

## 1 **The Svalbard Archipelago: an Exploratory Analysis of Port Investment in the Context of the New** 2 **Arctic Routes** <sup>1</sup>

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6 **Abstract:** The Svalbard Archipelago, located in the Arctic Ocean, is administered by Norway through  
7 the 1920 Svalbard Treaty. There is a dearth of research investigating Svalbard's economic development  
8 and associated political challenges. Due to its strategic location, the increasing activities of oil/gas  
9 exploration development, and the possibilities of new routes to and from Europe and Asia using the  
10 Arctic passage, Svalbard represents a new potential development area within a new efficient transport  
11 route. The aim of this paper is to investigate Svalbard's port development strategy. We explore this in  
12 three steps: what currently exists at Svalbard in terms of trade, traffic, infrastructure and governance;  
13 what are future plans; and, what are the possibilities. We address these issues with the support of the  
14 OLI (Ownership-Location-Internalization) Paradigm that works as a framework analysis to four main  
15 drivers of FDI (Foreign Direct Investment) attraction: resources, market, efficiencies and location. This  
16 is exploratory case study research using archival data from the Port of Longyearbyen Authority,  
17 Governor's Office, and Longyearbyen Community Council. The findings indicate that the strategic plan  
18 for port development at Svalbard should emphasize their location to attract investment. Further research  
19 is required to address the institutional environment and other legal aspects.

20 **Keywords:** Svalbard, port development, OLI Paradigm, Port of Longyearbyen, Arctic Geopolitics.

### 21 **1. Introduction**

22 Since the establishment of 200-mile economic zones (EEZ) in 1977, the paradigmatic shift from  
23 freedom of the seas to the partial closing of the commons represents a paramount example of state  
24 intervention in the environmental resource extraction industry globally. Since then, the complexity of  
25 the ocean governance framework has increased considerably with the effects of climate change  
26 especially in the Arctic may arguably demonstrate an unpreparedness of states that will lead to unknown  
27 effects on global ocean governance (Pinsky et al., 2018). One of these effects of climate change through  
28 rapid environmental change is a reduction in sea ice cover, which in turn may potentially increase  
29 shipping activities in this region. Increased water temperatures can also lead to poleward shift of fish  
30 species (Gattuso et al., 2015, Fossheim et al., 2015, Kortsch et al., 2015), as well as potential energy  
31 exploration opportunities (Borgerson, 2008) which may also have an effect on decisions to invest in the  
32 port developments in new areas of the Arctic where shipping routes may emerge.

33 It is common understanding among researchers and practitioners that ports and maritime shipping, like  
34 most of the transportation industry, are strongly characterized by derived demand, which implies a  
35 fluctuation according to the global or regional economics and politics. According to the research by  
36 Stratfor (2018), global shipping has a direct and indirect impact of more than \$400 billion per year and  
37 is "...prone to cyclic swings and vulnerable to the world's reaction and overreaction to any number of

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<sup>1</sup> On behalf of all authors, the corresponding author states that there is no conflict of interest.

1 *political events.*”. Because of the complex reality involving the Arctic Ocean, the aim of this study is to  
2 explore the possibilities of private port investment on the Archipelago of Svalbard in the High North.  
3 By private port investment we consider the application of capital to expand, improve or sophisticate the  
4 physical infrastructure or superstructure of terminals, docks, piers, warehouse facilities and land access  
5 to a designated port area done by for-profit private corporation. As detailed by World Bank seminal  
6 material on port reform, the increasing participation of private sector in port investment has resulted in  
7 the complexification of funding and financing schemes (World Bank, 2007). More recently, as  
8 identified in a recent study by ESPO (European Sea Ports Organization), port investments frequently  
9 have a high impact on the societal value they produce, but that does not necessarily generate a sufficient  
10 return on investment for the investing port authority. In this sense, the external funding is required.  
11 (ESPO, 2018, p. V). The category for “Basic Infrastructure” accounted for 37%, while “Equipment  
12 Superstructure” corresponded to 8% of the total submitted projects to E.U. for the 2018-2027 period.  
13 Still according to the same report, in the year 2015, only 9% of the port traffic was national,  
14 demonstrating both: the need for attracting investment and; the relevance of port infrastructure to  
15 international trade to/from the European Union members. The Svalbard Archipelago consists of  
16 approximately 61,000 square kilometers of territory, located mid-way between the North Pole and  
17 continental Norway. Besides this strategic location in the High North, this group of islands has other  
18 characteristics that also make it particularly interesting from a socio-economic perspective: the potential  
19 presence of resources such as oil/gas and actual presence of rich fishing activity; and the lack of full  
20 sovereignty as it has on its mainland territory. Norway does has formal sovereignty over the archipelago  
21 through the Svalbard Treaty (1920). Specifically, the treaty emphasizes in Article 1 that “*The High*  
22 *Contracting parties undertake to recognize, subject to the stipulations of the present Treaty, the full and*  
23 *absolute sovereignty of Norway over the Archipelago of Spitzbergen...*”. In the ensuing articles,  
24 however, stipulations limiting this sovereignty are clearly spelled out and though Norway is given  
25 explicit rights to manage the archipelago as an environmental management regime, none of the  
26 signatories shall have any kind of privilege, exemption or be favored in any manner when regulatory  
27 measures are taken to preserve or exploit resources (Ulfstein, 1995, Svalbard Treaty, 1920).

28 The academic literature about Svalbard is mainly concentrated on the natural sciences, covering issues  
29 about the archipelago’s geology, climate change, fauna development, sea level, soil, and glaciers  
30 development. According to Statistics Norway (2016) based on the information available by University  
31 Centre in Svalbard (UNIS), there is a growth in the number of academic publications about Svalbard,  
32 and between 2012 and 2014, 48% of the papers about Svalbard were in the discipline of Geoscience  
33 and 39% in Biology. There is also a growing literature on international relations and geopolitics as  
34 Svalbard has political strategic location and international disagreements over the maritime areas  
35 surrounding the archipelago (Tiller and Nyman, 2017, Rossi, 2016, Misund et al., 2016, Tiller and  
36 Nyman, 2015, Grydehøj, 2014, Grydehøj et al., 2012, Pedersen, 2011, Pedersen, 2009, Åtland and Ven  
37 Bruusgaard, 2009).

38 Another common area of research about Svalbard is the increasing tourism activity on the archipelago  
39 (Kaltenborn and Emmelin, 1993, Kelman et al., 2016, Kelman et al., 2012, Viken and Jørgensen, 1998).  
40 This is also natural in that this service sector is growing and the Svalbard geography makes it a place  
41 for tourism year-round, with the phenomena of mid-night sun in summer months and the aurora borealis,

1 also known as Northern Lights, during the winter months being natural phenomena that contributes to  
2 its draw for tourists. According to Glomsrød et al. (2017) based on the information provided by  
3 Statistics Norway (2014) the accommodation statistics show a 46% increase in the number of guest  
4 nights on Svalbard from 2010 to 2014. In relation, according to Statistics Norway (2016) the number  
5 of cruise guests has grown significantly from approximately 25,000 in 2011 to 41,000 in 2016. These  
6 tourists typically come on overseas cruises, but approximately 25% come to Svalbard by plane to join  
7 four to seven-day expedition cruises around the archipelago. Some literature has also addressed the  
8 tourism development issues (Kaltenborn and Emmelin, 1993), and issues centering on population  
9 turnover and the Norwegian presence on the area (Pedersen, 2017), and infrastructure and the  
10 sustainable development of tourism on the islands (Jaskólski et al., 2018). With exception of a few  
11 investigations, there is a dearth of research debating the Svalbard economic development and the  
12 political challenges associated with development of port infrastructure as a response to Arctic ice  
13 melting and the potentials thereof from a socio-economic perspective.

14 We argue that research on economic development is acutely needed considering the present and  
15 increasing activities of oil and gas exploration in the Arctic (Glomsrød et al., 2017), the potential new  
16 areas for undiscovered oil as well as the possibilities of new shipping routes to and from Europe and  
17 Asia using the Arctic passage (Olsen and Nenasheva, 2018). In this regard, we find that even the formal  
18 documents from the Arctic Council have not explicitly mentioned port infrastructure expansion as  
19 opportunities for economic development in the region. Also, recent literature on international law has  
20 demonstrated a lack of solid institutional coordination at a transnational level in the Arctic Ocean as  
21 compared to Antarctica, for example, beyond that of fishing (Government.no, 2017). This is not  
22 surprising of course, given that port developments and other economic activities in the Arctic take place  
23 within nation states' EEZs as opposed to in Antarctica, and as such, coordination is not as critical yet  
24 and also would not fall within the purviews of the Arctic Council.

25 In light of this, the current paper aims to address the Svalbard *possibilities* of enhancing its port  
26 development in the context of the new arctic routes. As per Galvao (2017), port development occurs at  
27 the intersection of three dimension: Economic, Strategic and Political. The Economic dimension is  
28 driven by volume throughput, which is derived from the gross domestic product (GDP) and  
29 internationalization rate of a given economy. The Strategic dimension is verifiable through planning  
30 and investment levels, while the Political dimension is analyzed by law and governance mechanisms.  
31 For the aim of this research, as an exploratory case study of Svalbard, we are looking at the international  
32 shipping through the Arctic as the Economic dimension. For the Strategic dimension, we employ  
33 content analysis techniques to examine secondary data available about port planning and investment  
34 and finally the general sovereignty status gives us the Political dimension., Specifically to the strategic  
35 dimension, we apply the well-established Ownership-Location-Internalization (OLI) Paradigm from the  
36 Foreign Direct Investment (FDI) literature as our framework of analysis, considering: resources,  
37 market, efficiencies and location as the four main factors of investment attraction (Dunning and Lundan,  
38 2008). Among several other internationalization or marketing strategies theories, we consider that the  
39 application OLI as eclectic paradigm to the country/location level and not on the firm. The OLI  
40 Paradigm does not take isolated aspects such as the finance, economics, law or management, but the  
41 strategic level of decision (Dunning, 2001). In this particular case, we are not trying to quantify the

1 investment or calculate the cost/benefit of it, but frame the factors that would attract port investment to  
2 Svalbard as location with unique characteristics. The FDI framework applies to Svalbard as the location  
3 clearly depend on external sources for direct investment. The particular sovereignty status of Svalbard  
4 makes its business environment unique, and therefore, the understanding of the geopolitical challenges  
5 in the area is also part of our investigation. Our ultimate goal is to apply the OLI paradigm to examine  
6 if the port development at Svalbard will give Europe more and better port choices for deep sea  
7 waterborne trade and tourism in the future when the Trans-Arctic route becomes operable, as well as  
8 search and rescue in an areas where traffic could possibly increase with the opening of new shipping  
9 lanes because of ice melting.

10 The article is structured as follows. The next section examines the Arctic Transit Shipping literature  
11 and follows this with the background on the geopolitical issues of the Arctic, with a special emphasis  
12 on Svalbard. This is followed by the socio-economic particulars of the Port of Longyearbyen and an  
13 explanation into the background of general port development models and the application methodology  
14 of the business strategy to the Svalbard case. We then explore the findings for Svalbard and makes the  
15 considerations for other countries in the area as well.

## 16 **2. Arctic Transit Shipping**

17 Arctic shipping has been an area of great interest in research and commerce for several years. As the  
18 ice cover in the Arctic generally continues to decline, it opens up the issue of potential shipping routes  
19 through Arctic waters. Lasserre and Têtu (2015) emphasize however that though there is an increase in  
20 shipping and tourism traffic in the Arctic, “...*this is far from being an explosion.*”, something which is  
21 also emphasized by Moe (2014). There are three routes that transit along the Arctic Ocean: The Northern  
22 Sea Route, which follows the northern coast of Russia from the Bering Strait to the North Atlantic  
23 Ocean; the Northwest Passage, which traces several potential paths through the Canadian archipelago,  
24 and the Trans-Arctic (or Transpolar) Route, which goes straight north across the North Pole and still is  
25 a rather futuristic option but nevertheless a hypothetical worth discussing. Figure 1 illustrates these  
26 routes through the Arctic Ocean. The two first are those that are best known and understood and in  
27 actual use today. However, these routes are located in areas that are very poorly chartered, with only  
28 6% of Arctic waters actually chartered to international standards and only 11% is even mapped – a  
29 challenge that will expand as more ice melts. Both Norway and Canada therefore have strict regulations  
30 for securing traffic in their waters, whether in the Northwest Passage, with its extreme differences in  
31 navigable seasons with permanent and moving ice as well as depth limitations; or in the waters around  
32 Svalbard. These regulations limit the freedom of navigation but are necessary to ensure that it is safer  
33 to travel. The costs associated with the construction of and ships that are strengthened for the ice in the  
34 area, and operating these, is also a current limiting factor in increased shipping in the Arctic (Lasserre  
35 and Têtu, 2015), though it is arguable that this may change with increased ice melting as well. However,  
36 it is also important to keep in mind that even if there is an even further decline in ice levels in the Arctic,  
37 search and rescue (SAR) and oil spill response (OSR) will still be very difficult to coordinate and  
38 effectuate in these remote and weather driven areas with great distances between any kinds of ports  
39 (Larsen et al., 2016). Furthermore, if the use of nuclear icebreakers increase to ensure all year traffic in  
40 the Northern Sea Route, an associated accident could have consequences that far surpass of SAR and  
41 OSR challenges, and the environmental consequences could be tremendous (Østreng, 2013).

1 Theocharis et al (2018) have systematically reviewed the literature on Arctic Shipping and verified that  
2 there was a significant increase of articles published in the 2011-2017 period. This fact is directly related  
3 with the increasing number of vessels completing the trans-Arctic passage. The authors have examined  
4 the literature from the economic and environmental perspective and found that the researchers of 13 out  
5 of 31 papers pointed the Arctic route more competitive than other routes. These results are aligned with  
6 the research by Wang et al (2018) that have made an effort to quantify the trans-Arctic route  
7 comparative to Suez Canal and found that considering present route choice determinant factors, there  
8 is little probability that large container companies would change their routes to a trans-Arctic. However,  
9 the authors also found that in the case of bulk (dry/liquid) and general cargo there is no dominant factor  
10 that determines the route choice. And because of that, the authors conclude with recommendations for  
11 the Suez Canal Port Authorities do attract or reduce impact of trade loss to the NSR. We consider this  
12 a particular relevant finding considering that 2/3 of the world seaborne trade is still bulk (dry and liquid)  
13 that 70% of that moves in the East-West direction (UNCTAD, 2018).

14 Finally, in a more recent study Zhang et al (2019) has demonstrated the increasing interest of China for  
15 developing what they have called “Ice Silk Road”. The authors recognize the fact that China is not part  
16 of the Arctic littoral, but the development of trans-Arctic routes as part of the “one belt, one road  
17 initiative” would help to cut costs and greenhouse gas emissions of the Chinese global trade. According  
18 to the authors, this is relevant given the major role played by China in the total global trade of  
19 merchandise goods and the fact that some of China’s main trade partners are located in North Europe,  
20 directly benefiting from the NSR versus the Suez route. The literature review on Arctic shipping  
21 presented here shows evidence that additional research is necessary to develop a conceptual framework  
22 of route choice decision-making factors that is not based on pure cost/benefit analysis. This evidence  
23 gives us the lead way to explore the hypothetical case of port development at Svalbard. The Trans-  
24 Arctic Route which potentially may pass next to the west coast of Svalbard where Longyearbyen is  
25 located is at this point in time a hypothetical route, because even in the peak of summer, the polar ice  
26 cap still exists though which is why most scholars have focused on the Northern Sea Route and the  
27 Northwest Passage as potentially more feasible for commercial shipping. These routes, however, have  
28 not only the environmental challenges mentioned above, but also political challenges in that they lay  
29 within the EEZs of sovereign Arctic states. Russia, who has already opened the Northern Sea Route to  
30 limited traffic, maintains control over the passage, and the Northwest Passage’s status as an  
31 international strait is disputed by Canada, who claims it is internal waters. If the Trans-Arctic route  
32 becomes feasible in the future, the Northwest Passage could potentially be of less interest to many  
33 commercial actors due to its comparatively shallower and rockier waters as well (Lackenbauer and  
34 Lajeunesse, 2014). It is important to note though that use of any of the three routes could potentially  
35 result in faster shipping times for some vessels in some circumstances as compared to today’s transit  
36 patterns (Melia et al., 2016).

37



1

2 *Figure 1: Different actual and potential polar routes. Source: Rodrigue et al. (2016)*

3

4 **2.2 The Archipelago of Svalbard and Trans-Arctic port potentials**

5 The Archipelago of Svalbard is uniquely placed to service the hypothetical future Trans-Arctic Route,  
 6 which, like the Northwest Passage, is actually several different traverses. However, most of these  
 7 traverses still travel directly past the Svalbard Archipelago. We acknowledge that transarctic ships could  
 8 still in the future prefer to continue to larger ports with existing facilities in Germany or the Netherlands  
 9 instead, given the strong connections of such cities to markets and hinterland in Europe. However, in  
 10 our hypothetical case, we argue that if the Trans-Arctic Route opens as predicted to traffic in the mid-  
 11 21<sup>st</sup> century (Melia et al., 2016), then Longyearbyen could potentially see a rapid increase in ships  
 12 transiting near its shores.

13 Svalbard is unique in that it is an Arctic Archipelago that is administered by Norway under the terms  
 14 of the 1920 Svalbard Treaty. Due to the age of the Svalbard Treaty, no provisions are made for ocean  
 15 governance outside of the archipelago's territorial waters; however, Norway instituted the Svalbard  
 16 Fisheries Protection Zone (SFPZ) in 1977, which is very similar to the Exclusive Economic Zone  
 17 provided for in the United Nations Convention on the Law of the Sea (UNCLOS, 1982).

18 The provisions of the Svalbard Treaty make the archipelago unique in many ways. Svalbard is officially  
 19 an area of political nondiscrimination, meaning that, unlike any other territory in the world, any person  
 20 from any country can live and work there without a visa or work permit. There are very few restrictions  
 21 to this unlimited immigration policy. Residents must comply with Norwegian law, as per Norway's

1 governance rights, but no citizen can be treated differently due to their nationality of origin. Likewise,  
2 by Article 3 of the treaty, citizens of any country can start business operations: “*subject to the*  
3 *observance of local laws and regulations, they may carry on there without impediment all maritime,*  
4 *industrial, mining and commercial operations on a footing of absolute equality.*” (Svalbard Treaty,  
5 1920). Norway is, however, also required to protect the natural environment of Svalbard, and so any  
6 commercial enterprises must comply with this and other local laws.

7 Norway also has the right to govern and collect taxes for the support of the archipelago but cannot  
8 collect any monies above what is needed for local governance. In fact, the Treaty specifically stipulates  
9 that any moneys collected on Svalbard must remain in Svalbard and used for the maintenance and/or  
10 improvement of the archipelago, and not be transferred back to Norway. Svalbard also lacks the Value  
11 Added Tax found in Norway. Because of this, taxes are lower in Svalbard than in other parts of Norway,  
12 and the regular income tax in accordance with the Law on Svalbard is 8% plus the Norwegian insurance  
13 contribution of 8.2% (Lovdata.no, 2018).

14 Politically, Svalbard is governed by a representative of the federal government of Norway, the  
15 Sysslemannen (Governor) of Svalbard. Particularly in the early years of Svalbard’s governance under  
16 Norway, this office is to ensure that activities on Svalbard are compliant with Norwegian national  
17 security goals (Grydehøj et al., 2012, Utnes, 1999). Responsibility for daily local management of the  
18 various settlements has varied. In the earliest years of Svalbard settlements, the various companies that  
19 constructed the settlements have handled local management duties, as these were company towns  
20 populated only by company employees. The company town model began to change over the course of  
21 the 20<sup>th</sup> century, as most of these companies based on coal extraction, became less viable on the  
22 archipelago over time. As a result, more local control over daily governance has occurred with the office  
23 of the Sysslemannen determining more of the policies for the residents of Svalbard.

24 Finally, residents of Svalbard tend to be working age adults. Of the 2214 individuals living in Svalbard  
25 in 2018, over half were between the ages of 20-44 – and only 38 individuals were over the age of 67  
26 (Statistics Norway, 2018). The population is composed of 60% Norwegian and 40% foreigners, among  
27 which Russian, Ukrainian, and Thai minorities (CIA, 2018) are in the majority. This mix of nationalities  
28 is directly related to the clause in the Svalbard Treaty that allows citizens of any state to live and work  
29 in the archipelago.

### 30 **2.3 Longyearbyen: City and Port**

31 The main city is Longyearbyen, where the vast majority of people who live on the Svalbard archipelago  
32 reside (just over 2000 people). The discovery of the town is credited to an American, John Munro  
33 Longyear, as a company town for his Arctic Coal Company. The port developed over time to allow for  
34 the export of coal and in 1926, Longyear City was renamed Longyearbyen.

35 The port is highly important to Longyearbyen, as most people historically traveled to Svalbard by ship.  
36 The Svalbard Treaty (1920) as such made special provision for travel to and from ports in Svalbard in  
37 Article 3:

1     *“Notwithstanding any rules relating to coasting trade which may be in force in Norway, ships of the*  
2     *High Contracting Parties going to or coming from the territories specified in Article 1 shall have the*  
3     *right to put into Norwegian ports on their outward or homeward voyage for the purpose of taking on*  
4     *board or disembarking passengers or cargo going to or coming from the said territories, or for any*  
5     *other purpose. It is agreed that in every respect and especially with regard to exports, imports and*  
6     *transit traffic, the nationals of all the High Contracting Parties, their ships and goods shall not be*  
7     *subject to any charges or restrictions whatever which are not borne by the nationals, ships or goods*  
8     *which enjoy in Norway the treatment of the most favoured nation; Norwegian nationals, ships or goods*  
9     *being for this purpose assimilated to those of the other High Contracting Parties, and not treated more*  
10    *favourably in any respect.”*

11    Therefore, by the Svalbard Treaty, international maritime trade to and from Longyearbyen (and any  
12    other future ports) is protected and all parties have the right to take on or drop off passengers and cargo  
13    without any restrictions other than what Norway decrees for its most favored trading partners. This  
14    means that Svalbard ports cannot be more restricted than any other port in Norway, even if the type of  
15    trade into and out of Longyearbyen is substantially different. Maritime traffic into Longyearbyen has  
16    already seen substantial changes over the past decade, and the shrinking of the Arctic ice cap is likely  
17    to lead to further changes in the future.

18    Today, port activity falls into four major categories: tourism, cargo, research and monitoring, and  
19    fishing (Kystverket, 2016, Marchenko, 2015). Of these, tourism brings the most people to Svalbard,  
20    though fishing vessels are the most numerous (Marchenko, 2015). Cruise ships have in fact been  
21    traveling to Longyearbyen since the 1870s; that was how Longyear himself first reached the area that  
22    would bear his name (Viken, 2006). Today, cruise passengers remain important to the economy and fall  
23    into three categories: those who arrive by international cruise ship, those who arrive by air and take a  
24    multi-day cruise around the archipelago, and those who arrive by air and take a day cruise. The  
25    international cruise ships are the largest of these, and may carry close to 4,000 passengers (Marchenko,  
26    2015). This can cause challenges and annoyances for the residents of Svalbard, as this is double the  
27    number of residents on the city of Longyearbyen – such numbers overwhelm the residents, and  
28    drastically impact smaller communities on the archipelago, some of which may have only 40-60  
29    residents in total.

30    Cargo ships, however, are fewer in number, with only two ships making regular runs to the archipelago  
31    and 5-6 others making occasional visits. In total, these ships visit the island between 15 and 20 times  
32    per year (Marchenko et al., 2015). In addition, coal ships visit about 25-35 times per year, freezer vessels  
33    remain year round to work with fishing vessels, two to three bulk carriers visit the island, and about 10  
34    vessels act as suppliers for the cruise ships. Research and monitoring vessels include the Norwegian  
35    Navy and Coast Guard, vessels belonging to the Svalbard local government, as well as educational and  
36    academic ships. One or two research ships also operate year round, and as many as ten operate in the  
37    summer season (Marchenko, 2015). Lastly, the number of fishing vessels varies by season, with as few  
38    as ten vessels in January to as high as 60 in September (Marchenko et al., 2015). The expectation is that  
39    all of these numbers will continue to increase in the future, as the Arctic becomes more industrialized  
40    and scientific activity increases (Marchenko, 2015). Table 1 presents a summary of main characteristics  
41    of port facilities. Clearly the maximum draft of 9 meters and the is a limitation for larger cargo ships,  
42    considering the Suezmax draft is 20.1 meters and Mallaccamax is 20.5 meters. Another major aspect



1 would be associated to the non-existence of dedicated terminals (they all do a little bit of everything)  
 2 and potentially loosing operational efficiencies with increasing volume flow.

3 **Table 1: Summary of existing Port Facilities at Port of Longyearbyen**

Name of Facility	IMO number	Main type of cargo	Quay length	Maximum Draft	Maximum Ships' length
Gammelkaia	SJLYR-0002	General Cargo, Passenger	48m	5m	90m
Turistkaia	SJLYR-0004	Passenger, cruise, general cargo	130m	6m	65m
Bykaia	SJLYR-0001	General cargo, dry, bulk, cruise, container, fish	84m	9m	335m
Kullkaia	SJLYR-0003	Dry bulk, general cargo, container, passenger/cruise	32m+12m	8m	150m

4 Source: Authors' own elaboration based on: [http://portlongyear.no/wp-](http://portlongyear.no/wp-content/uploads/2017/02/Svalbard_Cruise_Produktmanual.pdf)  
 5 [content/uploads/2017/02/Svalbard\\_Cruise\\_Produktmanual.pdf](http://portlongyear.no/wp-content/uploads/2017/02/Svalbard_Cruise_Produktmanual.pdf) and [https://www.cruise-](https://www.cruise-norway.no/viewfile.aspx?id=3672)  
 6 [norway.no/viewfile.aspx?id=3672](https://www.cruise-norway.no/viewfile.aspx?id=3672)

7 As earlier identified, the academic literature about Svalbard is predominantly in the natural science  
 8 fields. The recently published research by Ng and Song (2018) has drawn attention to the Arctic and  
 9 the regional development by emphasizing the economic and the policy implications of the increasing  
 10 shipping activity in the region. The increasing shipping activity in the Arctic North Sea passage is the  
 11 phenomena<sup>2</sup>under observation in our investigation and as such, this is primarily a qualitative study as  
 12 discussed by Alasuutari (2010), in any qualitative research approach there is variation between the  
 13 findings and policy relevant use of it. Therefore, we are not aiming for policy implications. This is an  
 14 exploratory study that makes use of available archival data existing in a limited number of sources to  
 15 examine the hypothetical implications of the increasing shipping activity in the area under the  
 16 geographical scope of Svalbard.

17 **3. Port development and FDI attraction: directions for business strategies in Svalbard**

18 In the previous section we review the main characteristics of the Svalbard Archipelago that support our  
 19 argument and build the reason why we argue that there is an under explored potential for port  
 20 development on the archipelago. Based on these characteristics it is clear that any large-scale port  
 21 development will strongly depend on outside investment. In this case we consider Svalbard as a unit  
 22 and expect that investment is likely to come from outside the archipelago. Because of the particular  
 23 sovereign state of Svalbard and considering the international business perspective, we use Dunning and  
 24 Lundan (2008) OLI FDI framework for our analysis; that is to say, we want to know what if any location  
 25 characteristics exist that might cause entities to choose to invest in Svalbard. This FDI framework is

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<sup>2</sup> Our reference that defines scientific phenomena is CHALMERS, A. F. 2013. *What is this thing called science?*, Hackett Publishing. The debate about the epistemology of science in Chalmers research was based on physical sciences, but through the historical examples he was able to point directions to science in general and as such, has denied the existence of a universal account and scientific method that applies to all sciences at all historical stages in their development.

1 particularly appropriate to use because while Norway is sovereign over the archipelago, they must allow  
2 citizens from other nations to invest, live, and work in Svalbard. The use of FDI as tool of analysis is  
3 consolidated among academics (Dunning and Lundan, 2008) and practitioners (OECD, 2002,  
4 UNCTAD, 2016), as it implies in a foreign investor decision occurs with an interest sufficient to impact  
5 decisions on the investment (generally 10% or more interest in an asset). FDI is a relevant as  
6 international business management strategy as well as economic development tool.

7 As this investigation is a case study done under an exploratory research design, in this section we will  
8 present the core concepts on investment and port development that could lead business strategy, in  
9 particular to the state and foreign direct investors in the Svalbard Archipelago. Our argument is built  
10 from the investor perspective, but we acknowledge the need of further investigation that considers  
11 multiple stakeholders' perspectives.

### 12 **3.1 Port development models:**

13 The original research on port development has been geographic in nature, typically trying to explain  
14 the spatial development of port activities (Bird, 1963, Charlier, 1992, Rodrigue and Notteboom, 2009).  
15 According to the specialized literature in the Maritime Policy and Management fields (Pallis et al.,  
16 2011, Woo et al., 2012), research on ports has revealed the development-led stage through the Maritime  
17 Division in the United Nations Conference on Trade and Development (UNCTAD). UNCTAD has  
18 proposed a terminology for ports development based on generations (UNCTAD, 1992, UNCTAD,  
19 1999). This formal model approach, has largely been used by scholars and industry members in their  
20 studies of specialized container ports for indicating the development phases that ports experience (Tae-  
21 Woo Lee and Flynn, 2011, Paixão and Bernard Marlow, 2003, Wilmsmeier et al., 2014).

22 In more recent studies, Notteboom and Rodrigue (2005) and Rodrigue and Notteboom (2009) introduce  
23 the terms of 'port regionalization' and 'port terminalization' as new trends in port development models.  
24 The research by Pettit and Beresford (2009) evaluates the WORKPORT model for Europe. Their  
25 conclusions point to an extension of port services into logistics integration. In the case of Sánchez and  
26 Wilmsmeier (2010) investigation about Latin America port cases, they have proposed the relational  
27 approach to port development based on the interaction of three systems: economic, maritime, and port.  
28 Lin and Tan (2013) find seven driving forces in port development and classify them into three  
29 dimensions (economic, management, strategic) in order to provide an evaluation of port development  
30 in China. Finally, the port sophistication model as proposed by (Mileski et al., 2016) establishes a new  
31 approach of port development based on levels of sophistication (1. Limited generalized; 2. Generalized;  
32 3. Specialized; 4. Highly specialized). They make use of a robust data based for 59 countries for the  
33 1980-2012 period and demonstrate that there is a strong correlation between the level of sophistication  
34 of ports and the trade mix the port handles. The trade mix composition is directly derived of the country  
35 economic development (measured by GDP). The port sophistication model presents distinct features  
36 over the previous literature due to three main characteristics. First, it reflects the port infrastructure  
37 sophistication by level (and not phases based on time). Second, it demonstrates the port development  
38 trajectory on cross-country level (not just by port). Third, it is calculated using variables in different  
39 dimensions such as container volume and manufacturing trade in value.

1 This literature analysis about different port development theories and applications leads to three main  
2 conclusions. First, there is not a consolidated or well-established concept of port development among  
3 academics or industry experts. Second, regardless of the method used to analyze development, there is  
4 a physical expansion aspect considered which may explain why geographers have taken some advocacy  
5 in this topic (as several studies on port development were taken under the Geography discipline  
6 perspective). Third, the researchers somehow agree that there is a need to analyze port development  
7 over time to address the dynamic evolution of ports.

8 However, when it comes to the application of these port development models to potential new locations,  
9 like the case of Svalbard, the local and national conditions represent major influences in the investment  
10 decision and business strategy directions. Ports have to respond to trade needs (that can be volatile),  
11 and investment in port infrastructure, as defined in Business Strategy literature as a lumpy asset  
12 (characterized by the investment maturation in the long term) cannot be transferable to a different  
13 location. In other words, this means that port investors have to deal with two dimensions of the port  
14 investment problem: the local versus international preexisting conditions; and the short-term needs and  
15 wants versus the long-term maturation of the investment. It is no wonder that the port development  
16 tasks (planning, structuring, execution) are a permanent job in the national transportation agencies in  
17 most countries with a significant maritime trade.

### 18 **3.2 The Business Strategy perspective applied to Svalbard:**

19 Strategy is an independent discipline in the field of Business with several different streams. For the  
20 scope of this investigation, we examine the literature on general International Business Strategies  
21 particularly Foreign Direct Investment (FDI). In an era of globalization corporations must adopt an  
22 international business strategy, the maritime industry has been ‘born global’ and maritime companies  
23 must adopt international business strategies.

24 FDI implies that companies decide to invest not in portfolio investments where they have no say in the  
25 operations of the investment, but in assets for production capacity expansion in a different location than  
26 their home country. Svalbard is a good place to consider the FDI framework because of the Svalbard  
27 Treaty – citizens of any state can invest and work in the Svalbard archipelago. For Norway, investment  
28 in Svalbard is not foreign – but the same considerations that would cause foreign governments or  
29 industries to invest in Svalbard have an effect on Norway’s decision to develop this remote territory  
30 under its sovereignty.

31 In the academic business literature the theory that provides the most comprehensive framework of  
32 analysis of FDI is known as the eclectic OLI (Ownership, Location, Internalization) Paradigm (Dunning  
33 and Lundan, 2008, Dunning, 1973,1980). According to this model, multinational enterprises (MNE)  
34 will make their investment strategy decisions for going international if they anticipate some kind of  
35 advantage for their business. The advantages in the OLI paradigm are based on three prerequisites:  
36 ownership, location, and internalization. The ‘ownership’ is the idea that the MNE already possess or  
37 own the intangible assets (like know-how) in their sector in their home country and they will be taking  
38 this advantage elsewhere at relative low or zero marginal costs. The ‘location’ advantages comes from  
39 the location theory where the MNE explores the foreign country local specialties (such as raw materials,  
40 labor force) associated with their ‘ownership’. Finally, the ‘internalization’ stands for the advantage

1 that the MNE will be operating in a foreign country, but still using their own systems and internal  
2 procedures, which reduces the transactional costs of the location factor. According to Dunning (2001)  
3 *“the purpose of the eclectic paradigm is not to offer a full explanation of all kinds of international*  
4 *production but rather to point to a methodology and to a generic set of variables which contain the*  
5 *ingredients necessary for any satisfactory explanation of particular types of foreign value-added*  
6 *activity. (2001, p. 177).”*

7 The OLI Paradigm proposed is based on manufacturing and services products companies and their  
8 direct investment and has no relation with international finance theories (for portfolio investments, for  
9 example). For the case of Svalbard, the OLI Paradigm is the framework is useful to explain from the  
10 investor perspective, why companies would invest in the Archipelago port infrastructure.

11 Figure 2 shows the exact location of Svalbard near the potential busiest route, known as the Northern  
12 Sea route, and illustrates the strategic location of this Archipelago. Figure 3 identifies the main natural  
13 resources and present areas of commercial exploration, illustrating the explicit availability of energy  
14 resources (coal and oil & gas). But when cross-checking the location of these resources against Figure  
15 4, which gives an overview of the main settlement and preservation areas, it represents a potential  
16 conflict as the vast majority of the Archipelago is under Natural Reserve of National Park protection.  
17 The Port of Longyearbyen, however, is outside these protected areas. Finally, Figure 5 gives an  
18 overview of the Svalbard economy by sector considering employment share as an indicator, where it is  
19 clear the increasing importance of the service sector to the detriment of the mining.

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27 **Figure 2: The Svalbard Archipelago location in the Arctic Circle**



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2 Source: <http://www.gqcruises.com/>

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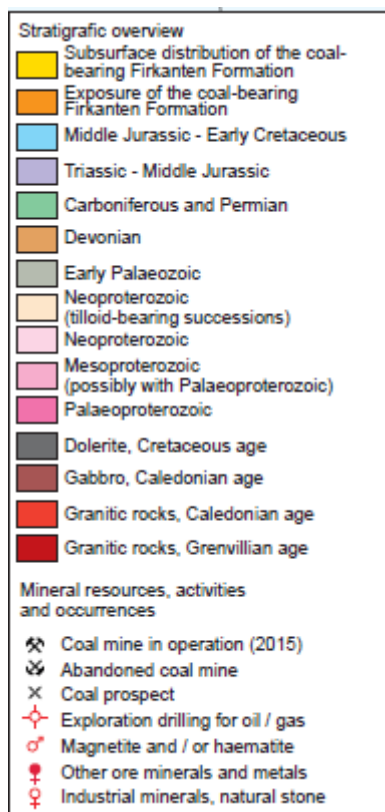
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13 **Figure 3: Geological map: mineral resources, activities and deposits**



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2 Source: Statistics Norway (2016) based on Norwegian Polar Institute.

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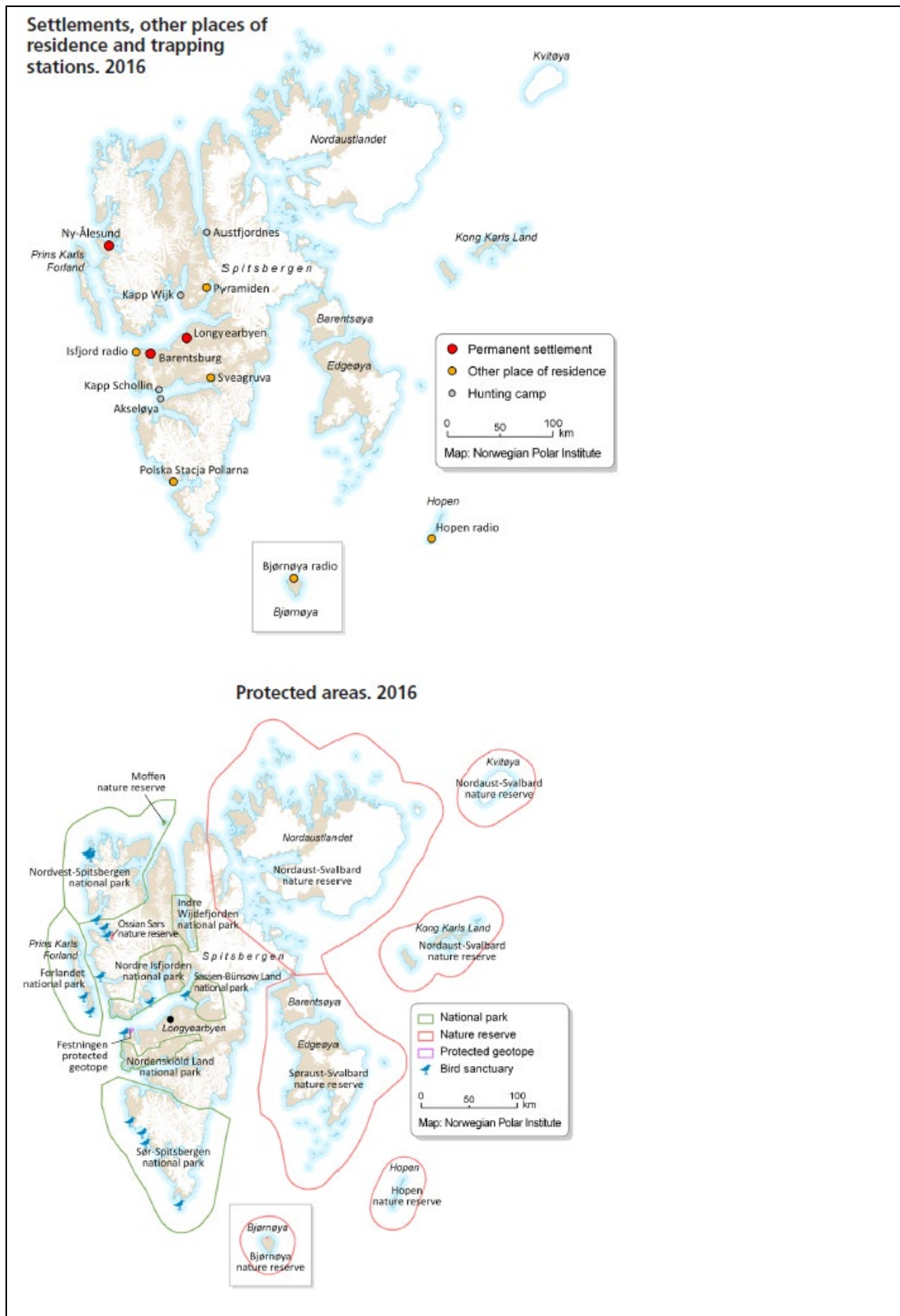
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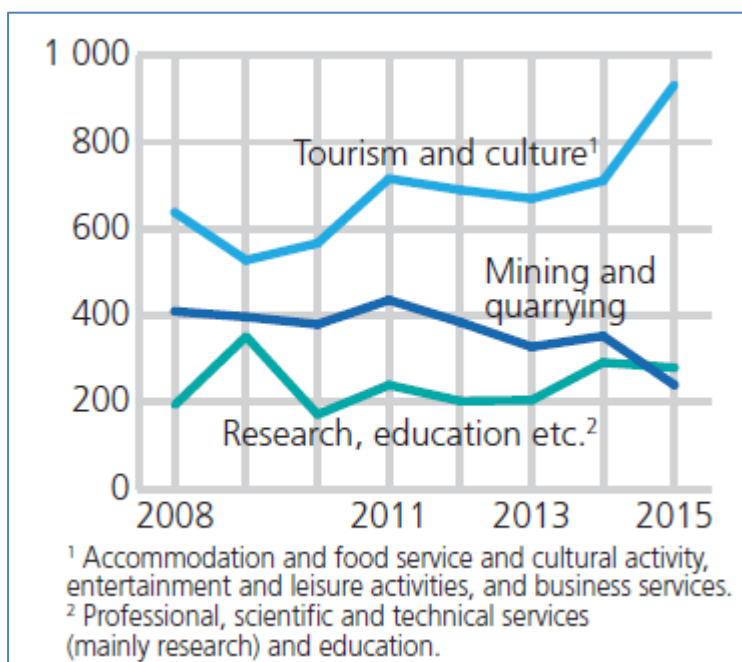
11 **Figure 4: Svalbard main settlements and preserved areas in 2016**



1 Source: Statistics Norway (2016) based on Norwegian Polar Institute.

2 **Figure 5: Employment in selected industry groups through the year (2008-2015)**





1

2 Source: Statistics Norway (2016) based on Norwegian Polar Institute.

3

4 On Table 2 we present the advantages that would attract investment to Svalbard. Using the definition  
 5 of Ownership, Location and Internalization (based on Dunning 1993) and the existing business at  
 6 Svalbard (based on archival data) we have identified the corresponding factors of attraction that would  
 7 bring additional FDI. As a result, it is clear that Location is the main advantage that MNE could explore  
 8 at Svalbard, in addition to the presence of advantages associated with Ownership and Internalization.

9 **Table 2: Identification of advantages according OLI Paradigm in the Svalbard main port related**  
 10 **activities**

Sector/activity	Ownership (O)	Location (L)	Internalization (I)
<b>Cruise</b>	Cruise companies operating in Svalbard already have a 'modus operandi' for cruising in the Arctic.	Exotic location and unique landscape for touristic activities.	Cruise companies could establish their own terminals and land-side activities and extend their presence on the archipelago.
<b>Oil &amp; Gas</b>	There is a significant activity of or potential for oil and gas exploration in the North Sea, Arctic and Barents Sea. There is no need for	The presence of oil & gas fields being already explored.	Potential reduction in the transactional costs due to proximity to a major consumer market (Europe)

	adaptation as this advantage is already present .		
<b>Fishing</b>	There is significant fishing activity in the North Sea and Arctic. There is no need for adaptation as this advantage is already present .	The location benefits the fishing in that area so that they could use Svalbard port infrastructure for processing and storage of their products before sending to the final consumer markets.	Potential reduction in transaction costs due to economies of scale.
<b>Other cargo</b>	This business sector is still in its developing stage (first Arctic crossing voyage took place in 2011). Vessel operators, vessel owners and supply ship operators are still designing/testing their service through the Arctic Ocean.	Strategic location of the Archipelago in the Arctic Circle, makes it an ideal location for a transshipment port for containers or even a re-supply port of call for ships in transit crossing the Arctic.	Major savings in fuel in using the Arctic route for the cargo to/from Asia to North European ports.

1 Source: Authors' own elaboration.

2 The results of Behrman (1972) are well known and largely used by the business academic literature for  
3 explaining FDI attractiveness. In this work, he identified four basic attraction factors of FDI based on  
4 the presence of the following characteristics: resources, efficiencies, market, capabilities, also known  
5 in the International Business Literature as strategic factors. The host countries do not have to present  
6 all these four factors at the same time, but at least one of them must be clear perceived by the MNE  
7 so that the company's ownership advantages can interact with the location advantages justifying a FDI  
8 investment.

9 We have seen that ports typically evolve as a response to trade (Mileski et al., 2016). In the case of  
10 Svalbard it would not be different, which means that the port infrastructure to be built has to consider  
11 the existing needs (cruise, oil, fishing) and the same time it develops to respond to new demands (transit  
12 cargo ships, supply ships). Table 3 summarizes the types of FDI and their application to Svalbard. We  
13 find that this result is consistent with the findings by Lassere et al (2016) who have interviewed major  
14 shipping lines in their intentions to develop the trans-Arctic shipping

15 "Arctic shipping is likely to keep growing, just as it has in the past ten years. But it will be mostly driven  
16 by local traffic linked to the servicing of communities, and by the exploitation of natural resources."

17

1

2 **Table 3: Identification of FDI types in Svalbard business environment**

FDI Type	Resource-seeking	Efficiency-seeking	Market-seeking	Capability-seeking
<b>Theoretical Driver</b>	natural resources, low-cost labor and specific skills	export-platform labor-intensive	presence of consumer market	pre-emptive or exclusive access to key assets
<b>Application / example</b>	Despite having a consistent tourism industry, the exploration of natural resources is not predominant in Svalbard economic outlook. Coal mining is decreasing and oil/gas fields are still under study.	The fact that no visa or working permit is require, could create an efficiency in labor hiring.	Svalbard does not represent a consumer market by itself, but it is close enough to Northern European countries.	Considering its strategic location and the dearth of port infrastructure in that area of the Arctic, the first who gets to build this infrastructure is put in advantage to these key asset.

3 Source: Authors' own elaboration.

4 From Table 2 we can see that Svalbard is a good match for two out of four FDI drivers. We consider  
5 the significant evidence that “capability” (due to strategic location in the Arctic) and “efficiencies” (due  
6 to labor regulations and non-requirement of visa and working permit) are the main drivers to attract  
7 new port investment to Svalbard. We therefore consider those as indicators of the FDI theory application  
8 being feasible for examining the case of Svalbard future port development possibilities. The questions  
9 that remain open is how relevant would the FDI be for Svalbard in terms of share of total investment  
10 (accumulative and flow); how much will be actually classified as foreign considering the Norwegian  
11 sovereignty as per the Svalbard Treaty; and which companies/investors would have the ownership  
12 advantages to best exploit the location advantages of Svalbard.

13 **4. Considerations for the Region and for Svalbard:**

14 The results discussed section 3 in the context of the geopolitical situation of growing tension in the  
15 Arctic sea lead to three main questions. First, should Svalbard develop their port infrastructure? There  
16 are currently three different ports in Longyearbyen. The Old Port, the Coal Port (owned by Store Norske  
17 Spitsbergen Kullkompani) and the City Port. The last is owned and directed by the Longyearbyen Local  
18 Government and is used by cruise, tourist fishing and research vessels, cargo ships and the Coast Guard  
19 (Longyearbyen Lokalstyre, 2014). In addition, the national government expects that with the opening  
20 of the Arctic Ocean, the port will have increased value in terms of search- and rescue readiness and as  
21 a base for maritime service providers.

1 Second, how would this development be feasible? A development plan has already been published and  
2 it is estimated that the cost will be approximately 400 million Norwegian crowns to expand it. This cost  
3 will have to be borne by the local government, in collaboration with industry and local actors if it is to  
4 be realized. However, according to the national governments latest White Paper on Svalbard (Det  
5 Kongelige Justis- og Beredskapsdepartement, 2016), there are strong national interests associated with  
6 the development of a new port infrastructure, and national ownership interests are expected. In fact,  
7 they set aside 15 million Norwegian crowns in state funds (approximately \$1.8 million US dollars, at  
8 current exchange rates) for the planning periods to look at different possibilities in terms of an upgrade  
9 and building of new port infrastructure in Longyearbyen (Longyearbyen Lokalstyre, 2014, Det  
10 kongelige Fiskeri- og Kystdepartement, 2017). In the National Transport Plan, a total of 400 million  
11 Norwegian Crowns (\$50 million US dollars, at current exchange rates) have been set aside to the port-  
12 and fairway project in Longyearbyen. This project involves improving the port infrastructure by adding  
13 a large scale floating dock with a transit area for passenger traffic. This improvement will increase port  
14 capacity and improve the facilities for smaller and medium sized vessels, especially during the summer  
15 season which has high passenger traffic and research activities associated with the port (Transport- og  
16 Kommunikasjonskomiteen, 2018, Det Kongelige Samferdselsdepartement, 2017).

17 Three, what are the major issues that might make investors wary? Svalbard is a small island archipelago  
18 with a remote location and extreme weather conditions. It has a multinational, non-native population  
19 with high yearly turnover. Most importantly, it faces potential issues with varied interpretations of the  
20 Svalbard Treaty. According to the The Norwegian Ministry of Justice and Public Security  
21 (2016) "*Legislation is the most important policy instrument for Norway's exercise of authority in*  
22 *Svalbard and for advancing its other Svalbard policy objectives.*" (Svalbard Treaty, 1920). However,  
23 other countries (notably Russia) have advocated for limits on Norway's exercise of sovereignty in the  
24 waters around Svalbard, and this could potentially lead to issues in the future.

25 Finally, since these are issues with no easy or quick fixes, what are the alternatives? For the investors  
26 the position is taking the risk and assuming that there are ownership advantages which provide benefit  
27 through the interaction with the Svalbard location. The location advantages shown above of efficiency  
28 and capability (strategic) seem to be the most attractive for companies and other investor. The local  
29 government and the Norwegian government can make the location more attractive with policy-making  
30 through concrete actions such as tax incentives, flexible labor regulations; other environmental  
31 regulations; and/or institutional marketing/advertisement.

32 It is important to remember that despite these risks, there are strong incentives for many countries and  
33 their industries to invest in a potential port expansion in Longyearbyen, both from a business perspective  
34 and from a geopolitical perspective. For Norway, the benefits are obvious – strengthening the economic  
35 opportunities in Longyearbyen and the Norwegian position as sovereign is important from a national  
36 and geopolitical perspective. Norway has a strong interest in Longyearbyen as a thriving *Norwegian*  
37 town, and with the decline of the coal industry, some other sector must grow up in its place to attract  
38 Norwegian workers to the town. It would thus be beneficial for Norway to incentivize Norwegian  
39 industry to take on investments in Svalbard, to serve Norway's geopolitical interests in the region.

1 Russia has a more complicated position. Growth in Longyearbyen could come at the expense of  
2 Barentsburg, a nearby Russian town on Svalbard. Barentsburg is in no position to compete with  
3 Longyearbyen, as it has a population of less than 500 people. However, Russia itself has an advantage  
4 in Arctic shipping – Russia has far more icebreakers than any other state in the world, and the new  
5 functionality of the Northern Sea Route means that Russian industry will be gaining more expertise as  
6 years pass. Russia would be poised to be a strong player in trans-Arctic shipping, and developing  
7 existing port structure at Longyearbyen is far less expensive than any alternatives. On the other hand,  
8 existing disputes over sovereignty in the waters around Svalbard may hold back Russia and Russian  
9 industries from investing too heavily in port development.

10 The European Union states would stand to gain from a developed port at Longyearbyen. The opening  
11 of the Trans-Arctic Route would be highly beneficial to the EU, allowing for potentially cheaper and  
12 quicker shipping. Likewise, there are a number of shipping companies based in EU states that could  
13 take advantage of this new port facility. However, the EU also disputes aspects of Norwegian  
14 sovereignty over the waters around Svalbard, which has led to some current political issues with  
15 Norway.

16 Lastly, China has a potential interest in investment in Svalbard. China has no Arctic possessions, but  
17 has shown extreme interest in the region due to its potential future resources. Chinese tycoons have  
18 tried to obtain Arctic land by purchase in both Iceland and in Svalbard itself – the latter a difficult angle  
19 to take because Norway no longer allows land to be sold in the archipelago, just leased. But by the terms  
20 of the Svalbard Treaty, Norway must allow China to take part in industrial and other activities in  
21 Svalbard without prejudice, meaning that this could be a good opportunity for the state to gain Arctic  
22 access at relatively little risk.

## 23 **5. Conclusions and Final remarks:**

24 The current article exploration into whether investment in port development in Longyearbyen, Svalbard  
25 has proven complicated, due in part to the intricate history of the Archipelago itself. The Svalbard  
26 Treaty, which grants Norway sovereignty over the island chain, has proven remarkably robust over  
27 time, in part due to Norway’s literal reading into it and a lack of direct confrontation from other  
28 signatories to this literal interpretation. Likewise, the remote location of the islands, while remaining a  
29 challenge in some ways, has also become one of its greatest assets.

30 The geopolitical situation has a great impact on Svalbard, because while no states seriously challenge  
31 the sovereignty of Norway over the land itself, there is dispute over Norwegian control of the waters  
32 around Svalbard, most recently over the harvesting of snow crab with the EU that directly challenges  
33 the Norwegian interpretation of the Svalbard Treaty (Sundet and Bakanev, 2014, Kaiser et al., 2018,  
34 Østhagen and Raspotnik, 2018, Tiller and Nyman, 2017). Because Norwegian sovereignty is largely  
35 uncontested, especially within the limits of the literal interpretation of the Svalbard Treaty, any  
36 governance issues for port developments will come from Norway itself, which has struggled to strike a  
37 balance between local and federal control on the Archipelago. Norwegian laws apply on Svalbard, but  
38 Norway has the further responsibility of protecting the Svalbard environment as per the terms of the  
39 Svalbard Treaty – meaning that in some cases, new legislation or regulations may be necessary. Norway  
40 intends to keep the laws of Svalbard as close to that of Norway as possible (The Norwegian Ministry

1 of Justice and Public Security, 2016), but it also must respect the particular rights and responsibilities  
2 laid out in the Svalbard Treaty. Some also argue that given the Norwegian obligation to protect the  
3 natural environment of the Archipelago, this will be the strongest driver defining the extent of port  
4 development in Longyearbyen. However, we argue that Norway, though with a strong environmental  
5 profile and with global commitments that puts it in lead when it comes to environmental protection,  
6 nevertheless has economic incentives as well that will trump the environment in a cost-benefit analysis.  
7 An example of this is the choice to open up for oil and gas explorations in Lofoten-Vesterålen (Misund  
8 and Olsen, 2013, Dale, 2012) and the Arctic (Dale, 2016) in light of Norwegian obligations to the Paris  
9 Agreement (UNFCCC, 2015). Furthermore, Norway also has a geopolitical stake in Svalbard and needs  
10 to have economic activities and employment opportunities for Norwegian nationals as well in order to  
11 uphold its claim of its status as a Norwegian territory. With the decommissioning of the majority of  
12 coal mines in Longyearbyen, the need for new employment opportunities can be visualized in increased  
13 port development, contributing to the goal of continuous Norwegian population and employment.

14 Overall, our analysis about hypothetical scenarios for port development in Longyearbyen suggest some  
15 drivers that may make it attractive for firms to directly to invest in port and further develop the maritime  
16 logistics at Port of Longyearbyen, given the factors we consider from the OLI FDI framework. The  
17 value of OLI paradigm is not to offer a full explanation of all kinds of international investment. As  
18 matter of fact, it may attract investment from Norway, which could not FDI *strictu sensu*, due to the  
19 sovereignty status of Svalbard. As such, the OLI Paradigm application in this case sheds light on how  
20 Svalbard could highlight their advantages to further attract business and how companies could explore  
21 these advantages in their business. The potential opening of the Trans-Arctic Route makes Svalbard a  
22 potentially compelling location to place a port facility, especially considering potentials for increased  
23 traffic from tourism, research, fisheries and search and rescue operations under the implications of  
24 climate change. The laws and relatively low tax rates in Svalbard compared to mainland Norway  
25 provide incentives for investment for commercial actors, and interest in the Arctic is at an all-time high,  
26 with Svalbard and specifically the Port of Longyearbyen being one of the most accessible areas to  
27 develop. Furthermore, it is both in line with Norway's need to validate its sovereignty over Svalbard,  
28 while at the same time allowing for other signatories to articulate and emphasize their role as  
29 stakeholders in an Arctic that is not only under stress, but also is of transregional relevance because of  
30 this. The willingness to invest in the development of the Longyearbyen port as an adaptive step in light  
31 of increase in tourism and easier shipping and fishing because of melting ice could therefore be  
32 perceived as a win for all the involved actors.

33

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