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# Framing the High North: The role of socio-economic information

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## **ABSTRACT**

This paper analyses how socio-economic information is used to build different frames of the High North, and seeks to understand how this may affect different actors with an interest in the region. Framing can be understood as an interpretation that gives meaning to an issue by emphasizing some aspects while omitting others. Our empirical material comes from front-line messages from the *Business Index North* (BIN) reports, which is disseminated to different stakeholders in print and online; public presentations; and registered feedback from potential BIN users. Our analytical approach builds upon the theory of framing combined with studies of accounting as social and institutional practice. We identify three different ways in which socio-economic information is used to build different frames of the High North: “signalling the gap”, “creating a new positive image of the North”, and “projecting the future”. Our findings suggest that the building of frames based on a mix of competing information sources has the potential to contribute to a learning process and to stimulate debate about regional development in the High North. This adds a new perspective to the mainstream public opinion literature which often views framing negatively and as a source of bias.

**Key words:** *Framing, High North development, Arctic, socio-economic information*

## **INTRODUCTION**

The Arctic regions, with their extremely rich yet somewhat difficult-to-attain natural resources, have in the last ten years attracted a lot of attention from states, global businesses, and international policy-makers. Developing the High North has become

a key issue in the governmental strategies and policies of the Arctic countries<sup>1</sup> – Russia, Norway, the United States, Canada, Sweden, Iceland, Finland, and Denmark – and also a primary concern for supranational organizations like the EU. Even non-Arctic countries, especially those in Asia, have developed active approaches to the region (see, e.g., The State Council Information Office of the People’s Republic of China 2018). National and global corporations, including oil and gas companies, shipping and shipbuilding firms, and other companies dealing with the extraction of natural resources, have increased their activities in the circumpolar Arctic.

These trends have resonated with opinion leaders, such as media outlets and scientific expert circles, making the Arctic a topic of constant interest. The search engine Google shows that the numbers of news items about the Arctic and the High North doubled in 2017 compared to 2015, while in 2015 there were 2.64 times more news items about these issues than in 2013. Google Scholar shows that since 2010 the annual number of scientific publications related to the topic has ranged between 30,000 and 40,000 (the corresponding figures for 2005 and 2000 were 18,600 and 11,800).<sup>2</sup>

A similar trend is to be observed in the appearance of many comprehensive reports (hereafter “Arctic reports”) on issues of socio-economic development in the Arctic and the High North regions, supported by international institutions such as the Arctic Council, the Arctic Economic Council, the Nordic Council of Ministers, OECD, as well as the Arctic states. The most recent reports include topics of human development (Nyman and Fondahl 2014), northern sparsely populated areas (*OECD Territorial Reviews*), and recommendations for an interconnected Arctic (*Arctic Economic Council Broadband Report*). Furthermore, the Arctic reports have examined socio-economic drivers of change in the Arctic (*Arctic Monitoring and Assessment Programme*), the economy of the North (Glomsrød, Duhaime and Aslaksen 2017), sustainable business development in the Nordic Arctic (NORDREGIO reports), Business Index North (Bullvåg, Mineev et al. 2017; Middleton, Hersinger et al. 2018), and European High North business and investments (*Arctic Business Forum Yearbooks*).

Without exception, all the Arctic reports above describe developments and build their statements by reference to, and visualizations of, statistics and numbers. This information is socio-economic in nature, normally derived from data in areas such as demography, education, financial numbers, infrastructure, and more. With these Arctic reports in mind, we discuss the opportunities and challenges associated with the presentation and use of such socio-economic information.

Presenting socio-economic development in numbers and graphs helps to eliminate the great complexity of the world by focusing on a particular (presumably more important) issue while seemingly abandoning others deemed to be less important. Yet this may lead to confusion and misconceptions. The use of calculations and numbers as representations of operational activity is an object of research in business and management studies under the general term of accounting. The accounting literature shows that the intended function of accounting is to support control and decision-making processes by reducing uncertainty (Mellemvik, Monsen, and Olson 1988). Scholars have also shown that accounting information can play a facilitative role in managerial work, because information produced by accounting can have an effect on people in both public and private sector organizations (Gerdin, Messner, and Mouritsen 2014; Mouritsen 2014). Recent studies discuss how accounting can act as a powerful communication device (Lorino, Mourey, and Schmidt 2017; Mouritsen and Kreiner 2016).

What function do these Arctic reports serve in presenting their information? Do they provide crucial and important data for those who demand decision-making information and knowledge about the Arctic? Do the reports reach their target audience? These questions have to be taken seriously by those who produce the reports if they really want to influence opinions, attitudes, and decisions, and not become a part of “a new cottage industry of report writers” as Michael Porter and Mark Kramer describe it in their influential *Harvard Business Review* article on corporate social responsibility (CSR) reporting (Kramer and Porter 2006).

This paper analyses how socio-economic information is used to build different frames of the High North, and seeks to understand how this affects different actors with an interest in the region. In doing so we analyse two issues of the *Business Index North* (BIN) reports. The BIN periodic reports issued in 2017 and 2018 provide a set of comparable, mostly quantitative, indicators of the socio-economic development of the Norwegian, Swedish, Finnish, and North-West Russian territories of the Arctic region. Although these territories are only a small part (10–15%) of the whole circumpolar Arctic, they are inhabited by some 3.5 million people out of a total Arctic population of approximately 10 million.

To analyse BIN, we use the concept of *framing*. The premise of framing theory is that an issue can be viewed from a variety of perspectives and be construed as having implications for multiple values and considerations (Chong and Druckman 2007, 104). Furthermore, according to Chong and Druckman, framing refers to the process

whereby people develop a particular conceptualization of an issue or reorient their thinking about it. As socio-economic information is the basis of the framing of the High North in the BIN report, our analysis involves recent elaborations of the accounting research field highlighting the communicative power of financial information: the socio-economic information in the BIN report can be compared to KPIs<sup>3</sup> and accounting data. Our research question is twofold: How is the socio-economic information in BIN used in the framing of the High North, and with what potential effects for users?<sup>4</sup>

The remainder of the paper is structured as follows: Section 2 briefly outlines the premises of framing theory and relates it to recent developments in the accounting literature; this combines to form the analytical framework for our study. Section 3 presents the context of the BIN project and the method of analysis. Section 4 presents the findings in terms of frames identified in the BIN reports and typical representations of the socio-economic information they are based upon. This section moreover reports the potential effects of the BIN presentation on its users. Section 5 presents a discussion of our findings, and in section 6 we summarize the paper and draw some conclusions about the theoretical and practical implications of the paper, while also conceding certain limitations and proposing avenues for further research.

## **ANALYTICAL FRAMEWORK**

### **What is framing and how does it work?**

Frames can be understood as messages that impart meaning or perspectives to a given issue. In this paper we deploy a generic framework developed by Chong and Druckman (2007). Their analysis is mostly based on the literature on public opinion in democratic societies, but also on the literature on social movements. Chong and Druckman argue (p. 105) that a more precise definition of framing starts with a conventional expectancy value model of an individual's attitude. An attitude towards an object or issue at stake, in this view, is the weighted sum of a series of evaluative beliefs about it. Furthermore, the set of dimensions influencing an individual's evaluation constitutes his/her "frame in thought" (ibid.). For example, some people believe that oil exploration in the North is important for economic development and prosperity, while others believe it is detrimental to the environment and to other industries such as fisheries and tourism. Thus, if we look at representatives from both groups, their frames in thought may have similar weights for their evaluative beliefs about the importance of socio-economic development, but the weights of their evaluative beliefs differ when it comes to the capability of modern technology to

handle the environmental risks associated with oil exploration. As a result, they have different attitudes.

Framing is a powerful method of influencing people to change their attitudes on an issue. Such a change of attitude, named the *framing effect*, has psychological foundations. To explain this effect, we present in Figure 1 our graphic interpretation of the framing model developed by Chong and Druckman.

As shown in Figure 1, *frame in thought* can be affected by *frame in communication*. The latter can be roughly described as a persuasive message which triggers the revision of evaluative beliefs and their weights in the frame in thought. As a result of the successful design and the communication of frames, people may change their attitudes towards issues at stake in a way favourable for those who stand behind the construction of the frames. The framing effect is thus a change of attitude resulting in a renewed frame in thought.

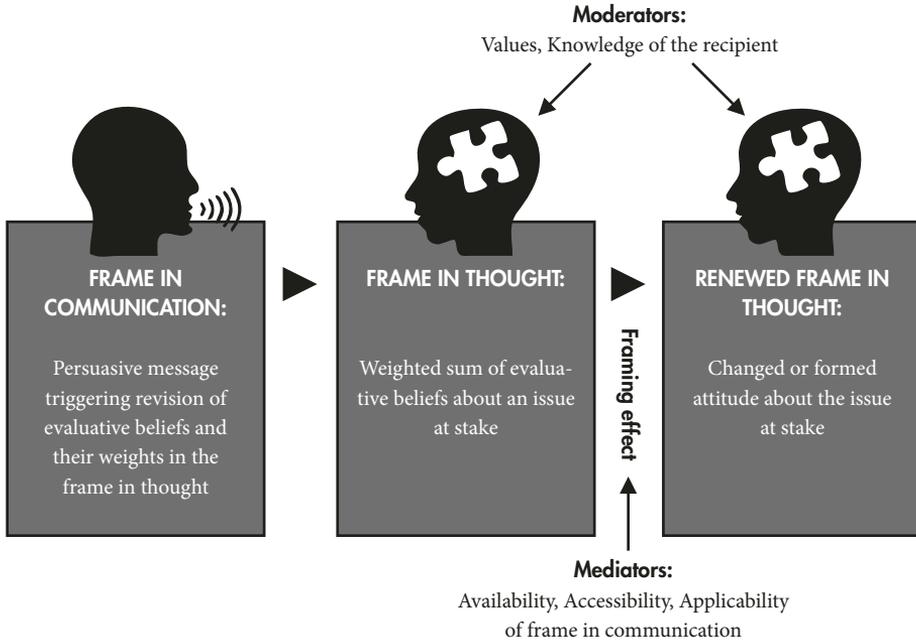


Figure 1. Our graphic interpretation of Chong and Druckman's (2007) framing model

Frames are produced by opinion leaders such as political parties, mass media, scientific circles, leaders of social movements, marketing and communication strategists in private and public sector organizations, etc. All these parties have their target audiences. For example, Pincus and Ali (2016) showed how the US media outlets headlines framed the Arctic for the general public as a theatre of conflict. According to these researchers, three different clusters of conflict frames were present: the “race (or scramble) for the Arctic”, which implies a broad sense of conflict and competition for the region; a more military-specific “new Cold War” between the US and Russia; and a specific conflict between the oil industry and environmentalists over the extraction of petroleum.

According to Chong and Druckman (2007), framing effects are attributable to three mediators: availability, accessibility, and applicability. Availability means that a framed consideration needs to be familiar to the recipients of the message. For example, the concept of sustainability is probably too fuzzy to be used in frames. An alternative – the triple bottom line – would not be familiar to most people. However, using the concepts of saving nature, people’s health, and economic growth greatly increases the likelihood of getting the message across to a mass audience.

Accessibility means that the framed consideration must be retrieved from long-term memory. This can be achieved by a strong emphasis or even by dramatization (e.g., claiming that nature is in danger), or directing attention to an issue. Repeating the issue to an audience makes the frame more accessible. A person who seldom thinks about the dangers of oil extraction in the Arctic needs more exposure to the issue of environmentalism in the Arctic before it comes accessible (Chong and Druckman 2007, 639).

The perceived applicability of a given frame, and thus the likelihood that it will affect an individual’s opinion, increases with the perception of its strength or relevance (Eagly and Chaiken 1993, 330, as cited by Chong and Druckman 2007, 110). People tend to consciously assess applicability when they are motivated (e.g., if they are concerned professionally with the issue at stake) or when confronted with conflicting considerations either induced or directly presented by the frame.

A number of studies also identify moderator variables that condition framing effects. Chong and Druckman conclude that perhaps the clearest limitation of the framing effect is provided by individual predispositions such as values. They also point out that frames that invoke long-standing cultural values are more likely to transform opinions. Studies of other moderators – knowledge, for example – exemplified by these authors produced conflicting results.

## The communicative power of accounting information

Here we adopt a broad view of accounting it as the systematic gathering, processing, and use of information of any kind (Mouritsen 2014). Apart from being a technical practice, during the second half of the 20th century accounting evolved into a social and institutional practice (Hopwood and Miller 1994), important for the development of organizations and society as a whole (Mouritsen and Kreiner 2016). Mouritsen and Kreiner posit that accounting has acquired a role beyond the one traditionally assigned to it (a representation of operational activities able to reduce uncertainty to support decision-making):

What kind of machination is accounting if it is neither truth nor lie? It is a machination of a future: of “what is regarded as problematic [and] what can be deemed a credible solution” (Burchell et al. 1980, 17). It is not a description of the actual world but an account of (selected) problems and solutions for the future. It may be expected that under such a condition, accounting does not efface ambiguity and uncertainty. Indeed, as it does not describe the world it cannot reduce uncertainty. Instead it asks people to do something. (Mouritsen and Kreiner 2016, 24)

The purpose of this approach, also referred to as “the promissory economy”, is to mobilize people to take joint decisions and actions, and assume responsibilities for future developments. An example of accounting as a machination of the future is the United Nations 17 sustainability goals, and corresponding targets, which aim “to transform our world” through numbers.<sup>5</sup>

What, then, makes accounting information a tool for managing cooperation and what constitutes its communicative power? Two properties are particularly important: mediation and the ability to direct attention. The description of these properties is based on the Special Issue of the *Scandinavian Journal of Management* (2014, Vol. 30, Issue 4), in particular the editorial by Gerdin et al. (2014).

**Mediation:** When a particular group of actors interpret a particular number or metric, they contextualize it through relating it to some already established knowledge. Therefore, accounting information can automatically bring to mind different concerns not explicitly stated in the reports. For example, one of the authors of this paper once attended an oil and gas conference in Russia and observed a keynote speaker displaying a table comparing the numbers of offshore vessels in Norway and Russia. In this comparison Norway had a clear advantage. That simple table provo-

ked a debate between experts from different sectors, such as authorities, business, and academia. A distinguished professor stressed that comparing capacities would also require considerations of the Russian onshore oil industry and its links to the strategic political goals of the two countries. Thus the onshore industry and politics immediately came to mind as triggered by an accounting representation which did not address these issues explicitly.

Furthermore, the property of mediation has a semiotic nature (Lorino, Mourey, and Schmidt 2017, 34–35). In this respect, accounting information serves as a language of meaning-making. Warren Buffett famously said that accounting is the language of business. Accounting reports make it possible for different actors within and outside an organization to communicate, cooperate, and make decisions based on their understanding of that language.

Direction of attention happens when the social and the material contexts are omitted in the accounting numbers, and attention is devoted to the production of just a single key figure (or a set of these). Often, when taking decisions, people tend to simplify their contexts. In this respect we tend to rely on accounting, which helps to direct our attention to “the most important” issues. It is easier to direct the counterparts’ attention if it is possible to quote a set of key figures. For example, checking the presentations of industrial parks, regional clusters, or other collaborations taking place in High North regions reveals that those entities often speak of themselves by pointing to key numbers such as total turnover, exports, and total number of employees, etc. These totalities can be used for strategic positioning, and in presentations and negotiations to gain status by showing “how big and important we are”. Synthetic measures for things like quality of life, innovations, and corruption are also widely used. The names of such measures are normally buzzwords inculcated in people’s minds, convincing them that focus on a particular metric is important.

### **Communication of socio-economic information through framing**

Chong and Druckman note that frames can be construed in both positive and negative ways. They can serve as a strategy to manipulate and deceive individuals, or as a way of contributing to a learning process through which people acquire common beliefs and overcome collective problems. This is done by developing shared frames about a predicament and agreeing on the best course of action (Chong and Druckman 2007, 120). Our study of the framing of the High North is built upon

the assumption that framing can be positive (framing as a learning process). We are therefore interested in exploring what might be a good framing of the High North and how to avoid the dangers associated with the manipulative aspect of a framing process. The communicative powers of socio-economic information (which is, in fact, accounting information) inherent in the properties of mediation and directing attention are included in our framework. In particular, we assume that mediation can work in the development of representations, which are both available to and applicable by multiple stakeholders. If such representations are made, mutual learning and dialogue become possible. Directing attention is more important in order to improve the accessibility of frames.

## CONTEXT AND RESEARCH METHOD

### **Context: the BIN project**

*Business Index North* (BIN) is a project that aims to contribute to sustainable development and value creation in the Arctic.<sup>6</sup> The overall goal is to set up a recurring, knowledge-based, systematic information tool for stakeholders such as businesses, academics, governments, and regional authorities, as well as media outlets in the Arctic states. The further plan for BIN is to involve partners from Alaska/US, Canada, Greenland/Denmark, and Iceland, and provide analyses of all territories of the circumpolar Arctic.

The first *Business Index North* periodic analytical report (issued in April 2017) focused on socio-economic developments in eight northern regions of Norway (Finnmark fylkeskommune, Troms fylkeskommune, Nordland fylkeskommune), Sweden (Norrbottens län and Västerbottens län), and Finland (Lapin maakunta, Pohjois-Pohjanmaan maakunta, Kainuun maakunta). In addition to these regions, the second BIN report (issued in April 2018) also included Murmansk Oblast and Arkhangelsk Oblast in North-West Russia. Altogether, the ten regions in the report are referred to as the BIN area (Figure 2). The project definition of the BIN area correlates with the EU concept of a macro-region – an area including the territory of a number of Member States or regions associated with one or more common features and challenges (EU definition).

This image is widely used in the BIN project. It also presents the BIN area in terms of its total Gross Regional Product (GRP) and number of people as a percentage of corresponding totals for Norway, Sweden, Finland, and the North-West Federal District

of Russia taken together. Green and red arrows indicate trends of economic growth and declining population in the BIN area.

Through a set of socio-economic indicators and index numbers, the report compares the BIN area as a whole to the national averages of Norway, Sweden, Finland, and the northwestern Federal Districts of Russia. Further, the BIN regions within the area are compared to each other, and each BIN region is compared to the index of its corresponding country. The text of the reports is organized mainly in notes around key figures/graphs. Each chapter has a short summary presenting implications for practitioners. As stated in the second BIN report (p. 5):

The present report gives both an overview and a detailed picture of the socio-economic development and business opportunities within the BIN area and highlights the following topics of major relevance for the area: People, Life, Work, Performance of Business, Innovations, Connectivity, and Maritime Transportation through the Northern Sea Route. Businesses

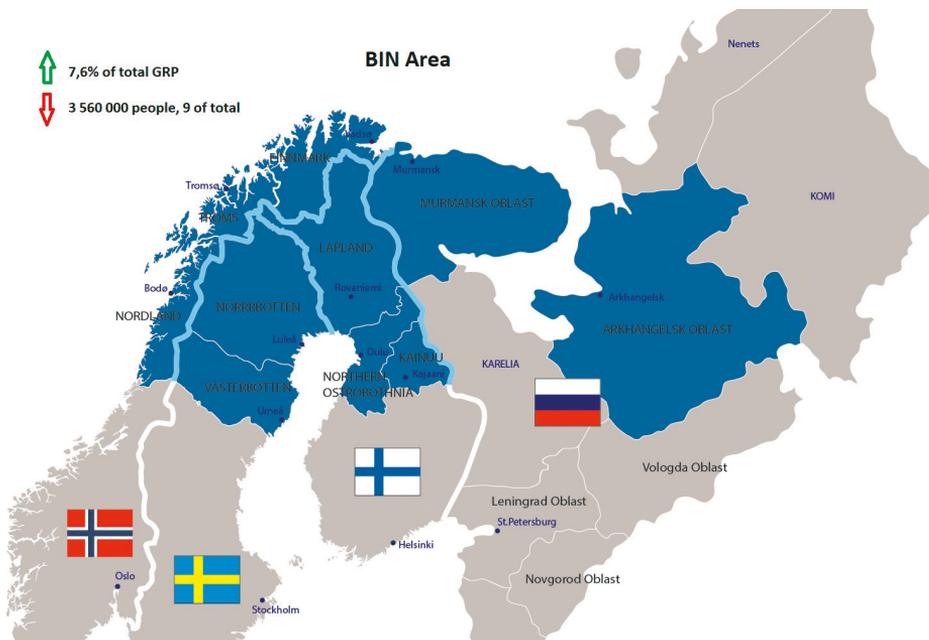


Figure 2. "BIN area" on the map, excerpt from the BIN presentation.

should be able to use it to learn more about economic developments, investment opportunities and challenges. Local, regional and national authorities will be able to identify problems and regional development opportunities, and take decisions for political and regulatory support focused on the BIN area as a whole. For media stakeholders the report will make it easier to describe the development in a reliable way.

BIN is an ambitious project as it targets multiple international stakeholders, covers a broad spectrum of analytical topics, and looks in considerable detail at various territories of the High North. In this regard, High North Development frames are built into the project and deserve particular attention.

### **Methods**

Our work with the empirical material started by generating two datasets: (1) front-line messages used in the BIN reports, for part one of the research question, that is, “how is the socio-economic information in BIN used in the framing of the High North?”; and (2) registered feedback from the potential BIN users, for part two; “and with what potential effects for users?”

To form the first dataset we looked at phrases and symbolic/graphic representations of the High North development in the executive summaries of the BIN-1 and BIN-2 reports, summaries, infographics, and implications for practitioners from each chapter in both reports, and basic PowerPoint presentations of BIN-1 and BIN-2 with key figures/graphs and statements. As the first step of the analysis of this dataset we selected and documented the strongest equivalence and emphasis framings. According to the persuasion psychologist Bart Shultz<sup>7</sup>:

Equivalence framing is the purposely stating or portraying of – logically equivalent – information in such a way that it encourages certain interpretations of the meaningful context, and discourages certain others. These “different, but logically equivalent frames” cause us to alter our preferences. Equivalency frames are often worded in opposite terms. Like “gains” versus “losses”, “full” versus “empty”, “fat” versus fat-free”, etcetera.

Emphasis framing is a persuasion technique where focus is placed on those specific aspects of a solution that encourage certain interpretations of the meaningful context and discourage certain others. This way the meaningful context in which the choice at hand will be evaluated is influenced.

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Our criteria for evaluating the strength of a frame were – according to framing theory – connectedness to recognized public debate, appealing to the values of the putative audience, criteria of availability and accessibility, provoking critical thinking, and providing a clear link to available evidence.

The second dataset included the track record of public BIN presentations available to us from the BIN project (this record included information about the audience and their reaction to the presentations), summaries of interviews with potential users of the BIN reports, and media articles about BIN produced by journalists. The first step in our analysis of this dataset was the summarizing of feedback by user group. The following groups were covered: central government bodies in Norway and Russia, regional authorities in Norway, business people and development actors in Northern Norway, students and experts interested in issues of the High North (Norwegian, Russian, and Finnish), pressure groups (environmentalist organizations in Norway and North-West Russia), and media covering the High North.

Further analysis included examination and reflection of the summaries from both datasets. We then grouped identified frames into inductively developed categories: “signalling the gap”, “creating a new image of the North”, and “projecting the future”. “Signalling the gap” is about presenting the High North regions in terms of losses and disadvantages compared with the capital areas of the BIN countries and the countries’ respective averages. “Creating a new positive image of the High North” refers to directing attention to positive things happening in the High North and attempting to change conventional views of the High North from being solely a natural resource base to something more. “Projecting the future” includes visualizations of development plans and future projects which, if implemented, are assumed to make the High North a better place.

Next we assessed the potential effects of these categories on users in terms of Availability, Accessibility, and Applicability (the terms are described in section 2). This analysis provided the background material for our next step: discussion of the role of Mediation and Direction of attention in the framing of the High North, thus addressing the umbrella research problem of this study. Table 1 presents a summary of our work with the empirical material.

RESEARCH QUESTION		
	Part 1 – How is the socio-economic information in BIN used in the framing of the High North?	Part 2 – and with what potential effects for users?
Data sources	Front-line messages of the BIN reports	Feedback from potential users
Data material	<p><b>Dataset 1</b></p> <p>Summaries and key figures/graphs from each chapter of the BIN-1 and BIN-2 reports, including executive summaries (74 pages of text, 16 chapter summaries);</p> <p>Basic PowerPoint presentations of BIN-1 and BIN-2 (69 slides)</p>	<p><b>Dataset 2</b></p> <p>Summaries of feedback received from audiences during BIN presentations (23 presentations January 2017 – March 2018)</p> <p>Interviews with potential users of the BIN report (8 interviews conducted winter/summer 2018)</p> <p>Media mentions of BIN findings (3 articles produced by professional journalists)</p>
Data Analysis step 1	Identification of strong emphasis and equivalency frames	Summary of feedback by user group
Data Analysis step 2	<p>Grouping of frames into three categories: “Signalling the gap”, “Creating a new positive image of the North”, “Projecting the future”</p> <p>Summary of accounting-based representations for each category</p> <p>Assessment of potential effects on users in terms of Availability, Accessibility, Applicability</p>	
Conceptual discussion	Role of Mediation and Direction of attention in framing of the High North	
	<p><b>What are the opportunities and challenges associated with the use of socio-economic information for shaping the attitudes of the stakeholders involved in development of the High North?</b></p>	
	<p><b>Umbrella research problem</b></p>	

*Table 1. Work with the empirical material from the research question to the umbrella problem statement.*

TYPE OF FRAMING	Signalling the gap	Creating a new positive image of the High North	Projecting the future
FRAMING OF THE HIGH NORTH	Area full of losses and disadvantages compared with capital areas	Area of growth and innovation	Area to become central for world logistics and data exchange.
KEY TOPICS ADDRESSED	People, Life, and Work	Businesses and innovations	Infrastructure
MAIN PRESENTATION METHOD	Symbols and colours in infographics, “profit and loss” and “BIN-negative” benchmarks graphs, negative trend graphs, emphasis and equivalence phrasing.	Innovation maps, cake diagrams and other BIN aggregating graphs, “BIN-positive” benchmarks graphs, positive trend graphs, emphasis phrasing.	Infrastructure maps, emphasis and equivalence phrasing.
TARGET AUDIENCE	Wake-up call to national politicians	Inspiration to regional actors, advice to investors	Advice to investors and politicians

*Table 2. Three types of framing used in BIN*

## FINDINGS

### Types of framing used in BIN

We start this section by presenting an overview of the three types of framing identified for the High North: “signalling the gap”, “creating a new positive image of the High North”, and “projecting the future” (Table 2). These statistics and metrics are socio-economic in character, and corresponding phrasing was extensively used. We provide examples for each type of framing and present findings regarding their potential effects on users.

### Signalling the gap

Figures 3 and 4 below are illustrations of how the BIN reports present a problematic situation of the demographics in the North. The terms in Figure 3 are a rather strong equivalency frame based on the graph. An alternative and weaker phrasing could be: The alteration of the population in the Nordic BIN area is 3.4% less than in the Nordic countries as a whole, or growth in BIN is 2.6% while for Nordics as a whole it is 7%.

Index 2007=100, 2007 – 2016

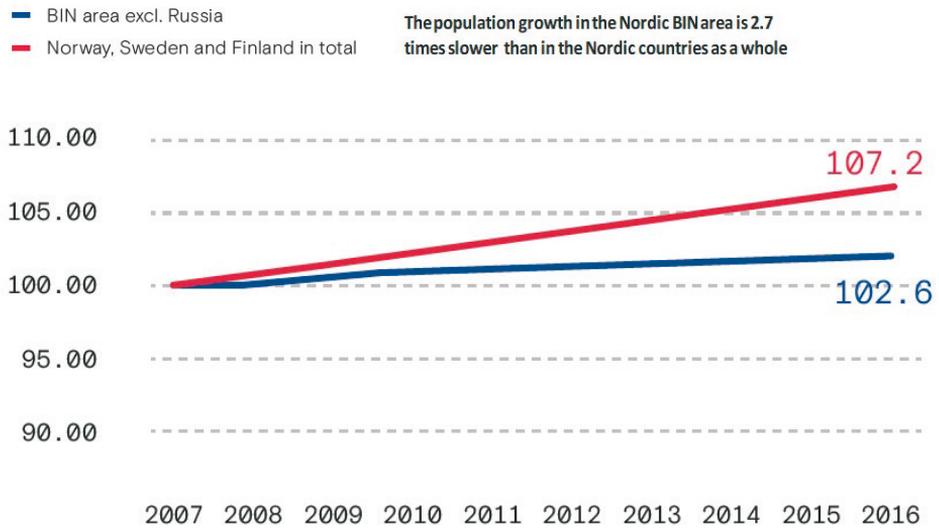


Figure 3. BIN area population development in 2007–2016 (excluding Russia): infographics and attached connected text (based on BIN-2 report and presentation.)

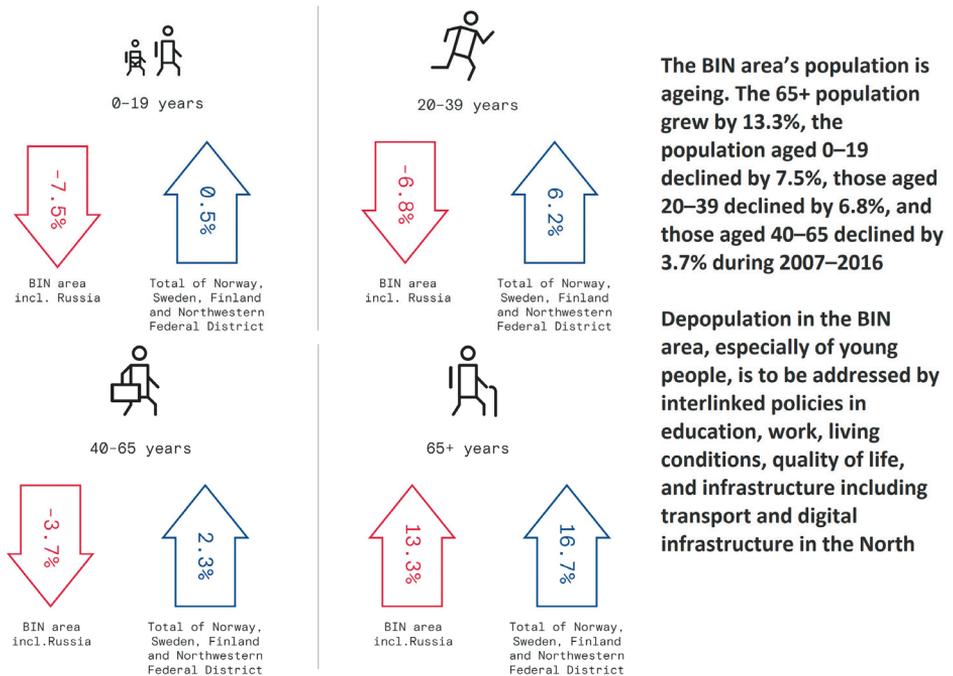
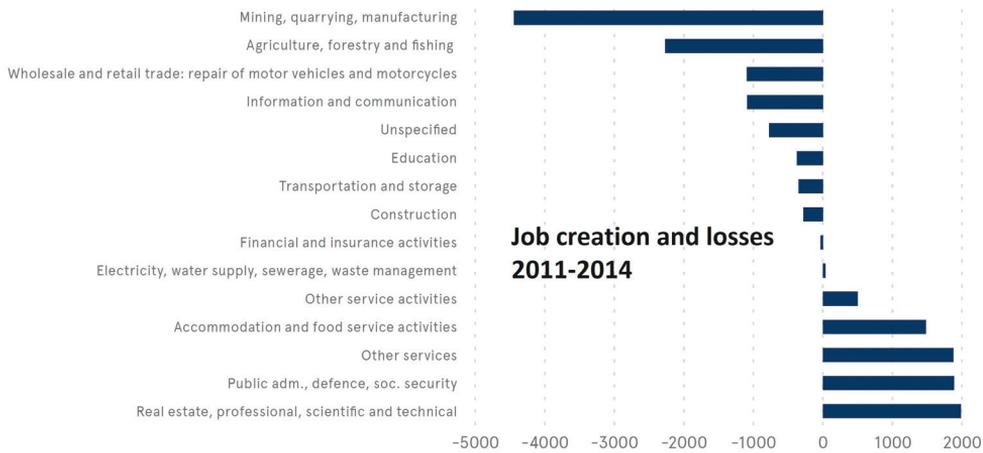


Figure 4. BIN area population development in 2007–2016 (including Russia): infographics and attached connected text (based on BIN-2 report and presentation.)



**Job creation speed in the BIN area is less than half the average speed in the Nordic countries; employment in the BIN area is affected by the loss of jobs in mining, quarrying, and manufacturing, and jobs creation in the services.**

*Figure 5. Nordic BIN-area employment development in 2011–2014: graph and attached connected text (based on BIN-1 report and presentation).*

The terms used in Figure 4 are quite long and detailed. However, they demonstrate the depths of the BIN information base. The strength here is in the symbolic interpretation of losses in the North compared with gains in the South.

Figure 5 illustrates the development of employment in terms of a profit and loss statement used in traditional accounting. This builds upon job creation and losses (emphasis frame) and uses a similar argument as in Figure 3 based on comparative measure: a positive development in the number of jobs is presented as negative, because the speed is slower than “it could be”.

### Creating a new positive image of the High North

In this type of framing, attention is directed to positive developments. Socio-economic information serves to show the “sound results” of the whole BIN area, positioning it as an area of success. This is done to offer a new view of the High North – a contrast to conventional notions, which consider the region to be merely a base for natural resources or just a sparsely populated area. In this way, the information presented directs attention to innovation in terms of brands from the High North (Figure 6), and to economic growth (Figure 7).

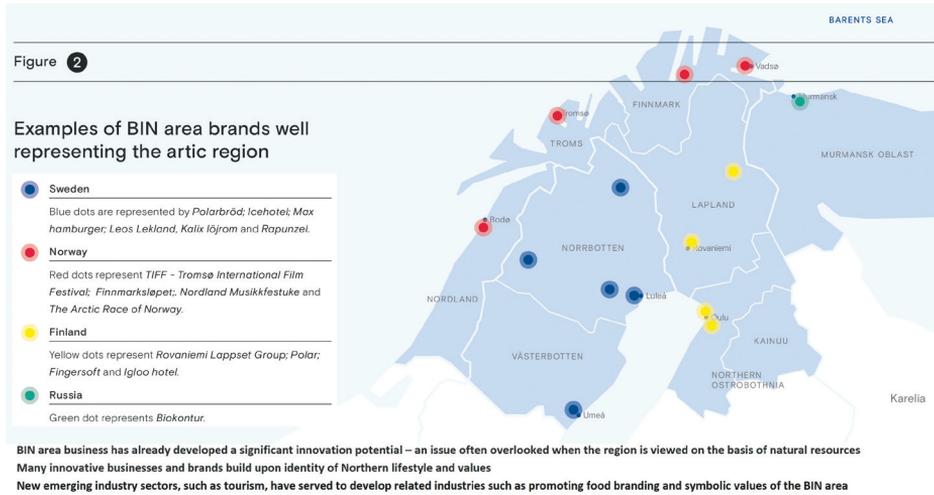
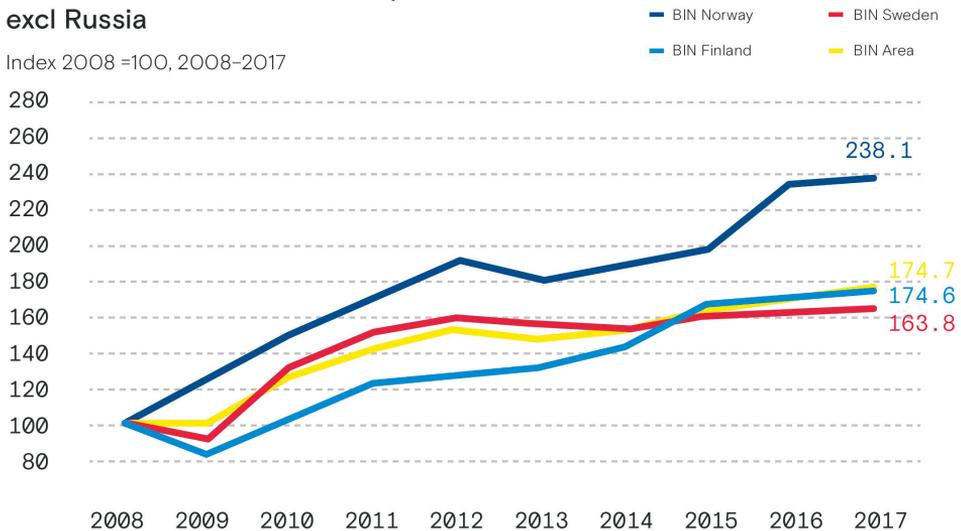


Figure 6. Innovations in the North illustrated by examples of BIN area brands: map and attached connected text (based on BIN-2 report and presentation).

### Growth in Turnover in current prices BIN area excl Russia

Index 2008 =100, 2008-2017



**A substantial economy is present in the North with obvious expansion opportunities if more people and resources were mobilized.**

**Without growing businesses and high-value creation, the Arctic regions will fail to attract investments and innovation.**

Figure 7. Focus on economic growth in the North: graphs and connected text (based on BIN-2 report and presentation)

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Figure 6 raises an interesting point; many innovative businesses and brands build upon identity with Northern life and values. The mapping of these firms may leverage the branding of the whole geographic area.

Figure 7 capitalizes on the ability of accounting to make aggregations. Industries have different growth rates in different regions, but presenting the results as a sum total and visualizing it as a positive development over time helps to keep the focus on economic growth.

The information presented in Figures 6 and 7 has different data backgrounds (qualitatively selected examples vs. quantitatively assessed totalities). Presenting these two things together may add value to the whole framing of the High North as an area of innovation and economic success.

### **Projecting the future**

Infrastructure maps showing ongoing and potential activities serve as a good device to publicize future developments. For example, figure 8 illustrates a baseline for the development of maritime logistics. The most recent BIN report states (2018, page 7): “Business opportunities brought by the Northern Sea Route are to be addressed in the perspective of the whole transport infrastructure development in the BIN area, including a Finnish railway project and digital infrastructure projects.” This can be seen as an attempt to set a joint development agenda for multiple stakeholders. If many actors consider using the sea route and building connecting infrastructure, everybody will benefit.

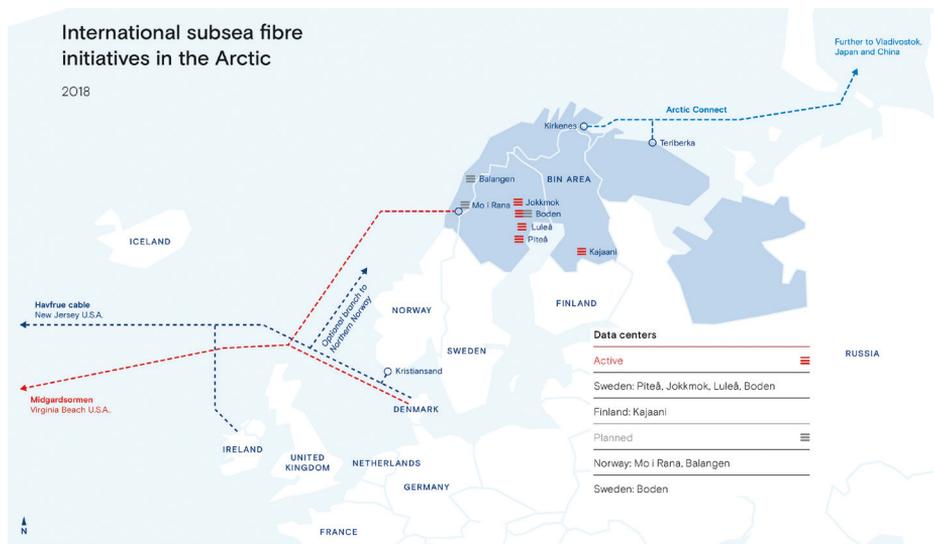
Figure 9 is concerned with international sub-sea fibre initiatives for broadband data transfers to and from the BIN area. Messages attached to the map of future projects establish a view of the area currently lacking a direct connection to the USA and Asia, framing BIN as a “disconnected area”. At the same time it is suggested that connectivity is a prerequisite for future development, a must which multiple stakeholders need to achieve through coordinated effort.

These two illustrations fit the idea of a promissory economy when the result is objectified (often with the help of accounting-like socio-economic information), and actors are “invited to agree” on the course of future action. The information in this respect describes some facts but also imaginings, thus making it possible to talk about the future.

Next huge innovation **Maritime Transportation in the North**



Figure 8. Maritime transportation in the North: shipping lanes tracked using satellite data, corresponding numbers and phrasing (replica of a slide from the BIN-2 report)



**Connectivity in the North**

A prerequisite for economic development in the North

Connectivity of the BIN area should be addressed at the government level, including the interests of different stakeholders such as communities, businesses, and academia

The BIN region requires improved connectivity with the USA and Asia.

Figure 9. Map of international sub-sea fiber initiatives with potential effect on the BIN area, data centres, in the European Arctic, attached connected text (based on BIN-2 report and presentation)

### Potential effect on users

As follows from our analysis of the users' feedback, availability is fairly high in BIN messages. Most people like the way BIN is presented through figures and graphs with short analytical notes attached. This helps keep the focus on the issue, and the information is both visualized and briefly explained. Accessibility of BIN messages in public presentations is fairly high for the user groups studied. From the track record of BIN presentations, BIN appears to be becoming a recognized brand. The presentations normally raise a lot of interest and good discussions. However, accessibility of BIN messages in the printed report and the BIN website was assessed as rather low. Several users mentioned that the report is quite long and difficult to navigate. So far, the BIN project has provided no technical user-customized interfaces for selecting and presenting relevant data. However, members of the project team adjust their presentations according to the preferences of the users and the feedback they receive. This also applies to the selection of analytical topics for the report.

Table 3 below presents a summarized assessment of the value and applicability of BIN based on our interviews with the users. This, however, is only a potential effect on users. The degree of applicability is our interpretation of their feedback.

When it comes to the practical use of BIN, we have data from only one user group, the media. Journalists use BIN as background material, and some journalists have retranslated the report frames to the public, as in the following selected headlines and supporting phrases from a newspaper article about the BIN report (translated from Norwegian). The headline of this article has a strong emphasis in terms of availability and accessibility through dramatization. For analytical purposes, we make a distinction between messages with negative or positive connotations.

Taken together, the negative connotations resemble the framing described earlier as "signalling the gap", while the positive ones relate to "creating a new positive image of the High North". Elements of framing such as "projecting the future" appear on both sides. On the gap side, there is a warning of negative future consequences of unchanged policy, and on the positive side are development plans and some persuasion points to help the audience think positively of the High North. In the newspaper text

*Table 3. Potential effect of the  
BIN report on users*

USER GROUP	PERCEIVED VALUE OF BIN	DEGREE OF APPLICABILITY
Central government bodies in Norway and Russia	Information about key issues of the High North development to be addressed at a central political level	<p><b>Rather high</b></p> <p>BIN presentations raised a lot of interest among these users. The project was invited several times to make presentations to ministries in Oslo and Moscow.</p>
Regional authorities in Norway	Information about various sectors like demographics and businesses to prepare background for political decisions	<p><b>Medium</b></p> <p>Comparison between regions is important to build arguments for central politicians; otherwise it adds rather little to their knowledge of the region.</p>
Businesses people and development actors in Northern Norway	Overview of major issues of the High North	<p><b>Low</b></p> <p>This group needs more detailed and more relevant information for specific industries. This is derived from customers and more specific studies. Often they possess contextual knowledge of their own region in the High North and therefore the information in BIN is not a big surprise for them.</p>
Media in the High North	Background material	<p><b>Medium</b></p> <p>Media outlets are interested in the information presented in BIN, they tend to develop emphasis frames (mostly dramatized versions of signalling gaps) and they reframe key messages in the report.</p>
Students and experts interested in issues of the High North (Norwegian, Russian, Finnish, international)	Information about key trends in the High North	<p><b>Medium to high</b></p> <p>During the BIN presentations this group asks a lot of questions and show interest in the figures. It is clear that those who want to get introductory knowledge of the High North find it in BIN presentations.</p> <p>Numerical information on key topics is helpful in developing a structured view of the North. Not least, these people find it easy to connect to the discussions about BIN figures/graphs by drawing on their own perspectives and life experiences.</p> <p>This user group is mostly motivated to go into the details of the report.</p>
Pressure groups: environmentalist organizations in Norway and North-West Russia	Solid statistical overview	<p><b>Low</b></p> <p>BIN in its current form is unlikely to be relevant for this user group as it has neither direct information on environmental hazards nor first-hand information on development decisions to be made by high level political and business actors.</p>

“WARNING AGAINST A GIANT ROBBERY IN THE NORTH” (HEADLINE OF THE ARTICLE)

(negative connotations):

**More and more of the northern areas are drained of resources**

There is a screaming shortage of people of working age, including a lack of men with higher education.

There is a decline in all the productive groups in the population, while the number of people older 65 rises in all countries.

...we need a whole new thinking around the High North with a new policy framework. The worst thing that can happen is that natural resources are increasingly harvested without new jobs and settlements being created in these northern areas.

It will be a big loss for all nations

“The medicine does not work” – High North policies of the states are neither efficient nor effective

**The state leaves**

In Norway and Sweden, the role of the state has deteriorated sharply. This is in contrast to Finland... Russia also has a stronger public influence because there are regions with extensive self-government.

(positive connotations):

**An enormous economic potential and growth opportunities** [in Northern Norway, Northern Sweden, Northern Finland, and the Murmansk and Arkhangelsk regions in Russia]

**More than ore and fish**

There is also no shortage of brands or solid financial results.

The North is a big financial success. It is about much more than ore and fish. Forestry, tourism, and various industries have created growth in several places.

Identity and culture must be built, we need to decide to be positive when we talk about what it is like to live here.

**New sea route gives hope**

Shipping speeds up every year, and the new sea route is creating a year-round passage from China to Kirkenes. This can have an enormous impact on the High North.

Figure 10. Example of competing frames of the High North (made in a newspaper article<sup>8</sup> about BIN).

all the frames were mixed, thus offering the reader competing considerations. This is good for the applicability of frames, as conflicting yet informed representations are known to induce critical thinking and more conscious opinions. Accounting information was not the only type used in the article to support the statements. However, without access to the numbers and figures in the BIN report and reference to it, such fairly strong qualitative statements would not be possible.

### **Summary of the findings**

In this section we have shown that the information in BIN is used in at least three types of framing of the High North: “signalling the gap”, “creating a new positive image of the High North”, and “projecting the future”. Socio-economic statistics and metrics and phrasing connected to the information make it possible for the BIN reports to communicate these frames. Also, the different frames in the BIN reports have the potential to initiate a learning process, assuming that the users are motivated and involved in the development of the Northern regions. At the end of the section we have highlighted an example of how a media actor (newspaper) could retranslate all the three BIN frames in a short article.

In the following discussion section we explore the opportunities and challenges associated with the use of socio-economic information for shaping the attitudes of the stakeholders involved in the development of the High North.

### **DISCUSSION: THE ROLE OF SOCIO-ECONOMIC INFORMATION IN FRAMING THE HIGH NORTH**

Our findings suggest that socio-economic information can be used to develop informed, contrasting, and even competing frames of the High North. If presented in a proper way, this information can serve as a language to communicate development opportunities and challenges. The communication happens through directing attention and mediation. The former has the ability to make aggregations with emphasis on issues of interest (the power to direct and redirect attention). The latter makes it possible to construct applicable frames for these issues by addressing various stakeholders such as politicians, investors, the media, and other experts. Generic representations such as innovation or infrastructure maps can provide communication (mediation) between the stakeholders. KPIs such as the index number of a single indicator (like population growth or employment development) can trigger critical thinking, as individuals may experience conflicts between their own frame in thought and the frame communicated to them.

The possibility to combine different yet informed frames is a prerequisite of framing as a learning process. In this regard, we show that framing can be a positive thing, where accounting information and accounting techniques can help. This adds to the studies in the public opinion literature domain, as most of them assume that framing is a purely negative phenomenon and a source of bias.

The challenge lies in the potential temptation to use socio-economic information in a one-sided way. For example, if gain–loss narratives dominate or are extensively used in framing, there is a risk of establishing an image of the High North in terms of a zero-sum game. A zero-sum bias judges a situation to be zero-sum (i.e., resources gained by one party are matched by corresponding losses to another) when it is actually non-zero-sum (Meegan 2010). Following this line of reasoning, people may believe that development of the capital regions inevitably involves costs for the High North. If, in turn, the emphasis is solely on a positive image or projected future, then there is a trap of neglecting important development limitations. The solution rather lies in a counterbalanced use of socio-economic information in the framing of the High North.

Our study did not find that the BIN reports are highly relevant to the core business activities of the interviewed users. Instead, the BIN reports and their numerical information have the potential of becoming a tool to facilitate debate among the actors involved in the development of the High North. In this respect, we were able to draw confirmatory conclusions regarding the theory that views accounting-type information as a language of meaning-making (Lorino et al. 2017) and as a machination to communicate about the future (e.g., Mouritsen and Kreiner 2016). Is accounting-type information the most efficient tool to use in debates about joint decisions and actions leading to regional development in the High North? All the high-priority goals declared in the prestigious *Arctic investment protocol* of the World Economic Forum (2015) are quantified as targets and performance indicators using socio-economic information.

The High North is still a prospective area not directly familiar to most people. This means that attitudes to its development “stored” in people’s frames in thought may still be in the process of formation. The strategies of opinion leaders may be directed towards the formation of more conscious and consistent attitudes and offering good questions to both those interested in and those less familiar with the High North. The comparative approach to the High North regions applied in the studied BIN reports is a step in this direction. This approach allows for various aggregations and disaggregations of socio-economic information and thus juxtaposes different units of analysis. For example, the different BIN regions could be compared with the BIN area as a whole or to metrics of their respective countries. This makes it possible to frame the High North in various ways.

## CONCLUSIONS

In this paper we have identified three different ways in which socio-economic information can be used to create different frames of the High North. These three ways are: “signalling the gap”, “creating a new positive image of the High North”, and “projecting the future”. We have shown that the building of frames on a mix of competing considerations has the potential to contribute to a learning process and an informed debate on the development of the High North. This adds to the mainstream public opinion literature which often considers framing to be something negative and a source of bias.

High North development is a seemingly complex issue. Despite numerous attempts to express it in terms of numbers, a complete and consistent representation is unlikely. Various stakeholders will need specific tools to handle their core business and organizational tasks. Socio-economic information has the potential to contribute to those representations by facilitating communication and joint agenda setting.

Actors involved in the development of the High North should be careful when dealing with information and analyses presented to them. They need to avoid superficial reviews, one-sided frames in communication, and impassioned debates, but rather seek informed views scrutinizing competing considerations. Furthermore, we encourage them to look for information which may connect them with other actors interested in the region, a search which might initiate a learning process.

The research presented has several limitations and therefore corresponding opportunities for further research. Firstly, while paying much attention to the structure of frames in communication, we have established only a tenuous link between these frames and their effect on users. Further research could therefore focus on feedback from potential users of the High North reports and the effects of the socio-economic information have on their frames in thought. This would necessitate a wider sample of respondents and types of stakeholders using a standardized selection of frames in communication from more High North reports.

Secondly, we have not paid much attention to other analytical and informational products than *Business Index North*. Further research can benefit from a comparative analysis of these reports and from the identification of more types of framing of High North development than the three identified in our research. Further research would also benefit from considering stakeholders from other regions (apart from those co-

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vered by the BIN reports), such as Alaska in the US, territories of Northern Canada, Greenland, Iceland, and eastern territories of Arctic Russia.

Thirdly, the identification of, and search for, important stakeholders could also be done in a more proactive, analytically supported manner. We suggest that future research use the network perspective of stakeholder theory to identify which and how many such stakeholders are connected to a particular issue (for example a mega-project like the Northern Sea Route or the new sub-sea data cable project in the Arctic). Such an issue-centred approach would contribute to a better understanding of what kind of framing is needed, and how socio-economic and technological information can facilitate cooperation and mutual learning among stakeholders.

Finally, our analysis has not included important visual carriers of frames such as symbols and other illustrations like pictures, cartoons, and photographs. What type of framing of the High North can (or do) they facilitate and how? How can different stakeholders work together using socio-economic information? These questions may merit particular attention if we wish to facilitate a strong, informed, and constructive framing of the Arctic and the High North.

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## FOOTNOTES

<sup>1</sup> For documents, see Government of Russia (2008), Norwegian Ministries (2017), The White House (2013), Government of Canada (2017), Prime Minister's Office, Finland (2013), Ministry of Foreign Affairs of Denmark, Government of Greenland, Government of Faroes (2013), and European Union External Action (2017). Links to the documents are available in the list of references at the end of this paper.

<sup>2</sup> The authors conducted these searches on 24 August 2018.

<sup>3</sup> KPI is an abbreviation for Key Performance Indicator – a measurable evaluation of performance, a target – a widely used concept in business and management practice.

<sup>4</sup> Alternatively, studies on the framing of the Arctic and the High North could focus on the role of other types of information also widely used, such as news headlines and stories, cartoons, and visual imagery. See, for example, Pincus and Ali (2016).

<sup>5</sup> <http://www.un.org/sustainabledevelopment/>

<sup>6</sup> For more information about BIN see [www.businessindexnorth.com](http://www.businessindexnorth.com).

<sup>7</sup> Published on his website *The wheel of persuasion* (<http://www.wheelofpersuasion.com/?s=framing>). Schultz's explanations of emphasis and equivalency framing are based on Nelson, Clawson, and Oxley (1997) and Tversky and Kahneman (1981).

<sup>8</sup> Avisa Nordland, 17. april 2018: <https://www.an.no/naringsliv/utdanning/bodo/advarer-mot-et-gigantisk-ran-i-nord/s/5-4-742839>