The Base Requirements, Community, and Regional Levels of Northern Development

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Abstract: Many of Canada's remote northern communities, including those in the Provincial Norths, are severely disadvantaged as compared to their southern counterparts. Despite the wealth extracted from the abundance of natural resources like uranium, diamonds, and oil in their regions, some of these communities are among the most socio-economically challenged in all of Canada. In many cases, a trivial amount of the significant wealth generated in these Provincial North regions has been retained to benefit the local communities that have been the stewards of that land for generations. This article applies a meta-narrative method to examine the extant literature relevant to Provincial North communities in Canada. Some of this relevant literature includes studies conducted in Northern Scandinavia, which shares many of the same attributes as Canada's Provincial Norths. The purpose of this research was to identify the pre-conditions for effective Provincial North development leading to improved economic and social welfare for the communities in that part of Canada. Our result was a three-level model showing the base requirements, community, and regional levels of northern development. These three levels focus on implementing effective local governance and securing the resources needed for development, building community capacity, and working collaboratively with neighbouring communities toward regional self-reliance to ensure regional sustainability and security.

Introduction

Many communities in the northern regions of Canada's provinces have not flourished in the same way as their counterparts in the southern parts of the provinces. These northern communities tend to be more remote and have smaller, younger, and larger Aboriginal populations as compared to those in the south of Canada.[1] Their social and economic development pales in comparison with southern communities even though, for thousands of years prior to the arrival of Europeans, the Aboriginal people in those regions were self-reliant and lived sustainably. Despite the abundance of natural resources in the Provincial Norths, some of the regions located there have

the lowest median incomes in the country.[2] These shortcomings have mainly arisen because these communities have not yet gained the political power or established the co-operative approaches across the Provincial Norths necessary to benefit as they could from their naturally endowed resources.[3]

Given the importance of the Provincial North regions to Canada's economic future because of the vast energy, mineral, and forestry resources they hold and the potential for the expansion of their tourism industries, it is paramount that the social and economic conditions in these areas be improved. Even more importantly, it is vital that the problems in these regions be remedied so their residents receive a fair share of the wealth extracted from their lands and can enjoy lifestyles and opportunities similar to other Canadians.

The following sections explore the pre-conditions for effective Provincial North development by examining literature that draws from both the Canadian and Scandinavian experiences in their northern regions. The Scandinavian experiences are relevant to the Canadian Provincial Norths context because of the similar resources, climate, and other attributes. Although the Northern Scandinavian regions are geographically located at the same latitudes as Canada's territorial Far North, and significantly further north than the Canadian Provincial Norths, Northern Scandinavia shares much more in common with Canada's Provincial Norths than with its Far North.

The issues facing the North are complex, and the pre-conditions required for development there are influenced by the increasing global demand for Canada's resources, the emerging Aboriginal governance structures, and the rapidly changing regional dynamics. In response, Canada must implement innovation-driven northern development and governance strategies built on community and industry partnerships.[4] The three-level northern development model we introduce in this article shows that development in Canada's Provincial Norths depends upon a local endowment of resources, leadership, infrastructure, and effective governance; community level activities and commitments to build capacity; and commitments by communities to work collaboratively toward regional self-reliance to ensure regional sustainability and security.

Research Method and Scope

"Disciplined comparative and international research can contribute much to the development of theory and methodology—as well as to the improvement of policy and practice in education world-wide."[5] Few studies have explored the similarities and differences in the practices contributing to northern

development in Scandinavia and Canada. This meta-narrative of the relevant literature begins to address this deficiency while conceptualizing new ways to understand northern development to advance theories, policies, and practices in this area.

Collectively, there is a diverse and marginally connected body of literature related to northern development. Each of these research areas draws from, and is informed by a wide range of work from disciplines and topics including anthropology, sociology, history, political science, systems theory, resilience and adaptive capacity, sustainability, environmental studies, community and economic development, ethnic entrepreneurship, and even forestry and reindeer herding. The research on these topics is rooted in many regions of the world, including the two we focused on, Canada and Scandinavia. To date, little effort has been invested in synthesizing the findings from these diverse contexts to create a deeper overall understanding of the pre-conditions required for northern development.

We applied a meta-narrative approach to synthesize the relevant literature into a new perspective on northern development. This is a rigorous research method capable of effectively organizing and making sense of the range and diversity of salient topics so that findings are relevant and valuable. The meta-narrative approach uses interpretive synthesis, which is an extensive and systematic review of the principal literature and a narrative summarizing the key findings.[6]

Consistent with the meta-narrative method, we initiated planning, search, mapping, and appraisal phases to collect a broad set of research articles and reports pertinent to our topic that met our inclusion criteria.[7] We then synthesized the outcomes from the studies in our emergent data set. Our inclusion criteria were designed to provide needed focus and direction for our literature search. We included areas of study and sources for data that we felt would provide the appropriate breadth needed to generate a new, meaningful, and comprehensive perspective on the foundations for northern development. These areas of study included northern entrepreneurship, Aboriginal entrepreneurship, Indigenous entrepreneurship, community-based entrepreneurship, sustainability, resilience, capacity building, remote communities, rural communities, regional development, community development, community economic development, community capacity, adaptive capacity, social entrepreneurship, self-determination, and sustainability.

Following our initial search for relevant articles, books, and reports, we broadened our yield of pertinent research by applying a snowball method whereby we used the reference lists from the resources we found to detect missing and important sources of information. According to Greenhalgh et

al.,[8] utilizing this snowball approach can significantly improve the meta-narrative outcome.

During the appraisal and synthesis phases of our meta-analysis—and our last stage, an adaptation of Greenhalgh's[9] final *recommendations phase* that we called our *conceptualization phase*—we evaluated our inclusion criteria topics according to the breadth and depth to which they were covered in the works we examined. The results from this evaluation shaped the literature review that follows and was the basis for the three-level model we developed showing the base requirements, community, and regional pre-conditions to successful development of Canada's Provincial North regions.

Pre-Conditions for Northern Development

Northern Development Relies on Community-Based Capabilities

Canada's North is characterized by excessive income disparity. Canada has 288 census divisions, and in 2010 the five census divisions with the lowest median incomes were located in the country's Provincial Norths: "three in Northern Manitoba, one in Northern Saskatchewan, and one in Northern British Columbia. However, the three with the highest median incomes are also in Canada's North," namely in resource rich areas in Northern Alberta, Northern British Columbia, and in the Northwest Territories.[10] This disparity is largely due to the relative wealth of the regions from which natural resources like oil and precious metals are extracted.

Northern Scandinavia is a good comparator to Northern Canada because some of its regions are also advantaged due to their natural resource endowments. Another similarity is that much of the wealth generated in both Northern Canada and in Northern Scandinavia is transferred out to the owners of the capital used to produce the output. One major difference, however, is in the levels of income disparity in these two parts of the world. Unlike the case in Northern Canada, the GDP per capita across Northern Scandinavia does not vary much from the average GDP per capita for the entire Circumpolar Arctic.[11] Northern Scandinavians enjoy a relatively high standard of living, although the GDP per capita numbers can be deceiving because these measures do not mean that all individuals residing there enjoy high levels of disposable income. Although regional GDP is relatively high, it is not "available for consumption or saving in the region."[12]

Experiences from both Canada and Scandinavia indicate that an endowment of natural resources does not necessarily guarantee prosperity in a region. In both cases, a large portion of the wealth generated in northern regions has been transferred out to the South. This can be partially attributed to the fact that some local communities lack the capacity required to exploit

the resources in the region. Financial investments and human capital often come from elsewhere.[13] This implies that a key to northern development is to build the local capacity to be able to increase the benefit they derive from their regional endowment of natural resources. A pre-condition to northern development, then, should be local capacity building and community development to achieve the goals of reducing the level of income disparity in the Canadian Provincial Norths regions and ensuring communities are sustainable.

Loxley describes community development as "a conscious intervention on the part of a group of people to shape their lives in directions they feel to be desirable." He points out that "the implication is that without this intervention broader forces at work in society, many of them economic, would act to the detriment of the people in question, either by bypassing them or by affecting them adversely."[14]

Reports by organizations like The Conference Board of Canada[15] and the Scandinavian countries' Nordic Council of Ministers[16] highlight some of the practical measures required to ensure that northern communities have the required capacity to be sustainable. These organizations stress the importance of education, training, and skills development for northern residents. They address the challenges these remote communities face in recruiting and retaining skilled workers when there are jobs available. Infrastructure issues like accessibility to affordable housing, ensuring adequate water and waste management systems are in place, and providing needed communications and transportation systems are common hurdles to building capacity in the vast, sparsely populated, and isolated northern regions.

There is a myriad of scholarly and practitioner-focused literature on capacity building, including practitioner manuals, guides, and reports that attempt to promote social and economic well-being in northern communities. Even so, the attempts to define and explain what is meant by the terms *community capacity* and *capacity building* have not generated a universally accepted definition.

> The notion of community capacity building is both explicit and pervasive in the rhetoric that describes the missions that guide and, to a greater or lesser extent, the activities that embody these efforts. However, there is little clarity about the meaning of community capacity and capacity building in practice.[17]

Chaskin assessed the various approaches to defining community capacity and identified four common elements. First, community capacity

depends upon what resources are available, including those deriving from individuals' skills and the access individuals and organizations have to financial capital. Second, community capacity is dependent upon the networks of relationships between people. Third, leadership is an important factor contributing to community capacity. Finally, communities interested in building their capacity must "provide support for some kind of mechanisms for or processes of participation by community members in collective action and problem solving."[18]

For this study, we will use the following definition of community capacity:

> Community capacity is the interaction of human capital, organizational resources, and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the well-being of a given community. It may operate through informal social processes and/or organized effort.[19]

This is consistent with The Aspen Institute's perspective on community capacity as "the combined influence of a community's commitment, resources and skills that can be deployed to build on community strengths and address community problems and opportunities."[20] Community capacity building, then, can be considered to be the purposeful measures occurring within a community "through effort and will, initiative and leadership"[21] to develop that community's commitment to take advantage of opportunities and address problems, and increase the stock of skills and resources needed to meet that commitment. A supportive local political environment is also essential for the success of community-owned enterprises.[22]

Northern Development Must Engage Aboriginal Citizens and Respect Aboriginal Culture
Aboriginal peoples represent a growing demographic in Canada.

> In 2006, the number of persons declaring an Aboriginal identity was estimated at approximately 1.3 million persons, compared to roughly 900,000 10 years earlier in 1996. Among them, 785,000 were North American Indians, 404,000 were Métis and 53,000 were Inuit. Overall, these populations accounted for some 3.9% of the Canadian population … The Aboriginal population in Canada grew more rapidly than the non-Aboriginal population between 1996 and 2006 … The projection results show that the proportion of Aboriginal people would continue to grow between now and 2031,

reaching between 4.0% and 5.3% ... The Aboriginal population would then number between 1.7 million and 2.2 million. During the period extending from 2006 to 2031, the Aboriginal population as a whole would have an average annual growth rate ranging between 1.1% … and 2.2% … In all cases, the growth would be greater than that of the non-Aboriginal population despite the fact that it is assumed that the latter population would benefit from important international migratory gains up to 2031, which is not the case for Aboriginal populations which are assumed to have nil net international migration.[23]

Much of Canada's North is sparsely populated, the communities are separated by great distances, and high proportions of the populations in those communities are of Aboriginal descent. In the Far North, the populations of the Northwest Territories and Nunavut were 52.3% and 84.8% Aboriginal in 2006.[24] Relevant to this study, the population of the northern part of the Province of Saskatchewan (Census division 18) was 33,900 in 2006 with 29,085 of those people of Aboriginal ancestry.[25] This indicates the population in the northern part of Saskatchewan was 86% Aboriginal when the proportion of the Aboriginal population for the entire province was 15%. As another example from Canada's Provincial Norths, the northern part of the Province of Manitoba (census divisions 19, 20, 21, 22, and 23) was home to 62% of the 150,040 Aboriginal people residing in the province, while the total proportion of the provincial population that was Aboriginal in 2006 was 13%.[26]

This growing demographic has not, however, been matched by a corresponding relative increase in Aboriginal peoples' well-being as indicated by economic prosperity, although some headway has been made. The self-government rights of Canada's Aboriginal peoples are now more widely recognized and exercised; and they have assumed more control over their social and economic well-being. This appears to have contributed to a general increase in economic influence.[27]

In Scandinavia, Aboriginal peoples are attempting to advance their interests and assume more control over their own futures in the northern regions through the Inuit Circumpolar Council, the Sami Council, and the Sami Parliaments in Finland and Norway.[28] Reports from both Canada and Scandinavia have discussed the changes now occurring that will have an impact on northern economies, and therefore capacity building in northern communities. Common issues include new developments related to Aboriginal rights and concerns about the potential impacts from environmental change.[29]

According to Peredo and Anderson[30], there are two perspectives on Aboriginal entrepreneurship. The first views this as occurring whenever and wherever an Aboriginal person engages in entrepreneurship. The second perspective is conceptually different and considers the activity to be a distinct kind.[31] This viewpoint considers Aboriginal entrepreneurship as being "restricted to certain contexts. One restriction is to location, another is to its ultimate objective, and a third is to its form or organization."[32] Lindsay[33] also described Aboriginal entrepreneurship as different, and more complex, than other forms.

> Significant cultural pressures are placed on Indigenous entrepreneurs. These pressures will manifest themselves in new venture creation and development behavior that involve the community at a range of levels that contribute toward self-determination while incorporating heritage, and where cultural values are an inextricable part of the very fabric of these ventures. Thus, the Indigenous "team" involved in new venture creation and development may involve not only the entrepreneur and the business' entrepreneurial team but also the entrepreneur's family, extended family, and/or the community. Thus, in Indigenous businesses, there are more stakeholders involved than with non-Indigenous businesses. For this reason, Indigenous businesses can be regarded as more complex than non-Indigenous businesses and this complexity needs to be reflected in defining entrepreneurship from an Indigenous perspective.[34]

While not within the scope of this study to describe how all of the scholars in this area have itemized what distinguishes Aboriginal entrepreneurship, several have provided descriptions of the concept.[35] Dana and Anderson describe Aboriginal entrepreneurship as follows:

> There is rich heterogeneity among Indigenous peoples, and some of their cultural values are often incompatible with the basic assumptions of mainstream theories. Indigenous entrepreneurship often has non-economic explanatory variables. Some Indigenous communities' economies display elements of egalitarianism, sharing and communal activity. Indigenous entrepreneurship is usually environmentally sustainable; this often allows Indigenous people to rely on immediate available resources and, consequently, work in Indigenous communities is often irregular. Social organization among Indigenous peoples is often based on kinship ties, not necessarily created in response to market needs.[36]

Taking a slightly different approach, Anderson and Giberson described Aboriginal entrepreneurship as a subset of ethnic entrepreneurship.

> What makes Indigenous ownership a particular and distinct instance of ethnic entrepreneurship is the strong tie between the process and place—the historic lands of particular Indigenous group involved. With Aboriginal populations there is also often a strong component of "nation-building," or more correctly re-building. This is in contrast with instances of entrepreneurship associated with ethnic groups that have migrated to new places and are pursuing economic opportunities there in ways that distinguish them from the non-ethnic population.[37]

Adding to the inherent complexity of this form of entrepreneurship, some researchers have defined specific kinds of Aboriginal entrepreneurship, such as that practiced by the Sami in Scandinavia[38] or the kind developed by Canadian Aboriginal people in the forest and agricultural industries.[39]

In a Canadian context, Wuttunee and Robinson[40] highlighted nine distinct challenges faced by Aboriginal entrepreneurs when trying to win contracts to work with large southern-based companies, often in the oil and gas or mining sectors, active in their territories. Some of these challenges arise because of a lack of formal education resulting in (real or perceived) deficiencies in management skills, difficulties in being able to adequately analyze risks, and a lack of confidence in engaging in business relationships with the more sophisticated potential partners. Other difficulties arise because of the inaccessibility of needed project information, the large size of the contracts that are being offered, and limited access to needed capital. Another potential challenge is when Aboriginal entrepreneurs and the southern-based businesses do not understand each other—possibly because of discrimination toward the Aboriginal entrepreneurs or feelings of alienation by these business people.

Some of these challenges might now be less prevalent as some Aboriginal communities implement measures to separate politics from business as advocated by the Harvard Project on American Indian Economic Development,[41] and as governments and businesses fulfill their—now legally-required—duties to consult with Aboriginal communities that might be impacted by proposed developments and actions.[42]

As demonstrated by the preceding descriptions and definitions, Aboriginal entrepreneurship is often viewed as a particular instance of community-based entrepreneurship, which is "a relatively neglected topic in entrepreneurship literature."[43] Huggins and Thompson[44] pointed out that

community cultural factors are often not considered in analyses of economic change and development even though they can significantly impact the prevailing entrepreneurial culture. Remote northern communities are usually comprised of a relatively cohesive and uniform type of population, sometimes mostly of Aboriginal origin. This type of social cohesion is one factor that can contribute toward a community culture that can influence the nature of entrepreneurship in that area. Another factor is the collective cultural approach that characterizes many predominantly Aboriginal communities.[45]

Northern Development Must be Environmentally Sustainable
Climate and environmental changes bring about both opportunities and challenges for northern communities. On the one hand, as more Arctic sea ice melts, the potential opening of the Northwest Passage will impact "transportation and trade, which will in turn affect the economies, security, socio-cultural well-being, and environmental sustainability of northern communities."[46] While the Northwest Passage is in Canada's Far North, the potential impact from climate change leading to its greater use is relevant to some of the Provincial Norths, like those in Manitoba, Ontario, and Quebec that have access to the ocean waterways. On the other hand, milder winters have contributed to the spread of the mountain pine beetle, which has severely impacted the forest industry in the Provincial Norths in Western Canada. Climate change has also affected the integrity of the winter roads that are so essential for northern transportation. Some of the changing wildlife migration patterns have challenged many communities that have traditionally relied on migrating animals as a main food source. "Though uncertainty surrounds the potential impacts of climate change on the region, there is a consensus that these impacts will be important and that communities require resources to assist them in dealing with these effects."[47]

Research into the adaptive capacity of communities has considered the impact of environmental change on communities involved in the forestry sector in Sweden[48] and on the Sami reindeer herders in Norway.[49] Besides the effects of climate change, some of the other environmental factors affecting northern communities as they strive to build their capacities and improve the social and economic welfare of their people are the direct result of human actions. Two examples are the disruptive impacts on human and animal life caused by the oil exploration activities in the Canadian North, and the serious and lingering effects on the food chain in the Scandinavian North from the 1986 Chernobyl nuclear disaster.[50]

Northern Development is Best Examined Through a Complexity Lens

Research into community capacity building in a northern context has, of late, often centred on the concepts of sustainability and adaptive capacity.[51] In many cases, the references to adaptive capacity are in response to the observable changes in the ecological systems in the North. Given the historical and the inherent relationship between the people of the North and their natural environment, the apparent changes to their ecological systems are forcing them to adapt their traditional ways of living.[52]

The concept of resilience is related to sustainability and adaptive capacity in northern communities, and it also highlights the need to take a complexity perspective when studying capacity building in these regions. Scholars like Lindsay[53] and Swanson and Zhang[54] have illustrated how social entrepreneurship and Aboriginal entrepreneurship structures represent complex adaptive systems. Others have described community capacity in a northern context as complex adaptive systems.[55] Using conventional ways to try to understand the issues faced by northern communities, and many of the current and customary approaches we have used to try to solve the difficulties, might instead be compounding those problems.[56] Applying alternative lenses, like those available through complexity theory, can help us better develop policies and implement measures to achieve political, social, economic, and environmental sustainability in the Provincial North communities.

> Natural systems and social systems are complex systems in themselves; furthermore, many of our resource and environmental problems involve the additional complexity of interactions between natural and social systems (Norgaard, 1994; Berkes and Folke, 1998). Such complexity creates a huge challenge for disciplinary approaches. 'Phenomena whose causes are multiple, diverse and dispersed cannot be understood, let alone managed or controlled, through scientific activity organized on traditional disciplinary lines' (Jasanoff et al., 1997). Complex systems thinking is therefore used to bridge social and biophysical sciences to understand, for example, climate, history and human action. (McIntosh, Tainter, and McIntosh, 2000)[57]

For northern communities striving to build their capacity, change and adaptation are necessary. Both because of their largely Aboriginal heritage, which is built upon a foundation of sustainability, and because of the ecological realities in our world today, these changes and adaptations will be (and should be) heavily influenced by sustainability principles. When

social and environmental sustainability is considered to be a process instead of just an end product, that process constitutes a complex adaptive system. "In seeking to integrate the two streams of thought, ecological system complexity and social system complexity, we use the idea of resilience as our organizing concept and scoping device. Thus, we deal with the issue of change and adaptation through the lens of resilience."[58]

Northern Development Should Create Both Social and Economic Value

Building on the extended[59] and inclusive[60] perspectives of social entrepreneurship, Swanson and Zhang[61] conceptualized the social entrepreneurship zone to include organizations in the for-profit and not-for-profit sectors along with some government and social service organizations. To be considered socially entrepreneurial, these organizations must strive for sustainability by applying business practices in a manner similar to that normally associated with for-profit businesses.[62] They must also explicitly plan to support, improve, or transform society in a positive manner as a dominant part of their mission.[63] According to this conceptualization, many of the organizations involved in northern development would fall within the social entrepreneurship zone (see figure 1).
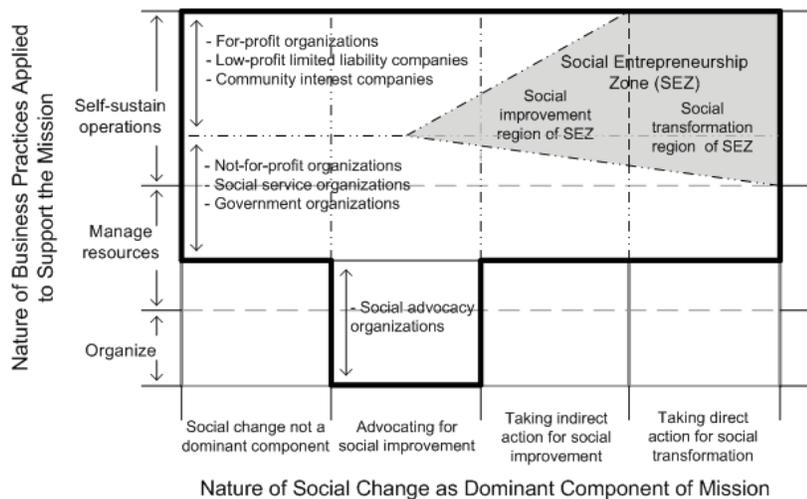

Figure 1. Northern development on the map of organizational forms[64]

According to Haugh, community-based entrepreneurial ventures initiated to address social issues can "deliver benefits over and above economic and financial outcomes" and "they have the potential to revitalize communities via meeting local needs, developing the capacity of a community to be independent, and generating social capital between individuals and communities."[65] Aboriginal entrepreneurship is considered by some to be a form of social entrepreneurship.[66]

Although some Aboriginal ventures now have national and international operations, many operate for the dual purpose of addressing important social needs in their communities, like providing a needed service or creating employment opportunities, while also generating enough of a revenue stream to at least financially break-even so that they can sustain their operations into the longer term.[67] Besides making them a form of community-based enterprise, this blended focus on social outcomes and financial self-sustainability makes them socially entrepreneurial.[68]

The Levels of Northern Development

Figure 2 shows three levels of northern development: base requirements, community, and regional. It also indicates the roles that should be assumed at each of these three levels. In order, these roles include implementing effective governance and securing the needed resources, building community capacity, and working with neighbouring communities toward regional self-reliance to ensure regional sustainability and security. The activities and requirements listed within each level might, however, occur at a different level or at more than one level in some contexts. For example, a multi-community regional initiative might be launched to attract, train, and retain needed skilled workers to the area even though that function is listed as a base requirement at the local level for northern development.

The foundational base-level requirement shown in figure 2 is a local governance approach that will support the activities shown at all of the levels. For some communities, the separation of politics from business, as advocated by outcomes from the Harvard Project on American Indian Economic Development,[69] might be a governance imperative to ensure that development progress can be made. This is particularly important for communities struggling with social problems where there might be immense local pressure to allocate all resources and efforts toward dealing with those issues. Communities that succumb to that pressure, however, might make insufficient advances in economic development and thereby threaten the sustainability of even their social program development.

			Category
Regional level	• Promote and build regional self-reliance and ensure sustainability and security		Regional sustainability and security
	• Create long-term regional environmental, cultural, economic, and social sustainability		
	• Foster a culture of cooperation among and across Northern communities		
	• Recognize and accommodate the inherent complexity and adaptability in Northern development		
Community level	• Commit to creating both economic and social value without compromising one when pursuing the other		Community capacity building
	• Secure community-based political power		
	• Engage Aboriginal citizens and demonstrate respect for Aboriginal culture		
	• Practice *Northern* community engagement to ensure collective community involvement		
Base requirements	• Attract, train, retain skilled human resources • Attract needed financial Resources	• Foster effective Leadership • Build social capital	• Supply needed infrastructure, including affordable housing, water safety and security, proper waste management, effective and reliable communications and transportation systems	Governance and resources
	• Supportive and effective local governance		

Figure 2. Levels of northern development

Other base-level requirements for northern development in communities in the Canadian Provincial Norths include fostering effective leadership, building the capacity of human resources, attracting needed financial resources, and providing the infrastructure necessary to support healthy living conditions in the community and facilitate future development. Hand-in-hand with the requirement for effective governance and leadership is the continual development of social capital in the form of personal and professional networks that can be leveraged to advance the community's needs.

Supported by the base requirements for northern development in local communities, community level activities can help build further capacity. These include effectively engaging as many members of the community as possible to ensure collective and broadly based community involvement in the capacity building and development efforts. Engaging the Aboriginal members while honouring and respecting their cultural traditions and beliefs is particularly important for many northern communities. Key to securing this ongoing community engagement is to ensure that the development activities balance social and economic value creation. Another community level imperative is to continually build the community-based political power to reduce the power that non-community member individuals and organizations can exercise over the community.

At the regional level shown in figure 2, neighbouring communities collaborate to enhance the political power they can exercise for the benefit of the region. This is dependent upon these communities each fostering a lasting culture of co-operation with their counterparts in nearby communities. This might be a difficult task in cases where some communities feel compelled to compete for resources on their own in an effort to gain advantages over neighbouring communities. Once the inherent complexity in inter-community collaboration for northern development is recognized and measures are taken to ensure a lasting culture of co-operation is locked in, the region should collectively strive to create long-term regional self-reliance and sustainability.

Discussion

In this article, we used a meta-narrative method to synthesize literature on northern development, with specific examples from Canada and Scandinavia. We explored concepts such as resilience, sustainable development, adaptive capacity, community capacity, and community economic development. In particular, we paid special attention to the notion of Aboriginal entrepreneurship and community-based entrepreneurship.

Northern communities are complex adaptive systems. As such, the study of northern development should occur through a complexity theory lens. This is not surprising because both social entrepreneurship and its common embodiment in northern Canada, Aboriginal entrepreneurship, have been described as complex adaptive systems[70]. Complexity thinking can help us better understand how to effectively build capacity in remote northern communities: "The lesson from complex systems thinking is that management processes can be improved by making them adaptable and flexible, able to deal with uncertainty and surprise, and by building capacity to adapt to change."[71] According to Folke, the resilience perspective has enabled those interested in implementing change to consider the social, environmental, and other dimensions together and "to challenge the dominant stable equilibrium view. The resilience approach emphasizes non-linear dynamics, thresholds, uncertainty and surprise, how periods of gradual change interplay with periods of rapid change and how such dynamics interact across temporal and spatial scales."[72] Recently, advancements have been made by integrating knowledge about leadership, social learning, cognitive models, social networks, social memory, organizational factors, adaptive governance, and other areas into social-ecological systems studies.

Embracing the inherent complexity of northern development and drawing from a wide range of existing research, we identified the following three levels of northern development:

- the base requirements level, which ensures that effective governance is in place and the needed resources are secured;
- the community level that builds community capacity; and
- the regional level, which involves neighbouring communities working together to build regional self-reliance to ensure regional sustainability and security.

These three levels characterize the pre-conditions for northern development and include the key elements necessary for northern development to be successful in a region.

The results from this study should help inform the development of new theory, policy, and practices related to capacity building in remote northern communities. The particular strength of this article derives from its comparative analysis of the different social, political, and economic environments that have influenced and characterized northern capacity building through entrepreneurship in Scandinavia and in Canada.

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