.

²⁵⁸ "Ministry of Public Security," State Council of the People's Republic of China, Aug. 25, 2014, http://english.www.gov.cn/state_council/2014/09/09/content_281474986284154.htm.

²⁵⁹ "Group Profile," China COSCO Shipping Corporation Limited, 2021, <http://en.coscoshipping.com/col/col6918/index.html>.

²⁶⁰ "Overview," COSCO Shipping Ports Limited, 2021, <https://ports.coscoshipping.com/en/AboutCSP/CorporateProfile/Overview/>.

²⁶¹ Dustin Braden, "China COSCO Gets \$26B for Belt and Road Initiatives," Jan. 13, 2017, https://www.joc.com/international-trade-news/infrastructure-news/china-cosco-gets-26b-belt-and-road-initiatives_20170113.html.

²⁶² "Wang Ying, "COSCO Shipping Rides the BRI Wave," *China Daily*, May 14, 2019, <https://www.chinadaily.com.cn/a/201905/14/WS5cda25d7a3104842260bb7e6.html>.

COSCO Shipping's connections to the CCP

The company's website states that its chairman of the board, Xu Lirong, is also the company's CCP party secretary.²⁶³ In addition to this role, he serves as a CCP delegate to the NPC, China's national legislature.²⁶⁴ COSCO Shipping's party committee oversees 137 branches and 2,761 subordinate departments across the entirety of the group.²⁶⁵ According to the company's website, of COSCO Shipping's 118,243 employees worldwide, 36,839 are active party members.²⁶⁶

COSCO Shipping's connections to the PLA

PRC-based civilian transportation companies, including COSCO Shipping, are playing an increasingly important role in augmenting the power projection capabilities of the PLA.

- COSCO vessels have been supplying the People's Liberation Army Navy (PLAN) during its Gulf of Aden counterpiracy operations since at least 2010.²⁶⁷
- COSCO Shipping's vessels have been used to transport ammunition to military units during PLAN exercises. For example, in September 2016, vehicles loaded with troops and ammunition embarked aboard one of COSCO Shipping Group's roll-on, roll-off ships for transport to an island firing range, reportedly the first time a civilian ship had been used to transport ammunition for the PLA's Northern Theater Command.²⁶⁸
- COSCO Shipping is also involved in pioneering new power projection capabilities. In 2019, China's Ministry of National Defense reported that the PLAN had successfully tested an underway replenishment (UNREP) from a COSCO container ship.²⁶⁹ The

²⁶³ "Top Management," China COSCO Shipping Corporation Limited, 2021, <http://en.coscoshipping.com/col/col6919/index.html>.

²⁶⁴ "Demographics of the 13th NPC," NPC Observer, Mar. 11, 2018, <https://npcobserver.com/2018/03/10/demographics-of-the-13th-npc/>.

²⁶⁵ "Party Building Work (*Dangjian Gongzuo*; 党建工作)," China COSCO Shipping Corporation Limited, 2021, <http://www.coscoshipping.com/col/col6863/index.html>.

²⁶⁶ Ibid.; "China COSCO Shipping," *Fortune*, Aug. 10, 2020, <https://fortune.com/company/china-cosco-shipment/global500/>.

²⁶⁷ Andrew S. Erickson and Austin Strange, "Learning by Doing: PLAN Operational Innovations in the Gulf of Aden," Jamestown Foundation, Oct. 24, 2013, <https://jamestown.org/program/learning-by-doing-plan-operational-innovations-in-the-gulf-of-aden/>.

²⁶⁸ "First Time Delivering Troops and Ammunition on Merchant Ship Directly to Exercise Site (*Minchuan Shouci Yunsong Shibing Shidan Zhida Yanbing Chang*; 民船首次运送实兵实弹直达演兵场), *PLA Daily (Jiefangjun Bao*; 解放军报), Sept. 27, 2016, <http://military.people.com.cn/n1/2016/0927/c1011-28743017.html>.

²⁶⁹ Xu Yi, "Civilian Ship Debuts Underway Replenishment to PLA Naval Ships," Ministry of National Defense of the People's Republic of China, http://www.eng.mod.gov.cn/news/2019-11/21/content_4855357.htm.

report on the UNREP stated: “Using civilian ships to carry out UNREP for naval ships is a new attempt in the field of naval logistics support. The civilian vessels cover a wide range of routes, thus have large potential for replenishment at sea, which implies remarkable military economic benefits. The success of the test provides important technical support for the future development of underway replenishment control technology.”²⁷⁰

International reactions to COSCO Shipping

COSCO Shipping has gained notoriety because of its involvement in the acquisition of critical infrastructure globally. Examples include Piraeus Port in Greece and the Spanish Noatum Ports. The acquisition of a majority stake in Piraeus led to accusations that the state-owned company was taking advantage of Greece’s sovereign debt crisis to acquire a strategically located port facility.²⁷¹ COSCO Shipping also adjusted numerous acquisition attempts in the United States because of national security concerns from the US Committee on Foreign Investment.²⁷²

Implications of COSCO Shipping’s presence in the Arctic region

COSCO Shipping’s relationships with the PRC party-state and PLA raise concerns about its involvement in Arctic projects. The company’s involvement in enhancing the PLA’s power projection capabilities, including in strategically important waterways, is particularly concerning. COSCO Shipping has supplied PLAN vessels in the Gulf of Aden for more than a decade. Furthermore, COSCO Shipping has established an active presence in the South China Sea and in 2016 announced its intention to create a tourism cruise ship operation in that region,²⁷³ raising the possibility that COSCO Shipping may be used to assist PRC military operations in or around the Arctic in the near future.

Past business practices of COSCO Shipping include exploiting vulnerable populations and collaborating with the PLA. COSCO Shipping’s inclination and capability to exploit vulnerable economies and populations (such as those in Greece) pose significant threats to the Arctic

²⁷⁰ Ibid.

²⁷¹ “China, Greece agree to push ahead with COSCO’s Piraeus Port investment,” Reuters, Nov. 11, 2019, <https://www.reuters.com/article/us-greece-china/china-greece-agree-to-push-ahead-with-coscos-piraeus-port-investment-idUSKBN1XL1KC>; “China’s COSCO Shipping buys \$228 million stake in Spain’s Noatum Port,” Reuters, June 12, 2017, <https://www.reuters.com/article/us-cosco-ship-hold-noatum-port/chinas-cosco-shipping-buys-228-million-stake-in-spains-noatum-port-idUSKBN19405I>.

²⁷² Paris, “Cosco Energy Unit Suspends Trading, Oil Transport Orders Canceled After U.S. Blacklisting”.

²⁷³ Reuters Staff, “China state shipping line to launch cruise route in disputed South China Sea,” Reuters, June 20, 2016, accessed July 19, 2021, <https://www.reuters.com/article/us-southchinasea-cosco/china-state-shipping-line-to-launch-cruise-route-in-disputed-south-china-sea-idUSKCN0Z708X>.

because many of the Arctic nations have small economies and particularly vulnerable populations. Additionally, COSCO Shipping's close ties with the PLA raise the risk that COSCO Shipping's "civilian" endeavors in the Arctic are more strongly linked with the PLA than they claim them to be.

China Petroleum & Chemical Corporation (Sinopec)

China Petroleum & Chemical Corporation (Sinopec) is an SOE founded in 1998. Sinopec describes itself as the largest oil and petrochemical products supplier in China, the second largest oil and gas producer in China, and the largest refining company in the world.²⁷⁴

Sinopec's activities in the Arctic region

Sinopec and its subsidiaries have invested in multiple Arctic countries since 2010, particularly Iceland and Russia. Sinopec and its subsidiaries have invested in or headed roughly half a dozen projects, mainly in the oil and gas, energy, and petrochemical sectors.²⁷⁵ In 2017, Alaska signed an agreement with Sinopec and other PRC-based entities to build an LNG pipeline in Alaska. The project is estimated to have a value of \$43 billion, and 75 percent of the LNG produced would go to China. Alaska's LNG project remains in its early stages, and given the current political environment, the pipeline may never be built.²⁷⁶

Sinopec's connections to the PRC government, CCP, and PLA

As a central SOE, Sinopec maintains a number of connections to the PRC government and CCP, as well as limited connections to the PLA.

²⁷⁴ "About Sinopec Group," Sinopec Group, 2021, <http://www.sinopecgroup.com/group/en/companyprofile/AboutSinopecGroup/>.

²⁷⁵ CNA's Chinese Arctic Activity Tracker

²⁷⁶ CBS News, "Alaska, China sign natural gas pipeline project deal," Nov. 9, 2017, <https://www.cbsnews.com/news/alaska-signs-gas-pipeline-project-deal-with-china/>.

Sinopec's connections to the PRC government

Sinopec is a central SOE managed by the SASAC.²⁷⁷ SASAC is a PRC government organization that reports directly to the State Council, the chief administrative authority of the PRC.²⁷⁸

In addition to being owned by the central government, Sinopec benefits from a protected home market and generous government subsidies. Petroleum is one of multiple strategic industries in which the PRC government has noted that the state must maintain “absolute control.”²⁷⁹ According to the Office of the US Trade Representative, three state-owned oil companies—Sinopec, CNPC, and CNOOC—accounted for 94 percent of domestic oil production and 99 percent of domestic gas production.²⁸⁰ For decades, Sinopec has received regular subsidies from the PRC government amounting to billions of dollars a year.²⁸¹ These subsidies have continued despite regular reports from China that the government was seeking to reduce its support to Sinopec and other state-owned firms.²⁸²

²⁷⁷ “Central Enterprise Directory (*Yangqi Minglu*; 央企名录),” State-Owned Assets Supervision and Administration Commission of the People’s Republic of China, Dec. 29, 2017, www.sasac.gov.cn/n2588035/n2641579/n2641645/c4451749/content.html.

²⁷⁸ “The State Council,” *People’s Daily*, 2021, <http://en.people.cn/data/organs/statecouncil.shtml>; “State Council,” Embassy of the People’s Republic of China to Nepal, Oct. 27, 2004, <http://np.china-embassy.org/eng/ChinaABC/zz/t167478.htm>.

²⁷⁹ *Notice of the General Office of the State Council on Forwarding the Guiding Opinions of the SASAC About Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises (Guowuyuan Bangongting Zhuanfa Guozhiwei Guanyu Tuijin Guoyou Ziben Diaozheng He Guoyou Qiye Zhongzu Zhidao Yijian De Tongzhi*; 国务院办公厅转发国资委关于推进国有资本调整和国有企业重组指导意见的通知),” Peking University School of Law, Dec. 5, 2006, http://www.pkulaw.cn/fulltext_form.aspx?Db=chl&Gid=82473; Wendy Leutert, “Challenges Ahead in China’s Reform of State-Owned Enterprises,” *Asia Policy*, No. 21 (Jan. 2016), <https://www.brookings.edu/wp-content/uploads/2016/07/Wendy-Leutert-Challenges-ahead-in-Chinas-reform-of-stateowned-enterprises.pdf>, p. 85.

²⁸⁰ “Findings of the Investigation into China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974,” Office of the United States Trade Representative, Mar. 22, 2018, <https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF>, p. 81.

²⁸¹ “Sinopec Receives Govt Subsidy of 12.3B Yuan,” *China Daily*, Mar. 3, 2008, http://www.chinadaily.com.cn/china/2008-03/20/content_6553349.htm; Takashi Kawakami, “China Corporate Subsidies Swell Further in 2019 as US Cries Foul,” *Nikkei Asia*, Dec. 17, 2019, <https://asia.nikkei.com/Economy/Trade-war/China-corporate-subsidies-swell-further-in-2019-as-us-cries-foul>; Tom Hancock and Yizhen Jia, “China Paid Record \$22Bn in Corporate Subsidies in 2018,” *Financial Times*, May 27, 2019, <https://www.ft.com/content/e2916586-8048-11e9-b592-5fe435b57a3b>.

²⁸² “Sinopec Expects Much Smaller Government Subsidy,” *China.org*, Dec. 15, 2007, http://www.china.org.cn/business/news/2007-12/15/content_1235803.htm; Liang Fei, “Oil Giants’ Huge Subsidies May Fade Under Reforms,” *Global Times*, May 2, 2013, <https://www.globaltimes.cn/content/778956.shtml>; Takashi Kawakami, “China Corporate Subsidies Swell Further in 2019 as US Cries Foul,” *Nikkei Asia*, Dec. 17, 2019, <https://asia.nikkei.com/Economy/Trade-war/China>.

Sinopec appears to be involved with a number of PRC government foreign policy strategies as well. In 2009, PRC state media reported that Sinopec would begin exploration of offshore oil and gas resources in a disputed area of the South China Sea.²⁸³ In 2015, the company built filling stations and an oil storage tank in Sansha City, a PRC settlement of 1,000 people located in a disputed area of the South China Sea.²⁸⁴ Sinopec also plays a major role in China's Belt and Road Initiative. According to *China Daily*, Sinopec has received financial backing from the Asian Infrastructure Investment Bank and the PRC state-owned Silk Road Fund to establish projects in more than 30 countries that have signed on to the Belt and Road Initiative.²⁸⁵

Sinopec's connections to the CCP

The company's website states that its chairman of the board, Zhang Yuzhuo, is also the company's party secretary.²⁸⁶ According to a 2020 report from the *People's Daily*, Sinopec maintains 22,000 party organizations of varying sizes, counting 460,000 party members among its 582,648 employees.²⁸⁷ Zhang Yuzhuo has stated that his goal is to ensure that Sinopec is "at the forefront of state-owned enterprises" in terms of building internal party organizations.²⁸⁸

The CCP has also taken action against Sinopec executives accused of corrupt business practices. In 2016, Wang Tianpu, a former general manager of Sinopec, admitted to accepting \$4.87 million in bribes following an investigation by the CCP's Central Commission for Discipline

corporate-subsidies-swell-further-in-2019-as-US-cries-foul; Tom Hancock and Yizhen Jia, "China Paid Record \$22Bn in Corporate Subsidies in 2018," *Financial Times*, May 27, 2019, <https://www.ft.com/content/e2916586-8048-11e9-b592-5fe435b57a3b>.

²⁸³ "Sinopec to Tap Gas in South China Sea Next Year," *China.org*, June 17, 2009, http://www.china.org.cn/business/highlights/2009-06/17/content_17966366.htm.

²⁸⁴ "Sinopec Dips Toes in Disputed South China Sea," *Wall Street Journal*, Dec. 14, 2015, <https://www.wsj.com/articles/BL-CJB-28332>; "China's Sinopec Building Filing Station in Disputed South China Sea," Reuters, Dec. 14, 2015, <https://www.reuters.com/article/instant-article/idUSL3N14311820151214>.

²⁸⁵ Zheng Xin, "Sinopec Uses Initiative to Reshape Petroleum Sector," *China Daily*, May 23, 2017, https://www.chinadaily.com.cn/kindle/2017-05/23/content_29461605.htm.

²⁸⁶ "Leadership," Sinopec Group, 2021, <http://www.sinopecgroup.com/group/en/companyprofile/Leadership/>.

²⁸⁷ "Zhang Yuzhou: Sinopec Must Take the Lead and Strive for First in Party Building (*Zhang Yuzhuo: Zhongguo Shihua Dang De Jianshe Yao Zai Yangqi Zhan Paitou, Zheng Di Yi*; 张玉卓: 中国石化党的建设要在央企站排头、争第一)," *People's Daily (Renmin Ribao; 人民日报)*, Apr. 17, 2020, <http://ccnews.people.com.cn/n1/2020/0417/c142091-31678266.html>; "Sinpec Group," *Fortune*, Aug. 10, 2020, <https://fortune.com/company/sinopec-group/global500/>.

²⁸⁸ "Zhang Yuzhou: Sinopec Must Take the Lead and Strive for First in Party Building (*Zhang Yuzhuo: Zhongguo Shihua Dang De Jianshe Yao Zai Yangqi Zhan Paitou, Zheng Di Yi*; 张玉卓: 中国石化党的建设要在央企站排头、争第一)," *People's Daily (Renmin Ribao; 人民日报)*, Apr. 17, 2020, <http://ccnews.people.com.cn/n1/2020/0417/c142091-31678266.html>.

Inspection.²⁸⁹ Wang, who held top positions at Sinopec from 2003 to 2014, was sentenced to 15½ years in prison for graft.²⁹⁰ In 2020, the PRC government replaced Sinopec’s leadership with Zhang Yuzhuo, an executive from outside the oil industry, in what some financial analysts view as an effort to enhance government and party control of the oil sector.²⁹¹

Sinopec’s connections to the PLA

Sinopec’s interactions with the PLA appear to be limited to research and development. According to *Global Times*, in 2019, Sinopec developed “golden silk,” a heat- and corrosion-resistant fiber material used to make body armor and other components for military hardware.²⁹² According to the report, “The development of ‘golden silk’ has broken the blockade of foreign countries and can further boost China’s capability in military equipment development.”²⁹³

International reactions to Sinopec’s business practices

Several accusations involving environmental concerns have been made against Sinopec Group and its subsidiaries. Sinopec’s projects have been suspected of causing environmental damages that have led to public health concerns and pollution issues. Sinopec has also been accused of failing to comply with local environmental laws and regulations and failing to conduct environmental impact assessments. For example, in 2012, the Ministry of Environmental Protection said that Sinopec failed to meet its promised decrease of nitrogen oxide emissions, resulting in China’s environment ministry halting multiple projects.²⁹⁴ Sinopec’s business practices and disregard for complying with environmental laws are particularly concerning in the context of the Arctic because of the Arctic’s fragile ecology and the lack of capacity for oversight.

²⁸⁹ “Former Sinopec Executive Pleads Guilty to Corruption, Bribe-taking,” Reuters, Nov. 8, 2016, <https://www.reuters.com/article/us-china-corruption/former-sinopec-executive-pleads-guilty-to-corruption-bribe-taking-idUSKBN1340B7>.

²⁹⁰ “China Jails Former Sinopec President for 15-1/2 Years Over Graft,” Reuters, Jan. 23, 2017, <https://www.reuters.com/article/us-china-corruption-sinopec/china-jails-former-sinopec-president-for-15-1-2-years-over-graft-idUSKBN1580AA>.

²⁹¹ Shunsuke Tabeta, “Beijing Taps Outsiders to Lead Sinopec and State Grid,” *Nikkei Asia*, Jan. 18, 2020, <https://asia.nikkei.com/Business/Energy/Beijing-taps-outsiders-to-lead-Sinopec-and-State-Grid>.

²⁹² Liu Xuanzun, “China Develops Military-grade Fiber with Multiple Applications,” *Global Times*, Nov. 24, 2019, <https://www.globaltimes.cn/content/1171021.shtml>.

²⁹³ Ibid.

²⁹⁴ David Stanway and Judy Hua, “China Environment Min Suspends Some Approvals for Sinopec, CNPC,” Reuters, Aug. 28, 2013, accessed July 19, 2021, <https://www.reuters.com/article/us-china-environment-oil-idUSBRE97S03G20130829>.

Sinopec and its corporate family have also exhibited concerning behaviors regarding the exploitation of vulnerable economies. For example, the government of Ecuador was forced to sign a contract that heavily favored the China International United Petroleum & Chemical Company (UNIPEC), a Sinopec subsidiary, after defaulting on \$3.2 billion in foreign debt. The country was shunned by other lenders, so it had no choice but to rely on funding from PRC-based sources, raising concerns that UNIPEC was feeding off of Ecuador's economic vulnerability for the PRC's strategic gains. The contract gave Sinopec the ability to claim up to 90 percent of Ecuador's oil shipments over an unspecified period of time. In effect, China gained control of the country's oil supply.²⁹⁵ This process is similar to what is occurring in the Arctic. Because of environmental concerns, investment banks and NGOs have been progressively pulling out of oil projects in the Arctic. China, however, is still showing significant interest in this sector and willingness to engage. As a result of the lack of competition, Sinopec and other PRC-based entities may get more access to Arctic projects of this nature and the ability to control valuable resources in the Arctic.

Implications of Sinopec's presence in the Arctic region

Sinopec's track record poses significant risk for any Arctic country that it invests in. As a state-owned company, Sinopec must be responsive to the dictates of the PRC government and the CCP. Its activities and investments in the Arctic region could be directed in a manner that provides strategic benefits to the PRC government through preferential access to natural resources or information on geographic features. Sinopec's poor record of environmental stewardship poses a risk to Arctic countries with vulnerable ecologies. Finally, Sinopec has demonstrated a willingness and capability to exploit economically vulnerable or debt-laden countries to gain access to strategic resources, which is particularly concerning for the more vulnerable Arctic nations such as Greenland and Iceland.

General Nice Development

General Nice Development is a large conglomerate with subsidiaries that focus on resource development, production, logistics, trade, real estate development, and other services.²⁹⁶

²⁹⁵ Financial Post, "How China Took Control of Ecuador's Oil," Nov. 26, 2013, accessed July 19, 2021, <https://financialpost.com/investing/how-china-took-control-of-ecuadors-oil-2>.

²⁹⁶ "Group Introduction (*Jituan Jianjie*; 集团简介)," General Nice Group (*Ju'an Jituan*; 俊安集团), Aug. 26, 2017, https://web.archive.org/web/20170826220208/http://www.generalnice.com.cn/templates/T_second/index.aspx?nodeid=3.

Founded in Hong Kong in 1992, it is privately owned and ultimately controlled by its chairman Cai Suixin and his sister Cai Suirong.²⁹⁷

General Nice Development's activities in the Arctic region

General Nice Development has invested in mining projects in the Arctic for more than a decade, primarily in Greenland. They have been major players in Greenland's mining industry since the early 2000s. General Nice Development is leading the project for the Isua Mine Site in Greenland following its acquisition of the mine in 2014.²⁹⁸ Additionally, General Nice Development took over the \$2 billion iron ore mine in Greenland, which became the first Arctic resources project to come under the complete ownership of China.²⁹⁹ They are also taking part in Russia's IRC Kimkanskoje and Sutarskoje mine development in Russia's Far East. General Nice Development bought an 18.9 percent stake in those projects for roughly \$103 million in 2013.³⁰⁰ General Nice Development sought to purchase an abandoned base in Greenland, Gronnedal Naval Base, but was blocked by the Danish government citing national security concerns, including dual-use possibilities.³⁰¹

General Nice Development's connections to the PRC government, CCP, and PLA

General Nice Development's links with mainland PRC entities include state-owned companies with large stakes in a General Nice Development subsidiary as well as multiple ongoing legal disputes with PRC state-owned banks. This study did not uncover explicit ties between General Nice Development and the CCP or PLA.

General Nice Development's connections to the PRC government

A 2015 report from *Finance Asia* notes that General Nice Development's executives sought to arrange joint ventures or mergers with SOEs to reduce costs and improve their ability to raise

²⁹⁷ Ibid.; "Private Chinese Enterprise Takes Their First Arctic Iron Mine (*Zhongguo Minqi Shouci Naxia Beiji Tie Kuang*; 中国民企首次拿下北极铁矿)," *Changjiang Business Daily* (*Changjiang Shangbao*; 长江商报), Jan. 14, 2015, <http://news.sina.com.cn/o/2015-01-14/021931395649.shtml>.

²⁹⁸ "New Strong Force Behind London Mining Greenland," Government of Greenland (Naalakkersuisut), Aug. 1, 2015, <https://naalakkersuisut.gl/en/Naalakkersuisut/News/2015/01/080115-London-Mining>.

²⁹⁹ "Chinese group General Nice takes over Greenland mine," *Financial Times*, Jan. 11, 2015, <https://www.ft.com/content/22842e82-9979-11e4-a3d7-00144feabdc0>.

³⁰⁰ Flanders-China Chamber of Commerce, "Two Chinese Companies to Invest in Russian Miner IRC," Feb. 7, 2013, <http://news.flanders-china.be/two-chinese-companies-to-invest-in-russian-miner-irc>.

³⁰¹ Erik Matzen, "Denmark Spurned Chinese Offer for Greenland Base Over Security: Sources," Reuters, Apr. 6, 2017, <https://www.reuters.com/article/us-denmark-china-greenland-base/denmark-spurned-chinese-offer-for-greenland-base-over-security-sources-idUSKBN1782EE>.

funds.³⁰² Attempts to arrange mergers with PRC SOEs eventually resulted in General Nice Development losing control of one of its subsidiary companies, Silk Road Logistics Holdings (before 2018, the company was named Loudong General Nice Resources (China) Holdings).³⁰³ In 2015, two state-owned companies, Bohai Steel Group and Tewood, acquired a 7 percent stake in the General Nice Development subsidiary.³⁰⁴ Later in 2015, this same subsidiary entered into an agreement with the state-owned China Huarong Asset Management to issue \$50 million in convertible bonds (debt securities that can be converted into a predetermined number of common stock or equity shares).³⁰⁵ China Huarong Asset Management specializes in purchasing debt from financially distressed companies.³⁰⁶ In 2016, the subsidiary filed an announcement that Cai Suixin and Cai Suirong had resigned from the subsidiary for “personal reasons.”³⁰⁷ They were replaced with executives from China Huarong Asset Management.³⁰⁸ According to *MarketScreener*, a finance and investing website, current major shareholders in the General Nice Development subsidiary include China Huarong Asset Management (28.4 percent) and Tianjin State-Owned Assets Supervision and Administration Commission (7.32 percent).³⁰⁹

In addition to shareholding ties with state-owned companies or government ministries, General Nice Development and its executives are involved in a number of legal disputes

³⁰² Denise Wee, “General Nice Plots M&A Strategy,” *Finance Asia*, Apr. 23, 2015, <https://www.financeasia.com/article/general-nice-plots-ma-strategy/396789>.

³⁰³ “Milestones,” Silk Road Logistics Holdings Limited, 2021, http://www.ldgnr.com/html/about_milestones.php.

³⁰⁴ “Major Shareholders Notice – Loudong General Nice Resources (China) Holdings Limited, Hong Kong Stock Exchange, Apr. 16, 2015, <https://di.hkex.com.hk/filing/di/NSForm2.aspx?fn=263280&sa2=ns&sid=27700100&corpnl=Loudong+General+Nice+Resources+%28China%29+Holdings+Ltd.&corpndisp=Loudong+General+Nice+Resources+%28China%29+Holdings+Ltd.&sd=22/04/2014&ed=22/04/2015&sa1=cl&scsd=22/04/2014&sced=22/04/2015&sc=00988&src=MAIN&lang=ZH&tk=ds>.

³⁰⁵ Loudong General Nice Issues Convertible Bonds to Huarong, Making It a Major Shareholder When Exercised (*Loudong Jun’an Xiang Huarong Fahuan Zhairuo Xingshi Zuo Danyi Da Gudong*; 楼东俊安向华融发换股债 若行使做单一大股东),” *Sina Finance*, May 19, 2015, <http://finance.sina.com.cn/stock/hkstock/ggscyd/20150519/101522213430.shtml>; James Chen, “Convertible Bond,” Investopedia, Oct. 6, 2020, <https://www.investopedia.com/terms/c/convertiblebond.asp>.

³⁰⁶ “Company Profile,” China Huarong Asset Management, 2021, <http://www.chamc.com.cn/en/AboutUs/Profile/index.shtml>.

³⁰⁷ “(1) Change in Director; (2) Change in Chairman and Chief Executive; and (3) Change in Board of Directors Membership ((1) *Dongshi Biandong*; (2) *Zhixu Ji Xingzheng Zongcai Biandong*; Ji (3) *Dongshi Weiyuanhui Zucheng Chengyuan Bian*); (1) 董事變動; (2) 主席及行政總裁變動; 及 (3) 董事委員會組成成員變),” Hong Kong Stock Exchange, Dec. 30, 2016, https://www1.hkexnews.hk/listedco/listconews/sehk/2016/1230/ltn201612301058_c.pdf.

³⁰⁸ *Ibid.*

³⁰⁹ “Silk Road Logistics Holdings Limited,” *MarketScreener*, 2021, <https://www.marketscreener.com/quote/stock/SILK-ROAD-LOGISTICS-HOLDI-6170780/company/>.

regarding repayment of loans to PRC financial institutions, including state-owned banks. According to one 2016 Chinese-language media report, General Nice Development's chairman, Cai Suixin, has been barred from taking assets out of Hong Kong because of a dispute with the state-owned China Merchants Bank.³¹⁰ That same year, Ningbo Iron and Steel—a subsidiary of the state-owned Bohai Steel Group—filed suit against General Nice Development for unpaid debts.³¹¹ The Industrial and Commercial Bank of China, one of China's largest state-owned banks, filed a lawsuit against Cai Suixin in 2017 for unpaid debts owed by General Nice Development.³¹²

International reactions to General Nice Development

General Nice Development's financial difficulties appear to have affected the company's activities in Greenland. According to a collection of emails from the government of Greenland, General Nice Development's subsidiary in Greenland, London Mining Greenland A/S, was temporarily forced into a compulsory dissolution process in August 2016.³¹³ Unverified reporting from Miguel Martin, an independent researcher focused on China's activities in the Arctic, indicates that the dissolution order may have been related to accounting problems connected to the transfer of London Mining Greenland A/S to General Nice Development.³¹⁴ The location of all accounting materials (electronic data as well as physical documents) related

³¹⁰ Loudong General Nice Resource's Cai Suixin Restricted by Hong Kong Court in Transfer of Assets (*Loudong Jun'an Ziyuan Zhangmenren Cai Suixin Bei Xianggang Fayuan Xianzhi Zichan Zhuanyi*; 楼东俊安资源掌门人蔡穗新被香港法院限制资产转移), *Zhitong Finance Network (Zhitong Caijing Wang*; 智通财经网), Nov. 5, 2016, <https://stock.qq.com/a/20161105/018704.htm>.

³¹¹ "In the High Court of the Hong Kong Special Administrative Region Court of First Instance Action No 854 of 2015 Between General Nice Resources (Hong Kong) Limited and Ningbo Iron and Steel Co., Ltd.," High Court of the Hong Kong Special Administrative Region, July 15, 2016, <https://vlex.hk/vid/general-nice-resources-hong-862485844>.

³¹² "Loudong General Nice Resources (China) Holdings Ltd: Former Chairman Appears to Be in More Than a Spot of Bother," *Target*, Vol. XIX, No. 91, Apr. 27, 2017, <https://www.tolfin.com/TolfinWeb/public/updates/articles/Articles%202017/1704/170427A.htm>.

³¹³ "London Mining Greenland A/S er under tvangsopløsning," Government of Greenland (Naalakkersuisut), Mar. 31, 2016, https://naalakkersuisut.gl/~/_media/Nanoq/Files/Attached%20Files/Raastof/Agtindsigtsbegaeringer%20og%20osvar/London%20Mining%2017nov16/31-08-2016%20Materiale%20til%20aktindsigt%20-%20Tvangsopl%C3%B8sning%20af%20London%20Mining%20Greenland%20AS.pdf.

³¹⁴ "General Nice's Greenland Subsidiary under Compulsory Dissolution [UPDATED: Now Back in GN's Hands]; Accounting Docs 'Disappeared'," *Jichang Lulu*, Jan. 2, 2017, <https://jichanglulu.wordpress.com/2017/01/02/general-nices-greenland-subsidiary-under-compulsory-dissolution-accounting-docs-disappeared/>; "Miguel Martin," Jamestown Foundation, 2021, <https://jamestown.org/analyst/miguel-martin/>.

to the 2014 transfer was unknown. The dissolution order was revoked after London Mining Greenland A/S completed administrative requirements and received a capital injection.³¹⁵

General Nice Development's attempt to purchase an abandoned base in Greenland, Gronnedal Naval Base, was blocked by the Danish government, which cited national security concerns. The blocked sale indicates that although Greenland welcomes foreign investments from China, they are still wary about the national security implications China's increased presence could have in certain locations.³¹⁶

General Nice Development's creditor difficulties are not limited to state-owned PRC financial institutions. According to a report from the Hong Kong publication *Oriental Daily News*, the French multinational bank Société Générale filed bankruptcy petitions against Cai Suixin and Cai Suirong in 2016.³¹⁷

Implications of General Nice Development's presence in Arctic countries

General Nice Development's financial difficulties and linkages to PRC state-owned companies pose a number of risks to Arctic countries. General Nice Development and its executives have faced multiple lawsuits from state-owned banks alleging a failure to repay debts. These allegations eventually forced the Hong Kong government to restrict Cai Suixin's assets and prevent him from transferring them outside of China. Also, one of the state-owned entities working with General Nice Development, an entity that specializes in managing debt-distressed assets, appears to have taken direct control of at least one General Nice Development subsidiary.

These factors increase the likelihood that the PRC government may be able to influence General Nice Development's business activities in the Arctic either by outright seizing assets as part of a debt-for-equity swap or by threatening the company's executives with legal punishment. Although General Nice Development's attempts to purchase Gronnedal Naval Base were ultimately unsuccessful, future attempts to purchase strategic assets in the Arctic could be used to resolve the company's financial woes.

³¹⁵ Ibid.

³¹⁶ "Denmark Spurned Chinese Offer for Greenland Base Over Security: Sources."

³¹⁷ "Financial and Economic Situation: Loudong General Nice Chairman Cai Suixin Has Gone Bankrupt (*Caijing Faqing: Loudong Jun'an Dongshi Zhang Cai Suixin Zao Chengqing Pochan*; 財經法情：樓東俊安董事長蔡穗新遭呈請破產)," *Oriental Daily News*, Nov. 24, 2016, https://hk.on.cc/hk/bkn/cnt/finance/20161124/bkn-20161124124519735-1124_00842_001.html.

China Railway Construction Corporation

CRCC is a central SOE formed in 2007.³¹⁸ CRCC offers a wide array of services related to construction of high-speed railways, railways in mountainous locations, highways, bridges, tunnels, and urban rail traffic.³¹⁹ In addition to road and rail transportation, CRCC's business lines have expanded to project contracting, survey design consultation, industrial manufacturing, real estate development, and logistics.³²⁰ CRCC has been involved in commercial construction projects in numerous countries around the world and has entered into construction contracts with foreign governments.

CRCC's activities in the Arctic region

CRCC has significantly increased its activity in the Arctic since 2018. Its investments are mostly in the construction sector and have taken place predominantly in Russia.³²¹ CRCC has also been involved in projects involving fisheries and health care supplies, but these make up a small percentage of the projects that CRCC has been part of in the Arctic.³²² CRCC is heading a massive railway project that would stretch between Norway and Finland.³²³

CRCC's connections to the PRC government, CCP, and PLA

As a central SOE, CRCC maintains a number of connections to the PRC government, CCP, and PLA.

³¹⁸ "Company Profile," China Railway Construction Corporation, 2021, <http://english.crcc.cn/col/col21582/index.html>.

³¹⁹ Ibid.

³²⁰ Ibid.

³²¹ "CRCC Secures Deal of Russia National Expressway Project," *Xinhua Silk Road Database*, Sept. 24, 2020, <https://en.imsilkroad.com/p/316477.html>; China's CRCC Agrees Railway, Port Projects in Russia," Reuters, May 10, 2015, <https://www.reuters.com/article/china-russia-railway/chinas-crcc-agrees-railway-port-projects-in-russia-idUKL3NOY205F20150511>; Ren Qi, "CRCC Signs Contract for Two Office Buildings in Central Moscow," *China Daily*, July 18, 2019, <http://www.chinadaily.com.cn/a/201907/18/WS5d2fd7a7a310d830563ffb29.html>.

³²² "China's CRCC Might Help Build \$350 Mln Fish Tech Park in Sakhalin," *Interfax*, June 19, 2019, <https://interfax.com/newsroom/top-stories/20000/>.

³²³ Eilís Quinn, "The Arctic Railway: Building a Future...or Destroying a Culture?," *Barents Observer*, Sept. 19, 2019, <https://thebarentsobserver.com/en/arctic/2019/09/arctic-railway>.

CRCC's connections to the PRC government

According to its website, CRCC is a construction company under the administration of the SASAC.³²⁴ SASAC is a PRC government ministry that reports directly to the State Council, the chief administrative authority of the PRC.³²⁵

CRCC also receives large subsidies and preferential loans from the PRC government. The company, which actively participates in a number of railway construction projects affiliated with the Belt and Road Initiative, regularly receives multibillion-dollar export loans from the PRC government's Export-Import Bank.³²⁶ These loans facilitate the company's work abroad by providing financing to countries that may otherwise be unable to afford CRCC's products and services.

CRCC's connections to the CCP

The CCP maintains a robust presence within CRCC's leadership, subsidiaries, and rank-and-file employees. The company's website states that its chairman of the board, Wang Jianping, is also the secretary of the company's internal CCP committee.³²⁷ CRCC also dedicates a page of its website to its party-building activities. According to this webpage, as of 2015, CRCC and its subsidiary companies had 742 internal CCP committees, 218 party branches, and 7,411 party

³²⁴ "Company Profile," China Railway Construction Corporation, 2021, <http://english.crcc.cn/col/col21582/index.html>.

³²⁵ "The State Council," *People's Daily*, 2021, <http://en.people.cn/data/organs/statecouncil.shtml>; "State Council," Embassy of the People's Republic of China to Nepal, Oct. 27, 2004, <http://np.china-embassy.org/eng/ChinaABC/zz/t167478.htm>.

³²⁶ "China Builds Landmark Projects along the Belt and Road," *People's Daily*, Apr. 17, 2019, <http://en.people.cn/n3/2019/0417/c90000-9567515.html>; Yun Sun, "China and the East Africa Railways; Beyond Full Industry Chain Export," Brookings Institution, July 6, 2017, <https://www.brookings.edu/blog/africa-in-focus/2017/07/06/china-and-the-east-africa-railways-beyond-full-industry-chain-export/>; "China Railway: From 'Made in China' to 'Built by China,'" State Council of the People's Republic of China, Feb. 26, 2015, http://english.www.gov.cn/news/top_news/2015/02/26/content_281475062080738.htm; Laura Zhou, "All Aboard for Africa's Heartland – On a Train Built in China," *South China Morning Post*, Jan. 10, 2017, <https://www.scmp.com/news/china/diplomacy-defence/article/2060971/all-aboard-africas-heartland-train-built-china>; "China to Fund and Build \$3.9bn Railway from Nigeria's Capital to the Sea," *Global Construction Review*, Oct. 11, 2019, <https://www.globalconstructionreview.com/news/china-fund-and-build-39bn-railway-nigerias-capital/>.

³²⁷ "Management Team," China Railway Construction Corporation, 2021, <http://english.crcc.cn/col/col21583/index.html>.

cells.³²⁸ The webpage also notes that 137,693 CRCC employees are members of the CCP.³²⁹ This figure represents just under half of CRCC's 290,907 employees.³³⁰

In addition to its presence throughout CRCC and its subsidiaries, the CCP also exercises influence over the company through its ongoing anticorruption probes. Since 2011, CRCC and its executives have repeatedly found themselves subject to corruption investigations from the CCP's Central Commission for Discipline Inspection. In 2011, CRCC was found to have solicited millions of dollars for nonexistent invoices while constructing high-speed rail lines in the mainland and Hong Kong.³³¹ Eight CRCC employees were punished in 2013 for spending \$135 million on receptions for guests and prospective customers.³³² In 2020, CRCC Chairman Chen Fenjian died in a fall from a Beijing skyscraper. PRC media reports described his death as a suicide.³³³ According to the *Asia Sentinel*, a news agency focused on politics and finance in the Asia-Pacific, PRC authorities had just completed an inspection of CRCC's business and finances the day before Chen's death.

CRCC's connections to the PLA

CRCC's relationship to the PLA predates the founding of the PRC in 1949. According to CRCC's website, CRCC's predecessor company, the Railway Engineering Corps, was set up under the Military Commission of the Communist Party Central Committee in 1948.³³⁴ The company was only officially transferred to civilian control in 1984.³³⁵ However, cooperation with the PLA has continued despite this transfer to civilian control. For example, in 2018, CRCC and several other state-owned railway corporations signed a strategic cooperation framework agreement with the PLA's Strategic Support Force, an element that centralizes the PLA's space, cyber,

³²⁸ "Party Building (*Dang De Jianshe*; 党的建设)," China Railway Construction Corporation, 2021, <http://www.crcc.cn/col/col6961/index.html>.

³²⁹ Ibid.

³³⁰ "China Railway Construction Corporation," *Fortune*, 2021, <https://fortune.com/global500/2013/china-railway-construction-corporation/>.

³³¹ Toh Han Shih, "Beijing Pursues Probe into Railway Mess," *South China Morning Post*, Apr. 8, 2011, <https://www.scmp.com/article/964523/beijing-pursues-probe-railway-mess>;

³³² Reuters Staff, "China Punishes Eight in Railway Corruption Case," Reuters, Oct. 21, 2013, accessed July 19, 2021, <https://www.reuters.com/article/us-china-railways-corruption/china-punishes-eight-in-railway-corruption-case-idUSBRE99K02V20131021>.

³³³ "Public Security Authority Investigates CRCC Chairman's Death," *Global Times*, Aug. 18, 2020, <https://www.globaltimes.cn/content/1198051.shtml>; Ton Han Shih, "Apparent Suicide Raises Questions Over BRI Corruption," *Asia Sentinel*, Aug. 30, 2020, <https://www.asiasentinel.com/p/apparent-suicide-raises-questions>.

³³⁴ "History," China Railway Construction Corporation, 2021, <http://english.crcc.cn/col/col21584/index.html>.

³³⁵ Ibid.

electronic, and psychological warfare capabilities.³³⁶ The agreement pertains to the provision of resources for PLA forces and the development of military construction projects.³³⁷ CRCC's 2017 annual report also states that the company seeks to "intensify" its participation in national strategies such as military-civil fusion.³³⁸

International reactions to CRCC

Recently, CRCC has come under scrutiny in several of the countries it has done business in. CRCC has been hit with a series of allegations of corrupt and nontransparent business practices, namely overinflated cost estimates, misappropriation of funds, activity outside of the scope of the contract, bribery, and privacy violations and breach of confidentiality. In 2013, China's antigraft authorities punished CRCC for its corrupt and illegal business practices.³³⁹ In 2019, CRCC and its subsidiaries were debarred by the World Bank for nine months because of misconduct during the contract procurement process for a highway project in Georgia.³⁴⁰

CRCC's links to the PLA have also drawn international concern. In 2020, DOD listed CRCC as a company that was determined to be owned or controlled by the PLA. As a result, the Trump Administration sought to implement sanctions against CRCC.³⁴¹

Implications of CRCC's activities in the Arctic region

Despite these concerns, CRCC continues to expand into numerous regions, including the Arctic. Arctic countries still appear willing to work with CRCC, indicating that CRCC will continue to

³³⁶ "The Strategic Support Force and a Number of Central Enterprises Signed a Strategic Cooperation Framework Agreement (*Zhanlve Zhiyuan Budui Yu Duo Jia Yangqi Qianshu Zhanlve Hezuo Kuangjia Xieyi*; 战略支援部队与多家央企签署战略合作框架协议)," *China Military Online*, June 6, 2018, http://www.81.cn/xuexi/2018-06/06/content_8054840.htm; John Costello and Joe McReynolds, "China's Strategic Support Force: A Force for a New Era," National Defense University, Oct. 2018, https://ndupress.ndu.edu/Portals/68/Documents/stratperspective/china/china-perspectives_13.pdf, p. 1.

³³⁷ Ibid.

³³⁸ China Railway Construction Corporation 2017 Annual Report (*Zhongguo Tie Jian Gufen Youxian Gongsi 2017nian Niandu Baogao*; 中国铁建股份有限公司2017年年度报告), China Railway Construction Corporation, 2017, <https://www.crcc.cn/module/download/downloadfile.jsp?classid=0&filename=a388c7453add415b8793dd3cd5a4f235.pdf>, p. 12.

³³⁹ "China Punishes Eight in Railway Corruption Case."

³⁴⁰ World Bank, "World Bank Group Debars China Railway Construction Corporation Ltd. and Two Subsidiaries", June 5, 2019, accessed July 19, 2021, <https://www.worldbank.org/en/news/press-release/2019/06/05/world-bank-group-debars-china-railway-construction-corporation-ltd-and-two-subsidiaries>.

³⁴¹ Richard Sofield et al., "Department of Defense Releases List of Companies Tied to Chinese Military," Wiley, June 26, 2020, accessed July 19, 2021, <https://www.wiley.law/alert-Department-of-Defense-Releases-List-of-Companies-Tied-to-Chinese-Military>.

maintain a strong presence in the Arctic. CRCC's history of corrupt business practices puts the economies of the Arctic countries it invests in at risk. CRCC is also owned and controlled by the PRC government. Additionally, it maintains a large CCP presence among its leadership, subsidiary entities, and rank-and-file employees. These factors increase the probability that the PRC government may influence the company's business decisions or activities in the Arctic region. CRCC's presence in the Arctic provides the government avenues to gain critical information and resources from that region. Finally, CRCC's past links to and current cooperation with the PLA create the possibility that its business activities could be used to benefit the PRC military, for example through surveillance of strategic locations.

Appendix B: Non-Arctic State Activities in the Arctic

This appendix provides further context regarding the investment and economic activities of non-Arctic states other than China. The objective is to further illustrate China's relative weight compared to other actors.

Other countries in Asia, including Japan, South Korea, and India, have increasingly demonstrated interest in the Arctic. These countries have explored investment and research opportunities to enhance their involvement in the region. Like China, their interests lie in the promise of Arctic shipping and transportation access, economic development, and scientific research. In some ways, China's approach to the Arctic is similar to the strategy of other non-Arctic states. China and other non-Arctic countries hope to increase their knowledge and understanding of the region and engage in regional research and dialogue with Arctic states in ways that are mutually beneficial to all parties involved.

Meanwhile, European states (including the Netherlands, France, and the EU more broadly) have also shown an interest in becoming more actively engaged in research and investment in the Arctic region. The EU released its new Arctic policy, *A Balanced Arctic Policy for the EU*, in July 2020. The EU's new policy discusses the strategic importance of the Arctic, emerging security concerns in the region, and ways that the EU can increase its engagement in the Arctic region. It states that "investment is seen as one of the main requirements of an updated EU Arctic policy."³⁴²

Japan

Japan has a long-standing involvement and a strategic interest in the Arctic. The Arctic provides Japan with new avenues for greater energy access, new shipping routes through the Northeast Passage, and unique business opportunities. In 1992, Japan became one of the founding non-Arctic members of the International Arctic Science Committee. Japan was also part of the 1993–1999 International Northern Sea Route Program in collaboration with Russia and Norway. The program studied the feasibility of traveling via what is now known as the NSR from Russia to

³⁴² Policy Department Directorate-General For External Policies, *A Balanced Arctic Policy for the EU*, European Parliament, PE 603.498, July 2020, [https://www.europarl.europa.eu/RegData/etudes/IDAN/2020/603498/EXPO_IDA\(2020\)603498_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2020/603498/EXPO_IDA(2020)603498_EN.pdf)

the Bering Strait.³⁴³ In 2013, Japan gained observer status in the Arctic Council. Since then, Japan has been an active observer state with memberships in numerous committees. Japan's focus in the Arctic Council mostly centers on conservation and research, and they participate in maritime data gathering, including the Arctic Data Archive System.³⁴⁴

The Japanese government has made several public statements asserting that combating climate change and using the region sustainably are their main priorities in the Arctic. In 2015, the Japanese government unveiled Japan's Arctic Policy, in which it outlined the following priority areas: research and development, international cooperation, and sustainable development. The policy also states that Japan wishes to enhance its presence in the region through research activities.³⁴⁵ To further these efforts, Japan established research stations in the US, Canada, Russia, Norway, and Greenland. Expanding on its 2015 Arctic policy, the Japanese government published *The Third Basic Plan on Ocean Policy* in 2018. The policy states that it is important for Japan to play a role in promoting and maintaining maritime security, exploiting ocean industries, protecting the maritime environment, and improving scientific knowledge, Arctic policy, and international cooperation. The policy also references the great potential of the Arctic and details the importance of economic and commercial opportunities in the region.³⁴⁶

In the Arctic, Japanese companies are investing in a wide range of projects in the oil and gas sectors. Mitsui and Mitsubishi, subsidiaries of Japanese companies, were involved in the Sakhalin-2 oil project, a gas development in the Sakhalin Islands located in Russia. As part of the project, these Japanese companies helped build the LNG Plant, and the Japan Bank for International Cooperation loaned \$3.7 billion to Sakhalin Energy.³⁴⁷ Roughly 60 percent of the LNG produced as part of this project is supplied to Japan. Japanese companies Japan Mitsui & Company and Jomtec, a state-owned entity, signed an agreement with Russia's biggest LNG producer, Novatek. Novatek agreed to sell a 10 percent stake in its future Arctic LNG 2 plant to Japan Mitsui & Company and Jomtec in exchange for a \$3 billion investment made by the

³⁴³ Carin Holroyd, "East Asia (Japan, South Korea and China) and the Arctic," in *Palgrave Handbook of Arctic Policy and Politics*, (Springer International Publishing, 2020), <https://www.springerprofessional.de/en/east-asia-japan-south-korea-and-china-and-the-arctic/17388928>.

³⁴⁴ Arctic Council, "Interview with Arctic Council Observer: Japan," July 3, 2020, <https://arctic-council.org/en/news/interview-with-arctic-council-observer-japan/>.

³⁴⁵ *The Basic Plan on Ocean Policy*, Cabinet of Japan, (2018), https://www8.cao.go.jp/ocean/english/plan/pdf/plan03_e.pdf.

³⁴⁶ Ibid.

³⁴⁷ Mitsubishi, "Integrated Oil And LNG Business Sakhalin 2 Project," accessed July 20, 2021, <https://www.mitsubishicorp.com/jp/en/bg/natural-gas-group/project/sakhalin-2/>.

companies.³⁴⁸ Japan has also been actively investing in mining projects. From 2009 to 2018, Sumitomo Metal Mining Company and Sumitomo Corporation, both Japanese entities, operated the Pogo gold mine in Alaska.³⁴⁹

Additionally, Japanese companies are actively exploring new potential oil and gas opportunities. Japan Petroleum Exploration Company (JPEX) has undertaken exploration and collaboration with Greenland. In 2012/2013, JPEX won two offshore exploration licenses in Greenland jointly with Chevron and Shell. These licenses allow JPEX to explore opportunities in the Kanumas Area, located in the northeastern part of offshore Greenland.³⁵⁰ In 2019, another Japanese corporation, Japan Oil, Gas, and Metals National Corporation, began testing project opportunities in Alaska's North Slope and in the Mackenzie Valley. Japan Oil, Gas and Metals National Corporation, the US Geological Survey, and Petrotechnical Resources-Alaska formed a partnership and were involved in this testing in Alaska.³⁵¹

South Korea

South Korea has been actively engaged in the Arctic since the 1990s. Their interests are mainly tied to the promise of shipping and transportation access in the Arctic as a result of declining levels of sea ice. Similar to Japan, South Korea has made it clear that they believe the development of the Arctic should be in accordance with international norms.

In 1996, South Korea and Japan engaged in a large-scale multilateral scientific project. In 2001, the country organized the Korea Arctic Science Council in which South Korea conducted marine research with the Geological Survey of Japan and sent two researchers to join a PRC-owned icebreaker to explore the Bering and Chukchi Seas. In 2002, South Korea became a member of the International Arctic Science Committee and established its first research station in Svalbard, the Arctic Dasan Station. South Korea gained observer status in the Arctic Council in 2013.³⁵²

³⁴⁸ Ibid.

³⁴⁹ Sumitomo Corporation, "Concerning the Transfer of the Pogo Gold Mine," Aug. 30, 2018, accessed July 20, 2021, <https://www.sumitomocorp.com/en/jp/news/release/2018/group/10650>.

³⁵⁰ Offshore Energy, "Japex, Shell, Chevron Win Exploration Acreage Off Greenland," Dec. 24, 2013, accessed July 19, 2021, <https://www.offshore-energy.biz/japex-shell-chevron-win-exploration-acreage-off-greenland>.

³⁵¹ Department of Energy, "The US Department of Energy, As Part of an International Team, Has Successfully Drilled a Gas Hydrate Test Well on Alaska North Slope," Jan. 23, 2019, accessed July 20, 2021, <https://www.energy.gov/fe/articles/us-department-energy-part-international-team-has-successfully-drilled-gas-hydrate-test>.

³⁵² Arctic Institute, "South Korea," June 19, 2020, accessed July 20, 2021, <https://www.thearcticinstitute.org/countries/south-korea/>.

South Korea has worked with numerous Arctic stakeholders and has developed a number of Arctic policies and strategies. In 2013, South Korea released its *Arctic Policy Master Plan*. The objective of the master plan is to call for the enhancement of South Korea's cooperation with Arctic states in areas such as science, technology, and economy. The *Arctic Policy Master Plan* detailed South Korea's goals to increase scientific research in the region and to develop new industry in the Arctic by expanding its participation in economic activities.³⁵³ Moreover, in 2018, South Korea organized the first Arctic Circle forum, which was attended by 200 delegates (mainly from East Asia) and opened by the UN Secretary at the time.

South Korea has specifically sought to strengthen its ties with Russia. South Korea launched the "New North Policy" with the hopes of strengthening both its relationship and economic ties with Russia.³⁵⁴ In 2017, President Moon Jae-in created the Presidential Committee on Northern Economic Cooperation, which proposed a "9-Bridge Strategy." The strategy includes provisions for promoting the commercial route for the NSR, increasing South Korea's import of natural gas from the Russian Arctic, and continuing to build LNG carriers and other ice-capable vessels.

A majority of South Korea's economic activity in the Arctic has taken place in Canada and Russia. In 2011, Korea Gas Corporation bought a 20 percent share of the Umiak gas field located in Mackenzie Valley in Canada.³⁵⁵ South Korea has also sought to modernize its ports in Russia's maritime province, Zarubino. South Korean companies are currently participating in the construction of port terminals in Slavyanka and Fokino. Additionally, South Korea's Daewoo Shipbuilding & Marine Engineering (DSME) built 15 Arc7 LNG carriers for Russia between 2016 and 2019, and South Korea currently transports natural gas from the Yamal LNG project. Novatek is expected to order more Arc7 LNG carriers from DSME. The contract is valued at \$4 billion and runs until 2024.³⁵⁶ In addition to undertaking projects in Canada and Russia, since 2019, South Korea has shown interest in growing its presence in Norway and Greenland.³⁵⁷

³⁵³ *Arctic Policy of the Republic of Korea*, http://library.arcticportal.org/1902/1/Arctic_Policy_of_the_Republic_of_Korea.pdf.

³⁵⁴ "South Korea."

³⁵⁵ Holroyd, "East Asia (Japan, South Korea and China) and the Arctic."

³⁵⁶ Malte Humpert, "Novatek Orders 10 Arc7 Carriers for Arctic LNG 2 from Zvezda Shipyard," High North News, Sept. 8, accessed July 20, 2021, <https://www.highnorthnews.com/en/novatek-orders-10-arc7-carriers-arctic-lng-2-zvezda-shipyard>.

³⁵⁷ "South Korea."

India

Over the past decade and a half, India has been increasingly invested in the Arctic and seemingly eager to secure a role in what the Arctic has to offer in terms of resources and research opportunities. Most of India's Arctic-related undertakings have stemmed from government research and policy-making initiatives. India conducted its first scientific expedition to the Arctic in 2007, which was followed by the establishment of the Himadri Station at Svalbard, India's first Arctic research center. In 2013, India gained observer status in the Arctic Council.³⁵⁸

Compared to other countries with a presence in the Arctic, India's presence is more limited. In early 2021, the Indian government released a draft Arctic policy titled "India's Arctic Policy Roadmap for Sustainable Engagement." The draft policy focuses on ways India can heighten its role in and engagement with the Arctic region. The policy objectives center on five broad categories: science and research activities, economic and human development cooperation, transportation and connectivity, governance and international cooperation, and national capacity building.³⁵⁹ One main goal of the policy is to facilitate scientific research on the connection between climate change in the Arctic and environmental concerns in India, such as monsoons.³⁶⁰

The draft policy also heavily focuses on the potential economic opportunities that the Arctic presents for India. The draft policy notes that "the Arctic is the largest unexplored prospective area for hydrocarbons remaining on earth" and that it contains large reserves of "mineral deposits—copper, phosphorus, niobium, platinum-group elements and rare earth." According to the draft policy, "India's current investment in Russia is 15 billion USD in oil and gas projects," but "there are similar opportunities in other Arctic nations as well." The draft policy also notes that India is aware of the large mineral reserves found throughout the region. The Indian government states in the draft policy that there are investment opportunities for India in sectors such as "offshore exploration/mining, ports, railways, and airports."³⁶¹

A majority of India's activity in the Arctic is currently limited to Russia. In 2017, Russia's Gazprom Neft and India's ONGC Videsh announced that they had created and signed a

³⁵⁸Sergey Sukhankin, *Looking Beyond China: Asian Actors in the Russian Arctic (Part One)*, Jamestown Foundation, Eurasia Daily Monitor 17.64, 2020, accessed July 20, 2021, <https://jamestown.org/program/looking-beyond-china-asian-actors-in-the-russian-arctic-part-one/>.

³⁵⁹Sahana Ghosh and Mayank Aggarwal, "Research and Resources are Two Pillars of India's Draft Arctic Policy," Mongabay, Jan. 22, accessed July 20, 2021, <https://india.mongabay.com/2021/01/research-and-resources-are-two-pillars-of-indias-draft-arctic-policy/>.

³⁶⁰*Policy Watch: India's Arctic Policy | Episode - 424*, Rajya Sabha TV (YouTube, 2021).

³⁶¹"Research and Resources are Two Pillars of India's Draft Arctic Policy."

memorandum of understanding that expressed both companies' intent to work together to implement offshore hydrocarbon projects in Russia and other places around the world.³⁶² Coal India signed deals with Russia in 2019 to mine coking coal in the Arctic and the Russian Far East.³⁶³ Another large deal between Russia and India took place in 2020. India announced that it would participate in Rosneft's large Vostok oil project, which will take place in Russia's Taymyr Peninsula, located in the Arctic region. The project includes the creation of a 600-kilometer pipeline that extends to the Arctic Ocean. Rosneft predicts that this pipeline will allow for the exportation of roughly 25 million tons of oil per year via the NSR.³⁶⁴ Earlier this year, Russia continued the talks with both China and India regarding their possible participation in this project.³⁶⁵

In early 2021, Russia offered Petronet LNG, India's largest natural gas importer, and other Indian companies a stake in the second phase of its Yamal LNG project. India has not yet accepted or rejected the offer.³⁶⁶ Additionally, Tata Steel, India's second largest steel company, announced that it had tested samples of coking coal from Russia's Far East.³⁶⁷ Although up to this point India has mainly collaborated with Russia in the oil and gas sector, its policy clearly expresses its intent to branch out into other Arctic countries and to explore investment opportunities in additional sectors.

France

Compared to other EU member states such as Germany and Poland, France's investment in the Arctic has been relatively limited. However, in recent years, France has been expanding its presence in the Arctic and has noted the role that both the EU and NATO can play in the region.

³⁶² , "Gazprom Neft, ONGC to Collaborate on Offshore Field Development in the Arctic," Mar. 30, accessed July 20, 2021, <https://www.worldoil.com/news/2017/3/30/gazprom-neft-ongc-to-collaborate-on-offshore-field-development-in-the-arctic>.

³⁶³ Rishika Pardikar, "India's Dirty Arctic Energy Hunt," OZY, Jan. 11, accessed July 20, 2021, <https://www.ozy.com/around-the-world/indias-dirty-arctic-energy-hunt/413010/>.

³⁶⁴ Atle Staalesen, "New Delhi Confirms Indian Stake in Rosneft's New Arctic Oil Project," ArcticToday, Jan. 16, accessed July 20, 2021, <https://www.arctictoday.com/new-delhi-confirms-indian-stake-in-rosnefts-new-arctic-oil-project/>.

³⁶⁵ Vladimir Soldatkin, "Rosneft holds talks with global traders, India and China on Vostok Oil project," Reuters, Feb. 12, accessed July 20, 2021, <https://www.reuters.com/article/rosneft-results/update-2-rosneft-holds-talks-with-global-traders-india-and-china-on-vostok-oil-project-idUSL1N2KI0KT>.

³⁶⁶ Nidhi Verma, "Petronet LNG Plans \$3 Billion Investment in Overseas Push," Reuters, accessed July 20, 2021, <https://www.reuters.com/article/india-petronet-plans-lng/petronet-lng-plans-3-billion-investment-in-overseas-push-idINKCN0ZR1HZ>.

³⁶⁷ "India's Dirty Arctic Energy Hunt."

In 2016, France published its National Roadmap for the Arctic. The Roadmap identifies French interests in the Arctic region. It further discusses that France's focus in the region will be on scientific research, economic opportunities, marine protection, security interests, France's participation in international meetings, and the EU's role in the region. Additionally, the document states, "France calls for increased scientific cooperation in the Arctic, in which it intends to play an active role by increasing its resources and its investment in scientific research on the Arctic."³⁶⁸ Before the release of the Roadmap, France published a white paper on defense and national security in 2013. Although the paper did not solely focus on the Arctic region, it did mention the importance of the Arctic. It stated that "the reduction in Arctic sea ice already has strategic consequences and the prospect of regular use of new Arctic shipping lanes is drawing closer."³⁶⁹

Scientific research is at the forefront of France's activity in the Arctic. Currently, France has two research centers in the Arctic region, the Jean Corbel Camp and the Charles Rabot Station, that field research activity for France in that region. Additionally, AWIPEV Arctic Research Base, a permanent joint French-German research station, is located at Ny-Ålesund on Svalbard. France has also indicated that environmental concerns should be at the forefront of Arctic policies. France, the United Nations, and the World Bank created the One Planet Movement in 2017 to bring Arctic stakeholders together to rally against environmental destruction in the Arctic.³⁷⁰

Additionally, France has numerous economic interests in the Arctic surrounding energy and has invested in the oil and gas projects in the region. France has backed a number of projects of this nature in Russia. In 2019, Novatek chose TechnipFMC, a French-American company, to head its new Arctic LNG 2 liquefied natural gas project taking place in northern Siberia on the Gydan Peninsula. France owns 10 percent of the venture.³⁷¹ Additionally, Gazprom, a Russian state-owned gas giant, partnered with French energy company Total on its LNG projects. Total holds a 20 percent stake in Yamal LNG and bought a 10 percent share in Arctic LNG 2 in 2018.

³⁶⁸ *The Great Challenge of the Arctic: National Roadmap for the Arctic*, Ministry of Foreign Affairs and International Development, France, 2016, https://www.diplomatie.gouv.fr/IMG/pdf/frna_-_eng_-_interne_-_prepa_-_17-06-pm-bd-pdf_cle02695b.pdf.

³⁶⁹ Arctic Institute, "France," Mar. 17, 2021, <https://www.thearcticinstitute.org/countries/france/>.

³⁷⁰ France Diplomacy, "The One Planet Movement," accessed July 20, 2021, <https://www.diplomatie.gouv.fr/en/french-foreign-policy/climate-and-environment/the-one-planet-movement/article/the-one-planet-movement>.

³⁷¹ Rauf Mammadov, *Russia's Novatek Allies With French-American TechnipFMC on New Arctic LNG 2 Project*, Eurasia Daily Monitor 16.81, 2019, <https://jamestown.org/program/russias-novatek-allies-with-french-american-technipfmc-on-new-arctic-lng-2-project/>.

Total also bought the 10 percent stake in the LNG 2 project for roughly \$2.5 billion.³⁷² Also in 2018, a French state investment bank and credit agency, BPIFrance, offered \$700 million worth of credit finance to the \$21 billion Novatek project.

French companies have also invested in projects in Canada and Norway across numerous sectors, including oil and gas, underwater engineering, tourism, fishing, and commercial transportation. In 2008, Norwegian oil company Gaz de France merged with Norwegian oil company GDF Suez.³⁷³ France also invested in tourism in the Arctic, creating Ponant, a cruise line that travels through the Arctic to countries such as Canada, Norway, and Russia. Additionally, given France's commitment to combating environmental concerns in the Arctic, French companies such as Areya, Seabed Geophysics, and Technip are actively investing in uranium exploration, seismic data collection, and underwater engineering in a number of Arctic countries.³⁷⁴

The Netherlands

The Netherlands has a long history and strong interest in the Arctic. The Netherlands engages in exploration and business opportunities in the Arctic, with primary interests in polar research, sustainable development, climate change, and ecological impact. Unlike those of other countries, the official views of the Netherlands focus more on scientific research and environmental protection than on potential commercial and other investment opportunities in the Arctic.³⁷⁵

The Netherlands declared the significance of the Arctic region in its *Strategy for the Netherlands Polar Programme 2016–2020*. According to the strategy, “Knowledge about changes in the polar regions and the consequences of these for the Netherlands remains strategically important.”³⁷⁶ In 2020, the Netherlands' Ministry of Foreign Affairs released *The Netherlands*

³⁷² Malte Humpert, “China Acquires 20 Percent Stake in Novatek’s Latest Arctic LNG Project,” High North News, Apr. 29, accessed July 20, 2021, <https://www.highnorthnews.com/en/china-acquires-20-percent-stake-novateks-latest-arctic-lng-project>

³⁷³ Franks-Norsk Handelskammer, “After 15 years in Norway GDF SUEZ changes name to ENGIE,” Feb. 12, 2016, accessed July 19, 2021, <https://www.ccf.no/no/nyheter/n/news/after-15-years-in-norway-gdf-suez-changes-name-to-engie.html>

³⁷⁴ *The Great Challenge of the Arctic: National Roadmap for the Arctic*.

³⁷⁵ Arctic Institute, “Netherlands,” accessed July 20, 2021, <https://www.thearcticinstitute.org/countries/netherlands/>.

³⁷⁶ *Poolpositie-NL 2.0: Strategie voor het Nederlands Polair Programma 2016-2020*, Nederlandse Organisatie voor Wetenschappelijk Onderzoek, 2014, https://www.nwo.nl/sites/nwo/files/media-files/poolpositie-nl_2_0_web.pdf.

Polar Strategy 2021–2025: Prepared for Change. According to the strategy, the Netherlands is interested in “sustainable economic activity” but solely for scientific research purposes rather than for commercial purposes. The policy states: “The Netherlands’ view is that the ban on minerals extraction for non-scientific purposes applies both onshore and offshore....The Netherlands is in favour of a permanent ban and regards activities involving minerals—except for scientific purposes—as incompatible with provisions of the Antarctic Treaty and its Environment Protocol.”³⁷⁷ Thus, the official policy of the government of the Netherlands is to limit Arctic exploration and resource extraction to scientific research purposes.

The Netherlands is outwardly focused on scientific research opportunities in the Arctic. It was a signatory to the Svalbard Treaty of 1920 and was part of the first group to be given observer status in the Arctic Council in 1998. To advance its interests, the Netherlands created the Arctic Center for Polar Research, a multidisciplinary research institute in the city of Groningen in the northern part of the Netherlands. It also has an Arctic station in Ny-Åslesund, Svalbard that is run by the Arctic Center for Polar Research. Additionally, in 2016, the Dutch appointed their first Arctic Ambassador.³⁷⁸ Also in 2016, the Dutch government pledged to allocate \$4 million annually from 2016 to 2020 for scientific research in the region.³⁷⁹

Traditionally the Netherlands has partaken in energy initiatives in the Arctic, but more recently it is shifting away from expanding drilling operations in the region and focusing on more sustainable projects in the Arctic. Historically, Dutch entities have invested in maritime and offshore technology, shipbuilding, fishing, and oil and gas in the Arctic region. However, because of mounting pressures regarding environmental concerns, Dutch entities have been limiting their oil and gas exploration in the Arctic region. In 2015, Royal Dutch Shell pulled out of a \$7 billion drilling project in Alaska. The major oil spill by Russian oil company Norilsk Nickel (Nornickel) in 2020 also caused major controversy in the Netherlands. It came to light that Dutch financial institutions ING Bank and ABP provided significant funding to Nornickel shortly before the incident. ING Bank gave \$307 million in loans and invested \$207 million in corporate bonds in Nornickel. Additionally, ABP has invested more than \$221 million in Nornickel shares.³⁸⁰ The spill fueled discussions in the Netherlands about whether the country should continue to invest in oil and gas projects in the Arctic.

³⁷⁷ Government of the Netherlands, “The Netherlands’ Polar Strategy 2021-2025: Prepared for Change,” <https://www.government.nl/documents/publications/2021/03/01/polar-strategy>.

³⁷⁸ “Netherlands.”

³⁷⁹ “The Netherlands’ Polar Strategy 2021-2025: Prepared for Change.”

³⁸⁰ FairFinance International, “Dutch ING & ABP also invest in Arctic spill’s Norilsk Nickel,” June 17, 2020, accessed July 20, 2021, <https://fairfinanceguide.org/ff-international/news/2020/dutch-ing-abp-also-invest-in-arctic-spills-norilsk-nickel/>.

Although Dutch entities have been investing less in large-scale projects, the Netherlands is still eyeing oil and gas opportunities in the region. The Netherlands is still one of the largest producers and distributors of oil and natural gas. In 2020, Royal Dutch Shell submitted plans to recommence oil and gas exploration in waters off the northern coast of Alaska.³⁸¹ However, this project may be halted by the lack of financing because of the steep drop in oil prices and the unwillingness of large banks to finance projects of that nature. It is unlikely that the Netherlands will cease investing in oil and gas projects because the industry, in particular Royal Dutch Shell, remains important to the Dutch economy.

³⁸¹ Malte Humpert, "Shell Plans to Resume Offshore Oil and Gas Exploration in Arctic Alaska," High North News, Sep. 25, accessed July 20, 2021, <https://www.highnorthnews.com/en/shell-plans-resume-offshore-oil-and-gas-exploration-arctic-alaska>.

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Tables

Table 1. Sample CNA CAAT data 6

Abbreviations

ACFTU	All-China Federation of Trade Unions
AGDC	Alaska Gasline Development Corporation
BoC	Bank of China
CAAT	Chinese Arctic Activity Tracker
CCP	Chinese Communist Party
CDB	Chinese Development Bank
CIAO	China-Iceland Arctic Research Observatory
CNCEC	China National Chemical Engineering Group
CNOOC	China National Offshore Oil Corporation
CNPC	Chinese National Petroleum Corporation
COSCO	China Ocean Shipping Company
CRCC	China Railway Construction Corporation
DOD	Department of Defense
DSME	Daewoo Shipbuilding & Marine Engineering
EU	European Union
FDI	Foreign Direct Investment
FY	Fiscal year
GDP	Gross domestic product
GRP	Gross regional product
JPEX	Japan Petroleum Exploration Company
LNG	Liquefied natural gas
MTS	Mobile Telesystems
NATO	North Atlantic Treaty Organization
NDAA	National Defense Authorization Act
NFC	China Nonferrous Metal Industry's Foreign Engineering and Construction
NGO	Nongovernmental organization
NPC	National People's Congress
NSR	Northern Sea Route
OECD	Organization for Economic and Cooperative Development
PLA	People's Liberation Army
PLAN	People's Liberation Army Navy
PRC	People's Republic of China
SASAC	State-owned Assets Supervision and Administration Commission
SOE	State-owned enterprise

SRBG	Sichuan Road and Bridge Group
UNCTAD	United Nations Conference on Trade and Development
UNIPEC	China International United Petroleum & Chemical Company
UNREP	Underway replenishment

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