



Arctic potential – Could more structured view improve the understanding of Arctic business opportunities?



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ABSTRACT

The increasing interest towards the Arctic has been witnessed during the past decades. However, the commonly shared definitions of the Arctic key concepts have not yet penetrated national and international arenas for political and economic decision making. The lack of jointly defined framework has made different analyses related to the Arctic quite limited considering the magnitude of economic potential embedded in Arctic.

This paper is built on the key findings of two separate, yet connected projects carried out in the Oulu region, Finland. In this paper's approach, the Arctic context has been defined as a composition of three overlapping layers. The first layer is the phenomenological approach to define the Arctic region. The second layer is the strategy-level analysis to define different Arctic paths as well as a national level description of a roadmap to Arctic specialization. The third layer is the operationalization of the first two layers to define the Arctic business context and business opportunities.

The studied case from Oulu region indicates that alternative futures for the Arctic competences and business activities are in resemblance with only two of the four identified strategic pathways. Introduction of other pathways to regional level actors as credible and attractive options would require additional, systematic efforts.

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1. Introduction

The emergence of Arctic into political, business and research agendas has not yet been followed by commonly shared definitions of key concepts. This lack of jointly defined framework has made different analyses of the Arctic as a context¹ far too limited when considering the magnitude of economic potential embedded in various raw material resources and other arctic endowments. Incoherent² – and sometimes even biased – specification of the Arctic itself is hindering qualified and proper analysis of the Arctic as a business context, but in addition to this inconvenience there are justified concerns expressed about the Arctic competence and

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¹ In this paper, the context refers specifically to business context unless stated otherwise.

² Arctic has various definitions see e.g. perception of the whole of Finland as an Arctic country in Finland's Strategy for the Arctic Region vs. e.g. Definition of Circumpolar Arctic in Glomsrød and Aslaksen, 2009. The Economy of the North 2008.

expertise required to enable utilization of Arctic potential – how to secure development of sufficient know-how and competitive innovations when relevant agents are not able to clarify the essence of the Arctic?

When considering the Arctic as a context, it is necessary to identify features separating this context from other contexts. Moreover, this contextual approach can be complemented with phenomenological approach enabling operationalization of the key Arctic features. Only after the identification of Arctic features combined with understanding of the Arctic phenomena, it is possible to address the main questions concerning the Arctic.

In this paper, one attempt to specify and clarify abovementioned incoherence is presented. This paper is built on the key findings of two separate, yet connected projects carried out in the Oulu region, Finland. The goals of these projects were to explicate the role of the Arctic from Finnish perspective, identify the key trends affecting the Arctic context and eventually to investigate the business potential of the arctic region.

Finland can be seen as an Arctic nation which is especially highlighted by the national authorities (Prime Minister's Office,

2013). However, some definitions only focus on the most northern parts of Finland as they correlate the Circumpolar Arctic definitions (Glomsrød & Aslaksen, 2009). This definition issue differentiates Finland from other Arctic nations and complicates the formation of shared Arctic agenda. This problem can be distinguished in the European decision making level as well, since, depending on the actor, the Arctic is perceived as circumpolar Arctic or European Arctic (Stepien, 2015).

2. Analytical approach

This paper consists of three overlapping layers. The first layer is the phenomenological³ approach to the Arctic region. Here the Arctic is presented as a composition of different features of which some do emerge in other regions whereas some features or combinations of them are truly and exclusively Arctic. This approach enables the identification of various trends possibly affecting the Arctic and these trends combined with existing information of different large-scale investment projects forms the essence of what can be defined as the Arctic potential.

The second layer of chosen approach is the strategic approach. This approach contains definitions of different Arctic paths as well as a national level description of a roadmap to Arctic specialization. Strategic layer needs to be in compatible with the definition of the Arctic in the first layer.

The third layer takes into consideration the business context. The organizational level analysis requires operationalization of not only the Arctic features described in the first layer but also the strategic level options from the second layer. Once the enterprise level description is completed and expressed as a somewhat traditional market analysis, the picture of the Arctic as a business context is completed.

The synthesis of the aforementioned layers forms a logically coherent and operational tool to assess such a multidimensional phenomenon as the Arctic. This approach ensures that all relevant factors – shared definitions, governmental, upper-level strategies and the level of business development – are not only recognised and explicated but connected to each other as well. For instance, identifying Arctic agenda from the political decision making requires that there is a shared understanding of the essence of the Arctic, whereas capturing the effects of the national strategies to Arctic business opportunities requires that the Arctic business context is adequately defined.

Three-layered specification of the Arctic enables the in-depth analysis of the Arctic potential and moreover it can be exploited to detect the possible – and even quite plausible – gaps between demand and supply for Arctic specialization. This formulation can also be beneficial when for example assessing the somewhat sluggish responses and unexpectedly slowly growing interest of companies from Oulu region toward the Arctic business opportunities. In other words, a more structured view of the Arctic is supposed to alleviate challenges in mapping the variety of economic potential and business opportunities.

Hence, the purpose of this paper is to present a novel way to collect, combine and organize seemingly scattered information so that the Arctic becomes a more tangible and operational concept. In addition, this procedure summarizes and elaborates the recent key findings about Arctic opportunities, different national and industry level strategic alternatives as well as a variety of operational level enablers and obstacles of business related to the Arctic specialization.

Due to selected approach, this paper focuses on the Arctic from Finland's perspective. Moreover, the intention is to investigate whether this selected approach performs adequately even with the quite limited case. Therefore, the data used in this paper is mainly based on the documentation of the aforementioned projects. If functional and applicable, this approach can be subsequently expanded to research activities covering larger geographical areas and exploiting more versatile data.

3. Material and methods

Research material used in this paper are the final reports from The Finnish Funding Agency for Innovation's (Tekes) strategic opening *SMARCTIC Roadmap to a smart Arctic specialization* (Thule-institute, 2014) and The Council of Oulu Region's funded project *Arctic business and research, development and innovation (RDI) -activity in the Northern Ostrobothnia* (Hintsala, 2015). In order to illustrate the background of the material, methodological framework of the SMARCTIC project is presented involving the innovation policy roadmapping (IPRM) process and a strong prospective trend (SPT/SP trend) approach in the future analysis.

Methodologically, results presented in this paper are based on quite a loose and somewhat eclectic application of content analysis combined with elements of grounded theory approach. It is noteworthy that the writers have been involved in projects forming the source of information here and hence it can be argued that ethnographical touch cannot be avoided. The chosen research strategy was to label, classify, categorize and synthesize material and to find common, descriptive denominators covering the multifaceted theme of the Arctic.

In the SMARCTIC project critical strong prospective trends were identified up to the year 2030, in some cases up to 2050. The background report of SMARCTIC project identified and described relevant so called PESTE categories of trends (Political, Economic, Social, Technological and Environmental) (Kamppinen et al., 2002) in the Arctic region, which can be seen as strong prospective trends. This literature-based analysis was linked methodologically to the future workshop concept, which is the typical participatory foresight method with Delphi methodology. Altogether 24 trends were chosen for examination where project research team and other experts performed a trend analysis of these chosen trends. In the first stage of the foresight workshop,⁴ presented SP trends and four thematic expert groups evaluated the most important SP trends affecting the theme of each work package. The second phase of the workshop involved the evaluation of the impacts of SP trends on the development of thematic clusters and development. Last phase of the workshop process focused on discussion about different projects, networking activities and potential new broader future projects. There were about 50 experts participating in the project workshops at the campus of the University of Oulu. The total number of experts was 31 who delivered the formal interview format. The Table 1 reports the number of participants and their expertise background at the SMARCTIC foresight workshop.

During the SMARCTIC project also the innovation policy roadmapping (IPRM) (Ahlqvist et al., 2012) was applied as an analytical framework. IPRM links R&D results to systemic policy context and to forward-looking policy design. IPRM method integrates the approach of technology roadmapping – including e.g. enabling technologies, markets and drivers – with the perspectives of policies and its instruments. Process is targeted to include multiple participants and different interests. The policy analysis in the

³ In this paper, the Arctic phenomena are interpreted from the views of the experts and specialists who participated in different stages of the studied projects.

⁴ The applied method of workshops is intended to diminish the problems with subjective definitions of the terms and topics. See e.g. Dufva and Ahlqvist, 2015.

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