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RESEARCH ARTICLE

Indigenous economies in the Arctic: To thrive or to survive?

Elena Gladun^{1*}, Soili Nysten-Haarala², and Svetlana Tulaeva³

There is a growing global interest in Arctic natural resources that have a strong influence on the local economies. The Arctic economy is a rather unique phenomenon encompassing Indigenous practices, local economic activities, and industrial development. Indigenous economies vary across the Arctic states and exhibit divergent economic mixtures. In globalizing societies and full market economies, traditional Indigenous economies are changing and perceived especially by the non-Indigenous to be a tribute to old customs rather than a way of life that is being followed by the young generation. However, certain groups of the contemporary Indigenous populations in the Arctic continue to preserve their culture and ensure the continuation of Indigenous ways of life. The development of Indigenous communities is closely linked to their economic well-being, on the one hand, and to their culture and traditions, on the other. Our article contributes to the discussion on the significance of Indigenous economies in providing sustainability in terms of Indigenous communities, their culture, and traditions. The research objective is to identify strategies and tools that sustain Indigenous economies as well as the goals of various stakeholders in encouraging and supporting the traditional economic activities of Indigenous peoples. We contrast three countries—Russia, Finland, and the United States (Alaska)—and discuss some governmental strategies that can be employed for preserving unique Indigenous economies. The research methods consist of a content analysis of state and regional legislation and strategies, social studies of stakeholders' opinions, case studies describing market infrastructure, and economic activities as well as features of traditional lifestyles and Indigenous knowledge typical of these regions.

Keywords: Arctic, Indigenous peoples, Indigenous economy, Traditional culture, Russia, Finland, Alaska

Introduction

Contemporary Indigenous economies with a long history represent various scenarios of development. In accordance with the United Nations Declaration on the Rights of Indigenous Peoples (2007), Indigenous peoples include those who maintain their historical continuity and those who consider themselves to be different from the current “dominant” society. Furthermore, Article 1 of ILO Convention No. 169 specifies Indigenous peoples as those whose ancestors inhabited a country or a region prior to its colonization and who retained their social, economic, cultural, and political institutions (International Labor Organization, 1989). The main characteristics of an Indigenous population are (1) special relationship with the land on which they have lived for generations; (2) preservation of cultural identity,

including its economic, social, cultural, and political aspects; (3) self-identification; and (4) experience of colonization or discrimination (Poppel, 2006).

Indigenous groups in the Arctic sustained themselves for centuries by means of gathering, fishing, hunting large land and sea mammals (Sonnenfeld, 1957; Stuckenberg, 2007), and reindeer herding (Krupnik, 1989). In short, they have not only survived in a part of the world that appears to non-Indigenous as inhospitable (Stuckenberg, 2007) but also thrived (Policy Briefs, 2019). In the words of Brascoupé (1993, p. 63), “it is the traditional economy, living on the land and with the land that brings meaning to aboriginal peoples.” However, climate change, modernization, and globalization have forced profound changes upon the Arctic region, including Indigenous peoples, who strive to balance subsistence and other forms of production (Kuokkanen, 2011). The Indigenous peoples of the North have embraced Western institutions while remaining closely tied to their historic cultural roots (VanStone, 1960). Their traditional activities and models of land and resource use foster both local economic progression and conservation of environmental policies, striving to achieve the major goal of combined sustainable development and sustainable harvests through a long-term approach (Fow, 2012).

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Global markets have affected and transformed Indigenous economies across the world. Indigenous communities are under increasing pressure to conform to a global market economy in the form of profit-driven activities such as logging, mining, hydropower, and oil and gas. Today's Indigenous economies demonstrate a continuum where priorities are sliding from market (fully monetized) to subsistence (nonmonetized) activities. This sliding was captured schematically in the following work: "A Conceptual Framework of Arctic Economies for Policy-making, Research, and Practice" (Larsen et al., 2019). The framework allows one to visualize the push and pull among various factors affecting Arctic economies. Between these theoretic ideas lie mixed economies that combine both monetized and partially monetized aspects of economic development. It is this conscious prioritization of monetary and nonmonetary features that Indigenous communities strive to balance and sustain.

The objective of this article is to explicate the various types of Indigenous economies on the continuum between subsistence and market across three Arctic countries—Russia, Finland, and the United States (Alaska). We aim to identify strategies of developing Indigenous economies and the approaches that various stakeholders use to balance the for-profit and nonprofit goals of Indigenous communities' economic activity. The core idea is to demonstrate that some features of Indigenous economies are a crucial part of Indigenous culture and help sustain the traditional way of life and interaction with the market economy in a changing environment. In other words, we discuss the interaction between culture and economy.

As the methods of our research, we employed context analysis of Russian, American, and Finnish legislation and strategies, case studies, and contextual interviews with representatives of governments and Indigenous communities.

Theoretical approaches to Indigenous economies and methodology of the research

Indigenous economies refer to the traditional and local structures of Indigenous peoples. These structures may include a variety of land- and marine-based, small-scale economic activities and practices as well as sustainable resource management (Kuokkanen, 2011). Indigenous economies are difficult to define because of their uniqueness and diversity; there is no definition that applies to all. Although it is difficult to define a single structure, we can assume that Indigenous economies are a combination of organized communal, family, and individual activities of aboriginal peoples living on their traditional land and aiming to satisfy their need to lead a traditional way of life, including consumption needs, in a modern world that is increasingly imposing on the Arctic. In general, the Indigenous economy includes vital economic, social, cultural, and spiritual dimensions.

The recent Arctic Human Development Report describes Indigenous communities as ones that maintain subsistence production within traditional social structures, exploit new economic opportunities, and create increasingly complex socioeconomic dynamics (Poppel

and Kruse, 2010; Larsen and Fondahl, 2015). The key principles of Indigenous economies that differentiate them from other economic models are subsistence, environmental awareness, that is, awareness of the consequences of their activities (Nath, 2009), and rational use of natural resources as a proven and historical way to survive in harsh Arctic conditions with limited nature's capacity as compared to lower latitudes (Lavrillier and Gabyshev, 2017). Furthermore, reciprocity is defined as reflection on land-based worldviews founded on active recognition of kinship relations that extend beyond the human domain (Kuokkanen, 2006; Lasimbang, 2008). Indigenous economies are contingent upon a stable and continuous relationship between the human and natural worlds (Kuokkanen, 2011), a crucial link existing between Indigenous economies and Indigenous traditional knowledge. Indigenous knowledge and practices have historically been an integral part of Indigenous economies that reflect their social, economic, and environmental values and aspirations. Hunn (1999) notes that Indigenous or traditional ecological knowledge "is a consequence of subsistence-based production." Indigenous peoples continue to rely on their traditional practices and sustainable use of renewable resources although this dependence occasionally puts them at risk of being adversely affected by industrial activities and market effects.

Several main characteristics of the economic activities of Indigenous peoples can be identified. The first one is the peoples' ability to adapt to and thrive in environmental conditions that many, who are not Indigenous, would find exceedingly challenging. The specific economic activities that have resulted from this relationship are reindeer herding, fishing, gathering, and hunting.

Second, Indigenous economies are tied to their specific territories. Reindeer herders, for instance, have wandered along their routes for many centuries, and some Indigenous peoples continue to fish and hunt in the areas of their ancestors (Novikova, 2013).

The third characteristic is the rootedness of economic activity in the social norms and perceptions of Indigenous peoples. Today, these perceptions may be a mixture of Western and Indigenous rules and values (Bunikowski, 2015), but certain social norms still govern the existence of Indigenous peoples, and their economic activities have prevailed over the centuries (Gladun and Zakharova, 2020). The use of natural resources in economic activities is closely related to the traditional ideas of Indigenous peoples about nature (Stammler, 2005).

Fourth, a typical feature of Indigenous economies is their connection with certain forms of social organization. As a rule, the main economic unit of an Indigenous population is the extended family or community. This social structure is often maintained in a transition toward market relations (Stammler, 2005; BurnSilver et al., 2016).

The fifth feature is the use of Indigenous peoples' specific knowledge in conducting business activities. This includes knowledge of wildlife migration routes, local climatic conditions, hunting and fishing, processing collected resources, adapting to natural disasters, and so on. The traditional knowledge is associated not only with

practical skills but also with folklore legends (Martynova and Novikova, 2011).

The sixth typical trait is linked with the culture and life of Indigenous peoples. Their economic activities are closely intertwined with their language, folklore, way of life, and crafts (Poppel, 2006). Therefore, the preservation of the traditional economic activities of Indigenous peoples is directly associated with the preservation of their culture. Even when they are related to new types of economic activity instead of traditional ones, cultural aspects continue to play a key role and influence decisions. For example, ecological and ethnographic tourism by others than Indigenous that increases on the lands of Indigenous peoples is only possible by exploiting the elements of Indigenous culture, whereas tourism based on companies owned by Indigenous presents the links between culture and a way of life that combines historical connections with a conscious acknowledgment of modernizing and preserving the culture into the future.

In our article, we discuss various types of Indigenous economies. Generally, economists distinguish three main types: subsistence, redistribution, and market economies (Stigler, 1941; Polanyi and Maclver, 1944). We use the concept of market economy to refer to market-based relations where goods and services are monetized. The concept has been applied as the opposite of planned economy, where production is centrally planned, prices centrally set, and goods are distributed by the state. Based on this classification, we have identified three main types of Indigenous economies: subsistence economy, state-supported economy, and market relations. The first case is a situation where Indigenous people live mainly by the products of their households and use of natural resources (hunting, gathering, reindeer herding, and fishing; Poppel, 2006; Larsen and Huskey, 2015). In a state-supported economy, Indigenous communities' lives are considerably influenced by governmental subsidies and target programs (Filant, 2017), although this support should be understood to exist on a continuum. Finally, a market economy presupposes the successful inclusion of Indigenous people in market relations where their main income derives from the sale of their products on the market (Stammler, 2005).

Subsistence is the intrinsic value of Indigenous economy, identified both as an economic and a social system, encompassing various spheres of life that often are inseparable from one another. It means that at the center of traditional Indigenous economic activity is not competition or the exchange of products and services for profit but the sustenance of individuals, families, and the community. The surplus is shared at numerous festivals and ceremonies that maintain the social cohesion of the community but also bring prestige to those who give and share their wealth (Kuokkanen, 2011). Although a subsistence economy that is not dependent on any market or monetized features more than likely does not exist today, the aspiration continues to play a significant economic, social, and cultural role in many Indigenous communities. According to various estimates, subsistence economy accounts for 30%–80% of all production and income in many northern Indigenous communities (Wolfe and

Walker, 1987; Langdon, 1991; Elias, 1995; Elias, 1997; Dinero, 2003).

The progress of economic development in the Arctic and the related Western influence on Indigenous structures have significantly altered the traditionally sustainable practices of the Arctic's Indigenous peoples (Sonnenfeld, 1957; Fow, 2012). Numerous studies demonstrate that Indigenous subsistence economies have been intertwined with market economy based on wage-labor relations for a long time (Sonnenfeld, 1957; Hosmer, 1999; Dinero, 2003; Meeks, 2003; O'Neill, 2005).

The involvement of Indigenous peoples in market relations means that they begin to extract natural resources and harvest products mainly for sale. As a rule, Indigenous peoples sell traditionally made products (fish, venison, antlers, meat, and skins of wild animals) both locally and internationally, depending on country. The least developed area of Indigenous economy is ethnological or ecological tourism. In addition, Indigenous people can be employed by companies and receive a regular salary which is usually used for motor boats, all terrain vehicles (ATVs), satellite phones, fish and meat processing equipment, and fuel. However, in many cases, Indigenous people have difficulty entering the market. Often, they live in less accessible areas where market infrastructure is undeveloped. Their products are not competitive with those of large companies. They don't have enough resources to turn their system into a market economy and lack the necessary knowledge and skills to organize their enterprises or get jobs for which they qualify. Finally, the complicated relationship between Indigenous peoples and market relations can be problematic in that full employment can remove and distract one from a traditional way of life (Huskey, 2005; Larsen and Huskey, 2015).

In the back-and-forth transition between subsistence and market relations, Indigenous people are often supported by their governments. Public authorities develop programs aimed at supporting Indigenous communities, pay subsidies, pass laws that ensure the rights of Indigenous people to their land or give them certain preferences, and develop market infrastructure. Sometimes, public authorities redistribute the resources they receive to support the most vulnerable communities. However, in some circumstances, governmental support may increase the dependence of Indigenous peoples on more powerful external factors, for instance, authorities and corporations (Huskey, 2005).

To date, many Arctic Indigenous economies are defined as *mixed economies*, characterized by subsistence, commodity production, wage labor, transfers (social assistance, unemployment insurance, welfare, pensions, and other statutory or fiduciary payments), and enterprise (Van Stone, 1960; Kuokkanen, 2011; BurnSilver et al., 2016). Mixed economies have three components: (1) households engaged in market exchange, (2) subsistence activities, and (3) culturally embedded social relationships sustained by flows of food and other resources from nature (BurnSilver et al., 2016).

Usher (1998) comments on the northern mixed economy, describing it as follows:

The two modes of production in the North today are the domestic and the capitalist. The capitalist mode has been superimposed on the pre-existing domestic mode, but the latter survives in a modified form. The two coexist not as isolated, unconnected enclaves, but rather as interrelated parts of a larger social formation, that of industrial capitalism on the frontier.

Another characteristic of mixed economies is that cash is often considered as the means to purchase materials and equipment (Fienup-Riordan, 1986; Elias, 1995; Pickering, 2000). Therefore, Arctic Indigenous economies lie on a sliding scale between a market and traditional subsistence. We present three examples of economies found in Russia, Alaska, and Finland, demonstrating different adjustments to changing economic, social, and political circumstances.

Our research was based on qualitative methodology (Kvale, 1996), and its main research strategy was based on case study. We selected three main cases: Sámi in Finland, Nenets in Yamal (Russia), and Alaskan Native communities (United States). The three cases represent different ways, strategies, and consequences of Indigenous economy development. The main research methods were semistructured interviews, analysis of documents, and observation in Indigenous settlements. We conducted interviews with Indigenous peoples, state authorities, experts of research centers, and representatives of nongovernmental organizations (NGOs) of Indigenous peoples. All the interviews were transcribed and analyzed through thematic and axial coding (Kvale, 1996). The research encompassed context analysis of national laws granting rights to Indigenous peoples, governmental target programs aimed at supporting Indigenous communities, and NGO documents dealing with the rights and activities of Indigenous peoples. The main focus in our cross-disciplinary research was on the following topics: the special features of Indigenous people' life, the role of governmental support programs, the impact of market relations on the traditional way of life, and the opportunities for participation in market relations. Based on the collected materials, the main economic strategies of the Indigenous populations were reconstructed, and their impact on Indigenous culture and the traditional way of life was described.

Russia's case (Yamal)

According to Russian legislation, Indigenous peoples are the peoples living in the territories of their traditional habitat and preserving their traditional way of life, nature management, and crafts, numbering in the Russian Federation (1999) less than 50,000 people and identifying themselves as independent ethnic communities. Being officially termed *small-numbered Indigenous peoples of the North, Siberia and the Far East*, their status needs to be approved by the Russian Government. Once enrolled into the official list, Indigenous communities get additional rights and protection from the governments of different levels. The right of Indigenous peoples to maintain their

traditional way of life is protected by the Russian Constitution and federal laws. In accordance with Russian legislation, Indigenous peoples are allocated territories for traditional economic activities (Russian Federation, 1999, 2000). Additionally, various programs aimed at Indigenous communities' development are enacted by the federal and regional authorities, though some of the programs of the period 1990–2000 are a dead letter and not fully implemented due to lack of money. The main objectives pursued by state programs to increase the sustainability of Indigenous communities are related to the preservation of Indigenous culture, cultural heritage, language, and cultural values. Indigenous economy and traditional livelihoods are considered subordinate to traditional culture (Russian Federation, 2009).

Yamalo-Nenets Autonomous Okrug (YaNAO), or Yamal, is an active Indigenous location in Western Siberia and home to the largest group of Indigenous peoples, the Nenets, numbering approximately 29,000 or 6% of the total population of the Okrug. More than 19,000 of them are employed in traditional economies, which is 41.0% of the total number of Indigenous people or 3.6% of the total number of people in the YaNAO (2018). The Nenets have long been nomadic and engaged in traditional economic activities: reindeer husbandry, fishing, and hunting. In the Soviet era, the government made efforts to change their nomadic life and to establish collective farms for reindeer herding. However, due to long distances and the inaccessibility of the territories, the Soviet government was unable to take full control over the reindeer herders in Yamal. This allowed a significant number of Yamal Nenets to sustain nomadic reindeer herding as a historically and culturally important economy in the region. The largest reindeer population in Russia has been preserved in Yamal. Reindeer husbandry on the Yamal Peninsula currently exists in two forms: (1) reindeer husbandry state farms based on Soviet reindeer husbandry enterprises and (2) family/clan communities, which is more typical to date. In 2018, the number of reindeer in Yamal was more than 700,000, and only 44% of them belonged to state-owned farms (Filant, 2016, 2017).

Since 1990, reindeer husbandry has gradually entered market relations. This has resulted in a partial transition to a market economy, with profiting as the principal goal. The main income of reindeer herders comes from the sale of meat and antlers, which is not always commercially viable and demands extensive government support. The biggest producer of the Okrug—open joint-stock company “The Yamal Reindeer”—is engaged in the processing and trading of reindeer products. Advanced market relations have contributed to modern technology spreading through the tundra: Reindeer herders actively use satellite phones, computers, snowmobiles, motor boats, and power generators. This modern equipment not only facilitates the herders' existence on the tundra but also requires additional funds (Filant, 2016; Detter, 2017a, 2017b).

At the same time, further development of reindeer husbandry in the Okrug is jeopardized by lacking market infrastructure. The demand for venison in Russian regions is modest, and reindeer herders have difficulty selling

their products. The largest enterprise processing reindeer herding products in the area is Indigenous-owned and occupies a monopoly position. Accordingly, it can impose its conditions on reindeer herders. A significant obstacle is the inaccessibility of the territories and deficient transportation logistics. Reindeer herders also lack the money to commercialize their farms, for example, to purchase refrigerators and processing equipment for venison, as the venison is primarily meant for fulfilling their families' needs (Kibenko et al., 2017).

In this regard, governmental support for reindeer husbandry remains crucially important. There are several basic instruments of this support. To begin with, the government subsidizes the whole industry, covering more than half of the costs of the municipal enterprise that processes reindeer herding products—"The Yamal Reindeer" (Detter, 2017a). *Factorii* on the tundra are established with public funding providing reindeer herders with some necessary goods.¹ Reindeer husbandry farms also receive annual subsidies for their activities. In 2018, the sector was subsidized by more than 100,000 rubles (or 1,500 dollars) per ton of harvested products. The regional law "On Reindeer Herding" (Russian Federation, 2016) provides reindeer herders with additional social guarantees and family support. In the framework of acting regional legislation, reindeer herders and their families are eligible to receive 2,000 rubles (30 dollars) per month in social support, as well as 6,000 rubles (95 dollars) for each child under 8 years of age (Zuev, 2015; Detter, 2017a). Also, a regional target program is enacted with an aim to support Indigenous peoples in the Okrug, focusing on the preservation of traditional economic activities. The program allocates funds for purchasing necessary equipment for Indigenous peoples (satellite phones, electric generators, snowmobiles, motorboats, fuel and lubricants, etc.), training, and recreation for children. The distribution of funds in the Okrug is an application-based process administered by the Okrug's public authorities. In this way, the Okrug's government subsidizes further development of reindeer husbandry in the area and provides material support to reindeer herders. However, reindeer herders themselves do not consider the governmental support significant. Most of them would conclude that they rely primarily on themselves and their relatives: "They told us all the time: the government gives you this, the state gives you that. Why should we say that? We can only rely on ourselves. The government gives us nothing. It doesn't help."² Interestingly, representatives of public authorities also anticipate the risks of giving excessive assistance to reindeer herders: "If reindeer herders are given money, it could

result in dependency which may lead to a certain imbalance, people could forget their traditions and customs. The main thing is to preserve our traditional way of life."³

Another source of funding and material assistance received by reindeer herders in their transition to market economy is the support given by oil and gas companies (Tysiachniouk and Tulaeva, 2017; Tulaeva and Nysten-Haarala, 2019). The arrival of oil and gas corporations and the acquisition of agricultural land for industrial purposes are accompanied by infrastructural development and additional material assistance (Tysiachniouk et al., 2018). There are several basic forms of benefits to be obtained from oil companies. The first is the construction of infrastructure that is needed and provided by the companies and can also be used by the local residents. Thus, the development of oil and gas production in the Yamal region has contributed to the construction of railways and improved the accessibility of certain areas. Second, social partnerships are created between the companies and public authorities purporting to offset the costs of industrial development in the territory and to demonstrate the social responsibility of the companies. As a rule, under such agreements, companies allocate funds for social infrastructure in the region. In the YaNAO, these agreements have been created between the Okrug, local authorities, and companies. The funds are distributed by public authorities to support the local communities, including the Indigenous peoples. With some proceeds going to the construction of social infrastructure, others are spent on the purchase of necessary equipment: "They do not conclude an agreement directly with reindeer herders. Only with public bodies. They build villages, schools, kindergartens, and gyms. Via the authorities they give money to buy gasoline, power plants, and awning tent products."⁴ Also, if Indigenous land is seized for industrial purposes, companies must pay compensation to Indigenous peoples. In the YaNAO, however, private reindeer herders do not have land legally assigned to them and therefore cannot claim compensation: "Lands do not belong to private traders anywhere. They are between heaven and earth."⁵ In the Okrug, compensations are received only by state reindeer husbandry farms with officially registered lands. The received compensations are used by the farms to purchase reindeer, to pay reindeer herders, and to buy necessary equipment. However, it is not possible to compensate Indigenous peoples for the damage caused by oil companies. Oil and gas extraction leads to a significant reduction of reindeer herding pastures, and environmental pollution from industrial activities damages traditional nature management. Moreover, the presence of oil and gas companies is the reason for social tension and deteriorating Indigenous integrity and culture.

1. Historically, *factorii* were built on the Yamal Peninsula as trading houses. Today, *factorii* in the Yamalo-Nenets Autonomous Okrug (YaNAO) are used as centers to sell consumer goods, products, and fuel to Indigenous communities leading a traditional lifestyle, as well as to ensure communication and to inform the tundra people about decisions made by authorities.

2. Interview with a reindeer herder, Seeyahinskaya tundra, Yamal, Russia, 2017.

3. Interview with a representative of the YaNAO, Yamal, Russia, 2017.

4. Interview with a representative of Okrug authorities, Salekhard, Yamal, Russia, 2017.

5. Interview with a head of the reindeer herding community, YaNAO (Yamal, Russia), 2017.

Thus, at present, the economic activity of the Indigenous peoples of the Yamal Peninsula takes place in several economic regimes, and subsistent farming still plays an important role in the life of reindeer herders. Reindeer husbandry, fishing, and hunting provide them with food, clothing, and vehicles. The inclusion of reindeer husbandry in the market is rather difficult because of a lack of financial resources and market infrastructure. The government subsidizes the development of reindeer husbandry in the Okrug, the funds partially coming from companies. However, this support is not sufficient and the standard of living of reindeer herders remains extremely low. According to research done by experts of the Arctic Research Center (Salekhard), the average reindeer herding family, consisting of two adults and three children, lives on 814,000 rubles (11,350 euros) per year. The structure of the expenses of such a family is as follows: A third is spent on food, a third on the acquisition and maintenance of equipment, and a third on other needs. Meanwhile, the main expenses of reindeer herders are related to equipment purchases, fuel, and clothing. The revenues of an average reindeer herder family come from several sources: selling venison (about 45% of income), selling antlers (25% of income), and receiving social assistance and subsidies (30% of income). If there are pensioners in the family, then the share of social assistance will increase (Detter, 2017a). The products of reindeer herders are increasingly commercialized. Nevertheless, the total income of reindeer herding families is on average 33% lower than the standard level in Russia. Only about 25% of nomad families have some kind of housing in the villages (Filant, 2016) and other necessary facilities. The rest do not have regular houses because they lead a nomadic life and live in tents (called “chums”) in the tundra.

Alaska's cases

Alaska's Indigenous peoples, who are jointly called Alaska Natives, can be divided into five major groups: Aleuts, Northern Inuit (Inupiat), Southern Inuit (Yup'ik), Interior Alaskan Indians (Athabascans), and Southeast Coastal Indians (Tlingit and Haida). This grouping is based on the broad cultural and linguistic similarities of peoples living contiguously throughout the vast lands of Alaska and maintaining a traditional subsistence lifestyle of hunting, fishing, and gathering. Because of the large number of Indigenous peoples in Alaska and the variety of economic resources, a single discussion can only give a limited view of Alaskan Indigenous economy and cannot serve as a comprehensive narrative.

According to the 2014 Census update, 15.1% of Alaska's general population are Alaska Natives. Alaska's largest city, Anchorage, has the greatest proportion (12%) of Native peoples among places with over 100,000 residents (Alaska Federation of Natives, 2019), although individual rural villages can be between 70% and 95% Native.

Alaskan Natives have subsisted on whales, walrus, fish, and other biological resources for food, clothing, and even construction materials for centuries. However, with the European and American demand for whalebone (baleen) and whale oil in the 19th and early 20th centuries,

depletion of many resources such as bowhead whales ensued (Shelden and Rugh, 1995). Ironically, the decrease in the demand for whalebone and whale oil has been associated with the increase in the demand for crude oil (Bockstoe and Botkin, 1980), which is the major economic force in contemporary Alaska, with more than 85% of state government revenues deriving from oil royalties. Other important elements of the contemporary Alaskan economy are seafood processing, tourism, and forestry (Knapp, 2012).

Understanding Alaska's rural, Indigenous market economies is particularly important during the period of rapid economic change caused by petroleum exploration and developments on Alaska's North Slope, which gave a significant impetus to the incorporation of the North Slope Borough itself on July 2, 1972. During the oil boom from the middle of 1970s to the early 1980s, the state administration followed an economic development policy which stimulated rapid population growth, primarily through immigration of people from outside the state to Alaska's urban centers (Goldsmith et al., 1984; Williams, 1985). Using oil revenues, the state boosted employment through capital construction projects and expanded government services, which stimulated immigration. Alaska thus became the most rapidly growing state (Mitchell, 2001). Although the state's investments during the oil boom clearly have resulted in economic benefits in many regions, it is possible that the stimulation of rapid growth in the state's population centers (Anchorage, Fairbanks, and Juneau) has had certain negative impacts on the established subsistence sector of the state's economy (Wolfe and Walker, 1987).

A milestone in the transformation of Indigenous economies was the passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971 that established Alaska Native Regional Corporations as a means to govern the resources allocated to the Native Alaskan communities. The act conveyed 44 million acres of land (about 10% of the land within the state) along with USD 962.5 million to about 80,000 Alaska Natives (at least one-fourth Native ancestry). The act did not remove federal responsibility for the social and health needs of Alaska Natives. The land and cash were distributed to 12 regional corporations (and about 200 village corporations) in which eligible Natives were enrolled and given shares (Case and Voluck, 2012). Not all Native individuals or Native leaders concluded that the passage of ANCSA benefited the development of Indigenous communities in Alaska. Some believed that it extinguished aboriginal land claims in the state, whereas others have come to regard it more positively. It should also be emphasized that the above description does not do justice to Native leaders' forethought. Although the Act merely lists large sums of money and large tracts of land, it should be supplemented with the foresight these leaders who insisted upon title to land and provisions for subsistence via a variety of corporations and subsistence oversight panels (Anders, 1983; Kofinas et al., 2016).

Since that time, two layers of Indigenous economies have been evolving in Alaska. Native for-profit corporations have worked to develop their land holdings and invested their capital both within Alaska and outside the

state in divergent industries such as petroleum, mining, seafood, tourism, construction, finance, engineering, and transportation. Various benefits are provided for the shareholders, for example, employment opportunities, dividend payments, scholarships, cultural preservation, land management, economic development, and advocacy for Alaska Native peoples (Glomsrod et al., 2015).

Along with market development, subsistence continues to play a prominent role in these rural economies not merely by supplementing but also by complementing the market economy (Behnke, 1982; Wolfe et al., 1984; Wolfe and Walker, 1987; Huntington, 1992), creating a mixed, subsistence market economy (Wolfe, 1984; Wolfe et al., 1984; Larsen et al., 2019) that exists in Alaska and in the Canadian North (Asch, 1983; Feit, 1986; Usher, 1998).

Subsistence activities such as fishing and hunting, while often highly productive, are not oriented toward sale or accumulated profit. Rather, they are carried out to meet the self-limiting needs of families and small communities. The combination of subsistence and commercial activities, more typical of Alaskan villages, provides cash as an economic means for leading a traditional way of life. A crucial factor influencing the economic context of rural Alaska is the importance of tradition and culture, of which Nelson Island provides an example.

There are five year-round villages located on Nelson island, all of them engaged in subsistence activities and relying heavily on fish and game harvesting. The populations adhere strongly to cultural traditions and ceremonies, the seal party being one of the most important of them. The basic meaning of the seal party, even today, is to distribute meat and sustain the basic principles of subsistence economy—reciprocity between people, close connections between households, hospitality, and willingness to host one community by another (Fienup-Riordan, 1983). Some features of the mixed economy exemplify that currently, subsistence economies are gradually transforming under the market influence (Burch, 1975), but the market does not appear to impact the basic values and traditions of Indigenous peoples. Thus, on Nelson Island today, money can be given for raw materials, fresh berries, and animal skins, but all of these goods are at times given freely on ritual occasions, bartered between nonrelatives or given informally, and at the same time, seal meat is never sold and traditionally has not been traded (Fienup-Riordan, 1983).

Subsistence is an economic and cultural activity (Tuck and Huskey, 1986; Clement et al., 2013), but it should be noted that some Natives' attitudes toward their traditions and Indigenous culture are divergent. Many Indigenous communities in Alaska demonstrate close linkage with their ancestors' traditions: "We do gathering, hunting, fishing and want to maintain the subsistent way of life."⁶ "It's my people's desire to return to the local tradition and to live subsistent life as our ancestors did, we used lands and

resources carefully and we had everything."⁷ On the other hand, it would be wrong to suggest that local communities are reluctant to develop more economic opportunities in their villages. Some have expressed concerns that the changes associated with acculturation and modernization are overwhelming: There are individuals and communities who recognize the transition from local production to dependence on store goods, from political autonomy to public participation and joint decision making, and from small-scale social systems to involvement in national and international issues (Tuck and Huskey, 1986). Alaska's communities manifest the gradual evolution from subsistence to market economy, which inevitably influences Indigenous culture. Some Natives, especially those living in the cities, conclude that traditional hunting and gathering techniques have been supplanted by modern technology, sometimes leading to negative consequences for traditional culture. Local people in the Yukon-Kuskokwim region, for example, "criticize the fact that traditional activities such as Native dancing have been replaced by drinking and watching TV."⁸ The opinion of other groups is different, however. Some elders recall the days of living in conditions that were not adequate and appreciate the warm, not drafty houses, ample food, and the opportunities made available by the road system and health care.⁹

Although Yup'ik and many non-Natives in rural Alaskan territories fear that the traditional way of life will be absorbed by the American mainstream and the ancient Indigenous culture will vanish (Fienup-Riordan, 1983), research (BurnSilver et al., 2016) has shown that both income and harvests have increased, leading to the conclusion that mixed economies in Inupiat Alaska, for instance, have not incorporated market values at the expense of traditional ones. In fact, based on social-scientific research on subsistence-cash interactions, a case can be made that extensive subsistence traditions, especially sharing and cooperative activities (harvesting, for instance), are thriving (Anders, 1983; AFES Report, 2015; Kofinas et al., 2016).

Representatives of Yukon-Kuskokwim Inuits and Inuits living in the cities admit that "a retreat to the old ways is impossible, and traditional culture and language can be preserved just for romantic purposes."¹⁰ On the other hand, the North Slope has its own Inupiaq language and heritage center that spends a considerable amount of time and money in efforts to maintain and perpetuate the language as a working language of the locals (North Slope Borough Department).

The subsistence and traditional component of Alaska's rural, mixed economies currently receives uneven

6. Interview with Inuit local resident, Anchorage, Alaska, USA, 2019.

7. Interview with Inuit local resident, Anchorage, Alaska, USA, 2019.

8. Interview with a representative of Yup'ik, the city of Bethel, Alaska, USA, 2019.

9. Interview with a representative of Yup'ik, the city of Bethel; Interview with a representative of Inuit, Anchorage (Alaska, USA), 2019.

10. Interview with a representative of Yup'ik, the city of Bethel; Interview with a representative of Inuit, Anchorage, Alaska, USA, 2019.

recognition in federal and state legislation and policy regarding subsidies, land, resource development (Tuck and Huskey, 1986; Wolfe and Walker, 1987; Huntington, 1992), and the incorporation of traditional knowledge into decision making. Prior to the passage of ANCSA and Alaska National Interest Lands Conservation Act (ANILCA), scholars, federal officials, and state officials were relatively uninformed about some Native groups' history and culture (Heaton, 2012). They viewed many Native communities generally as culturally and economically isolated. The major pieces of legislation mentioned above became the framework for the "rural preference" emphasizing "customary and traditional use." In practice, they helped create a mixture of traditional and new practices. This is not to say that problems do not exist. Alaska continues to "grapple with a seemingly unending controversy over subsistence that pits urban and rural interests against each other and the state against the federal government" (Heaton, 2012). In summing up the problems related to state and federal management of wildlife in northern Alaska, Huntington (1992) contends that regulatory systems must be responsive to local concerns, locals must participate and be shown that their concerns have a measurable impact, and locals must be part of the coproduction of knowledge and regulations.

The story of Tanana River Athabascans can be shown as an example, presented by John W. Heaton in his "Athabaskan Village Stores: Subsistence Shopping in Interior Alaska, 1850–1950" (Heaton, 2012). It is about the involvement of a local native community into the market economy in a broader historical context: the passage of ANCSA and ANILCA and the creation of Native corporations forced the subsistent hunter-gatherer community to be integrated into the market. The story reveals both the role the federal government played through policies and legislation designed to draw Athabascans into the mainstream economy and the way in which Athabaskan subsistence shoppers responded to changing conditions in a way that reproduced cultural identity. As this study has demonstrated, Athabascans have used new technologies, produced raw materials, and furnished wage labor for the market since the nineteenth century. They used their proceeds to purchase food and other commodities from outside Alaska. When fur markets collapsed during the Great Depression, Athabascans along the Tanana River became deeply indebted to traders. In the 1940s, three of the village communities opened stores with federal assistance. The new institution cut costs, lowered prices, severed the control of white traders, provided credit, and encouraged values associated with capitalism, as Athabascans increasingly connected subsistence practices to wage labor, production for markets, and consumption (Heaton, 2012).

The Athabascans' case demonstrates the scaling from a subsistence to a market economy, which most Alaskan Natives have been experiencing during the last 50 years. They gave up some control over their economic activities to the government in order to be assisted with market transferring processes. To varying extent, some adjusted to a relationship with the market, even to embrace the market values, and sustained local cultures in their

communities. Athabascans, for example, found ways, such as the potlatch and reproduction of seasonal economic patterns, to maintain a distinctive identity in response to Western consumer culture and to reject elements of the capitalist values (inherent in the government's store credit policy) to enable purchases at their local shops. Other communities took their own way. NANA Regional Corporation and Bering Strait Native Corporation have succeeded in national and international business. For example, the NANA corporation, whose shareholders are of Inupiat descent, has been declaring profits repeatedly since the 1980s. The corporation is engaged in various non-Indigenous holdings and ventures, including environmental systems (solid waste, sewage, and water), security systems for pipelines, construction, jade mining, hotels and apartment complexes, exploration with Standard Oil, fuel distribution, and so on. Moreover, NANA owns the Reindeer Enterprise, a nonprofit firm that helps to establish commercial reindeer herds in the region and provides meat to the local population (Alaska Native Corporations, 1977; Regional Alaska Native Corporations, 2012).

Regional nonprofit corporations have been established in Alaska along regional/ethnic lines parallel to profit-making corporations. Many of these organizations have their roots in the regional Native associations, which preceded ANCSA. They continue to provide social, cultural, and economic assistance to local populations. In most cases, they are the contracting agency for delivering the services of the Bureau of Indian Affairs and some state services to Native populations within their respective regions (Lonner, 2000).

Finland's case

The Sámi is the only officially recognized Indigenous people in Finland and the whole European Union (Bill, 248/1994). The area inhabited by the Sámi extends from Central Norway and Central Sweden over the Northern part of Finland up to the Kola Peninsula in Russia. An increasing number of Sámi also live outside these areas. In Norway, there are 50,000–70,000 Sámi (depending on the way they are counted), in Sweden 15,000–20,000, and in Russia 2,000. According to the data collected by the Finnish Sámi Parliament in 2015, there are 10,463 Sámi living in Finland (Finland, 2016–2019). There is a special Sámi Homeland area that covers the three northernmost municipalities of the country and part of a fourth municipality. This area of 35,000 square kilometers is inhabited by 3,499 Sámi, who are a minority in the Homeland area that has a total population of 18,700. Utsjoki is the only municipality where Sámi form the majority of the population (Sámi Parliament Plan of Action).

The Sámi were colonized gradually, when Swedish kings decided to inhabit Lapland with Finnish population in order to claim land based on permanent, nonnomadic settlement. Gradually, after the Enlightenment when nationalism became the dominant ideology, the Sámi started to be integrated into the dominant culture. From 1917 onward, when Finland became independent, the

Sámi experienced an extensive integration policy. The newly independent country endorsed the formal equality of all citizens, and the Sámi were treated as a minority that should be integrated into Finnish society. Although the Sámi no longer are nomads, they still have strong kinship ties and a strong identity as a people with its own culture (Heinämäki, 2017; Kuokkanen, 2019).

The Sámi have long been striving for self-determination and land rights with only minor success. According to section 17 of the Finnish Constitution, they are now recognized as an Indigenous people, and they have cultural autonomy based on the Act on Sámi Parliament of 1995. In practice, the autonomy is vague, partly because it is maintained by state funding allocated to the Sámi Parliament (Guttorm, 2017; Kuokkanen, 2019).

The traditional Sámi livelihoods are fishing, gathering, handicraft, hunting, reindeer herding, and the modern forms thereof. Nowadays, the most notable traditional economy of the Sámi is reindeer herding, which is also important for Sámi culture because it has maintained and developed the Sámi languages. The future of Sámi culture is often considered contingent on the continuation of reindeer herding. However, approximately only 10% of the Sámi are still involved in the reindeer herding economy (The current situation of traditional...2017).¹¹ Besides reindeer herding, there are many modern Sámi businesses and a great deal of entrepreneurship based on reindeer, for example, handicraft production, tourism services, catering services, and gift shops. The Sámi Education Institute, functioning in a number of campuses in the Sámi Homeland, provides instruction on reindeer herding, the abovementioned professions derived from it, and other natural resource-based professions such as fish processing. In addition, the institute offers instruction on media skills and the Sámi languages. The three Sámi languages—Northern Sámi, Inari Sámi, and Skolt Sámi—are reviving after having been taught gradually from the 1970s, and they received official status in the Sámi Homeland in 1992 (Aikio-Puoskari, 2007). In this case study, we focus only on reindeer herding because it is the core livelihood in Sámi culture.

Historically, reindeer herding has experienced several major changes in the area, which is nowadays called Finnish Lapland. The Sámi, who lived in the central and southern parts of the area before the gradual colonization of Finns, kept reindeer as baits for hunting wild reindeer. The first government-supported colonization in the 17th century brought profound changes. The growing Finnish population burned forests for agriculture, exterminated the beaver, and pushed wild reindeer to the Russian side of the border, which forced the starving Sámi to start farming as well (Joonas, 2019).

Starting gradually at the end of the 18th century, the Northern Sámi brought nomadic reindeer herding from central Norway to Finnish Lapland, which changed the economic conditions again. Nomadic reindeer herding took over as the main traditional economy and

managed to support those Sámi who continued with this traditional nomadic livelihood. The Skolt Sámi, who then lived on the Russian side of the border, were those to adopt the new nomadism last. Even Finns started reindeer herding to support agriculture, which was too difficult to live on in harsh northern conditions (Joonas, 2019). The closing of the border between Sweden and Russia in 1852 was a shock to nomadic reindeer herding, and the Sámi who stayed in Finland, which was part of the Russian Empire at that time, could no longer herd their animals to the Barents Sea. Some of them chose to move to Sweden or Norway (Allard, 2015; Joonas, 2019).

Unlike in Sweden and Norway, reindeer herding in Finland is not an exclusive right of the Sámi (Allard, 2015), but open for all EU citizens who reside in the reindeer husbandry area. The historical background for this solution is that also Finns living in Northern Finland have been reindeer herders for hundreds of years, combining reindeer herding with farming and forestry (Kortessalmi, 2008).

The newly formed Finnish State merged the two types of reindeer herding—nomadic and peasant—into one model through reindeer husbandry legislation in 1932. Each reindeer herding family has to be a member of one reindeer cooperative (*paliskunta*), which takes care of the well-being of all reindeer in its area and is responsible for keeping the number of reindeer sustainable for the pastures. The traditional Sámi reindeer unit is called *siida*, and it consists of one or two families with family relations. Siidas now work within reindeer cooperatives. Today's tightly regulated reindeer herding is far from original Sámi nomadic herding, which did not recognize fences that hinder reindeer from roaming along their traditional migration routes. Today, there are 13 reindeer cooperatives in the Sámi Homeland Area. They have together 1,250 reindeer owners, which is 27% of reindeer owners in Finland (Reindeer Herders' Association, 2019).

The total number of cooperatives in the reindeer husbandry area of Northern Finland is 54, and together they form an association of reindeer cooperatives, which is an administrative organ under the Ministry of Agriculture. The Association gives information to the reindeer herders and lobbies for the cooperatives. According to the Association, it is no longer possible to live solely on reindeer husbandry. Most reindeer herders are involved in tourism, handicraft, agriculture, or forestry. Some work in urban areas or in industries such as mining. Many of them are part-time herders, who want to continue the traditions of their family and ancestors (The Current Situation, 2017; Reindeer Herders' Association, 2019). However, most Sámi reindeer herders, especially in the Homeland Area, do earn their living from reindeer herding. For them, reindeer herding is a business and a means of subsistence.¹²

11. Finland does not have registers or statistics based on ethnicity. Therefore, the figures can only be estimates.

12. Interview of the leader of the recently (2019) established Sámi Reindeer Herders' Association, which is

Most of the forests in Finnish Lapland are owned by the state and governed by *Metsähallitus* (the state's public administrative unit responsible for land and water areas). The relationship between reindeer herders and *Metsähallitus* has been difficult because forestry reduces reindeer pastures. Nowadays, *Metsähallitus* negotiates with Sámi reindeer herders on logging in the Homeland Area based on section 9 of the Act on Sámi Parliament (974/1995). This obligation has improved the relationship between Sámi reindeer herders and *Metsähallitus*, although the Sámi complain that the negotiations are not always equal and that “the Sámi are heard, but not listened to” (Gutorm, 2017). According to the Reindeer Husbandry Act of 1990, reindeer can freely graze both in state and private forests in the Reindeer Husbandry Area (114,000 square kilometers), which extends far to the south and includes one-third of the total area of Finland. However, reindeer herders have to pay for the damage that reindeer cause to private forest owners. In the last 50 years, 25% of the reindeer pastures of the Euro-Arctic Barents Region have been lost to development and industrialization (Reindeer Herders' Association, 2019).

A lack of pastures limits the size of herds, and there are constant disputes on land use between herders and industrial land users. Nowadays, disputes are caused especially by windmills and plans to build a railway across Lapland. The Arctic Railway was found economically unfeasible, and yet the Regional Council of Lapland is making attempts to include it in the Regional Plan. The railway would cut reindeer pastures in the Homeland Area in two, disturbing the roaming reindeer and exposing them to danger (Nysten-Haarala, 2018). The reactions of Sámi reindeer herders have been emotional, reflecting fear for the future of their livelihood as well as strong distrust of decision makers. “Right now, when you have invested in reindeer herding again and business starts to grow, this Arctic Railway plan popped up...Our fathers still remember how water drowned our villages and reindeer” (Reindeer herder from Vuotso, 2018, referring in tears to the construction of hydro power that covered several villages under artificial lakes in 1967 and 1971).

Contemporary reindeer herding is market-based, even if regarded as a traditional economy. It has experienced ups and downs with fluctuating markets. One such “up” has been a growing market for reindeer meat to be consumed by international tourists in Finland. “We could now sell reindeer meat as much as we can produce in the domestic market because of growing tourism, and business looks promising, but now this railway plan started to shadow our future.”¹³ Market success is hindered by overgrazing of pastures, and diminishing pastures cannot

support families. Furthermore, reindeer herders do not always comply with the maximum number of reindeer allowed by the state, and there are constant disputes with authorities on the damage caused by herding to nature protection areas (Haataja and Sammallahti, 2017). Lichen is the main food of reindeer, but they also eat plants, including rare plants under the threat of extinction. Reindeer are also fed with hay, especially to the south of the Homeland area, when lichen is difficult to find under the snow. Ploughing the forests, especially old-growth ones, diminishes ground and hanging lichen (Kyllönen et al., 2006). “Climate change is a threat to us. Reindeer die of hunger when they cannot dig lichen under the snow. Last winter was catastrophic in this respect.”¹⁴

Two myths regarding reindeer herding are the assumptions that herders live on government subsidies and compensations. Both assumptions are far from the truth. In reality, only 14% of the income of reindeer herders consists of state or EU subsidies, while subsidies for agriculture amount to 40% of the income of Finnish farmers (Eriksson, 2014). Finnish agricultural subsidies extend to 2 billion euros, which is shared by 60,000 recipients (Ilta-lehti, March 20, 2019). Subsidies for reindeer herding include investment support and 28.50 euros per reindeer per year, if the herder owns at least 80 heads. Another myth of reindeer herding is that herders live off compensations for reindeer killed by carnivores or traffic. In fact, about 5,000 reindeer die every year because of traffic. On average, reindeer herders receive 60% of their income from selling meat, one-third from subsidies and compensations, and 10% from other products.

Although reindeer herders have trouble with wolves, wolverines, bears, and eagles, the state that pays compensation for losses caused by the carnivores also grants permits to hunt them. Wolves have been hunted quite effectively in upper Lapland, where there are no packs of wolves, only 10–20 individual animals. However, the number of wolves varies a lot, since wolves move across borders. Meanwhile, there is an increasing number of wolf packs living in southern parts of Finland because of a growing population of wild deer in the region (Holopainen, 2016). Of all carnivores, wolverines kill the largest number of reindeer, and the number is growing (paliskunnat.fi). Compensation is paid based on the evidence of reindeer killed by predators, which is not always easy to find. According to the Reindeer Cooperatives' Association, 4,361 reindeer were found killed in Finland in 2014, but this number is, based on the association's own estimations, approximately one-fifth of the actual one. According to current legislation, reindeer herders get compensation for lost calves based on an estimation, and there is no set amount of money for which the herders themselves are responsible that would reduce the compensation. The compensation should be 1.5 times the value of the reindeer, whereas previously it was twice the value of the animal (Act on Game Husbandry, 2009).

separate from the Finnish Reindeer Herders' Association, September 2020.

13. Interview with the president of the Sami Parliament, 2018. She is now leading the new Sámi Reindeer Herders' Association. In a new interview, she told that COVID-19 has destroyed the market of reindeer meat, and the herders now try to access European markets to sell venison (September 2020).

14. Interview with the leader of the Sámi Reindeer Herders' Association, September 2020.

The direct economic value of reindeer herding in the national economy is greater than it is generally assumed. According to the most recent study on Finnish and Swedish reindeer husbandry from 2013, the overall value of butchered reindeer in Finland was 15.4 million euros. Every butchered reindeer produces 661 euros for the employees, 441 euros for society as taxes and payments, and 3,000 euros as turnover for the companies. The total turnover in Sweden and Finland together is 1.32 billion euros, and reindeer herding employs 15,000 people (Eriksson, 2014).

The indirect value of reindeer husbandry amounts to much more. Reindeer herding keeps Lapland inhabited and benefits tourism, for which reindeer are the most valuable asset. The cultural value of reindeer is even more important. Lapland is tied to reindeer herding to such an extent that should herding end, both Sámi culture and Lappish identity would suffer. However, in spite of the direct and indirect benefits of reindeer herding, this way of life and occupation is not as highly valued as other industries (Brännström, 2017). The government finds itself in a dual role: Based on the Act on Reindeer Husbandry, it is obliged to protect reindeer herding, while on the other hand, the government should also promote industrial development. In a democracy, the majority decides and the industrial factors are stronger lobbyists, which leaves reindeer herders in the minority.

Sámi reindeer herders do not get more subsidies than other reindeer herders, because national legislation treats reindeer herding as an ordinary industry, not a traditional livelihood based on indigeneity. As an Indigenous people, the Sámi are subsidized through the Sámi Parliament, their body of self-government. The rather modest state funding,¹⁵ (6.5 million euros in 2019) channeled through the Sámi Parliament, is to protect and revive Sámi culture and languages. Although reindeer herders form only a 10% minority of the Sámi, they get a great deal of attention from the Sámi Parliament because of the cultural impact of reindeer herding. Cultural autonomy includes the right to influence decision making concerning the environment, the right to social security, and the right to a livelihood. Thus, Finnish authorities are obliged to negotiate with the Sámi Parliament whenever a project in the Homeland Area can harm a livelihood connected with Sámi culture. Although the Sámi claim that they are not listened to, the negotiation duty has worked quite well considering the present results. The national authorities are free to make their decisions even when the Sámi disagree with them, yet there are no mines in the Homeland Area, and there is only one small windmill farm that will soon be shut down. The industrial pressure is much stronger in the Reindeer herding area south of the Sámi Homeland. Yet, herders feel a constant threat also in the Homeland Area from gradually spreading industrial and

infrastructure projects, which could destroy their livelihood and culture.

Finnish decision makers and the majority of the population advocate democracy and equality. Legislation on the cultural autonomy of the Sámi is a step toward placing more emphasis on the rights of the Indigenous, who have difficulty getting their voice heard. Larsen et al. (2019) call for a more holistic examination of the direct and indirect revenues as well as a better account of the social and cultural risks in order to avoid irreparable loss of Sami culture, not to mention the loss of a domestic business worth 1.3 billion euros.

Discussion: Strategies and tools to sustain Indigenous economies

Indigenous economic development strategies

Based on the research available, we identified three main types of Indigenous economies: subsistence economy, state-supported economy, and market relations. For some, subsistence is still a highly disputed theoretical concept within the social sciences and the humanities, while for others, it is a past, present, and, to a reasonable extent, a future way of life that has direct economic implications. The literature related to the Arctic reflects the changes in the socioeconomic conditions of hunting, herding, and fishing, and how these traditional activities are influenced by cash economy and globalization.

Changes in Indigenous economies commonly associated with acculturation and globalization are occurring across all Arctic territories (Stammler, 2005). Indigenous economies move from local production to dependence on cash and grocery stores, from political autonomy to involvement in bureaucratic structures and decision-making processes, and from small-scale social systems to involvement in national and global issues. On the continuum of Arctic economies (Larsen et al., 2019), we tend to understand this shift exclusively as carrying subsistence toward market-based relations with the force of inevitability and without the active participation of Indigenous communities themselves. Although this can be the case, there are examples where members of Indigenous communities have taken control, prescribing not only how the changes will proceed but also under what conditions the Indigenous economy will prepare itself for development. Invited testimony of Eben Hopson (1976), former Mayor of the North Slope Borough, to the Berger Inquiry recounts how the discovery of recoverable oil in the Prudhoe Bay area was linked by the Inupiaq community to the “restoration of democratic self-determination to all Inupiat.” In summary, Mayor Hopson’s testimony to the Canadian Royal Commission delineates the complex web of ideas and events in the slide toward a mixed, cash economy that is tied not only to safe, responsible industrial development—allowing for the perpetuation of Alaska Native cultures, subsistence activities, and profit-sharing—but also to the reinstatement of the democratic principles of circumpolar Arctic peoples: “One of the things I am trying to say...is that our Native Land Claims is an integral part of the oil and gas development in Alaska, and this is also true for Canada and Greenland” (Hopson, 1976).

15. In the 2019 budget, the share of state funding is 6.5 million euros from a total of 7.7 million. About half of the costs consist of personnel and other fixed costs.

As evidenced by the cases presented in this article, Indigenous communities across the Arctic states are developing in contrasting dimensions, pursuing different goals, and employing various tools for development. From the standpoint of various stakeholders, the essence of Indigenous economies can differentiate dramatically.

Global institutions are unanimous in their willingness to protect Indigenous culture and diverse economies. Two UN covenants—the Covenant on Civil and Political Rights and the Covenant on Social, Economic and Cultural Rights—form an international human rights framework, recognizing the right of all peoples to their “own means of subsistence” (Article 1, Covenant on Civil and Political Rights, 1976). The United Nations Declaration on the Rights of Indigenous Peoples (2007) acknowledges the extension of this right to Indigenous peoples, noting that Indigenous peoples have a right to their economic systems and a right “to engage freely in all their traditional and other economic activities.” This collective right to one’s own economic institutions and activities, however, is being regularly ignored and trampled by various globalization processes and projects. Indigenous peoples are increasingly finding themselves “caught in a vicious circle through their integration into the market economy and globalization,” and, as a result, many “have become increasingly convinced that they have to look within their own systems if they are to survive and maintain important communal values” (United Nations, 2007).

Governmental goals concerning Indigenous development vary from state to state reflecting the priorities of government policies in relation to human rights, rights to land resources, and the right to participate in state affairs. Russia and Alaska partially subsidize Indigenous subsistence economies via governmental programs and companies’ obligations. Indigenous peoples receive subsidies and benefits from the government in order to preserve traditional economic activities even if they are economically inefficient. For example, reindeer herding in the Russian regions is preserved mostly by means of government subsidies. In this case, the cultural value of the economic activity is estimated higher than the economic benefits from it. Supporting Indigenous economies, especially subsistence economies, is a critical government function for several reasons. First, subsistence and traditional activities protect Indigenous communities from influences such as new technologies, improper behaviors, and values inappropriate to their culture and environment (Tuck and Huskey, 1986). Second, Indigenous traditional societies are environmentally conscious and protective, so they contribute greatly to sustainable development and sustainable harvests that are national and international priorities.

Possible governmental strategies are the encouragement of local production of goods and services for local use (such programs exist in Russia). Another approach could be the expansion of local markets and the allocation of infrastructural support for transportation, roads, trading opportunities, and so on (*factorii* in Yamal, roads in Alaska). The third possible approach is assisting the creation of for-profit local industries, where land issues, taxes, and decisions are determined by the locals. It has become

obvious that northern Indigenous peoples are interested not only in compensations and subsidizing—they do not merely demand protection of their rights and interests from the government—but they also want to be involved in decision making and the management of their territories and resources. Moreover, they are willing to cooperate with the government on issues dealing with the use and protection of Arctic resources according to their traditional values and knowledge (Gladun and Chebotarev, 2015). This is the main reason why the governments of the Arctic countries are trying to find the most effective forms of cooperation and interaction with Indigenous peoples and to guarantee their participation in decision making.

Of the three states of this study, only Finland has managed to engage the Indigenous Sami in its legislature to some extent, although it seems that implementing true participation has not worked well enough in practice (Gutorm, 2017). Reindeer herding—Indigenous and non-Indigenous—is subsidized considerably less than other agriculture. Finland still maintains its official policy of equality that does not recognize race, ethnic background, or language: Subsidies allocated to reindeer herding are the same for Indigenous and non-Indigenous people, and unemployment benefits offered by the welfare society do not depend on ethnic background, language, and so on. The cultural autonomy (Sami Parliament Act, 1995) granted to the Sámi rather recently works through the Sami Parliament, which has become an important lobbyist for Sámi culture and reindeer herding as one form of it. State funding is channeled through the Sámi Parliament, but there are also other state and EU subsidies available to the Sámi. Indigenous institutions support culture by channeling funding from the state, but they also keep land rights on the agenda. Some researchers think that the lack of recognition of Sami land rights is an unresolved human rights problem in Finland (Bunikowski and Dillon, 2017). The problem is extremely complicated, given the size of mixed population and the long time that has passed from colonization. Compared to the ANCSA in Alaska, Finland has not experienced a similar opportunity as finding oil in Prudhoe Bay was for Alaska. At the last moment, Alaskan Natives managed to use the situation for their benefit and acquired some rights to their land. In Finland, the state has managed to take the middle road of supporting Sámi culture. As part of cultural autonomy, the Sámi Parliament has a say in land use issues concerning the Sámi Homeland, although the duty to negotiate (Sámi Parliament Act, Article 9) does not require the Finnish authorities to accept its opinion. Actually, the authorities only have a duty to consult the Sámi, although reaching a joint solution in issues is the ultimate objective of the duty. For-profit native corporations in the United States have led the way to strong, independent cooperation and future investment, but not without disagreement even within Native communities themselves. In Russia, the government allocates social funding to support Indigenous communities and their traditional way of life. At the same time, Indigenous people have fewer opportunities to participate in decision making than in Finland.

However, subsidizing Indigenous economies can be justified from the Indigenous perspective: Although people receive some income from additional sources such as paid employment, they can sustain their traditional activities (hunting, fishing, and gathering) and be engaged in the cultural development of their community. A representative of the Alaska Village Initiative notes: "Getting wages, they can also invest income in subsistence supplies and better equipment and increase community welfare. In this respect, subsistence seems a more preferable and reliable form of economy in the long run, whereas other forms are usually more short-term and unpredictable."¹⁶

Market versus Indigenous identity

Indigenous economies such as household production and subsistence activities extend far beyond the economic sphere: They are at the heart of cultural and social identity (Kuokkanen, 2011; Novikova, 2013). One of the key elements of the sustainability of reindeer herding communities is the preservation of their cultural identity. It is closely related to their way of life, language, traditional ideas, folklore, and life as Indigenous peoples: "As long as the tundra is there, culture is maintained. As long as there are reindeer, the culture will also be preserved."¹⁷ Although Indigenous economies have changed in the course of history with a certain amount of variation between countries, most still preserve the principles and characteristics of subsistence. The deliverables of subsistence economy include multiple social, nutritional, economic, and cultural products. A subsistence economy is a highly specialized mode of production and distribution of not only goods and services but also social norms and culture (Tuck and Huskey, 1986), which is nonmonetary and essential for Indigenous communities.

One of the key problems in the further development of Indigenous economy is maintaining a balance between the integration of traditional nature use into market relations and the preservation of Indigenous identity. We analyzed three different models of these processes: (1) state paternalism aimed at conserving Indigenous culture in Russia, (2) corporate paternalism and commercializing Indigenous culture in Alaska, and (3) market relations and upgrading Indigenous culture on the market basis in Finland.

All the cases of the study are characterized by some forms of support given by the governments to the Indigenous populations. Government measures are mostly targeted at supporting Indigenous culture, not economies. Concurrently, Indigenous culture is closely linked to traditional nature use, so the preservation of reindeer

herding in Russia and Finland or whaling in Alaska are considered by public authorities primarily as an opportunity to preserve the unique culture of Indigenous people. However, the role of the government is different in all three cases. In the case of Russia, the federal and regional governments are prone to pursue a paternalistic policy toward Indigenous people. State subsidies account for about 30% of the income of a nomad family there (Detter, 2017a). This is dictated by the Soviet heritage, as well as an insufficient demand for reindeer products in the Russian market and logistic difficulties (e.g., stocking and transporting products from remote areas). In Alaska, the state provides privileges for the Indigenous population by granting rights to land and resources. This has led to the development of Indigenous corporations that profit from oil production and, at the same time, has made Indigenous communities dependent on oil money (Knapp, 2012). In Finland, reindeer herding is the most economically independent traditional activity of all types of traditional nature management. The share of state subsidies received by the herders is 14% in the country (Sami Parliament Plan of Action and Economic Plan, 2016–2019). The chosen state policy is possible because of the vicinity of markets for reindeer products.

It is clear that the modernization of the Indigenous economy leads to a gradual change in Indigenous identity. Some markers of identity, for example, language proficiency, can demonstrate the different levels of influence that markets and globalizing processes have in the three countries: 55.1% of the Nenets in Yamal, 26% of the Sámi in Finland, and 28% of the Indigenous population in Alaska speak their native language (Alaska Native Language Center, 2019; The Sami Language, 2019; Official website of YaNAO, 2020). It is also obvious that the traditional Nenets lifestyle in Yamal has undergone the smallest changes compared to the Indigenous peoples of Alaska and the Sami in Finland. In this respect, the efforts of the Russian state to conserve Indigenous culture can be considered successful. However, limited cultural variability is not always an indicator of successful preservation of Indigenous identity. A low standard of living and dependence on more powerful factors can hinder the community's further economic and cultural development.

Several crucial transformations of Indigenous culture are associated with the spread of market relations. First, there are changing kinship ties caused by the fact that future reindeer herders receive basic knowledge and skills within their family. This traditional knowledge is passed down from generation to generation. The critical difference between subsistence economies and market economies is that in the former, the production, distribution, and consumption of resources usually occur within kinship-based units, while in the latter, producers are bound by ties of occupation, training, education, or social class rather than by a common social network or genealogy (Ellanna and Wheeler, 1989). Although traditional kinship ties are at times fragmented and Indigenous communities may experience economic and cultural gaps, the struggle for self-determination and economic independence in a modern world may result in bold attempts to

16. Alaska Village Initiative is a nonprofit membership-based company dedicated to improving the well-being of rural Alaska communities, families, and individuals. Formerly known as Community Enterprise Development Corporation of Alaska, the corporation was formed in 1968 to create new economic activities in distressed communities, <https://akvillage.com/> (accessed November 20, 2019).

17. Interview with a reindeer herder, Seeyahinskaya tundra, Yamal, Russia, 2017.

integrate Indigenous identity and subsistence market values. We can see it clearly in the examples of Russia, Finland, and Alaska.

Second, there is a transformation of traditional values associated with Indigenous people's attitude toward nature. Traditional natural resource use is part of the market, which results in the collapse of old rules and taboos concerning the environment (Haryuchi et al., 2009). Hunting, fishing, and harvesting the wild were traditionally carried out for personal consumption. Today, business encourages Indigenous communities to sell furs, fish, and caviar for profit, and this leads them to abandon values such as moderation, limited use of nature, and sustainability in natural resources management, which used to be part of Indigenous culture—especially in fishing, hunting, and reindeer husbandry. Land use disputes in Finland reveal that market-based reindeer herding is not always environmentally sustainable. Market economy is changing the Indigenous way of life, but it can also assist in balancing development and subsistence as well as market motives and traditional values. The situation is complicated in a transitional market economy that lacks full-fledged market infrastructure because residents are often forced to sell their nature-based products at very low prices. To provide for their families in these circumstances, people have to fish and hunt on a larger scale. This is, however, not consistent with the concept of sustainable environmental management. The situation is aggravated by the arrival of industrial companies that have a completely different attitude toward nature (Stammler, 2011; Wilson, 2019). It is therefore necessary that the Indigenous can own land, have rights to resources, and have the power to levy taxes, so that they are able not only to share the profits but also to participate in the granting of permissions to extract resources on traditional land.

Watching the disappearance of previously untouched natural territories, Indigenous peoples also change their ideas about nature: "It used to be, as it were, easier, you know, to live on your own land. At the same time, when living only with your own kind it's easier there. And when people appear who are already slightly changing their lives, then it is more difficult, of course."¹⁸ Together with a new way of life, local residents adopt a new, consumer attitude toward nature. The sacral, respectful attitude toward nature is disappearing. Nature is now often perceived primarily as a source of material well-being. Representatives of the older generation note a lack of the necessary standards of respecting nature among the younger generation: "Old reindeer herders complain that young people no longer follow the old rules and leave a lot of trash behind. Moreover, now there is a lot of plastic packaging, which decomposes very slowly. All kinds of diapers are left there. And then, where to put them here in the tundra."¹⁹ In Finland, where reindeer herding is a market-based business, overgrazing of pastures and

other problems related to ecological sustainability are a constant challenge.

Third, the commercialization of Indigenous culture occurs when some elements of traditional culture begin to be reproduced in accordance with the expectations of external factors, such as authorities and corporations (Davydov, 2006). We can find such examples in Russian regions and in Alaska. The production of some items is adjusted to make them look more spectacular to external actors. For example, traditional festival costumes are made in more vivid colors to attract the attention of the audience. As a Nenets person explained: "On Reindeer Herders' Day we now wear stylized clothes. For example, the reindeer skin parka has decreased in size. Now we call them miniskirts. Why? Because it has to look spectacular on the stage."²⁰ Another example is the reconstruction of traditional holidays. In some cases, its main idea is connected not so much to the restoration of traditional occupations, rituals, and ceremonies as to the creation of more applied tasks. As noted in a press release on one of these holidays: "...the purpose of this event is not only to pay tribute to the traditions of ancestors, but also to attract the attention of industrial companies to preserving the spiritual culture of the Indigenous minorities" (Federal Press, 2012). For local communities, such performative events are an opportunity to draw the attention of authorities, businesses, and other strong actors to local problems, while companies emphasize their financial support in carrying out these events and thereby show their social responsibility. Sometimes, companies and authorities that provide funding for cultural events impose their stereotypical beliefs and expectations regarding Indigenous culture on local people. Accordingly, Indigenous peoples themselves often strive to meet these expectations, as this allows for additional funding. Similar examples of the development of a "souvenir culture" primarily for external actors can also be observed in Alaska, although Native Alaskan corporations with better knowledge of Native cultures support handicraft and Indigenous art.

There are also contrary examples where the market creates incentives and opportunities for the further development of Indigenous culture. In Finland, the significant improvement in the material well-being of Sámi communities in the context of market relations and welfare state has created a basis for the further development and dissemination of Sámi culture. However, the Sámi have had to stand up against the exploitation of their culture in tourism by non-Indigenous actors (Nuorgam, 2017). Nowadays, the Sámi Parliament, exercising its cultural autonomy, supports the Sámi in this contention and in making the exceptional Sámi culture known worldwide. There are also other support channels available for Sámi artists and cultural projects.

The Finnish example also makes one wonder whether Indigenous culture really is going to disappear along with the disappearance of its traditional economy. Although

18. Interview with a reindeer herder, Seeyahinskaya tundra, Yamal, Russia, 2017.

19. Interview with a local resident, YaNAO, Russia 2017.

20. Representative of the local administration, Khanty-Mansinsk, Russia, 2014.

only about 10% of the small Sámi population are reindeer herders, Sámi culture is experiencing a notable revival. Sámi culture is modernizing, but great efforts are made to render it faithful to its traditions. It is not always easy, and Sámi artists recognize the dilemma between the collective rights of the Indigenous and individual rights as part of the intellectual property rights system. However, the current cultural revival does not make the risk of losing the reindeer herding economy any less significant.

Subsistence-based economies focus on hunting, fishing, gathering, and trapping of local natural resources. The predominant identifying attribute of such economies is their dynamic and adaptive nature—they change over time and in accordance with fluctuations in the annual and seasonal resource base. The adaptive strategies of hunter-gatherers are not merely economic or material but also include a social and spiritual order which reflects the intensity of these societies' reliance on and identification with the "natural world" (Nelson, 1983). The structure of a subsistence-based economy includes specific strategies for harvesting, distributing, and consuming resources. Although these strategies can be perceived as economic, they are intertwined with the associated cultural and spiritual characteristics of the societies in which they occur (Ellanna and Wheeler, 1989).

For example, the use of modern Western technology and the integration of cash into subsistence-based economic systems are adaptive strategies and in no way reject cultural values related to hunting, fishing, trapping, or gathering. Instead, they provide the means to cope with new demographic, economic, political, and cultural conditions. Wolfe and Ellanna (1983) note that all subsistence-based economic systems in Alaska make use of cash and modern technology despite their fundamental reliance on local resource extraction. The Human Rights Committee of the UN has also recognized that the modernization of Indigenous economy does not deprive the Indigenous of the protection of Indigenous rights (Länsman et al. v. Finland).

Conclusion

Today's Indigenous economies are often mixed economies in which subsistence production continues to play a considerable role. Subsistence activities such as fishing, hunting, gathering, and reindeer herding make meaningful contributions to the economic and, most of all, social welfare of Indigenous communities in the Arctic states. By understanding the role of traditional Indigenous economies in the sustainability of the region, development may be planned to enhance this important economic base.

Considering the different types of Indigenous economies and decision making, the focus should be placed not on their economic importance but, rather, on fostering Indigenous traditions, knowledge, and culture. Placing the social dimension at the center of the sustainable development of the Arctic regions, the governments may opt to support Indigenous communities economically and thereby enable the reinstatement of their vital social institutions and traditions, which historically have played a key role.

The Arctic countries share concerns about both sustaining Indigenous traditions and cultures and promoting new economic policies, which are interdependent on Indigenous traditional economies. It is crucially important for the Arctic countries that Indigenous-related laws, economic programs, and state support measures are sensitive to the sustainability of Indigenous economies and provide efficient measures to also sustain their traditional way of life, as it contributes to the sustainability of the whole planet.

We discern several main scenarios for the development of Indigenous economies. The Russian case is an example of a combination of governmental paternalism regarding the economic activity of Indigenous peoples and an attempt to preserve traditional culture. Governmental subsidies and compensatory measures are used as the main instruments. Market incentives cannot be employed owing to a lack of the necessary market infrastructure. In addition, a strong dependence of Indigenous peoples on more powerful actors (state and corporations) leads to the distortion of market incentives. Finland represents successful market expansion and the consequent transformation of traditional culture. The household culture of the Sami has undergone substantial changes compared to the traditional way of life of the Russian Nenets. Concurrently, the achieved level of material well-being has created opportunities for further autonomous development of Sami culture in modern conditions. For a long time, Finland has endorsed the equality of its citizens in a welfare state and in market economy conditions, where economies and livelihoods are not subsidized based on indigeneity. With its limited budget, the Sámi Parliament is a weak sign of a new policy aimed to support Indigenous cultures based on cultural autonomy. This new policy, however, revealed old tensions behind the veil of equality and brought up old disputes and historical wrongdoings, which still cause mistrust toward Finnish authorities among the Sámi population. Although there are strong Indigenous market actors, the absence of land rights has resulted in friction between the Sámi and industrial projects, from which the Sámi do not gain economically. Alaska is an intermediate case with very divergent models of Indigenous development. Finland and Russia are characterized by a combination of market relations, governmental paternalism, and support strategies. Governments of different levels (state, regional, and municipal) and operating companies officially support Indigenous cultures, but the quality of life is relatively low because traditional activities are not economically viable and economic profit may not be entirely compatible with traditional values. On the other hand, subsistence economy survives partly because of support from these market actors and partly because of family traditions. The traditions and values of subsistence have been handed down from generation to generation through religious beliefs, folklore, traditional customs, and social customs and practices. The traditional mechanism of transmitting social experience from senior to junior has ensured the unity of values and provided behavioral guidelines. Furthermore, the traditional economies of Indigenous peoples have laid down

the basic rules governing people's behavior in a harsh natural environment for centuries and determined the likelihood of their survival and adaptation.

In general, the natural, social, economic, and cultural dimensions of the traditional Indigenous way of life have changed considerably in the Arctic Russia, United States, and Finland. Indigenous communities are thus forced to adapt to new circumstances associated with the transformation of their economic and cultural life. The success of this adaptation depends on their ability to combine subsistence, traditional practices, and market opportunities.

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