

UNFOLDING THE CONCERNS OF CHINESE GOVERNMENT AND COMPANIES IN GREENLAND'S MINING SECTOR

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MSc Development and International Relations

28th May 2021

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Number of characters: 130.190



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Abstract

The actions of China in Greenland in the last few years have arisen many questions and concerns among third parties, especially with regards to the mining sector. In this context, the aim of this elaborate is to understand which are the main interests of China behind the investments in Greenland's mining sector. The analysis will be developed following the perspective of two different points of view, the one of the Chinese Central Government, and one of three Chinese companies operating in Greenland's mining sector which are taken into account. Two theoretical frameworks will be applied in this research, Waltz's Neorealism to explain the interests of the Chinese Government in the Arctic island, and Mertha's Fragmented Authoritarianism to explain the different possible policies followed by both the state itself and the three companies.

The thesis will follow a deductive approach, making use of both qualitative and quantitative data. Three cases will be taken into account, the mine of Kvanefjeld, the one in Isua, and lastly the one by the Citronen Fjord. Of these three sites the research will focus on data such as the importance of the minerals extracted to China and the amount present in this area. Once analysed the possible reasons for the presence of the two stakeholders in Greenland, the outcomes will be conjuncted together, to see to what extent these motivations point to the same objective or are actually divergents.

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1.0 Introduction

Due to its abundance of resources, such as oil and minerals, the Arctic has been an area of great interest for many countries during the past decades, with a limited number of stakeholders which seems to be slightly increased with the time. Indeed, even though only a few nations are considered to be part of the Arctic zone due to their geographical location, some others have shown an interest in this part of the globe, becoming external observers inside the Arctic Council (Arctic Council, 2021). Among these countries we find China, which considers itself as a Near-Arctic state, and aims to be one of the main stakeholders of this region, due to the economic and political advantages that such a position could bring to it (Dams et al., 2020).

The interest of China in this area has grown more and more in the recent years, to the point that the Asian country has introduced for the first time an Arctic strategy in its 14th Five-Year Plan, making it an own and important topic separated from Antarctica, with which it was connected in previous papers under the name of Polar strategy (Lanteigne, 2021). Therefore, since Chinese engagement has seen an increase in all the states included in the Arctic Circle, the concern for the reasons behind this behavior has spread among the other countries in the world, especially in the US and EU, which are both involved as well in this side of the globe.

In this scenario, the People Republic of China has entered Greenland's economy mainly investing in Scientific Research and Natural Resources, yet its real interest in these actions could be different, including not only economic but also political matters. At the light of this, the project will focus specifically on the relations between China and Greenland, with the aim to analyse the Chinese strategy behind its investments in the mining sector. Indeed, during the last five years Chinese companies, among which also State Owned Enterprises (now on also referred as SOEs) entered in the Greenland mining sector, focusing mainly in three mining projects, one in the North of the island, by

the Citronen Fjord, and two in the South, one located in Kvanefjeld/Kuannersuit, and the last one in Isua (Bøje Forsby, 2018). The thesis will focus on these three mining areas, which will be analysed by the sources present in the mines, their relevance, and the structure of the enterprises involved in the projects. All this analysis will be held from the point of view of the companies, therefore it will be required to understand the decision making process behind these investments. In addition, it will firstly be presented from the point of view of the Central Government with regards to these investment plans.

Nevertheless, before starting with the analysis, it will now follow an historical background of the Sino-Greenlandic relations, an overview of the Chinese political system with a focus on SOEs in relation to the Central Government, and a literature review on the topic. Then, after presenting the problem formulation of this paper, it will be introduced the methodology part and the theory part, which will be necessary to explain the means employed to conduct the research. After that the analysis will be explained, the project will show its conclusions, trying to connect together the two points of view taken into consideration, the Chinese companies and the Chinese Government ones.

1.1 Historical Background

Since the birth of the People Republic of China, the Asian state has found in several Arctic countries an interlocutor and a trade partner. Nevertheless, when analyzing the historical relations between Greenland and China, it is not possible to not also cite the relations with Denmark. Indeed, the Arctic island has been under the control of the Danish Crown for a long time, and it got some freedom just recently.

Therefore, with the aim to give a broader as possible historical background, the project will first take into consideration the relations between Denmark and China, yet with Greenland always as the main topic of discussion. Secondly, this section will include the direct relations between China and Greenland, which started in the last few years when Greenland got some autonomy from Denmark and could make its voice heard by other international actors.

1.1.1 China-Denmark Relations

Starting from 1949, the year of the birth of the People's Republic of China, and also during the next few decades, relations between Denmark and China were mostly about trading of goods, although even in this field they barely existed, counting less than DKK 20 million by 1960. Nevertheless, Denmark was the second Western country after Sweden to establish diplomatic ties with the newborn PRC, at the beginning 1950 (Embassy of the People's Republic of China in the Kingdom of Denmark, 2004). Since then, the countries could count on a mutually good political relation, which was followed by a recovery of economic relations. During the end of the twentieth century both these relations had highs and lows, and with regards to trade, it experienced a big boost after 2004, to the point that in 2015 the Danish-Chinese trade amount reached a trade volume of DKK 120 billions (Bøje Forsby, 2018).

In light of the events just presented, it is likely to affirm that the Sino-Danish relation has been quite harmonious and advantageous for both parties, with highs and lows. Nevertheless, taking into account Greenland, the situation may vary a bit. Indeed, after the establishment of the Self-Government Act in 2009, Denmark started to have a more suspicious view towards Chinese actions in the Arctic island.

Two main events show clearly the concern of the European country towards the Asian superpower. One, in 2016, when Denmark decided to sell the abandoned naval base of Grønnedal used for military reasons. China, or more specifically a Chinese company based in Hong Kong, the General Nice Group, responded to the sale. Yet, at that point the Danish government decided to retire the offer and to keep the naval base as a fuel and material storage, and for training personnel. Likely, the decision was driven by the fact that Denmark did not want to endanger the area allowing other actors to settle military bases in the area, yet the country preferred to not comment on the event (Matzen, 2017). The second event is 2018, when Greenland was looking for investors for its Kalaallit airports project, which had the aim to expand the airports of Nuuk and Ilulissat and to build a new one in Qaqortoq. A Chinese state owned company, the China Communications Construction Company, participated in the bid. Nevertheless, this action raised US government worries, which with the help of the Danish government

managed to keep the Chinese company outside of the project, which eventually withdrew its bid (DeGeorge, 2018).

Even though there are plenty of events to cite with regards of Sino-Danish relations, they are not relevant to the development of this thesis. On the contrary, it is necessary to have a wider look at the relations with Greenland outside the influence of Denmark.

1.1.2 China-Greenland Relations

The relations between the Government of Greenland and the People Republic of China started only after the Self-Government Act in 2009, which gave to the former some autonomy, such as the right to form a parliament and a government, that administrate areas such as education, health, fisheries, environment and climate. Even though foreign affairs were still under Denmark's jurisdiction, with the new role of its government Greenland acquired the possibility to communicate with other governments, although the foreign affairs of the country remained under Denmark's control (The Government of Greenland, n.d.).

The first relation with the Chinese authorities arrived through the Danish mediation in 2012 with China's Minister of Land and Resources visit to Greenland. By that time the Arctic island was trying to develop its mining sector in order to diversify its economy which mostly relies on fisheries, with the final aim to become an independent state. Therefore, the Greenlandic government searching for foreign investments saw a possible partner in China. This signified the beginning of a series of agreements and negotiations between the two parties. The first in 2014, when the General Nice Development, a company under the General Nice Group, obtained the license for the mining operations in the Isua iron mine, which was previously held since 2005 by the English company London Mining, which was looking for the investments of other Chinese companies after having obtained an exploitation license in 2013 (Zeuthen and Raftopoulos, 2018). This site became the first project fully owned by a Chinese company in the Arctic, yet its development is still uncertain at the moment (Volpe, 2020). Then, again in 2014, a Memorandum of Understanding was signed between Greenland Minerals and Energy (GME), which is an Australian company based in

Greenland, and China Nonferrous Metal Industry's Foreign Engineering and Construction Co. (NFC). The aim of this memorandum was the development of the Kvanefjeld mining site, an area of interest due to its abundance of important resources such as rare earths elements (REE) and uranium. Even though NFC ended up not being involved in the project, in 2016 another Chinese SOE took its place, the Shenghe Resources Holding Co Ltd (Shenghe), which acquired 12.5% of the shares of GME (Andersson, Zeuthen, and Kalvig, 2018). In the same year, the Prime Minister of Greenland signed an agreement with a Chinese Governmental Agency under the Ministry of Land and Resources which is in charge of the supervision of the sea area, the State Oceanic Administration (SOA, 国家海洋局), which obtained the permission to build a research station. Then, in 2018, a ceremony was held in Kangerlussuaq to celebrate the launch of a satellite with the aim of studying climate change and also to develop the Beidou 3 navigational system. Nevertheless, the Greenlandic authorities declared to not be aware of this project, therefore the outcomes of this plan are still uncertain (Martin, 2018).

In addition, besides these events and also the two episodes cited in the Sino-Danish relations section of the airports project and the naval base, the other most important episode of Chinese presence in Greenland and also hotspot of this thesis, together with the above mentioned Kvanjenfield and Isua projects, is the mining project in Citronen Fjord. The importance of this place is due to its abundance of zinc, and also to the presence of lead in the ground. The project for mining was held by the Australian company Australian Ironbark Pty Ltd exploration group, which owns the right to exploit the area until 2046. In 2017, Ironbank decided to join forces with the Chinese company China Nonferrous Metal Industry's Foreign Engineering and Construction Co (NFC), since the latter had the knowledge and competence necessary to develop the project (Andersson, Zeuthen, and Kalvig, 2018).

At the light of this overview, it results in that Chinese involvement in Greenland started only once the Arctic island got more freedom, and even though they only had few actual agreements, it already caused concern in the Western World. This relation is a

consequence of Greenland's longing for investments, and on the other hand of the increased interest of China for the Arctic.

1.2 Chinese Political System: the Government and SOEs

Having in mind the awareness that this analysis will be structured from the two points of view of the Chinese Government and of Chinese companies, among which one is a State Owned Enterprise, it is fundamental to briefly explain firstly the structure of the Chinese Government in relation to the Chinese Communist Party, which is a complex political organ, and secondly the functioning of the SOEs, another intricate reality connected to the Chinese authorities.

Starting with a brief overview of the Chinese Government structure, the first information to report is the fact that the Chinese Communist Party (CCP) has been in power since 1949, and its members hold the most important positions in the government. Focusing on the structure of the party, the most important figure is the CCP General Secretary, which is usually also the State President, as in the case of the current leader Xi Jinping. This figure is also a member of the Politburo Standing Committee, which is the most important organ in the party, and it is currently formed by seven members (Lawrence and Martin, 2013). Looking at the Chinese Government from the perspective of the administration levels it is divided into six grades. At the top there is the Central Government located in Beijing, then comes the administration of provinces, autonomous regions, metropolitan areas, and Special Administrative Regions. Below these, there are the prefectures followed by the counties, and at the lowest level there are the villages. In such a complex governmental system it is not always fluid in the exchange of information. This concept is called stove-piping, and basically it means that inside the Chinese Government the bureaucracy and the information is well connected at a vertical level, or rather from an upper rank to a lower one and vice versa. On the other hand, the problem exists at the horizontal level, for example between two different ministries, where often the sharing of information is limited or nonexistent (Lawrence and Martin, 2013).

Moving to State Owned Enterprises, the Chinese government reshaped them several times, making them go through different stages before arriving at the SOEs that we know today. At first, at the very beginning of the People Republic of China Chinese public companies were both owned and operated by the state, making them literally State Operated Enterprises. With the "opening up policies" during the late 70s under Deng Xiaoping it started to be necessary to make a first change in this system. The main problem was the lack of enthusiasm for production, due to the fact that the whole profits were going to the state. Therefore, the authorities decided to concede the right of SOEs to make their own decision during operations, and in 1983 they also obtained the right to keep a part of the profit while giving the 55% to the State as taxes. Nevertheless, by that time the state was still in charge of the main decisions and operations of the companies, yet it ended up to be inefficient, since the government functionaries did not have the skills to take advantageous decisions. Therefore, in 1984 the government expressed the need to separate ownership and operating rights of SOEs, and established the Contract Responsibility System, which consisted of hiring a manager to handle the operating rights of SOEs. In the following years, the SOEs still showed several problems, especially due to a lack of market support institutions. This time, the government decided to intervene on the ownership rights of the companies, and to do so established Stock Exchanges in Shanghai and Shenzhen where SOEs were listed, then codified Company Law and a Security Law. Then, in 2003 China established the State-owned Assets Supervision and Administration Commission (SASAC), with the purpose of being in charge of the supervision of large SOEs which are vital for the economy of the country or for the national security, becoming their main shareholders on behalf of the state. On the other hand, smaller and less important SOEs' ownership was assigned to local governments. Another change occurred in 2012, with the rise to power of the president Xi Jinping, who during the 18th Congress of the CCP reformed SOEs as part of its anti corruption campaign. To do so, the government established one core policy document supplemented by supporting policies, the "1+N". This new reform consisted of a new classification system for the companies, an increase in the leadership of the Communist Party over the SOEs, and in the recognition of central SOEs, which are functional for the realization of the "One Belt

One Road” Initiative. This reform brought to a decrease in the number of State Owned Enterprises, which were 96 in 2018 compared to 189 in 2002 (Lin et al., 2020).

After having presented the formation of SOEs in the history of the People Republic of China, a further digression about these special companies and also other similar companies will be discussed in the analysis, with the aim to have a better understanding of the mechanisms behind these enterprises, and which are their direct connections to the state, with regards to the ones involved in the mining project on which this thesis is focusing.

1.3 Literature Review

Since the involvement of China in the Greenlandic mineral sector, many scholars interrogated themselves with the aim to understand the reasons behind their actions. It became an interesting case especially after the involvement of the Asian superpower in the mine of Kvanefjeld, due to the relevance of the minerals present in this area: rare earth ores and uranium. In this section it will be analysed the main studies made by scholars about the Chinese involvement in Greenland’s mining sector and their main findings on the reasons behind their activities.

In 2020 the Northern Research Forum published a dossier entitled the Arctic Yearbook, which included articles from several scholars with the involvement of China in the Arctic region as the main topic. The opening paper was entitled *“China Seeking Arctic Resources – The Arctic Seeking Resources in China”* by Ane Bislev, Ulrik Pram Gad, and Jesper Willaing Zeuthen, who stated that the idea of the possible Chinese investments is more relevant than the actual investments done so far. They also report a fear in the context of Chinese investment in Greenland, due to the fact that it could be a move to gain more influence in this area for the achievement of another objective. Lastly, they affirm that it is necessary for both Chinese and not only Greenlandic but Arctic actors in general to get to know each other more deeply in order to have a smoother relation (Bislev, Gad, and Zeuthen, 2018).

In the second article of the dossier, *“Imagining China on Greenland’s Road to Independence”* by Ulrik Pram Gad, Naja Dyrendom Graugaard, Anders Holgersen, Marc Jacobsen, Nina Lave, and Nikoline Schriver, it is analysed the role of China in the way towards independence of Greenland, paying attention on how China and its stakeholders present in loco are perceived by Greenlandic people. The authors highlight how the Government of Greenland sees in China a possible investor in large-scale projects inside the mining sector, since most of the projects are held by Australian and Canadian. Nevertheless, the Danish counterpart from the right wing party seemed to not have the same opinion on the situation, addressing Chinese investments as a possible threat, referring also to the fact that only Chinese workers would have been employed in the projects. This clash of wills seems not to be helpful for Greenland, which is willing to cooperate with Chinese and run the risks that come with it in order to become independent from Denmark. Events like the Polar Silk road may be an opportunity for the development of Greenland’s infrastructure, yet until Denmark and US consider these investments a possible threat the situation remains stagnant (Gad et al., 2018).

Also part of the Arctic Yearbook, the article *“Chinese Mineral Sourcing Interests & Greenland’s Potential as a Source of Conflict-Free Conflict Minerals”* by Karin Buhmann, aims to present the point of view of Greenlands society with regards of the repercussion caused by the mining action on the environment and on the society, taking into account the Chinese mining projects, such as Kvanefjeld and Isua mines. The author addresses issues such as the potential presence of an elevated number of Chinese workers in Greenland, or the toxic uranium’s dusts that may be caused by mining actions. In this regard, the article cites the 2009 Greenland’s Act on Raw Materials, which affirms the necessity to respect the social and environmental sustainability of the territory in order to obtain a license to work there. On the other hand, when it comes to develop projects outside of China, Chinese companies follow a guideline stipulated by the China Chamber of Commerce of Metals, Minerals & Chemicals (CCCMC), which is in line with the guidance elaborated by the Organisation for Economic Collaboration and Development (OECD). Therefore, the author point is the fact that this alignment between Greenlandic and Chinese regulation can be deployed by Greenland’s authorities to ensure that the Chinese companies will pay

attention to social and environmental sustainability while proceeding with the mining projects (Buhmann, 2020).

The last article from the Arctic Yearbook that will be cited is *“Chinese Mining in Greenland: Arctic Access or Access to Minerals”* by Patrik Andersson, Jesper Willaing Zeuthen & Per Kalvig. In this article the authors interrogate on the possible interests of China in the mining sector of Greenland, focusing as well on the two projects of Citronen and Kvanefjeld. To understand these reasons, the article analyses the importance of the minerals extracted in the above cited sites for the Chinese government, and how the narrative of Chinese official papers with regards to them has changed during the last years, starting to include Greenland. The result of the analysis is that Greenland is an important country for China, both for the presence of strategic minerals, and for the access to the Arctic region as part of the Polar Silk Road project. It suggests that while the Kvanefjeld project because of rare earth elements presence is likely to be driven by the interest on the resources itself, the interest in zinc, as it is for Citronen, could seem more to be part of foreign policy strategy (Andersson, Zeuthen and Kalvig, 2018).

In the article *“Chinese investments in Greenland: Promises and risks as seen from Nuuk, Copenhagen and Beijing”* by Camilla T. N. Sørensen the author aims to examine the overall Chinese investments in Greenland, and the Greenlandic-Danish reaction to them. The whole situation is introduced stating that Greenland is looking for investments, and that China is interested in investing yet at the same time need to be cautious to not scratch its relation with Copenhagen, being aware of the existence of the “China threat”. The areas of interest for Beijing when it comes to investing in the Arctic and specifically in Greenland are scientific research, energy and mineral resources, Arctic Sea routes, and evolving Arctic governance regimes. Even though China has several reasons to get involved in Arctic matters, it is showing to have a “wait and see” approach, handling the situation with extreme prudence, because of the delicate circumstances that represent the Danish-Greenlandic relation, and also with the aim to legitimise its presence on spot without arising the so-called “China threat”. On the other hand, Denmark shows an ambivalent perspective on Chinese presence in Greenland

and the Arctic. While there is an interest from Copenhagen to welcome Chinese investments to develop Greenland and also to strengthen the relation with Beijing, at the same time there is the fear of an excessive Chinese influence in Greenland, and a possible economic dependence. In this context, Greenland seems to appreciate a development in its relations with Beijing, considering them as an opportunity to reach a future independence from Denmark (Sørensen, 2017).

Proceeding on the same topic of the previous article, in *“Promises of Hope or Threat of Domination: Chinese Mining in Greenland”* by Zeuthen and Raftopoulos it is analysed how the Danish and Greenlandic perspective on future Chinese actions are likely to have failed to foresee their real interests, and how the Chinese presence in Greenland is not driven by a singular actor with a well defined goal, yet it seems to be fragmented. The reasons why the predictions of the Kingdom of Denmark, which were basically endorsing a second political and economic interest behind Chinese mining actions in Greenland, ended up to be debatable, it is mainly due to the fact that after a few years there are no proofs to verify such a statement, also considering the fact that by 2018, year of the publication of this article, Chinese stakeholders in Greenland were not that much active (Zeuthen and Raftopoulos, 2018).

1.4 Problem Formulation

The information reported so far shows how from the beginning the presence of Chinese enterprises in the mineral sector created an uproar among several actors. Indeed, even though China's current projects in Greenland are only few, it immediately caught the attention of Western countries, and also of many scholars who tried to comprehend this event.

In this scenario, understanding the real intentions behind the actions of the People Republic of China could be cryptic and speculative. In fact, it is first necessary to address the Chinese stakeholders in the Greenland Mining sector, and then analyse their modus operandi. This thesis will take into account two stakeholders, first of which is the Chinese Government, which will be considered looking at Greenland with a

positivist point of view, based on a realistic approach to the world system, with the scope to understand the political and economic interest that the state's authorities may have behind their relation with Greenland. The second stakeholder are the Chinese companies involved in mining projects in Greenland, and as specified above the ones working on Kvajenfeld, Isua, and Citronen projects. This actor will also be examined from a national point of view, taking into account the structure of the Chinese government when it comes to decision making.

However, summarising the concepts just exposed and going straight to the point, the research question that this thesis aims to answer is why China as a country and the Chinese companies present in that spot, which to some extent are state owned, are interested in Greenland's mineral resources. To answer this question, besides the analysis of the two stakeholders, it is necessary to take into account several aspects, since the outcome may concern both political and economic matters.

At this point, before starting with the analysis, it is mandatory to explain the methodology and the theories that will be applied to conduct the research, therefore will now follow the Methodology chapter.

2.0 Methodology

In this section it will be presented the methodology applied for the development of the analysis. It will start with the theoretical framework to clear the mechanisms of the reality taken into consideration in this thesis, in other words the context and the different points of view. Then, the choice of theory will give a first overview of how the theories will be applied during the research. It will follow the research method which will add other basic information on the method of the research, to get consequently to the choice of data, which will clarify the sources that will be consulted to answer the research question. Lastly, after stating the main limitations of the project, alias the possibly relevant aspects that will not be involved in this research, the thesis structure will be shown in order to make the understanding of the whole process clearer.

2.1 Theoretical Framework

This thesis will address the two points of view of Chinese Central Government and of the Chinese Companies involved in mining projects in Greenland. The world system in which the research takes place has a realist connotation, where behind the actors moves there are economic and political interests. In this context, China is perceived as a great power inside an anarchic world system, and the country's actions are driven by the balance of power of the world's structure.

The reasons behind the choice of analysing Greenland as the destination of Chinese projects is because of its unique situation. Indeed, the Arctic island has a particular political system because of its dependence from Denmark. Moreover, the fact that its mining sector has just started developing, and adding the facts that first it contains REE and uranium in the ground, and second it is a strategic ally of US and Europe, brought the Chinese investments to have been seen with suspicion by several actors.

Focusing on the Chinese investments, the reasons why this thesis points to uncover the motivations of China in Greenland is because of the vast range of possible objects. Starting from the fact that the island is an historical ally of the US, therefore military and defense reasons could be involved, to also the fact that the mineral resources in the territory are considered strategic by the Chinese authorities, reasons why the paper will focus on the projects of Citronen Fjord, where it is extracted zinc and lead, Isua where it is extracted iron, and Kvanefeld, known for REE and uranium (Andersson, Zeuthen, and Kalvig, 2018). Furthermore, it is important also to keep in mind that in 2018 China elaborated a White Paper on Arctic where it presented a plan called Polar Silk Road, a branch of the wider project Belt Road Initiative, and for the achievement of this plan it would be necessary to create a passage to transport goods through the Arctic region (The State Council to the People's Republic of China, 2018). For such a goal, having a strong relationship with Greenland would be a great advantage for China.

At this point, after that the vision of the world, the reasons behind the interest of Greenland among the many countries China is investing it, and the reasons for believing in a second purpose in Chinese investments have been cleared, it is possible

to proceed with other fundamental aspects which are part of the methodology of this thesis. It will now follow the choice of theory.

2.2 Choice of Theory

In this paragraph the application of the two theories Neorealism and Fragmented Authoritarianism in the analysis will be presented.

Starting with Neorealism, it will be mainly employed to analyse and explain the point of view of the Chinese authorities with regards to investments in Greenland's mining sector. The interests of Beijing will be political and economical, therefore about power. Indeed, in Waltz's Neorealism the actions of the different actors are driven by the seek of power. In addition, for Neorealism it is the system of the world itself the core that constrains the decisions of the states, and with this in mind, the fact that the Arctic is becoming an hot spot for the World order since of the new opportunities that the global warming is bringing in this region, Chinese actions acquire an important connotation. They are driven by the position that Greenland represents in the structure of the international system, since that is the factor that could give power to China, not the Chinese action itself. Therefore, the fact that China decides to act in a certain way because of its position in the international system and for the position of the Arctic, is the reason that makes Waltz's Neorealism suitable for this analysis.

Moving to Fragmented Authoritarianism, it will be employed together with Neorealism in the Government analysis, to explain the fact that the possibility of different interests of the state in Greenland are due to the different policy agenda the authorities would choose to pursue, and also for a second parallel analysis. The point of view taken into account in this second analysis is the one of the Chinese companies, among which also a State Owned Enterprise, involved in the projects of Kvanefjeld, Isua, and Citronen. This theory has the aim to explain the reasons behind the presence of these enterprises in Greenland. Indeed, since the Chinese system is so complex, and since these companies are connected to some degree to the state, Fragmented Authoritarianism has the duty to explain the mechanisms which brought these three Chinese enterprises

to invest in such an environment. Therefore, the theory will be applied to understand the stakeholders inside the Chinese political system who wanted to push for these investments through certain policies, and also which could be the reasons behind these choices. The fact that according to Fragmented Authoritarianism, the policy making process is a play field full of actors, is what makes this question relevant, since the reasons behind these investments could vary according to who decided to push for them. The thesis will mostly take into account the view of Fragmented Authoritarianism shaped by Adrew Mertha in his article “Fragmented Authoritarianism 2.0”: Political Pluralization in the Chinese Policy Process, which applies the classical fragmented authoritarianism to a broader context, which does not comprehend only political actors, yet also entities such as companies (Mertha, 2009).

Eventually, once the two analyses present their main findings, they will be combined together under the Fragmented Authoritarianism framework, which has the aim to explain how it is possible that state-related companies may have different goals regarding a certain investment than the Central Government, which is the one that owns the company, according to the level and sector of authorities they are controlled by and the relative policies they need to follow.

2.3 Research Method

In this paragraph the research method will be introduced, with the aim to clarify the mechanisms that will characterise the progress of the analysis part, explaining both the technical choices and the structure of the research.

Starting from the basic information, this thesis will follow a deductive method in the development of the analysis. In other words, it will utilise data and theories to make conclusions starting from a research question. The data employed will be both qualitative and quantitative, in order to have the possibility of focusing on different aspects and points of views. This kind of resource employment is called a mixed method.

At this point, once clarified the method and the data, the analysis will be structured from two different points of view of two stakeholders, and for each one will be utilised a theoretical framework. The first point of view is the one of the Chinese Government, which will be filtered by the theory of Waltz's Neorealism together with Mertha's Fragmented Authoritarianism. With Chinese Government the paper refers to the People Republic of China central government, the highest decisional charge of the Chinese political system. The second point of view is the one of the Chinese companies and State Owned Enterprises working in the mining areas of Citronen, Isua, and Kvanefjeld, which respectively are China Nonferrous Metal Industry's Foreign Engineering and Construction Co (NFC), General Nice Development Ltd, and Shenghe Resources Holding Co Ltd (Shenghe). Through Fragmented Authoritarianism the analysis will aim to address the reasons behind their presence in Greenland, taking into account singularly all the three projects, with the scope too. To conduct this analysis it is strictly necessary to have clear what is intended for Chinese companies and SOEs. Indeed, besides having presented an overview on how SOEs have been created and the mechanisms behind their operations, the paper will also present a more detailed structure of the above cited companies that are the focus of this thesis, and this part will be addressed in the analysis.

Eventually, the findings obtained from the analysis of the two different points of view will be combined together with the scope to understand the common interests and the divergences, among all the political and economic reasons that brought these stakeholders to mine in this Arctic island. This last connection is necessary for the reasons that the two stakeholders, the Chinese Central Government and the Chinese companies, which are SOEs or connected to the state in other ways, are both part of the same side, the People Republic of China, and therefore are very likely to have at least a few common interests.

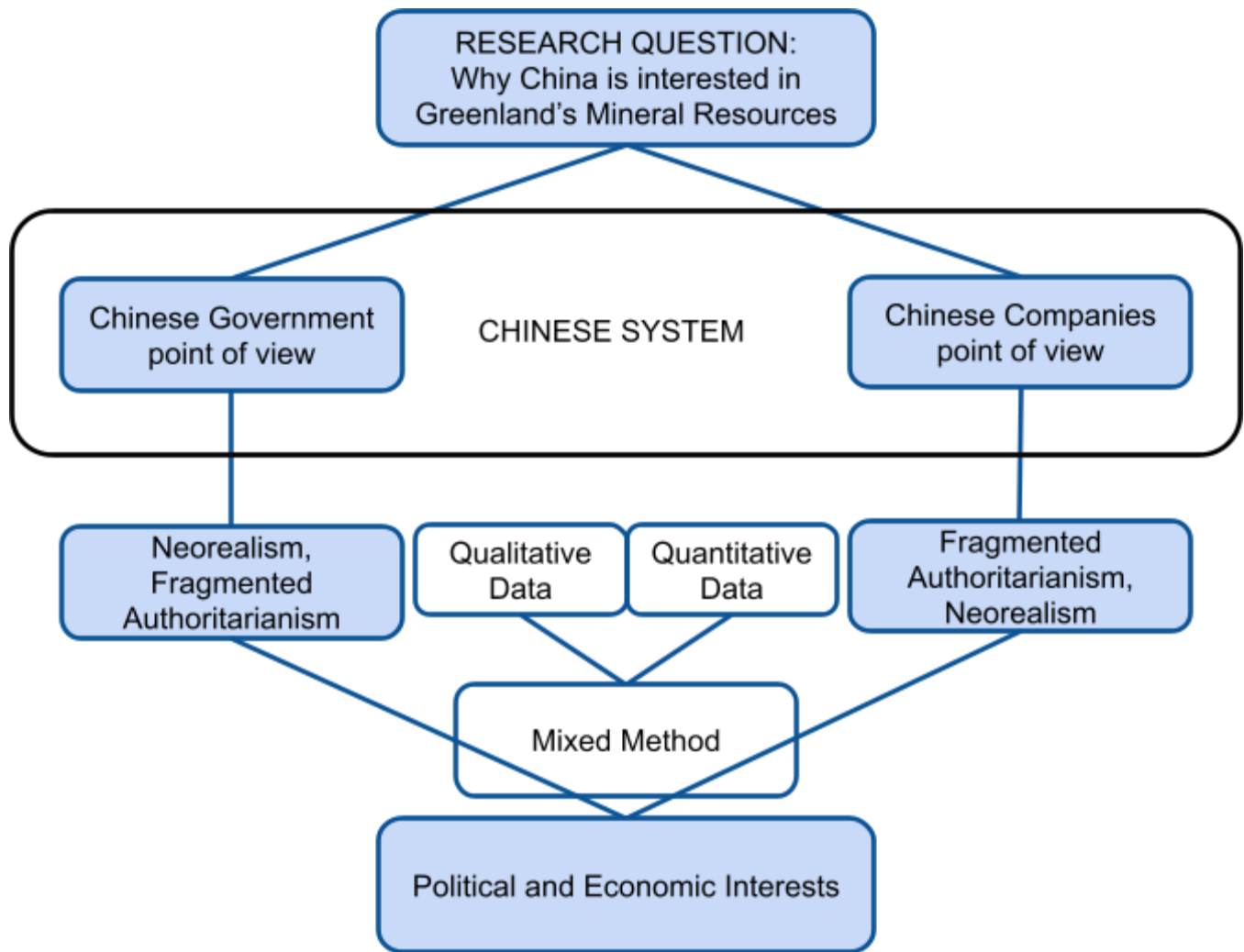


Figure 1. *Research Method*. Source: Personal Collection.

2.4 Choice of Data

As explained in the above Research Method paragraph this thesis will apply a mixed method to develop the analysis, therefore both qualitative and quantitative data. Indeed, to explain the outcomes of the two Chinese stakeholders' economic and political goals, different kinds of data will be utilized.

Concerning qualitative data, sources that enter in the sphere of Governmental policies or papers such as the Greenland Mineral Resources Act, the Chinese White Paper on Arctic Policy, and also the outcomes of the Chinese Five-Year Plans will be consulted.

Together with these, statements from relevant stakeholders can be valid qualitative data for this project. The analysis of the Chinese companies will rely on information retrieved from stock exchange markets or from the official website of the firm, where it is possible to find a chronological list of papers with annual reports of the company's main activities.

Taking into account quantitative data, since the theoretical framework of this project tends to be close to a realist perspective, these typologies of sources are essential to have a complete analysis. In this direction, an example of quantitative data necessary to achieve some results in the research are the amount of strategic resources that China can get from Greenland's mines of Citronen, Isua, and Kvanefjeld in comparison with other countries. Another quantitative data related to minerals, is the amount of reserves that China owns of certain resources compared to the rest of the world, and the consumption of them as well.

To conclude, the mixed method is perfect to conduct this kind of research, which has the aim to connect two different perspectives of the two stakeholders taken into account.

2.5 Limitations of the Project

In this section the limitations of this project, such as the aspects of this topic that are not taken into account in the analysis, will be taken into address.

The first and most important limitation is the decrease in the Chinese presence in Greenland's mining sector. Indeed, being aware of this fact, this thesis will aim to focus on the last 15 years events, taking into consideration the new outcome yet also analysing the previous situations. More in detail, the first change in Chinese presence is referred to the fact that recently Ironbark switched its partner for the Citronen project, join forces with an American SOE, US Export Import Bank (EXIM), which became the main shareholder in 2020, taking the spot of the Chinese SOE China Nonferrous Metal Industry's Foreign Engineering and Construction Co (Ironbark Zinc Limited Half-Year Report, 2021). In addition, the recent elections for the new prime minister of Greenland also brought critical changes in the development of the Kvanefjeld project. Indeed, in

April 2021 the left-wing Inuit Ataqatigiit party won the election, defeating the pro-mining Siumut party which was in power since 1979. The new government is focused on the environment and has already stated that the Kvanefjeld project is not going to happen due to the presence of uranium, which is highly hazardous for the ecosystem. Both the companies involved in the project, the Australian company Greenland Minerals and Energy and the Chinese company Shenghe, have not commented on the issue yet (Gronholt-Pedersen, 2021). To sum up, in doing the analysis the project takes into account the fact that in both the Citronen and Kvanefjeld projects the Chinese companies NFC and Shenghe have had complications to proceed with the mining activities, yet since the goal of this thesis is to address the reasons for the Chinese companies and for the Chinese Government investments in Greenland's mining sector, these new events are not an obstacle to answer the main question.

Since the mining projects in Greenland where Chinese companies are or have been involved are several, and since this thesis will address only three of them the lack of some of these mining projects represents another limit. Among them, one is a gold exploration on the east coast of Greenland, close to Illoqortormiut, where some Chinese companies, such as Jiangxi Copper, Jiangxi Union Mining, and China-Nordic Mining, are part of the exploration (Têtu and Lasserre, 2017).

Besides that, one more limitation is the fact that in this analysis the role of Denmark is almost totally absent. Since Greenland is still dependent on the European country, it could be relevant to keep in mind its presence in analysing a relation with the Arctic island. In addition, only the mining sector among all the Chinese investments in Greenland is considered in this project, ignoring the fact that other areas such as infrastructure and research are relevant to Chinese investors.

Going on, also the fact that the project is analysed from the point of view of only two stakeholders is a limitation. Indeed, to have a complete overview of the topic, not only other Chinese points of view could be taken into consideration, such as the Chinese workers employed in the mining companies, yet also the point of view of the Greenlandic Government, or also of the Greenlandic population. Moreover, also the

point of view of other Arctic actors is absent, such as other Arctic countries, which are not contemplated almost at all in the analysis.

Lastly, another limitation is in relation with the sources employed in the research. Indeed, due to the language barrier, only a limited amount of national policy papers could have been taken into account. Unfortunately, to have at disposal a full range of documents, the knowledge of both Greenlandic and Chinese language would be a requirement, since in many cases they are not available in the English translation.

2.6 Structure of the Thesis

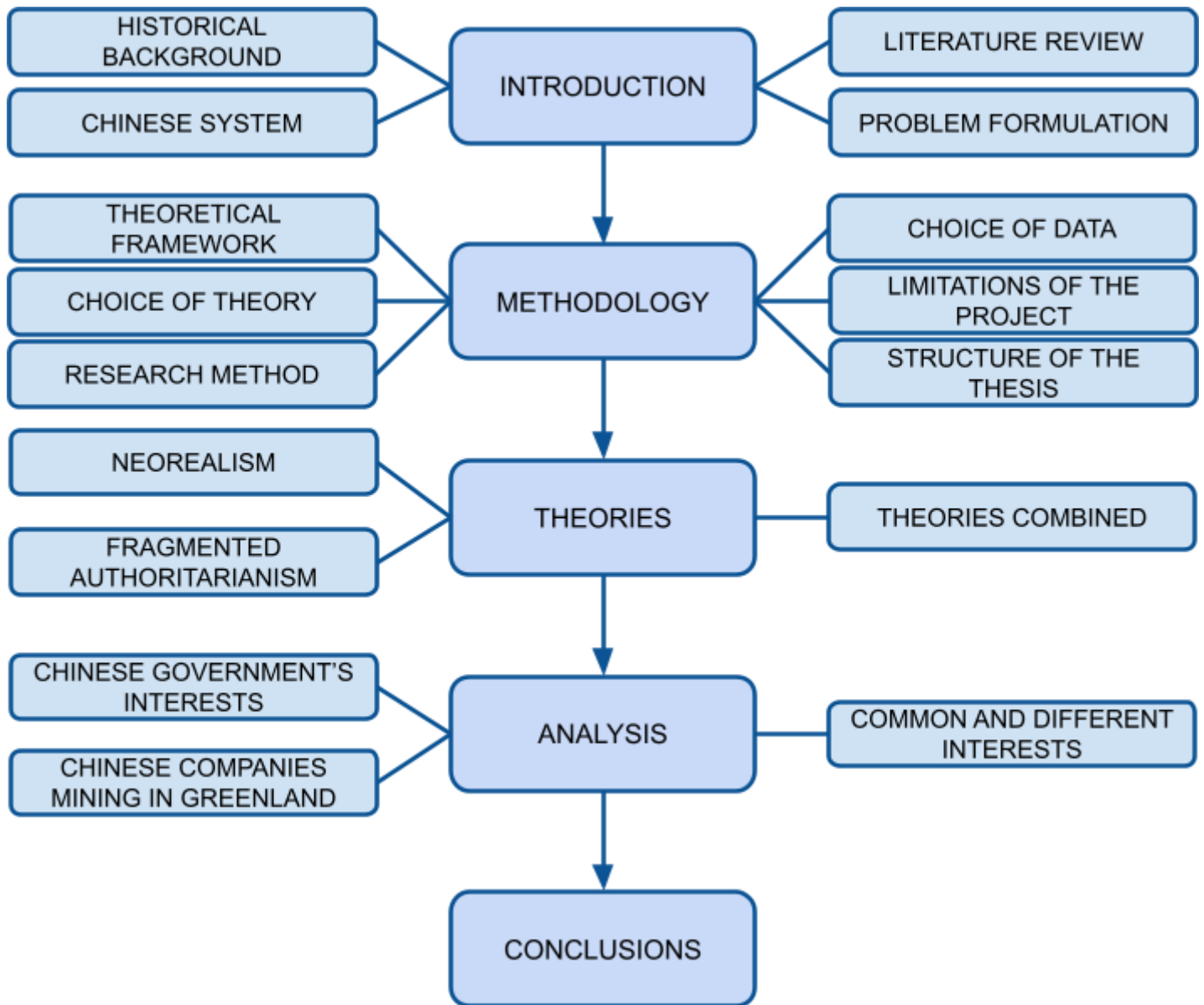


Figure 2. *Thesis' Structure*. Source: Personal Collection

3.0 Theories

In this chapter the theoretical frameworks applied in the analysis will be explained. They will be described as they have been conceived by their authors. Then, it will follow a paragraph where the two theories will be connected together in order to clarify how they will be combined in the analysis as well.

3.1 Neorealism

The theory of Neorealism was elaborated by Kenneth Waltz in 1979 in his book *“Theory of International Politics”*. Waltz’s theory is a re-elaborated version of the classical realism developed in the past by Thucydides, Macchiavelli, and Hobbes. Its aim is to scientifically explain the international political system. As in realism, the world is composed of independent states, seen as black boxes, which operate in an anarchic system. Nevertheless, differently from realism, concepts such as human nature and the ethics of statecraft are not taken into account in Neorealism. This theoretical framework can be called “systemic”, since it focuses on the system, such as the distribution of power, instead of state leaders and their actions or a political regime. States and leaders decide to behave in a certain way because they are acting according to the structure of the world, since it is according to the structure that a certain behaviour would end up being strategic or counter-productive (Jackson, Georg Sørensen and Jørgen Møller, 2019).

Another means to understand Waltz’s Neorealism is through ideal types, a simplification of a complex reality thanks to a mental construct, which has the aim to capture the essence of this reality. In Waltz’s theory, ideal types have the function of explaining the way of states to respond to international anarchy (Jackson, Georg Sørensen and Jørgen Møller, 2019).

In Neorealism, the structure of anarchy between states is decentralised, since all the states are alike taking into consideration their basic functions, such as collecting taxes, or conducting foreign policy. In Waltz’s vision, the international system has changes,

such as from a multipolarity , a system with more than two great powers, to a bipolarity, a system with two superpowers, and these changes are the result of a shift in the balance of power. According to Waltz these events cannot be predicted thanks to Neorealism, yet the theory assumes that such a change typically arrives through great power war. This does not mean that war is an inevitable event, since it is possible to have a balance of power among great powers, a condition that according to Waltz is more likely to occur in a bipolar system, that it consists of the hegemony of two great powers (Jackson, Georg Sørensen and Jørgen Møller, 2019).

To some extent, Waltz's Neorealism is a quite abstract theory, since it does not aim to answer possible concrete explanations of how a certain state should behave in a certain context, yet it is focused on the management of international affairs, which is strictly constrained by the structure (Jackson, Georg Sørensen and Jørgen Møller, 2019).

Besides these aspects, Neorealism also presents an ethical dimension of international politics, which corresponds to the one present in classical realism. In the Waltz world's system all states are sovereign, since they are free to act as they like, a condition of independence. The idea of independence also indicates that all states are equals, and it confers value to the figure of the state, which therefore becomes worth fighting for, and which it is in search of survival. Nevertheless, in Neorealism these concepts are not discussed, yet they are taken for granted (Jackson, Georg Sørensen and Jørgen Møller, 2019).

The main questions that Neorealism tends to answer are firstly why all the states even though are different for several aspects tend to act more or less in the same way towards the external worlds and secondly why some periods of history are more peaceful despite the presence of great tensions and why others are characterised by wars. In elaborating its theory Waltz got inspired by economic theories, and applied their same approach to international relations. It is the world system's structure that forces the states to seek power and security, and this brings to the creation of webs of power which try to prevent the outbreak of a possible war. Waltz's Neorealism similarity with economic theories is the fact that as in the latter economic is taken into account as

a separated sphere from social and political issues, the former concentrates solely on politics itself, separated from social and economic issues (Schörnig, 2014).

Waltz elaborated three different possible ways to analyse the world system, which are the level of the individual, the level of the political system, and the level of the international system. According to Waltz, the problem of many International Relations theories is the fact that they focus on the first or the second level, which are respectively the focus on the behaviour of political decision makers, and why some governments structures, for example democracies, behave in a different way than different forms of governments, such as non-democratic countries. In his opinion, these theories are reductionists, such as liberalism and classical realism, since it is not possible to understand world politics only looking inside of states. The only way to have an analytical perspective is employing the international politics sphere, the typical view of the world of the level of the international system (Schörnig, 2014).

In Waltz's view, the system is composed of two elements, the actors, which are the states, and the structure of the system. As explained above, states are perceived as black boxes, therefore they are all homogeneous and what is inside of the state is of no relevance. Also the political regime of the states is of no relevance, seeing thus the states as all identical. The main goal of states is to survive, in order to maintain their political and geographical integrity. Then, they tend to act rationally, taking into account the outcomes of certain actions, and they have to base their actions according to their capabilities and power (Schörnig, 2014).

Taking into account the structure, the biggest difference with realism, is the fact that for Waltz the structure is defined independently from the actions of the actors, while in realism are the actors which through their actions shape the structure. In Neorealism, it is not possible to directly observe the structure as it is, therefore it is necessary to create an abstract model. The model of the structure elaborated by Waltz is characterized by three elements, which are the ordering principle, the functional specifications or characteristics of actors, and the distributions of resources or power among the actors. More in detail, the first is the two different orders in which actors can be organized, hierarchically or anarchically. A hierarchical order would presuppose an

authority which gives laws valid for all the states, a sort of world government, while an anarchical one implies the lack of this authority, and it is recognised as the one typical of our world system. The second one is different functions that the actors may have among each other, in other words the different division of labour in the international system. Yet, in an anarchic world system every actor has to count only on its forces, without asking for help from other actors. The third element is the power relation between the actors, which as said before can be bipolar or multipolar, yet also unipolar, which sees one state as hegemon in the world system (Schörnig, 2014).

In order to survive in an anarchic system states need to maximise their security, which requires a balance of power among states. Nevertheless, this does not mean that states' behaviour is always determined and that they act in order to keep this balance, since states are free to act as they please. Yet, it is likely that states will act to keep the power balanced, since it is convenient for their survival. In this context, states need to be aware of their capabilities also in comparison with other actors, so it can form alliances or enforce its military sector in case it is needed (Schörnig, 2014).

To understand the reasons behind a system more inclined towards war or peace, it is fundamental to take into account the different power configurations in the world system, namely the previously explained unipolarity, bipolarity, and multipolarity. In the case of a bipolar system, the power relations between the two great powers are quite clear, making thus easier the possibility of a balance of power which prevents war, like for example the Cold War. Indeed, because of their destructive capabilities, the outbreak of a war would not benefit either of the two great powers. On the other hand, a multipolar system would bring more problems, since the intentions of the other actors are less clear due to the large number of states to keep under the eye. In this scenario, the outbreak of a war is more likely to happen, because a state could misjudge the actual power of other actors and attack it with the idea to have more possibilities to win. Lastly, in case of unipolarity, the risk of war will probably increase, since the presence of a unique egemon in the world would bring other actors to form alliances in order to contrast such a state (Schörnig, 2014).

Taking into account alliances, in Neorealism they are possible to form as just said to prevent a certain actor from gaining too much power. Nevertheless, this cooperation will not last more than needed, even though they could bring more benefits, since it could spread into a dependency toward the allied actor. Indeed, any partner could just break the agreement at any moment if this could bring any advantage to it. In the Neorealist vision of state it is unacceptable a dependency situation, since states act in order to improve their security inside a self-help system. The possible alliances that could for example be caused by the presence of a hegemonic actor are only based on fear, not on mutual trust (Schörnig, 2014).

According to Waltz, the anarchical nature of the world system is likely to be constant over time. While the above discussed changes in the balance of power are a change in the international system, the rise of a kind of world government which is above all actors would be a transformation of the system itself, a scenario that, if possible, would make Neorealist theory obsolete. The structure of the system elaborated by Neorealism is quite pessimistic, since it pictures states as actors which are in a constant research of security, and where power imbalances could bring to the outbreak of war and therefore must be evened out, and also considering that in this scenario cooperation is hard to be achieved and it is never based on trust (Schörnig, 2014).

3.2 Fragmented Authoritarianism

Fragmented Authoritarianism is a very specific theoretical framework which has been elaborated for an individual reality, the Chinese Government's system. This theory was first proposed in 1988 and since then has been one of the most effective approaches to study the Chinese system (Mertha, 2009).

In the book of 1988 *Policy Making in China Leaders, Structures, and Processes* by Kenneth Lieberthal and Michel Oksenberg, the authors present Fragmented Authoritarianism as the characterisation of the policy making process in the Chinese system. The main aspect of this framework is the fact that policies are established through a bargain between different Ministries or Provinces under the mediation of

some top leaders from the highest rankings directly or indirectly. For these reasons, it can happen that policies are not the result of a perceived problem or of a political strategy, yet they come out from temporary agreements between actors with different priorities, purposes, and experiences, which choose to follow a certain agenda despite another one (Kenneth and Oksenberg, 1988b).

This framework sees the Chinese Government as a centralised system with the top leaders at the core, which are the members of the Politburo, and from where are linked different Ministries that control different sectors from center to local levels. Any section of this system has its mission to achieve, and the central leaders are supposed to be in charge of the operation of any sector, making everyone working together. Nevertheless, this reality turns out to be fragmented, characterised by a cleavage, divided, and stratified structure. Because of its Nature, the Chinese structure ends up being a unified hierarchical system which operates in a system composed by competing agencies (Lieberthal and Oksenberg, 1988a).

As presented in the Chinese Political System paragraph in the Introduction, the Chinese Government is structured from the Central to the Local level. In this context, Fragmented Authoritarianism states that each level of the government has resources that other levels need, therefore Central-Provincial relations is characterised by bargaining between the two parties. Every unit of this system has a rank, which is directly connected to the levels of the government (local, provincial, ecc.). Only higher ranks can question the making of a certain policy, while units of the same rank can not oppose each other. Then, also the ranking of the individual who runs the unit has relevance in this system, which is categorised in the position they have in the Government/Party and the civil service grade. This system of ranking is what moves the decision making process in the Chinese Government, playing the main role when it comes to establishing some policy agenda (Lieberthal and Oksenberg, 1988a).

According to Andrew Mertha, which has a wider view of this framework in a way that not only political actors are involved in this process, the main point of Fragmented Authoritarianism is that policies made at the central level of the Government in the process of moving to the peripheral levels get more malleable to the parochial,

organizational, and political goals of various vertical agencies and spatial regions which have the objective of making those policies succeed. The means through which this mechanism works is bureaucratic bargaining. Thanks to Fragmented Authoritarianism, new actors, such as officials only peripherally connected to the policy in question, the media, non-governmental organizations and individual activists, all of which were not present before in the political scene, start to play a role inside a field which before was just political (Mertha, 2009).

Taking into account the policy alterations, some figures called “policy entrepreneurs” play a main role in this phenomenon. These figures invest money, energy, and time with the aim to obtain a future return. Clearly, these actions can create a clash of interests among different stakeholders that aim to shape a certain policy as they desire. Policy entrepreneurs can be divided in three categories, which are officials within Chinese government agencies opposed to a given policy, journalists and editors, and individuals within Chinese non-governmental organizations (NGOs) (Mertha, 2009).

In a system characterized by political fragmentation the information exchange is weaker, making the singular information more valuable. Such a system also brings state organs to become more self-supporting through bureaucratic entrepreneurship, with the consequence to push toward the safeguard of their own interest in the policy making processes. Fragmented Authoritarianism is the model behind the policy making process, and while it seems to be affirmed as a framework, it is at the same time making the playing field more and more crowded, with new stakeholders continuously entering in this system (Mertha, 2009).

This thesis will follow Mertha’s idea of Fragmented Authoritarianism, since the different levels and sectors of the state have different policies which need to be followed by entities external to the political area, in this case the three companies taken into account. Indeed, the first version of Fragmented Authoritarianism did not comprehend actors external from the state, yet since Mertha’s vision assumes the possibility of external actors in the policy agenda context, it can fit with this analysis where companies connected to the state are taken into account. Therefore, companies can

also be part of this picking policies system. In other words, according to the bargaining process they can decide which policy to follow.

3.3 Theories Combined

After having clarified the nature of the two theoretical frameworks that will be applied in the analysis it is now necessary to explain how these two realities can work together.

The first detail to highlight is the fact that the two theories will be applied to explain two different points of view. First, the two theories will be employed to analyse the point of view of the Chinese Government, then for the point of view of the Chinese companies. To be more specific, in the case of the former point of view it will be possible to research the reasons behind the interest of the People Republic of China in Greenland's mineral sector having Neorealism as main framework and with Fragmented Authoritarianism in the background, while in the case of the latter a larger focus on Fragmented Authoritarianism will be employed to understand why these Chinese companies, among which SOEs, are working in Greenland, and which are the mechanisms and the policies that brought them to decide to get involved in these projects.

Since for the Waltz's Neorealist point of view states are perceived as black boxes, China will be analysed as a united identity, which behaves in a certain way to gain advantages for the whole nation. Nevertheless, it is also considered the point of view of another actor inside the Chinese country, the Chinese companies connected to the state. The presence of such an actor together with the idea of the state as a black box is possible thanks to the application of Fragmented Authoritarianism as a theoretical framework. Indeed, this theory will explain how it is possible that national companies may act following different paths than the one established by the Central Government according to the level and the sector they are controlled by and the relative policies they have to follow. In this way these actors can be considered as external entities, which pretend to be black boxes.

Therefore, the two theories will be employed to make two different analyses, one for each of the stakeholders. Once established the main findings of each analysis, they will

be examined together applying Fragmented Authoritarianism, which allows the interests of state or semi-state companies to be different from the interests of the state itself, since different levels and different sectors of the Government set different policies according to their priorities.

4.0 Analysis

After having introduced the problem formulation together with a contextualization of the topic, the methodology, and the theoretical framework, it is now possible to start with the analysis to answer the research question.

The research will firstly be divided in two, one part will focus on the reasons behind the interest of the Chinese Government for Greenland's mining sector and the second part will address the reasons of the investments in Greenland of three Chinese companies, Shenghe Resources Holding Co Ltd (Shenghe), the General Nice Development Ltd from General Nice Group, and China Nonferrous Metal Industry's Foreign Engineering and Construction Co (NFC). After having obtained results from the analyses of these two stakeholders, a further analysis will conceive these outcomes to examine the common and different interests of these actors.

4.1 Chinese Government's interests in Greenland

Before introducing the three Chinese companies involved in the three mining projects in Greenland, and before examining the possible interests of these firms for making such an investment, employing fragmented authoritarianism as a framework to justify the fact that these companies could have different interests since they may have to follow different policies, it is going to be presented the first point of view. This part will try to address the possible interests of the Chinese Government with regards to Greenland's mining sector. This research will be conducted through the framework of Waltz's Neorealism, implying thus that China acts in a certain way because of the structure of the international system it is in, and in order to guarantee an advantage to its position inside this system, with survival as the final and most important goal. In addition, it will

be applied Mertha's Fragmented Authoritarianism as well, to explain the different policies that the state may pursue in Greenland, more specifically a Mineral policy agenda or a Foreign Affair policy agenda. In this context, all the parts of the state which follow different interests pretend to behave on the behalf of the Chinese State, being each of them therefore as black boxes.

This part of the analysis will be divided into two sections. The first one will research the interest that China has for the minerals extracted in the three sites above examined, Kvanefjeld, Isua, and Citronen. Indeed, since the focus on the analysis is the reason for the presence of China in Greenland's mining sector, the resources present in the sites represent the first layer among the possible objectives of the Asian country. This part will take into consideration the fact that the country's interests in Greenland are actually driven by the Ministry of Natural Resources which is following a policy agenda focused on minerals. Successively, the second section will try to dig deeper behind China's interests in Greenland, taking into account more factors which may be part of a broader strategy of the Asian superpower, indicating therefore also the presence of a foreign policy agenda followed by the Ministry of Foreign Affairs.

4.1.1 Mineral Interests

This section of the analysis has the aim to address the possible interests of Chinese authorities in the minerals extracted from the sites of Kvanefjeld, Isua, and Citronen, which are mostly rare earth elements, uranium, iron, and zinc. To do so, it will be taken into account each mineral singularly and analysed its importance for the state, since under the lenses of Neorealism the first goal of a state is to survive and to get power. Nevertheless, before starting with this analysis it is necessary to clarify some aspects of the mining process, in order to have a better understanding of the relevance of the Greenlandic mines.

The first relevant information to cite when examining the mining development is the whole process from the discovery of a new mine to the point to make it operative. It is important to have in mind that this process may take several years, through which many obstacles that would risk to make such an investment in vain may occur. In this context,

the first aspects to focus on when planning to develop a mining project is the commodity present in the mine and its location. It is fundamental to highlight the fact that there is a technical difference between mineral resources and mineral reserves. The former indicates the amount of materials present in the ground, which is first indicated and then measured. The latter is the amount of this material which is actually possible to extract from the ground, the part of mineral resources which in a certain moment is economically affordable to be mined (Warner, 2018).

Moving on by steps, in the development of new projects it is necessary to go through several studies before getting the project off, which conclude with the definitive feasibility study. At that point, it can start the exploration process, which gives an estimation of the size of the ore and the veins present in the site. It follows the mine design, which is the evaluation of the different options of project development, such as the amount of resources extracted per year and the duration of the mine, in order to have a more concrete idea of the potential profits. This part will allow the company to know how to develop the project and the costs behind it, which are usually rather high. Therefore, it often follows funding research, trying to attract bids. Once settled all these regulations, it can start the construction, which will vary according to the mineral extracted and to its location, if it's on the surface or underneath the ground. Then, it is possible to begin producing, even though it often takes years before the project starts extracting the amount of reserves per year expected. The life-of-mine, which represents the year it can economically operate for, will depend on the amount of resources extracted per year. Lastly, it follows the mining closure, which can be caused by the ending of the mineral resources and reserves, or because the mine is not economically profitable anymore, which for example can happen due to a change in the commodity value (Warner, 2018). After having briefly described a mining project life-cycle, it is now time to move to the analysis of the minerals.

Starting from REE, this resource is of extreme interest for Chinese Government. Indeed it is crucial for both the technological development of the state and for the maintenance of a strategic position with other countries. More in detail, these minerals can be applied in the construction of catalysts needed in electrical devices such as smartphones,

electric cars, wind turbines, and also for military defense and in many other fields. The fact that they are necessary for the production of these kinds of goods, of which the request has seen a huge increase in the last ten years, brought the prices of REE to increase. In addition, China has been the main producer of this resource since the 1990s, accounting nowadays for around 90% of the total supply, and as shown in Figure 3 controlling around 36% of the total available reserves. In addition, China is not only the world's main supplier of rare earths, it is also the first consumer, the reason that makes this resource even more strategic and critical for the Asian country (King, 2020).

Rare earths - distribution of global reserves 2020

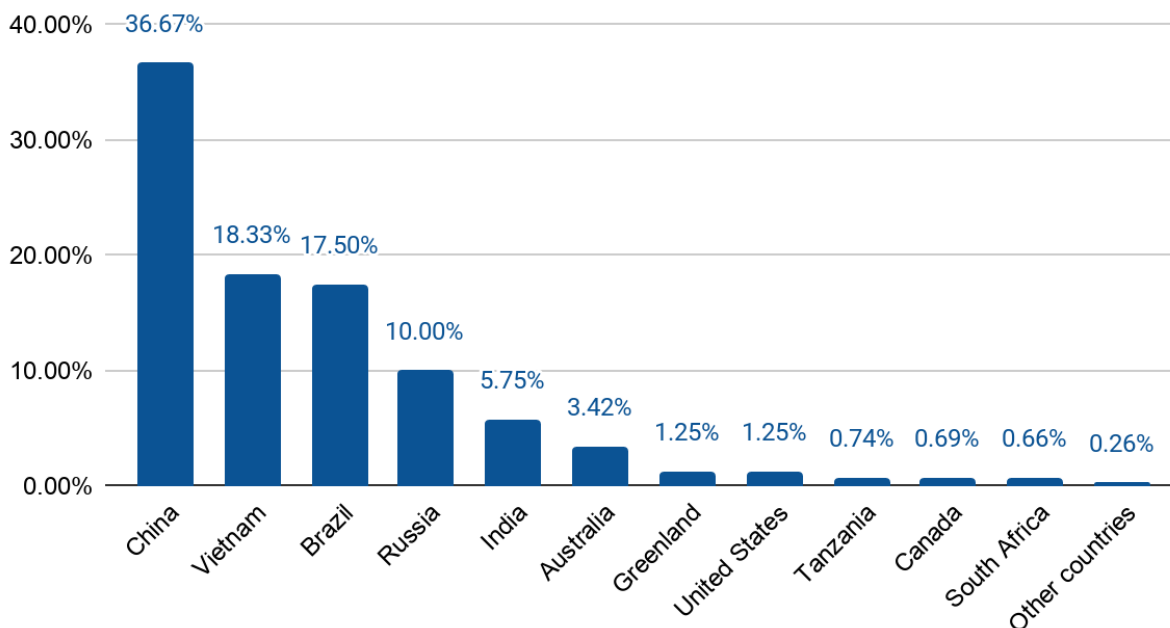


Figure 3. *Distribution of rare earth oxide reserves worldwide in 2020, by region.* Source: US Geological Survey, 2021.

The demand of the minerals for the development of the country and the strategic position of China in the global supply chain are the main reasons for making this resource so important to the Asian superpower, which classifies it as a “strategic mineral”. This denomination could result quite unusual, since the People’s Republic of China has the largest available reserve of this material and therefore it has no shortage issue taking into account in the short and medium term. Nevertheless, it is for China’s

dominant position in the global market that it is considered strategic (Andersson, 2020). This motivation, together with the fact that the exploitation of the mineral's ore causes a huge damage to the environment, brought China to invest abroad, increasing its share of REE's reserves. Chinese companies started entering in REE mining projects outside of the nation, investing in countries such as the US, Canada, and Zambia (King, 2020). In this context, the mine of Kvanefjeld could result in an interesting and convenient investment for the Asian superpower. Indeed, even though in 2014 the mine was still at a primordial step of the total mining process, and needed a huge amount of investments before of being operative, it was likely to have one of the largest rare earth reserve, being the new project with the highest potential production of rare earth ores, counting 10,3 tons per year (Argus Media, 2019).

Having this data in mind, the Chinese presence in Greenland's REE mine assumes a strategic relevance. Indeed, in such a world's structure, with the Asian country being at top of the supply chain of these minerals, placing itself in Kvanefjeld site could be a strategy to maintain and enforce its advantage in this market, which assures power to the country and increase also its security, avoiding to damage the national soil. These actions therefore would bring power and security, the main interests of a state in the Neorealist vision of the world.

Moving to uranium, which is also present in Kvanefjeld, it is a relevant resource for China, being the second country of the world in uranium demand after the US, with a consumption of 10,814 metric tonnes of uranium in the first five months of 2021. In addition, during the last few years China demand for uranium has increased, moving from 8,29 metric tonnes in 2017 to 10,81 in 2021 as shown in Figure 4 (World Nuclear Association, 2021). Because of the relevance of this resource for the country's development and for the fact that the internal production is quite limited, this material is considered strategic by the Chinese Government, labelled under the "Short-supply minerals" (Andersson, 2020). For this reason China has to mostly rely on the foreign market, making the Kvanefjeld site a more attractive investment, especially considering the fact that according to some estimations it is the sixth largest deposit of uranium (Stratfor, 2021).

Uranium demand in China 2017-2021

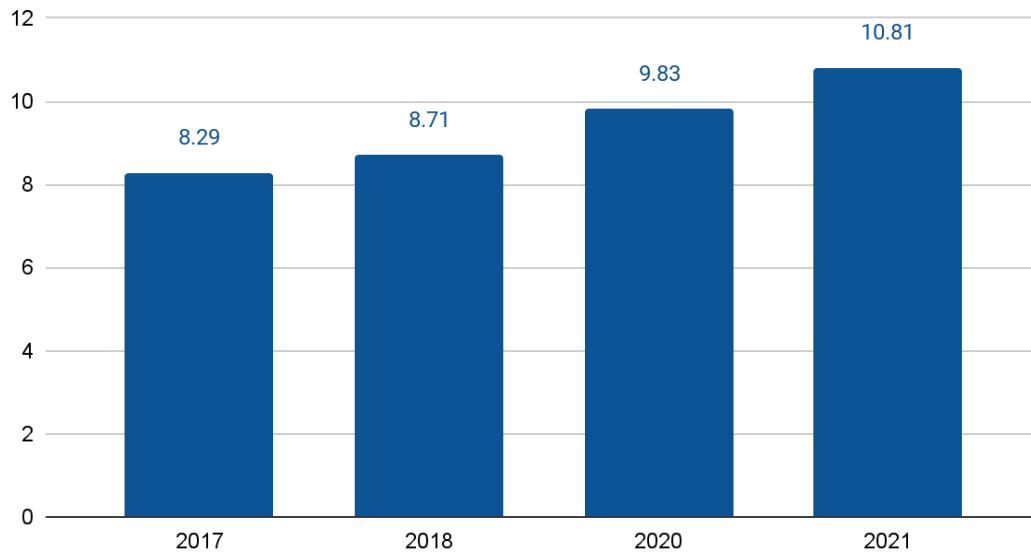


Figure 4. *Uranium consumption in China from 2017 to 2021 (in 1,000 metric tons)*. Source: World Nuclear Association, 2021.

Taking into account iron, which is the main mineral present in Isua, China is the first importer and consumer of the good having a relevant reserve yet relying mostly on the global market, especially on Australia (Reuters, 2021). Looking at Figure 5, it is possible to see that China is actually the fourth country in the world for the amount of reserves of iron ore (US Geological Survey, 2021). However, looking at Figure 6, it results that China is the first country in the world for imports of iron ore, accounting for 69.1% of the total, and with a huge gap from the second one, Japan, which accounts for 7.5%. The reason for this large amount of iron requests is due to the fact that the Asian country is the largest producer and consumer of steel in the world, for which production is needed iron (WTEEx, 2020). Since China needs steel in order to keep developing, applying the material especially for construction, the supply of this good is of vital importance for the security of the country (Holloway, Roberts and Rush, 2010).

World iron ore reserves by top country 2020

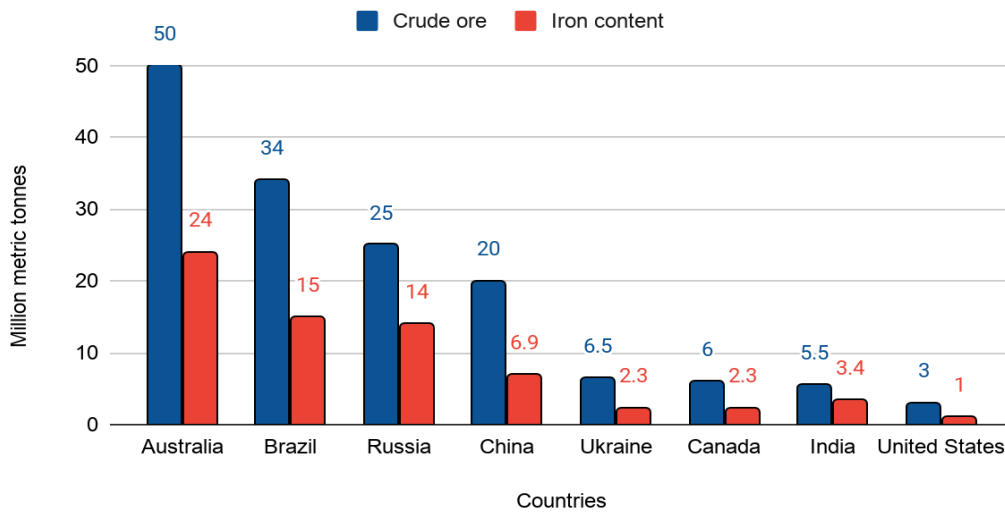


Figure 5. *World reserves of iron ore as of 2020, by country (in million metric tons).* Source: US Geological Survey, 2021.

Distribution of the leading importing countries of iron ore 2019

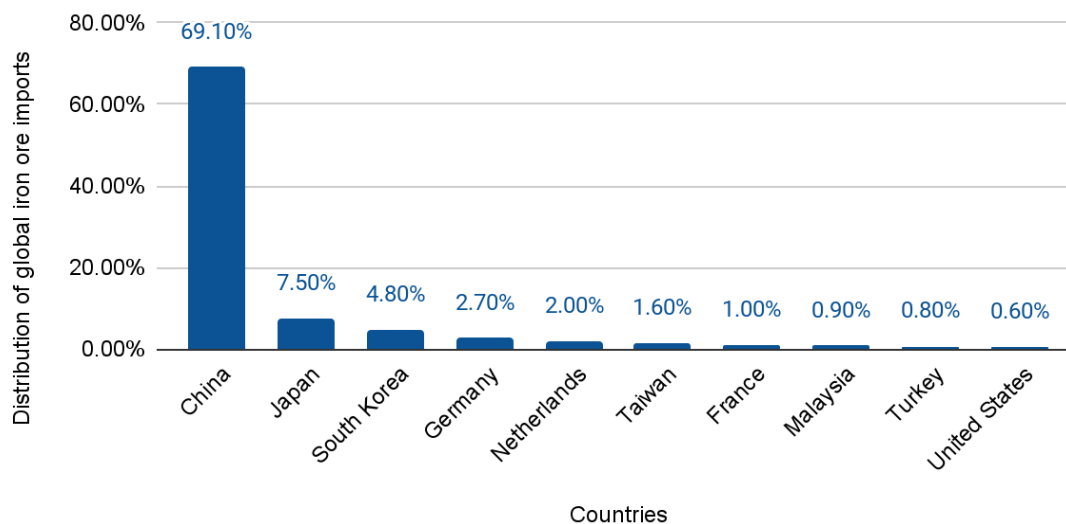


Figure 6. *Distribution of global iron ore imports in 2019, by major country.* Source: WTEx, 2020.

Focusing on the Isua mine, the amount of iron ore extracted per year was expected to be around 15 million of metric tones (George, 2013). Compared to the top producers of

iron, like Australia, which has a volume of iron ore that reached 790 million tonnes in 2017, it actually has a relatively small amount (Government of Western Australia, n.d.). Therefore, it is unlikely that the interest of China in Greenland was driven by a mineral policy focused on iron, since the amount of minerals in the island was very few compared to the one in other supplier countries.

Eventually, the last mineral examined in this section is zinc, extracted from Citronen Fjord. In this market China is the first country in the world for zinc mine production, with 4200 metric tonnes in 2020. It is a huge amount also considering that Australia, the second producer, accounted for 1400 metric tonnes in the same year. Taking into account the reserves of the mineral, China is in second place, with 44 million metric tonnes, after Australia which has 68 million metric tonnes (US Geological Survey, 2021). Therefore, the fact that the Asian country produces more zinc ore than Australia, indicates that a large share of the supply comes from investments outside China. This huge demand is a consequence of China's large consumption of zinc. Indeed, the Asian country is the first consumer of the resource in the world (ILZSG, 2021).

At the light of the need of China to import zinc, it becomes possible that its presence in Greenland is also driven by the Ministry of Natural Resources with a policy related to the mineral. Looking at the 13th Five-Year Plan of the Chinese Government, the plan for this resource was to increase its production, and with regards to foreign investments, to focus on the Belt and Road Initiatives countries. Considering the fact that the Arctic zone is part of the BRI under the Polar Silk Road project, it is possible that the interest for this resource in Greenland is driven by both a foreign and a mineral policy agenda (Andersson, Zeuthen and Kalvig, 2018). In addition, considering the amount of zinc in Citronen, which is estimated to be one of the biggest undeveloped zinc-lead reserves, containing around 13 billion pound of the resources, a mineral policy behind Chinese interest in Greenland becomes a valid motivation (NS Energy, 2018).

4.1.2 Geopolitical Interests

The motivations behind the Chinese Government interests in Greenland presented so far implicate the possibility and probability of the presence of a mineral policy agenda

towards the Arctic island, following therefore the interests of the Ministry of Natural Resources. Nevertheless, having a wider view at the situation, the possibility that the Asian country is acting following a foreign policy agenda as final goal and it pursues the mineral agenda as a means to reach other objectives is likely to be the reality behind the Chinese presence in Greenland.

First of all, a sign of the possibility of a second reason behind China's interest in Greenland can be found looking at the mineral sector itself. Indeed, even though as just presented more or less all the resources where China is somehow involved in Greenland are relevant for the state development, they do not justify these investments by themselves, since looking at the global context these reserves may not seem so attractive anymore. Starting from the development of the Greenlandic mining sector, the fact that it is still quite undeveloped is actually a limit, since it could be a risk to invest in a project which is still far from being actually profitable and could fall into obstacles which would make such investments vain.

In addition, the environment of Greenland is also an obstacle. This is due to the fact that Chinese workers are not used to the harsh climate and nature of the Arctic island, and summed to the lack of infrastructures both inside the country and to get back to the mainland, the mining project results to be rather complicated (Têtu and Lasserre, 2017). Considering the fact that the access to resources in other countries results being easier both for the presence of developed caves and for the favourable natural environment compared to Greenland, the presence of a Mineral policy agenda as the only motivation behind the Chinese interest in the Arctic island may result doubtful. Especially because all these reasons come together with the fact that these resources can be found in larger amount in other parts of the world, and while some of the Greenland's reserves are expected to be among the largest in the world, some other are not, and in both cases the information is still based on expectations since the caves are undeveloped. Indeed, as explained, China is already getting all these goods from other countries, such as rare earth elements from the US, and iron and zinc from Australia. For these reasons, the presence of a foreign policy agenda driving Chinese interests in Greenland seems likely to be real.

In doing these considerations it is also fundamental to be aware of the fact that the Chinese presence in the Greenlandic mining sector has been asked by Greenland itself. This event is meaningful for the fact that it could give credit to a possible Chinese foreign policy agenda. Indeed, from the moment that it is Greenland to demand for Chinese investments, a mineral policy could be less probable, since their presence in the Arctic island is the consequence of an initial interest of Greenland to China rather than the contrary. This request for investments from China, which was initially backed also by Denmark before seeing it as a possible threat, was generated by the ambition of becoming an independent country through the development of new economic sectors. Therefore, since the country was rich on minerals, and since apart from Denmark China was the main importer of the Greenlandic fish, the first economic sector of the country, the Greenlandic government found in the Asian superpower a potential investor (Gad et al., 2018).

At the light of this, the involvement of China in Greenland's mining sector could seem to be pushed by a foreign affair policy which has as objective to tighten the political relations and therefore to achieve a stronger political influence on the Arctic island. This hypothesis can find support in the White Paper on China's Arctic Policy. In the document the Chinese Government states that it aims to strengthen its relation with the Arctic population in order to obtain a win-win cooperation, since the preservation of this region is in the interest of everyone. The White Paper stresses the fact that the melting ices are creating new trading routes, and that China has the goal to include them in its Belt Road Initiative, creating the Polar Silk Road (The State Council to the People's Republic of China, 2018). Therefore, the economic and political interests of China are presented quite clearly in this document. Having them in mind, Chinese presence in Greenland assumes a totally different meaning. Indeed, if the People's Republic of China plans to enforce its relation with the Arctic countries in the view of future trading routes, placing itself in Greenland, where moreover are present resources which are of great interest to China, becomes a strategic action driven by both political and economic interests. Such an action, in an international system where the access to the Arctic would provide a great economic advantage, would bring power to the Asian country, especially considering that another superpower, the US, already has access to the

Arctic. In such a context, the Chinese Arctic policy would consist of a foreign policy agenda, which in its process meets the objectives of a mineral policy as well. Therefore, as it is in the Neorealism framework, China's interests in Greenland are moved by the structure of the international system, with the increase of power and also of security as main goals behind its actions.

4.2 Chinese companies Mining in Greenland

Following the analysis of the Chinese Government's interests in Greenland, the focus will now move on to the Chinese enterprises. In order to understand the main reasons behind the presence of the Chinese companies in Greenland's mining projects, it is mandatory to clarify the actors who are behind these initiatives, which in the case of Chinese companies is often likely to also include the Government. Therefore, in this section there will be an analysis of the three above cited Chinese enterprises, with an overview of their shareholders and of their main activities. After having in mind who these actors are, it will follow an analysis of the three mining projects, with the attempt to understand the reasons that brought these companies to engage in these businesses.

4.2.1 Overview of the Chinese Companies

Before pointing out the main aspects of the three Chinese companies mining in Greenland, an overview of how Chinese companies are connected to the state will be presented, taking into account not only SOEs. Indeed, Chinese system has a complicated structure when it comes to the company's ownership and operation, as already explained in the introduction.

The first information to cite talking about Chinese companies is the fact that the Chinese market is a unique entity which can not be compared to the global market due to its distinctive nature. Indeed, even though China adopted a capital market, it does not mean that the Asian country became neoliberal. The Chinese capital market is organised by a peculiar state structure, which is characterised by a combination of top-down state coordination and bottom-up market competition. In the Chinese model a

concept such as the financial system becomes instead a political system, where authorities make use of financial activities to exercise statecraft. To put this concept into words, it could be defined as a state-capitalist capital market (Petry, 2020). In the Chinese vision of the market, all business actors within the country, including the private ones, must work in a convergent way in order to achieve national interests, since they share the same ideologies and principles (Olson, 2020).

With the awareness of the particularity of Chinese market, it is clear that in such a context the line between public and private is not easy to define. The same counts for companies which even though are privately managed and to some extent also owned present in any case connections with the state. This attribute makes the distinction between private and state-owned complicated (McGregor, 2019).

Now the three Chinese companies involved in Greenland's mining projects are going to be analysed, presenting their main activities, the structure, and their connection to the Central Government.

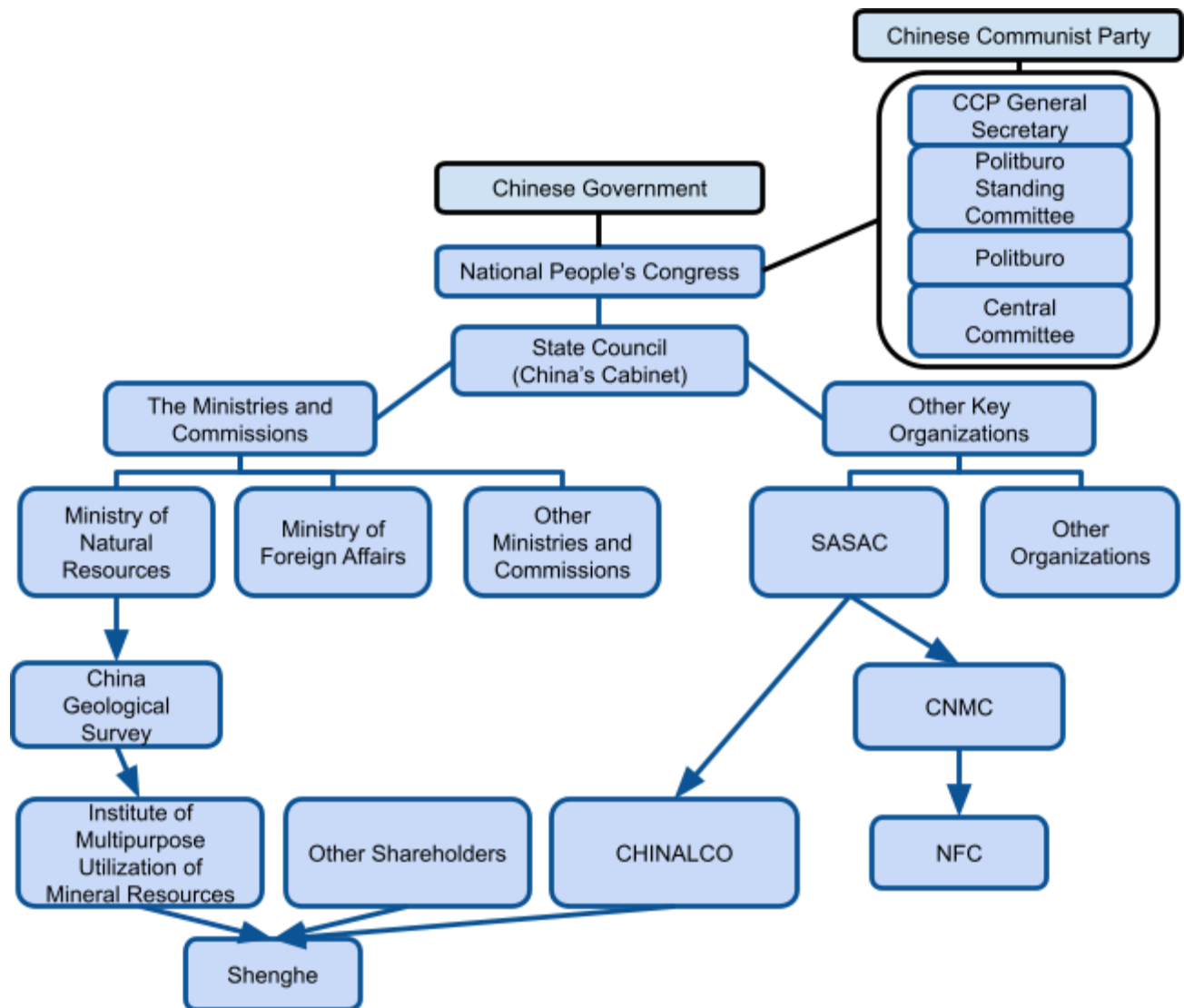


Figure 7. *PRC Central Government Structure and connection to companies.* Source: Personal Collection.

Shenghe Resources Holding Co., Ltd

The company involved in Kvanefjeld site, Shenghe Resources Holding Co., Ltd (盛和资源), is specialised in the development, production, and supply of rare earth resource and relevant products, such as titanium concentrate, rutile, and zircon sand. It is one of the few companies which is independent for the whole process of supplying rare earth, from the extraction to the production to high-tech tools, and which also operates in different parts of the globe (Hui, 2021). The firm has incorporated other three mining

companies, Leshan Shenghe Rare Earth Co., Ltd, Ganzhou Chenguang Rare Earth New Material Co., Ltd, and Hainan Wensheng High-Tech Materials Co., Ltd, and it is listed in the Shanghai stock exchange. In addition, when involved in projects overseas, at the moment the one in Greenland (even though it is likely that it is not going to continue in the process) and one situated in Mountain Pass Rare Earth Mine in California, Shenghe consists of Shenghe (Singapore) Co., Ltd, Shenghe (Singapore) International Trade Co., Ltd and Vietnam Rare Earths Co., Ltd etc, (Shenghe Resources, n.d.).

Officially, Shenghe is not a State Owned Enterprise. Yet, according to the company's website, it has a mixed ownership structure which is proposed by the Government, and follows the characteristics of Chinese rare earth's industry (Shenghe Resources, n.d.). Indeed, the largest shareholder of Shenghe is a government owned research institute, the Institute of Multipurpose Utilization of Mineral Resources, which is under the China Geological Survey, a main branch of the Ministry of Natural Resources. Furthermore, a part of share is owned by a Chinese State Owned Enterprise, Aluminium Corporation of China (CHINALCO), one of the only six companies allowed by the Chinese Government to mine REE (the Big Six), a relation which guarantees to Shenghe the possibility to get access to quotas for extracting REE inside China, mostly in Sichuan. The relation between these two firms is due to the fact that one of the representatives of CHINALCO is part of the board of directors as an independent director of Shenghe, being therefore involved in the production, decision-making, and operation processes of the company (Hui, 2021). The exact share percent of Shenghe held by the Chinese Government, also counting the SOEs and other state agencies, should be around 19.9%. In order to operate in Greenland, Shenghe did not have to respect only the Greenlandic law related to the mining license, since the company is not a direct investor in the Arctic island and got to mine in this area through the Australian company GME, which holds the mining licence. Therefore, in order to cooperate in the site Shenghe has to respect Australian's legislation, which in this case, contrary to the Greenlandic one that has no limits towards SOEs, allows the entrance of another company only in the case in which the shares owned by the state do not surpass the 20% of the total, making Shenghe a suitable partner, especially because of its skills and knowledge in the field of rare earth

Elements. (Nørrelund Sørensen, 2021). Lastly, another sign of the strict relation between the company and the Government, is the fact that Shenghe has a partnership with the Chinese State Owned Enterprise China National Nuclear Corporation (CNNC), which is one of the biggest producers of nuclear power in China (Hui, 2021).

General Nice Development Limited

The General Nice Development Limited (俊安发展有限公司) is a private company with a quite complicated structure, since it is connected to other companies which are under the General Nice Group (Jun'an Jituan, 俊安集团), a firm founded in Hong Kong in 1992 specialised in the mining and trading of coal, iron, and other non-ferrous minerals, and also in investing in the real estate market (Lulu, 2017). The firm is listed at the Hong Kong stock exchange under a connected company named Loudong General Nice Resources (China) Holdings (樓東俊安資源(中國)控股有限公司). This latter company was founded in 1993 and by that time had no bonds with the General Nice Group, which acquired and renamed in 2009 the Hong Kong listed company, which was firstly named Pearl Oriental Holdings Limited (明珠兴业集团有限公司), and became Silk Road Logistics Holdings Limited (Silk Road Logistics Holdings Limited, 2021).

The General Nice Group, as stated, is composed of several other companies, and it is initially owned by the Cai family, Cai Mingzhi and Cai Suixin, respectively father and son. By the time of the foundation of the company Suixin was the group's chairman, while his father was controlling a connected company, General Nice Group Holdings Limited (俊安集团控股有限公司). Thanks to Mingzhi, who was a veteran with relevant political contacts, the company could benefit from political clout and acquire stakes in Mainland China mining companies, which is not usual for a private company. In addition, another political bundle of the company comes from the fact that among the independent directors sits Choy So Yuk, who is a member of the Hong Kong Legislative Council for the pro-Beijing party (Lulu, 2015). Furthermore, in 2015 two Chinese State Owned Enterprises increased their number of shares acquiring around a total of 7% of shares of Loudong General Nice Resources, the branch of General Nice Group listed at Hong Kong stock exchange. The purchase was made by an Hong Kong company, New Asia Worldwide Limited (新亞環球有限公司), which is a conglomerate of two SOEs from

Tianjin, Bohai Steel (渤海钢铁) and Tewoo (天津物产). Nevertheless, it seems that this new acquisition should not influence the actions of the company in the Isua mine, since the company in charge of the project, the General Nice Development, is not directly connected with Loudong General Nice Resources, yet they are two separated branches of the General Nice Group. However, the firm has some ties with the Government, which could become relevant in case the Isua project starts developing (Lulu, 2017).

China Nonferrous Metal Industry's Foreign Engineering and Construction Co

China Nonferrous Metal Industry's Foreign Engineering and Construction Co (NFC) is a Chinese State Owned Enterprise listed in the Shenzhen stock exchange in 1997, after having been established in 1983 upon the approval of the State Council. The company's main activities regard the exploration, extraction, and development of nonferrous metal resources in the global market, and the construction of infrastructures (China Nonferrous Metal Industry's Foreign Engineering and Construction Co, 2009).

The company is part of a big Chinese corporation of companies involved with the mining of non-ferrous mineral resources, China Nonferrous Metal Mining (Group) Co., Ltd. (中国有色矿业集团公司), which is under the supervision of the party, since it is directly managed by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), the already cited state organ which has the aim to control the SOEs and to be their main shareholder (China Nonferrous Metal Mining (Group) Co., Ltd., 2011).

4.2.2 Mining Projects

In this section the three mining projects, Kvanefjeld, Isua, and Citronen, will be analysed one by one. The analysis will take into account the possible interests of the operating Chinese companies, keeping in mind their relations with the central government and the possible influences that this very relation could exert on them with regards to the motivations of the Chinese companies presence in Greenland. Furthermore, this examination will be filtered by the Fragmented Authoritarianism framework, to address the fact that the interests of the Chinese authorities may vary according to the level of

the government they come from. Indeed, even though the companies involved in the analysis are not all SOEs, they are all connected to the state to some extent.

Thanks to Fragmented Authoritarianism it is possible to explain why firms connected to the state may have different interests from some sectors at the highest level of the state. Indeed, according to the framework the policy agenda in the Chinese state may vary according to the level and the sector of the authority that releases a certain policy. This mechanism could influence the actions of the companies according to the relation they have with the state. In this way, a company which is related to a certain Ministry or agency could choose to follow different priorities dictated by the policy agenda of that part of the state or fulfill the interest of a policy set by another level because it is more convenient. The two main measures to analyse which policy agenda a company should have to follow are the ranking of the authority they are connected to, in other words how far from the central state it is, and the sector to which this authority has control over. Therefore, the analysis, after researching the possible interest of the Chinese companies in the three projects in Greenland, will try to address the possibility of the presence of a certain policy behind its actions in the mining site. It will be examined to what part of the Government the companies are connected to, and according to its connection to the central government and its role inside the state it will be researched a possible connection between the company's actions and the respective authority's policy.



Figure 8. *Kvanefjeld, Isua, and Citronen mining areas and respective Chinese companies and minerals extracted.* Source: Personal Collection.

Kvanefjeld/Kuannersuit Mine

Without any doubt Kvanefjeld is one of the mining projects in Greenland where the Chinese presence has arisen more concern. This fact is due to the presence of REE and uranium in the ground of the mine, which are considered critical raw materials not only by China, yet also by both the EU and the US (Andersson, Zeuthen and Kalvig, 2018). After having in mind the structure of Shenghe, the company operating in the scave, and its connection to the state, the analysis will follow with the attempt to

address the possible interests behind these investments, considering the fact that the fragmented authoritarian view assumes that the interests of a company are not unquestionably the same of the sector of the Government they are controlled by, yet they can have different goals according to the level or sector which sets a policy that corresponds to the interests of the firm. For this reason it is possible that an SOE does not necessarily follow the directives of some part of the Central Government because of this fragmented nature of its structure, and therefore different interests at different levels could end up in different directives (Mertha, 2009). Indeed, even though Shenghe is not an SOE on paper, its relation with the Chinese Government could be tied enough to imply a state pressure behind the company's action, not only for its affiliation with some Chinese SOEs, yet also for the presence of the state in the board of directors. In order to understand if the presence of Shenghe in Kvanefjeld is dictated by the state or by the company's interests, it will be examined the possible advantages that such an investment could bring to the enterprise, to clarify if it would be a reasonable move to do also in the case that the state is not involved at all in such an investment. As already explained, since the objective of the research is to address the reasons behind the investments of Shenghe in the Kvanefjeld project in the first place, the results of the Greenlandic elections of 2021 and the implications they have for the mining sector are not relevant for the development of the analysis.

A first reason to justify the interest of a company in investing in the Kvanefjeld project is the fact that both in 2014, when first the SOE China Nonferrous Metal Industry's Foreign Engineering and Construction Co entered in the project with GME, and in 2016, when Shenghe took the place of NFC, the project was likely to be developed, since it reached an high stage of development. By 2018 only 31 projects outside of China got to this stage of the process, therefore it is an important factor to be aware of when investing. Of these projects two are situated in Greenland, Kvanefjeld and Kringlerne. Yet, even between these two, Kvanefjeld is the most advanced one. Even though, as already explained, Shenghe is abilitated to extract REE inside China thanks to its cooperation with one of the Big Six, the company, being private on paper, can also easily engage in projects abroad and get credit help from the government at the same time (Andersson, Zeuthen and Kalvig, 2018).

Another incentive for the company to enter in the Kvanefjeld scave is the smooth access to the project. Indeed, without going into detail in the structure of the laws for mining in Greenland's territories, Shenghe could easily enter the project since the Australian company GME already held the license. In this case, the Chinese company had to follow the Australian law related to foreign investments, which limits the investment of companies owned by the state, yet Shenghe's shares held by the Chinese Government was low enough to guarantee the cooperation of the two companies. Furthermore, due to Shenghe's knowledge on REE processes, its entrance in the project was also an advantage for the Australian company, which encouraged this cooperation. In addition, engaging in a project in the Arctic would bring to the company also new knowledge (Nørrelund Sørensen, 2021). In fact, the Chinese company mainly operates in China, with overseas projects in the US and Vietnam (Shenghe Resources, n.d.), yet it lacks experience when it comes to harsh environments such as the Greenlandic one, experience that once gained could bring new customers and opportunities to the company, getting access to new markets (Nørrelund Sørensen, 2021).

Continuing with the motivation for Shenghe of entering the Kvanefjeld project, the presence of rare earth is surely one of the main factors. Indeed, these minerals are the main business the company is involved in, from the extraction to the development and supply (Shenghe Resources, n.d.). Therefore, having access to a cave with a relevant amount of rare earth ores is of extreme interest for the company. As presented in Table 1, Kvanefjeld is the actual project with potentially the highest reserve of REE, with a probable amount of annual production of rare earth ores of 10,3 tons, more than the double of the second project in the ranking, Ashram in Canada, which is suspected to produce around 4,7 ton per year (Argus Media, 2019). It is clear that for a company with rare earth elements as core business such a reserve of these minerals represent an advantageous opportunity, having in mind also the fact that it gets to develop new skills due to the different environment it operates in.

Potential annual production volume of selected rare earth mining projects worldwide between 2013 and 2018 (in tons of rare earth oxide)	
<i>Rare Earth Mining Projects</i>	<i>Potential annual production (tons of REO)</i>
Greenland Minerals and Energy (Kvanefjeld, Greenland) [DFS completed; deal signed with Shenghe Resource (August 2018)]	10,3
Commerce Resources (Ashram, Canada) [Pre-feasibility study ongoing]	4,7
Peak Resources (Ngualla, Tanzania) [PFS completed in 2014; awaiting mining licence (August 2018)]	4,6
Quest Rare Minerals (Strange Lake, Canada) [No active work on site (April 2014)]	4,43
Avalon Advanced Materials (Nechalacho, Canada) [Definitive feasibility study completed (October 2013)]	3,9
Geomega Resources (Montviel, Canada) [NI 43-101 resource estimate completed (June 2015)]	3,5
Arafura Resources (Nolans Bore, Australia) [DFS due end 2018; pilot plant produced Nd-Pr Oxide (December 2018)]	1,46
Mikango Resources (Songwe, Malawi) [Feasibility study due in 2019, resource update 1Q 2019 (December 2018)]	0,47
Hastings Technology Metals (Yangibana, Australia) [50% increase in ore reserves; 5th offtake agreement (November 2018)]	0,22
Rainbow Rare Earths (Gakara, Burundi) [575 tons of REO concentrate exported by June 2018]	0,14
Northern Minerals (Browns Range, Australia) [pilot plant commissioned, shipment to China (December 2018)]	0,06

Table 1. *Potential annual production of selected rare earth mining projects worldwide between 2013 and 2018 (in tons of rare earth oxide)*. Source: Argus Media, 2019.

On the other hand, there are also obstacles for the company in developing the Kvanefjeld project. The first one is the political situation of Greenland. While the project was already at an advanced step since after having obtained an exploration license it was waiting for exploitation license to be processed, at the same time as stated by the Chairman of Shenghe in 2017 was also present the uncertainty about the development of the project (Andersson, Zeuthen and Kalvig, 2018). At the light of the 2021 elections in Greenland this uncertainty has been confirmed, since the project seems to not have a future anymore (Gronholt-Pedersen, 2021). Then, another obstacle is the lack of appropriate infrastructures, both inside the Arctic island and on the way back to China. This problem is also connected to the extreme weather of which Chinese workers are not used to (Têtu and Lasserre, 2017).

Nevertheless, taking into account the motivations that likely brought Shenghe's investment to Greenland, they could be relevant for both the company's economic reasons and the Chinese Government's possible political interests. It is hard to state to

what extent the actions undertaken by Shenghe are driven by the Central Government or by different interests. However, one signal of discordant interests may be identified from the fact that before of the involvement of Shenghe in the project, the Australian company GME in 2014 signed a Memorandum of Understanding with the Chinese SOE China Nonferrous Metal Industry's Foreign Engineering and Construction Co, which as stated above, is directly under the control of the State through the SASAC (China Nonferrous Metal Industry's Foreign Engineering and Construction Co, 2009). Therefore, the fact that the Chinese Government had a company which is directly under its control operating in this site, and allowed it to leave the project letting another Chinese company, which is connected to the state only indirectly, may be an indication of no interest in the project from the Chinese authorities' side. Indeed, Shenghe can take advantage of its private nature according to the situation, and for the Chinese Government it would not be advantageous to leave such a company in place of a more controlled one in an area of interest.

Having cleared the main advantages that could result from investing in Kvanefjeld, it is time to analyse if this investment could be moved from some level of the Chinese Government. Indeed, according to Fragmented Authoritarianism, different interests of different sectors and ranking of the state produce different policy agendas according to their needs. In the case of Shenghe, the main shareholder of the company is an institute under the China Geological Survey, which is directed a Ministry directly under the Central Government, therefore it is over the influence of a quite high rank of the state. With the data available, it is not possible to say if the policy agenda is shaped by the influence of the bonding of the firm to the central government, even though it could be likely that since the policy are made by a branch close to the central government they follow its interests, but it would be a speculative statement. On the other hand, it is possible to do some considerations focusing on the other aspects that influence policy agendas according to Fragmented Authoritarianism, which is the sector over the enterprise. In this case the China Geological Survey (CGS), which is under the Ministry of Natural Resources, the branch of the government which has more relevance in establishing which resources are considered critical by the Chinese Government. Under the denomination of "Strategic Minerals" the CGS inserted also rare earth elements,

since they are needed both for the development of the state, and they are considered strategic for foreign relations, since China is the first producer of this resource with a huge gap from the second one. In addition, the other resource of which Kvanefjeld is abundant is uranium, which has been labelled as “Short-supply Mineral”, to indicate the fact that it is a mineral necessary for China’s development yet the country has to rely on the global market for the supply (Andersson, 2020).

At the light of this information, even if it is not possible to state with total certainty that Shenghe presence in Kvanefjeld is dictated by a policy agenda established by the branch of the government which owns the largest share of the company, it is likely that there is a connection between this investment and a possible policy, since both of the minerals present in the site are considered important by the GSC, the part of the state which is connected to the enterprise.

It is also important to highlight the fact that Shenghe was forced to focus on the foreign market by the mineral policy on REE, which established the Big Six as the only companies able to operate in the Chinese rare earth mines. Shenghe entered the Kvanefjeld project with a MoU in September of 2016 (Andersson, Zeuthen and Kalvig, 2018). By that time the connection between the private company and CHINALCO, one of the Big Six, was just going to happen, and until then Shenghe had no permission to get involved in REE projects in China (Lifton, 2016). This fact may further justify the interest of Shenghe for the Arctic Island, since the company was not able to operate in the Asian country yet. For this reason, it is likely that the presence of Shenghe in Kvanefjeld could be driven not only by GSC interests, which are the one of the Ministry of Natural Resources, formerly Ministry of Land and Resources, yet also by the one of CHINALCO, which is under the SASAC, or by a company policy agenda itself which exclude the influence of the state.

Isua mine

As for Kvanefjeld, also the analysis of Isua aims to address the possible reasons which brought the company to enter this project. Of course, also in this case it is fundamental to be aware of the fragmented authoritarianism framework, since especially in this very

circumstance the actions of General Nice are likely to not be driven by the central authorities. As explained, the firm is private on paper, exactly like Shenghe. Nevertheless it is important to underline the fact that the connection that the two companies have with the state is quite different. Indeed, while the latter as a higher presence of the state among the shareholders, General Nice's share held by other SOEs accounts for only 7%, and additionally the shares held are not of the company which is operating in Isua, General Nice Development, yet of Loudong General Nice Resources, another branch of General Nice Group (Lulu, 2017). Therefore, General Nice Development is likely to benefit from a good degree of freedom from the government in taking its decisions.

The first factor that makes Isua mine an interesting investment is the fact that by the time of its acquisition by General Nice Development in 2014 it was maybe among the all large mining projects in Greenland the most likely to be developed. Indeed, in 2013, one year before the involvement of General Nice Development, the Greenlandic government granted the exploitation license to London Mining Greenland A/S, the company involved in the project by that time, getting to a quite advanced step of the whole process (Zeuthen and Raftopoulos, 2018). This motivation, combined with the easy access to the project represents relevant incentives for the company to invest. In fact, after having entered the project in 2005, London Mining developed it until it went bankrupt in 2013 due to an ebola epidemic in Sierra Leone, where the company was developing another project. In this circumstance, the General Nice Group bought at a favorable price London Mining's share in the Isua project, through its parent company London Mining Greenland Jersey Limited, obtaining thus the exploitation license (Naalakkersuisut, 2015). In addition, according to the Mineral Resources Act, stipulated by the Government of Greenland in 2009, all the soil of Greenland is owned by the government, which has the rights to administer all the land (Kaalakkersuisut, 2019). This regulation facilitates not only General Nice Development, but also all foreign companies which intend to invest in Greenland's mining sector, since the only stakeholder they are legally bound to is the government, as stated by a special advisor from China Mining Association (Têtu and Lasserre, 2017). Moreover, the Greenlandic government passed a special legislation in 2011, the Large Scale Projects Act, which

allowed foreign investors to employ foreign workers in Greenland, to agevolate these companies to invest in the Arctic island (Boersma and Foley, 2014).

Taking into account the source extracted by the mine, which is iron, it is also a reason for General Nice Development to invest, since this mineral represents one of the main businesses of the company, which aims to become a leading supplier of steel-made materials (Naalakkersuisut, 2015). Nevertheless, in the case of the Isua mine, due to the time of the acquisition of the site, such an investment could not have been so convenient in the eyes of a company. This is due to the fact that in 2014 the market price of iron dropped heavily, passing from 135 dollars per dry metric ton unit in 2013 to 97 in the next year and even to 55 in 2015, as shown in Figure 9. Buying an iron ore mine in a moment when the prices went so low could be considered as a questionable action. About that, the reasons behind this decision could be different, such as buying the mine at a good price hoping that it will be worth more in the future, or trying to increase the value of the company's stocks, or even expecting the government to finance such a project since in an area of interest for the authorities, considering that in the future the ice would melt and open a new commercial route. In any case, at the moment of the acquisition of the mine by General Nice Development, it generally seemed a controversial move, also considering that investing in Greenland the company was going to face more or less the same challenges as other Chinese companies like Shenghe, lack of infrastructure and harsh weather (Têtu and Lasserre, 2017).

Iron ore prices from 2011 to 2020

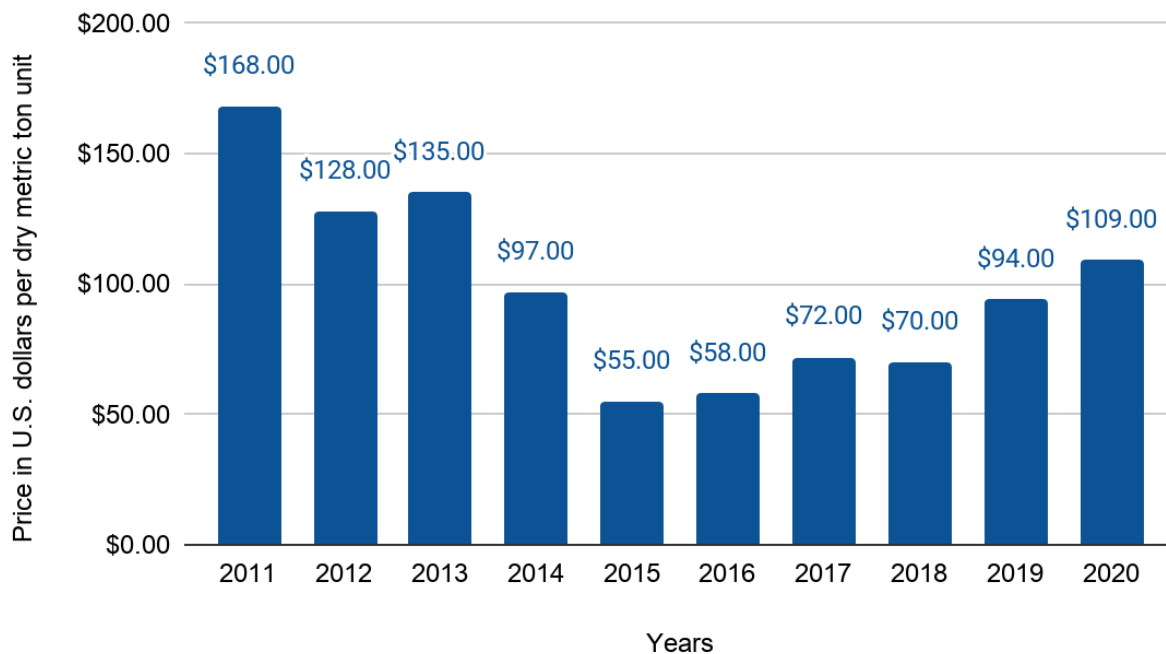


Figure 9. *Iron ore prices from 2012 to 2020 (in U.S. dollars per dry metric unit).* Source: Index Mundi, 2021.

In the case of General Nice Development's acquisition of Isua mine the involvement of the state seems quite unlikely. Looking back at when the project was held by London Mining Greenland A/S, the English company was looking for Chinese companies to invest in the mine development, and it found many interests among different Chinese firms and SOEs, such as the SOEs China Communication and Construction Company and China Development Bank, the SOE Sinosteel, the provincial level controlled company Sichuan Metallurgical Bureau, and the private company Sichuan Xinye. Apart from the last one that left earlier, London Mining Greenland A/S was close to signing a Memorandum of Understanding with the other Chinese companies. The project was also of interest for the Chinese Government, since in 2011 a delegation from Greenland went to China to discuss it, and in that circumstance the China's Ministry of Land and Resources considered financing the above cited Chinese companies to invest in Isua. Nevertheless, in a second time the Chinese companies decided to not invest anymore

in Greenland, mainly because of the drop of price of iron, that as shown in Figure 9 decreased from 168\$ in 2011 to 128\$ in 2012, then also for the difficult environment and all the problems that could have been derived from working in Greenland (Boersma and Foley, 2014). Therefore, similar to the situation of Shenghe, it is unlikely that the Chinese Government is interested in the project, since it had the possibility to be directly involved in it through a company directly under the SASAC, such as Sinosteel, and also other SOEs, yet it preferred to withdraw such a company from the agreement, leaving space for a private company just indirectly connected to the state.

Taking into account a possible relation between the presence of General Nice Development in Isua and a policy agenda established by some level of the Government, it is difficult to find data to prove a correlation. This is due to the fact that the company has more freedom from the state than Senghe, since its bond to the authorities is quite relative. Therefore, it becomes hard to state that the interest in the site is due to a certain policy set by a certain rank of the government. Nevertheless, taking into account the interest for the Chinese Government in iron, it could be possible tha General Nice is actually acting according to some policy agenda. In any case, it is important to be aware of the fact that for this episode, the Fragmented Authoritarianism could not be involved, and the interest in the mine comes from the firm's strategy without the involvement of the state.

As already stated the main source present in Isua is iron, a mineral which is in high demand from China. According to the Chinese State iron is included in the list of "Strategic Minerals" and is part of two different subcategories in this group, one is "Staple Minerals", and the second one is "Short-Supply Minerals" together with uranium. The former indicates those resources that China needs in high quantities and of which the share of global demand is large. Indeed, China's annual demand for iron reaches very high quantities. The latter, as already explained for uranium, stands for minerals which the state has a shortage of, and therefore needs to rely on the foreign market (Andersson, 2020). The importance that this mineral has for the Central State could give the impression of the presence of a mineral policy agenda behind the presence of General Nice Development in Isua, yet it's distant relation to the state makes this

possibility tough to demonstrate, if considered the fact that not only the company could not be driven by the state at all, but also that it could be driven by a different motivation which comes from a different agenda set by another sector or actor inside the Chinese structure which has stronger bonds with the companies and has different priorities than the top leaders.

Citronen Fjord

The last site taken into analysis is the zinc and lead mine situated by the Citronen Fjord. Also in this case the analysis aims to address the motivation that could have brought the company China Nonferrous Metal Industry's Foreign Engineering and Construction Co to invest in a mining site in Greenland. Nevertheless, it is important to underline the fact that this company has a different nature than the two already examined, since it is an SOE, therefore in this very situation it is more likely that the interests of the company are driven by the interests of the central authorities. However, since the framework employed in doing this analysis is Fragmented Authoritarianism, it is still possible that the objectives behind NFC's investments in Greenland are not the same as the central level of the Government, from the moment that these objectives could be dictated by some policy established at different levels which have different priorities. Lastly, before starting with the examination of the reasons for the company's investment in this site, it is important to underline the fact that even though the current main shareholder of Citronen Fjord together with Ironbank is the US EXIM bank, it is not relevant for this very analysis, which aims to understand the reasons for their involvement in the scave and not the results of their action in the development of the project.

NFC's involvement in the Citronen Fjord started in January of 2017 with a non-binding Memorandum of Understanding signed with Ironbark, an Australian company specialised in the extraction of zinc which operates mainly in Greenland and Australia (Andersson, Zeuthen and Kalvig, 2018). The reasons which brought the Chinese company to do an agreement in this site could be firstly the fact that Citronen, together with Isua, Kvanefjeld, and Kringlerne, is the project closest to production in Greenland, which at the current steps mainly requires big investments (Boersma and Foley, 2014). Indeed Ironbark currently holds the exploitation license for the site (Andersson, Zeuthen

and Kalvig, 2018). According to the MoU signed between Ironbark and NFC, the Chinese company has the right to acquire up to 19.9% of the site, and has to finance the 70% of the project's debts through loans from Chinese banks (Ironbark, 2017). The fact that Chinese state banks back the company in its involvement on this site could be a relevant reason for the company to invest, since this represents a big help from the government. Yet, at the same time it could also mean that such an involvement is driven by the Chinese authorities.

In addition, investing in Greenland could represent a good opportunity for NFC in order to develop new skills in a different environment financed by the state as well. Indeed, even though China Nonferrous is specialised in developing projects outside of its home country, it mostly operates in bordering Asian countries such as Vietnam, Laos, and Russia, which have different climates than the harsh Arctic one (China Nonferrous Metal Industry's Foreign Engineering and Construction Co, 2020). The only and closest environment to Greenland where NFC works is the one of the Ozeroye zinc-lead project in Russia (China Nonferrous Metal Industry's Foreign Engineering and Construction Co, n.d.).

Nevertheless, the most relevant factor that could bring a company to invest in Citronen is related to the resource extracted in the site, zinc. By the year of the MoU, the production of zinc from mines was projected to decrease due to the closure of major mining sites, with the consequential rise of price due to the expected increase of demand for the mineral (Business Opportunities in Greenland, 2018). The shutdown of the Australian giant Century mine and of the Irish Lisheen mine are two of the main sites that caused this phenomena (Chainwala, 2017). As shown in Figure 10, from 2015 the production of zinc started decreasing, and at the moment of the agreement between Ironbark and NFC the number was still low, data that could be read as a need for new zinc sources to be developed.

Global refined zinc production 2012-2020

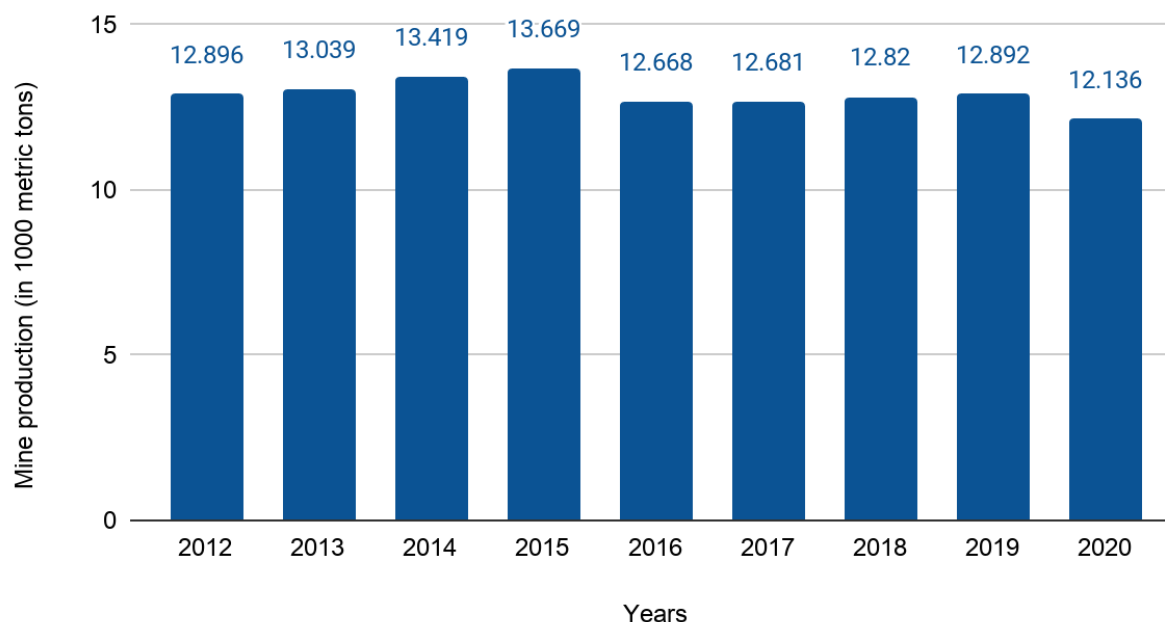


Figure 10. *Production of refined zinc worldwide from 2012 to 2020 (in 1,000 metric tons).*
Source: ILZSG, 2021.

At the same time, Figure 11 shows the increase of the price of zinc by 2017, a fact that made the development of a new zinc mine a profitable investment from the eyes of a company, especially since both price and demand were expected to rise toward 2025 (Business Opportunities in Greenland, 2018). However, the graph from Figure 11 also shows how this prediction of price rise was not accurate, since after the increase in price from \$0.95 in 2016 to \$1.31 in 2017, the high price lasted only for one year, dropping again in 2019 with \$1.16 and once more in 2020 reaching \$1.01 (ILZSG, 2021).

Zinc price per pound at the London Metal Exchange 2012-2020

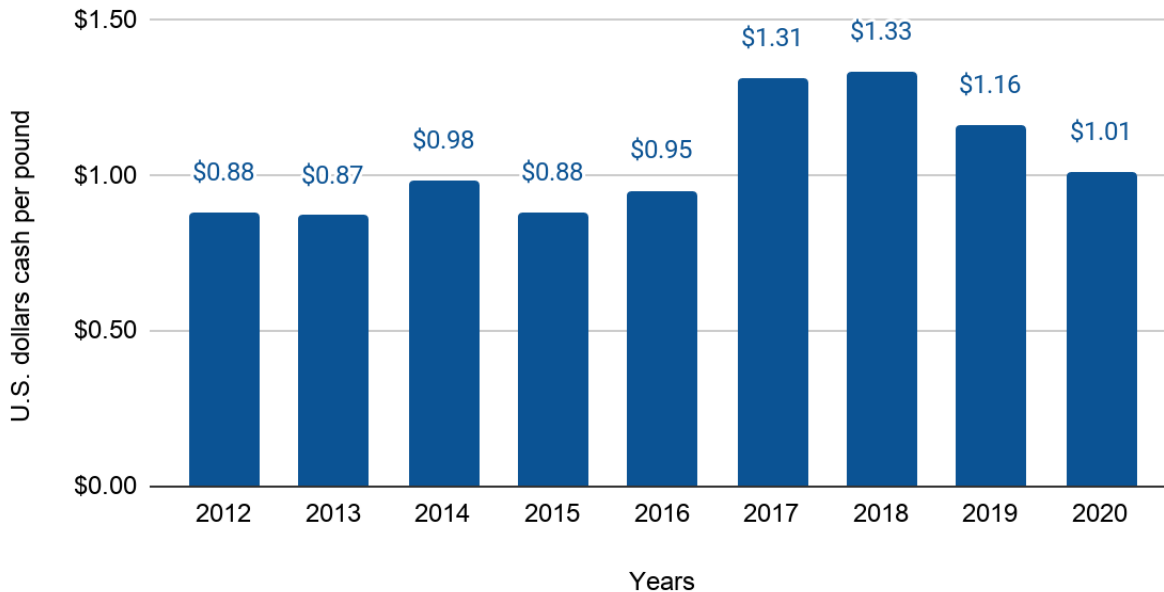


Figure 11. *London Metal Exchange zinc price from 2012 to 2020 (in U.S. dollars cash per pound)* Source: ILZSG,2021.

The need for more zinc production and the higher price of the resource came together with an always increasing Chinese demand for the mineral. Indeed, the closure in 2016 of the mines in Australia and Ireland cited above caused a growth in the Chinese need for zinc supply (Chainwala, 2017). To sum up, looking at the situation from the point of view of the company in 2017, the perspective of an increasing Chinese request for zinc, considering that it is its home country and therefore a well known market, could result in a highly profitable investment, if also connected to the fact that the price of the goods are likely to increase together with the world request of new zinc deposits.

Of course, also in this case it is hard to state if the situation of the market with regards to the zinc made the Chinese company invest in the project for economic and growth interest, or if it was driven by the state need for that resource.

Of the three cases taken into account in this thesis, Citronen is the one where the authorities presence behind the investment through some policy agenda is more likely to have happened. This is due to the fact that NFC is an SOE directly under the supervision of SASAC, an organ of the Government which is under the direct control of the State Council (State-owned Assets Supervision and Administration Commission of the State Council, 2018). For this reason, in this context the company is likely to follow the policies which have been set by some top authorities, may it be in accordance with mineral or foreign policies. Furthermore, not only the position of the state's organ over the company is relevant, yet also the actions of the company in the mine, in order to analyse if they might operate in order to fulfill some state's interest. For this kind of research it is necessary to have a look at the position of the Chinese Government with regards to zinc, the main resource obtained in Citronen.

Having a look at the importance of zinc in the 13th Five-Year plan, it results that the government plans to increase the interest of companies in this mineral, both in internal and foreign sites, giving priority to countries involved in the Belt Road Initiative (BRI), with a growth in the total production of the mineral as final goal (Andersson, Zeuthen and Kalvig, 2018). Because of the fact that the Arctic region has been integrated in the BRI countries after the planning of the Polar Silk Road, also Greenland is considered optimal for the extraction of zinc. Then, since the company which was in charge of extracting in Citronen together with Ironbark, NFC, is directly under the Central State, the organ which has the strongest influence in the policy agenda for Five-Year plans, the possibility of a policy from the central authorities behind the Citronen projects are quite probable, from the moment that this site meets all the qualities listed in the plan. Therefore, the company could have been following a foreign policy agenda rather than a mineral policy agenda, which was also followed indirectly anyways, even though it is not possible to state with certainty what was actually driving NFC actions when decided to enter in the Citronen Fjord.

4.3 Common and Different Interests

After having analysed the possible interest behind the presence in Greenland's mining sector of both the Chinese Government and the three Chinese companies, it is now possible to examine which are the common objectives of the two actors and which are the different interests not shared.

From the analysis above resulted that the interest of the Chinese Government in Greenland's mining sector, even though not totally proved, is probably due to a foreign policy agenda which also meets the objectives given by a mineral policy agenda. Indeed, the authorities desire to get influence in the Arctic region, therefore also in Greenland, because of the future opportunities given by the new commercial routes that will emerge due to the ice melting. Since this situation would be optimal for the formation of a Polar Silk Road, the fact that the Greenlandic Government looked for Chinese investment in the emerging mining sector, offering the opportunity to obtain important resources and to develop the skills to operate in the Arctic region, occurred as a perfect chance for the development of China's Arctic strategy.

In this context, the involvement of the three Chinese companies Shenghe, General Development, and NFC resulted being advantageous for the Chinese Government's interests, even though the firms' goal was maybe not to accomplish the authorities. Looking at the analysis on the Chinese companies, it emerged that the company which most likely is following some policy agenda is NFC, since it is directly under the supervision of SASAC. In the case of this company, it seems probable that due to the directives of the Government on foreign investments in zinc the interest in Citronen Fjord may be driven by a foreign policy which lines up with a mineral policy agenda.

Moving to Shenghe, the possibility of the company's interests in Kvanefjeld are different. This uncertainty is due to the fact that in this case the presence of the state behind the firm is uncertain, and therefore it could be possible that the company is following its own policy, since it is specialised in foreign projects due to the limitative policy of the Chinese Government when it comes to extract rare earth in China. On the other hand it is also possible that the enterprise is following the guidelines of some authorities, which

could be the Ministry of Natural Resources, that would entail a mineral policy agenda, or the directives of SASAC through CHALCO, case which would open to the possibility of both a mineral and a foreign policy agenda. In any case, the company's action would perfectly match with the state interests, even in the case which the company is pursuing its own interests, which would probably be of economic nature.

Lastly, looking at General Development, it ended up being hard to affirm if the company is actually following some governmental policy. Among the three companies, General Development is the one whose goals are more likely to diverge from the Central Government's ones. Indeed, due to the time and area of the investments, and considering also that the Chinese authorities declined the offer to invest directly in Isua, it seems that such an action may be driven more by the vision of a long-term investment or an attempt to increase the value of the firm in the stock market. Indeed, a study on Chinese companies, among which also General Nice, presented that when investing abroad these enterprises have economic motivations as most important matters (Têtu and Lasserre, 2017).

To sum up, being aware of the fact that with the data available it is not possible to state with certainty the real interests of the three companies which involved themselves in Greenland's mining sector, from the analysis results that the main contrasting objectives between the Government and the companies are the economic interests which the firms have in entering in mining projects. Since the relevant motivations for the Government would be rather an access to Arctic or an access to the minerals, both these objectives would get benefits from the presence of these companies in Greenland besides their real interests.

5.0 Conclusions

In this last chapter the outcomes of the research will be summarised, and it will also follow a consideration at the light of the results obtained from the above analysis.

From the last part of the analysis it has been deduced that apart from the possible reasons which drove the above mentioned companies when involving in Greenland's

mining sector, their presence in this area is advantageous for the Chinese Government interests. It is possible to do such a statement since the objective of China in the Arctic has been stated openly by the authorities in the White Paper on China's Arctic Policy. Indeed, with the optic of the opening of a new Arctic passage, the fact that these Chinese companies met the request for investments of the Greenlandic Government and had the opportunity to develop skills to operate in this zone, also obtaining the access to useful resources, resulted to be in line with the Chinese Governments' concerns, beside the real interests of the three companies.

By employing Waltz's Neorealism it was possible to have a more pragmatic view on the events, using mostly quantitative data to examine the interests of the state towards the minerals and their relevance in relations to the development and security of the People Republic of China. Indeed, considering the Arctic in the world system, the access to this region would bring power to the Asian country through economic and political advantages. Then, the employment of Mertha's Fragmented Authoritarianism allows to understand the possible different interest of China according to the Ministry which is driving the actions, giving space to geopolitical interests next to minerals ones. For this latter section the White Paper was the main qualitative data employed. At the light of Chinese declarations and of their actions, the interests in the mineral resources together with access to the Arctic in order to trade goods seems to be the most likely scenario.

Taking into account the three Chinese companies, their interests seem to vary. While economic matters are an objective for all of them, it seems to be more relevant for General Development, with Shenghe and NFC being more likely to follow some mineral or foreign policy to get a strategic advantage thanks the resource extracted or the location. Also in this analysis the employment of Mertha's Fragmented Authoritarianism served as a tool to understand the possible different priorities of the companies, opening not only the dual possibility of operating for private interests or for the state, yet also for different levels of the state, which are most probably represented by the the Ministry of Natural Resources and the Ministry of Foreign Affairs. For this analysis both qualitative and quantitative data were fundamental, in order to clarify the relations of

each company with the Chinese government, and their possible interests in Greenland's mining sites, taking into account both pros and cons of these investments.

After having analysed both the interests of the Government of the People's Republic of China and of the three Chinese companies in Greenland and after having obtained the possible reasons behind their presence in the sites, it is relevant to also view these findings in a broader context, which is the one of the Arctic itself. Greenland, is only one the different realities of this particular region, therefore when taking into account the Chinese interests on Arctic, the island plays a partial role. Considering the fact that the presence of the Asian country has been asked by the Government of Greenland, the strategic plan of China behind its presence in this nation may assume a weaker meaning. Nevertheless, if inserted in an ever wider context, a global one, these interests may gain more value, with the Arctic island being in such a strategic position, especially for the US. In this sense, the strategic interests could include political influence as a priority together with obtaining minerals and a new trade route.

Unfortunately, it is hard to read the real intents of a state in the projections of future events. In this context, only time can be considered the ultimate proof for the real interests of China in Greenland. The recent events, which saw a weaker presence of China in the Arctic island, due to both internal reasons and the results of the Greenlandic elections, contribute to complicate the situation, adding on one hand more information on the topic, and on the other more doubts on what is actually driving the actions of China as a state and the companies involved in this matter. Therefore, the aim of this thesis is not to give final answers on the topic, yet to contribute in clarifying different aspects of a complicated reality which is in constant evolution.

6.0 Bibliography

Amir Guluzade (2019). *Explained the Role of China's state-owned Companies*. [online] World Economic Forum. Available at: <https://www.weforum.org/agenda/2019/05/why-chinas-state-owned-companies-still-have-a-key-role-to-play/>. [Accessed 27 Mar. 2021].

Andersson, P. (2020). Chinese Assessments of “critical” and “strategic” Raw materials: Concepts, categories, policies, and Implications. *The Extractive Industries and Society*, 7(1), pp.127–137.

Andersson, P., Zeuthen, J.W. and Kalvig, P. (2018). Chinese Mining in Greenland: Arctic Access or Access to Minerals? In: *Arctic Yearbook*. Northern Research Forum.

Arctic Council. (2021). *Observers*. [online] Available at: <https://arctic-council.org/en/about/observers/>. [Accessed 15 Apr. 2021].

Argus Media. (2019). *Potential annual production volume of selected rare earth mining projects worldwide between 2013 and 2018 (in tons of rare earth oxide)**. Statista. Statista Inc.. Available at: <https://www-statista-com.zorac.aub.aau.dk/statistics/281081/rare-earth-mining-projects-outside-china-until-2015/>. [Accessed 2 May 2021].

Bislev, A., Gad, U.P. and Zeuthen, J.W. (2018). China Seeking Arctic Resources – The Arctic Seeking Resources in China. In: *Arctic Yearbook*. Northern Research Forum.

Boersma, T. and Foley, K. (2014). Chinese Interests and the Potential for Chinese Investments. In: *The Greenland Gold Rush Promise and Pitfalls of Greenland's Energy and Mineral Resources*. The John L. Thornton China Center.

Bøje Forsby, A. (2018). Denmark's Relationship with China. In: *China and Nordic Diplomacy*. Routledge.

Buhmann, K. (2020). Chinese Mineral Sourcing Interests & Greenland's Potential as a Source of Conflict-Free Conflict Minerals. In: *Arctic Yearbook*. Northern Research Forum.

Business Opportunities in Greenland. (2018). Arctic Cluster of Raw Materials.

Chainwala, K. (2017). Chinese Demand Prospects Likely to Brighten Zinc. *The Economic Times*. [online] Available at: <https://economictimes.indiatimes.com/markets/commodities/views/chinese-demand-prospects-likely-to-brighten-zinc/articleshow/58809820.cms?from=mdr>. [Accessed 7 May 2021].

China Nonferrous Metal Industry's Foreign Engineering and Construction Co (n.d.). NFC in North Asia. [online] China Nonferrous Metal Industry's Foreign Engineering and Construction Co. Available at: http://www.nfc.com.cn/templates/en_T_jxcx/index.aspx?nodeid=326. [Accessed 7 May 2021].

China Nonferrous Metal Industry's Foreign Engineering and Construction Co (2009). *Overview_NFC*. [online] www.nfc.com.cn. Available at: http://www.nfc.com.cn/templates/en_T_new_list3/index.aspx?nodeid=121. [Accessed 25 Apr. 2021].

China Nonferrous Metal Industry's Foreign Engineering and Construction Co (2020). *Company Profile_NFC*. [online] www.nfc.com.cn. Available at: http://www.nfc.com.cn/templates/en_T_new_list2/index.aspx?nodeid=86. [Accessed 7 May 2021].

China Nonferrous Metal Mining (Group) Co., Ltd. (2011). *China Nonferrous Metal Mining (Group) Co., Ltd.* [online] www.cnmc.com.cn. Available at: http://www.cnmc.com.cn/outlineen.jsp?column_no=1202. [Accessed 25 Apr. 2021].

Dams, T., Van Schaik, L. and Stoetman, A. (2020). *Presence Before Power: China's Arctic strategy in Iceland and Greenland*. Netherlands Institute of International Relations 'Clingendael'.

DeGeorge, K. (2018). *The controversy over Greenland airports shows China isn't fully welcome in the Arctic — yet*. [online] ArcticToday. Available at: https://www.arctictoday.com/controversy-greenland-airports-shows-china-still-unwelcom-e-arctic/?wallit_nosession=1. [Accessed 15 Mar. 2021].

Embassy of the People's Republic of China in the Kingdom of Denmark. (2004). *China and Denmark*. [online] Available at: <http://dk.china-embassy.org/eng/zzjw/t105327.htm>. [Accessed 16 Apr. 2021].

Gad, U.P., Graugaard, N.D., Holgersen, A., Jacobsen, M., Lave, N. and Schriver, N. (2018). Imagining China on Greenland's Road to Independence. In: *Arctic Yearbook*. Northern Research Forum.

George, J. (2013). *Prospects Fade for Huge Greenland Iron Mine*. [online] Nunatsiaq News. Available at: https://nunatsiaq.com/stories/article/65674prospects_fade_for_huge_greenland_iron_mine/. [Accessed 12 May 2021].

Government of Western Australia (n.d.). *Iron Ore*. [online] Department of Mines, Industry Regulation and Safety. Available at: <https://www.dmp.wa.gov.au/Investors/Iron-Ore-1482.aspx>. [Accessed 12 May 2021].

Gronholt-Pedersen, J. (2021). Left-wing Party Wins Greenland election, Opposes Big Mining Project. *Reuters*. [online] 7 Apr. Available at: <https://www.reuters.com/article/us-greenland-election-idUSKBN2BU0V1>. [Accessed 21 Apr. 2021].

Gu, J. (2016). China's Private Enterprises in Africa and the Implications for African Development. In: *The Power of the Chinese Dragon*. European Association of Development Research and Training Institutes.

Holloway, J., Roberts, I. and Rush, A. (2010). *China's Steel Industry*.

Hui, M. (2021). *A Chinese Rare Earths Giant Is Building International Alliances Worldwide*. [online] Quartz. Available at: <https://qz.com/1971108/chinese-rare-earths-giant-shenghe-is-building-global-alliances/>. [Accessed 23 Apr. 2021].

ILZSG. (2021). *Global consumption of refined zinc from 2004 to 2020 (in 1,000 metric tons)*. Statista. Statista Inc.. Available at: <https://www-statista-com.zorac.aub.aau.dk/statistics/264884/world-zinc-usage/>. [Accessed 7 May 2021].

ILZSG. (2021). *Production and consumption of refined zinc worldwide from 2012 to 2020 (in 1,000 metric tons)*. Statista. Statista Inc.. Available at: <https://www-statista-com.zorac.aub.aau.dk/statistics/242789/zinc-demand-and-supply/>. [Accessed 7 May 2021].

Index Mundi. (March 17, 2021). *Iron ore prices from 2005 to 2020 (in U.S. dollars per dry metric ton unit)* [Graph]. In Statista. Available at: <https://www.statista.com/statistics/282830/iron-ore-prices-since-2003/>. [Accessed 4 May 2021].

Ironbark (2017). *Agreement with China Nonferrous*.

Ironbark (2021). *Ironbark Zinc Limited Half-Year Report*.

Jackson, R.H., Georg Sørensen and Jørgen Møller (2019). *Introduction to international relations : theories and approaches*. Oxford ; New York, Ny: Oxford University Press.

King, H.M. (2020). *REE - Rare Earth Elements - Metals, Minerals, Mining, Uses*. [online] Geology.com. Available at: <https://geology.com/articles/rare-earth-elements/>. [Accessed 12 May 2021].

Lanteigne, M. (2021). *The Polar Policies in China's New Five-Year Plan*. [online] thediplomat.com. Available at:

<https://thediplomat.com/2021/03/the-polar-policies-in-chinas-new-five-year-plan/>.

[Accessed 15 Mar. 2021].

Lawrence, S.V. and Martin, M.F. (2013). *Understanding China's Political System*.

Congressional Research Service.

Lieberthal, K. and Oksenberg, M. (1988a). Salient Characteristics of the Structure of Power. In: *Policy Making in China Leaders, Structures, and Processes*. Princeton University Press.

Lieberthal, K. and Oksenberg, M. (1988b). Structure and Process: an Overview. In: *Policy Making in China Leaders, Structures, and Processes*. Princeton University Press.

Lifton, J. (2016). *Molycorp, (The Last) Chapter 11 Exit*. [online] InvestorIntel. Available at:

<https://investorintel.com/markets/technology-metals/technology-metals-intel/molycorp-the-last-chapter-11-exit/>. [Accessed 21 May 2021].

Lin, K.J., Lu, X., Zhang, J. and Zeng, Y. (2020). State-owned Enterprises in China: a Review of 40 Years of Research and Practice. *China Journal of Accounting Research*, 13(1), pp.31–55.

Lu, Z. and Zhu, J. (2020). Tracing Back to the source: Understanding the Corporate Governance of Boards of Directors in Chinese SOEs. *China Journal of Accounting Research*, 13(2), pp.129–145.

Lulu, J. (2015). *Since You Asked so Nicely: Greenland's Isua Mine and Its New Chinese Owner*. [online] Tumblr. Available at: <https://jichanglulu.tumblr.com/general-nice>.

[Accessed 25 Apr. 2021].

Lulu, J. (2017). *General Nice*. [online] Jichang Lulu. Available at:

<https://jichanglulu.wordpress.com/tag/general-nice/>. [Accessed 24 Apr. 2021].

Martin, M. (2018). *China in Greenland: Mines, Science, and Nods to Independence*.

[online] Jamestown. Available at:

<https://jamestown.org/program/china-greenland-mines-science-nods-independence/>.
[Accessed 16 Mar. 2021].

Matzen, E. (2017). Denmark spurned Chinese offer for Greenland base over security: sources. *Reuters*. [online] 6 Apr. Available at:
<https://www.reuters.com/article/us-denmark-china-greenland-base-idUSKBN1782EE>.
[Accessed 15 Mar. 2021].

McGregor, R. (2019). *How the State Runs Business in China*. [online] The Guardian. Available at:
<https://www.theguardian.com/world/2019/jul/25/china-business-xi-jinping-communist-party-state-private-enterprise-huawei>. [Accessed 20 Apr. 2021].

Mertha, A. (2009). “Fragmented Authoritarianism 2.0”: Political Pluralization in the Chinese Policy Process. *The China Quarterly*, 200, pp.995–1012.

Naalakkersuisut (2015). *New Strong Force behind London Mining Greenland - Naalakkersuisut*. [online] Available at:
<https://naalakkersuisut.gl/en/Naalakkersuisut/News/2015/01/080115-London-Mining>.
[Accessed 23 Apr. 2021].

Nørrelund Sørensen, H. (2021). *Kuannersuit: Kinesisk selskab kommer ind ad bagdøren*. [online] KNR. Available at:
<https://knr.gl/da/nyheder/kuannersuit-kinesisk-selskab-kommer-ind-ad-bagd%C3%B8ren>. [Accessed 24 Apr. 2021].

NS Energy (2018). *Citronen Lead-Zinc Project, Northern Region of Greenland*. [online] NS Energy Business. Available at:
<https://www.nsenergybusiness.com/projects/citronen-lead-zinc-project/>. [Accessed 13 May 2021].

Olson, S. (2020). *Are Private Chinese Companies Really Private?* [online] thediplomat.com. Available at:

<https://thediplomat.com/2020/09/are-private-chinese-companies-really-private/>.

[Accessed 20 Apr. 2021].

Petry, J. (2020). Same same, but different: Varieties of Capital markets, Chinese State Capitalism and the Global Financial Order. *Competition and Change*, 0(0).

Reuters (2019). China Withdraws Bid for Greenland Airport projects: Sermitsiaq Newspaper. *Reuters*. [online] 4 Jun. Available at:

<https://www.reuters.com/article/us-china-silkroad-greenland-idUSKCN1T5191>.

[Accessed 20 Apr. 2021].

Reuters (2021). UPDATE 1-China Iron Ore Imports Dip in April on Shipping Disruptions. *Reuters*. [online] 7 May. Available at:

<https://www.reuters.com/article/china-economy-trade-ironore-idUSL1N2MU05L>.

[Accessed 18 May 2021].

Schörnig, N. (2014). Neorealism. In: *Theories of International Relations*. Routledge.

Shenghe Resources. (n.d.). *Shenghe Resources Company Profile*. [online] Available at:

<http://en.shengheholding.com/about>. [Accessed 22 Apr. 2021]

Silk Road Logistics Holdings Limited (2021). *Silk Road Logistics Holdings Limited*.

[online] silkroadlogistics.dk Available at:

http://www.silkroadlogistics.com.hk/html/about_milestones.php. [Accessed 24 Apr.

2021].

Sørensen, C.T.N. (2017). Chinese Investments in Greenland Promises and Risks as Seen from Nuuk, Copenhagen and Beijing. In: *Greenland and the International Politics of a Changing Arctic*. Routledge.

State-owned Assets Supervision and Administration Commission of the State Council (2018). SASAC. [online] Sasac.gov.cn. Available at: <http://en.sasac.gov.cn>. [Accessed 10 May 2021].

Têtu, P.-L. and Lasserre, F. (2017). Chinese Investment in Greenland's Mining industry: toward a New Framework for Foreign Direct Investment. *The Extractive Industries and Society*.

The Government of Greenland (n.d.). *Politics in Greenland - Naalakkersuisut*. [online] naalakkersuisut.gl. Available at: <https://naalakkersuisut.gl/en/About-government-of-greenland/About-Greenland/Politics-in-Greenland>. [Accessed 15 Mar. 2021].

The State Council to the People's Republic of China (2018). *Full text: China's Arctic Policy*. [online] Available at: http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm. [Accessed 20 Mar. 2021].

US Geological Survey. (2021). *Distribution of rare earth oxide reserves worldwide in 2020, by region*. Statista. Statista Inc.. Available at: <https://www.statista.com/statistics/232911/rare-earths-distribution-of-global-reserves/>. [Accessed 12 May 2021].

US Geological Survey. (2021). *Major countries in worldwide zinc mine production from 2010 to 2020 (in 1,000 metric tons)*. Statista. Statista Inc.. Available at: <https://www.statista.com/statistics/264634/zinc-production-by-country/>. [Accessed 12 May 2021].

US Geological Survey. (2021). *World reserves of iron ore as of 2020, by country (in million metric tons)*. Statista. Statista Inc.. Available at: <https://www.statista.com/statistics/267381/world-reserves-of-iron-ore-by-country>. [Accessed 12 May 2021].

Volpe, M. (2020). *The tortuous path of China's win-win strategy in Greenland*. [online] The Arctic Institute. Available at: <https://www.thearcticinstitute.org/tortuous-path-china-win-win-strategy-greenland/>. [Accessed 16 Apr. 2021].

Wang, O. and Xin, Z. (2020). *China cements Communist Party's role at top of its state firms*. [online] South China Morning Post. Available at: <https://www.scmp.com/economy/china-economy/article/3045053/china-cements-communist-partys-role-top-its-soes-should>. [Accessed 14 Apr. 2021].

Warner, J. (2018). *Lifecycle of a mine: a step-by-step Guide to Mining Commodities*. [online] IG. Available at: <https://www.ig.com/au/news-and-trade-ideas/commodities-news/lifecycle-of-a-mine--a-step-by-step-guide-to-mining-commodities-180530>. [Accessed 21 May 2021].

World Nuclear Association (January 15, 2021). Uranium consumption in China from 2017 to 2021 (in 1,000 metric tons) [Graph]. In *Statista*. Available at: <https://www.statista.com/statistics/1203298/uranium-demand-in-china/>. [Accessed 12 May 2021].

World Nuclear Association (2021). *World Nuclear Power Reactors | Uranium Requirements | Future Nuclear Power - World Nuclear Association*. [online] World-nuclear.org. Available at: <https://www.world-nuclear.org/information-library/facts-and-figures/world-nuclear-power-reactors-and-uranium-requireme.aspx>. [Accessed 12 May 2021].

WTEx. (2020). *Distribution of global iron ore imports in 2019, by major country**. *Statista*. Statista Inc.. Available at: <https://www.statista.com/statistics/270008/top-importing-countries-of-iron-ore/>. [Accessed 12 May 2021].

Zeuthen, J.W. (2017). Part of the Master Plan? Chinese Investment in Rare Earth Mining in Greenland. *Arctic Yearbook*.

Zeuthen, J.W. and Raftopoulos, M. (2018). Promises of Hope or Threats of domination: Chinese Mining in Greenland. *The Extractive Industries and Society*, 5(1), pp.122–130.