Northern Economies Workshop

Joan Nymand Larsen and Lee Huskey

Introduction

The Northern Economy Workshop was held in Oulu, Finland, in May 2005. The primary objective of the workshop was to strengthen the economic study of the Circumpolar North through networking among economists working throughout the north. The workshops recognized that economists have something to say but are underrepresented in the discussion of the north.

The following questions guided the discussion at the workshop:

- What do we know about the economy of the region called the circumpolar north?
- How are local and regional economies throughout the circumpolar north similar and how are they different?
- What are the factors that influence production and welfare in the province, state, territory, and community economies throughout the north?
- And what factors determine the success and failure of northern economies?

Workshop organizers:

Lee Huskey
Joan Nymand Larsen

The workshop had participation from all Arctic states.

Participation from the European North:
Lassi Heininen, University of Lapland, Finland
Charlie Karlsson, Jönköping International Business School, Sweden
Ilmo Maenpaa, University of Oulu
Pekka Hautala, University of Oulu
Johnny-Leo Jernsletten, Uppsala University, Sweden
Heikki Eskelinen, University of Joensuu, Finland
From Russia:
Larissa Riabova, Kola Science Center, Russia
Vladimir Didyk, Kola Science Center, Russia
From North America:
Lee Huskey, University of Alaska Anchorage, USA
Chris Southcott, Lakehead University, Canada
Heather Myers, University of Northern British Columbia, Canada
From the West Nordic region:
Joan Nymand Larsen, Stefansson Arctic Institute, Iceland
Gorm Winther, University of Aalborg, Denmark
Rasmus Ole Rasmussen, Roskilde University, Denmark
Magni Laksafoss, University of Faroe Islands
Jogvan Mørkøre, University of the Faroe Islands
Birger Poppel, University of Greenland
Björn Gunnarsson, University of Akureyri, Iceland

The presentations at the Northern economy workshop provided discussion of both the industrial north and the small, open, remote community economies which characterize much of the region. The industrial north described by the workshop depends on external markets. The small community economies depend on the local subsistence production and transfers from higher levels of government in addition to external markets.

The workshop identified the influence of institutions as an important determinant of economic performance of both the industrial and local economies. For example, definition of herding and ownership rights

affects the production of reindeer and the distribution of land resources in Sweden. The openness of the Faroese economy affects the way the economy adjusts to macroeconomic changes. The workshop presentations also described the instability that economies with narrow economic bases face. Cases were presented showing how the Murmansk and Finnish border regions became peripheral as a result of external changes.

The workshop also investigated both potential future problems and opportunities these economies might face. Problems discussed for the industrial economies included the limits to long term growth presented by the lack of diversity, by environmental conflicts, and by resource constraints. Problems facing local economies included conflict between area intensive industry, such as reindeer herding or trapping, and other uses of the land, such as farming or recreation. Presentations also discussed the effects of environmental pollution on local food sources. Two interesting opportunities were presented. The introduction of a new stakeholder oriented economic form, the social economy, provides hope for resource towns in the Canadian North. The success of the Oulu technology economy also provides another possible opportunity for northern communities.

The Northern Economy: an overview

As a general introduction to the northern economy, Joan Nymand Larsen presented the main findings of the Arctic Human Development Report (AHDR). While the AHDR shows that serious problems exist in the Arctic today, it also shows that these problems are accompanied by genuine success stories. The ability of Arctic peoples to retain a clear sense of cultural identity is under considerable pressure, but human societies in the circumpolar North are highly resilient. Arctic people have faced severe challenges before and adapted successfully to changing conditions. Success stories include the effective use of advanced technologies, and the creation and refinement of innovative political and legal arrangements that are responsive to the needs of a range of stakeholders.

However, while the Arctic region has experienced many successes in terms of human development, much of the region continues to be faced with significant obstacles to economic development. The formal economy of the region is mainly based on large-scale resource exploitation. Family-based commercial fishing or customary hunting, fishing, breeding, and gathering activities also continue to be important. Much consumption, in particular public services, is supported by transfer payments to regional governments and individuals from central governments.

The Arctic region is characterized by significant exports to developed regions, and substantial imports of finished products for domestic consumption. While the industrial-scale natural resource exploitation creates considerable wealth, these activities are mainly carried out to supply markets outside the Arctic regions, and the rents generated are captured by owners of capital from outside the Arctic. Resource exploitation may generate economic spin-off effects in local areas and regions, but in most cases, these large-scale activities are separate from the local regional socio-economic environment. Most food and other products consumed in the Arctic are imported. In places where the food production sector remains important, it is usually not very diversified.

The service sector is strongly developed in many parts of the Arctic. This includes private sector activities such as retail, transports, and tourism, as well as the public sector activities such as education, health care, and administration. Transfer payments remain essential to guarantee public services in many parts of the Arctic where economic activities do not provide sufficient fiscal revenue. In some regions transfer payments may be seen as means of correcting disparities created by a political system which sends resource rents to central governments.

The economies differ across the Arctic, with significant variations in both size and structure of the economy. The Russian north is the most populated part of the circumpolar north and produces almost two-thirds of northern output. The most densely populated and most diversified region of the circumpolar north is the European north outside of Russia. In the North American north the limited economic diversity and sparsely settled populations across much of the region is a contrast to the significant industrial production and economic diversity associated with Alaska's oil economy.

The Northern Community Economy

The northern community economy has three separate but related sectors: the traditional or subsistence economy, the market economy, and the transfer economy. Northern economies are not transitional economies, but rather economies that integrate subsistence, market, and transfers. Recent changes to the community economies reflect the decline in the level of transfers and emerging new "conflicts" related to centralization, non-

renewable resources, and population growth. The limit to the market development in remote communities presents a problem common throughout the north.

Workshop presentations pointed out that the limits to the market economy in northern communities and the decline in transfer support have increased the importance of subsistence activities. Subsistence and traditional activity provides an important source of real income throughout the region. For example, in Nunavut almost 80% of the population engages in subsistence activities, which amount to an equivalent income of about $30-50M per year. These economies rely on kinship, sharing, and cooperation, and cultural continuity is required for well-being.

Birger Poppel discussed the SLiCA project and the measurement of subsistence activity. The SLiCA project provides information for comparative studies of the living conditions among the Inuit and Sámi peoples in the Arctic region. The concept of subsistence can be defined as "hunting and/or fishing for the household economy, with a distribution system which secures that the community shares the products". In most northern communities many individuals as well as households are oriented to both market and subsistence activities. Income flows to the households from both spheres in the form of wages, commodities, transfers, and of subsistence income in kind.

Household success requires successful integration of market activities and subsistence production. Subsistence is a distinctive socio-economic system because of the primacy of kinship in the economy. There is substantial cooperation and sharing among households generally along lines of kinship, to optimize the flows of income and to ensure a general distribution of benefits. Subsistence activities do not constitute a separate and distinct economy in northern communities, but are combined at the individual, the household and the settlement level with wage labour and transfer payments. While in market economy-based societies, individual well-being is often conceived as correlated to the ability to procure commodities; well being in subsistence-based economies is associated with system maintenance and cultural continuity as well.

Excluding the subsistence economy from the calculation of regional GDP ignores the crucial importance of subsistence to indigenous peoples. Failure to account for the contribution of subsistence production to the total production of the north risks an improper judgement of the productive capabilities of different population groups/regions and the miscalculation of the total economic activity. The indigenous population groups' total employment and actual unemployment rates will also be misrepresented. Ignoring the contribution of subsistence production will provide inadequate information for overall economic and social planning. Ignoring subsistence will fail to account for an economic aspect of central importance to indigenous population groups and provide an inadequate basis for evaluating development according to the international community's standards.

The importance of subsistence production throughout the north makes its security important for residents of northern communities. Heather Myers examined food security in northern Canada. Country foods remain important; in the arctic subsistence provided a yearly real income equivalent to over $15,000 per household. Country food has a benefit of being more nutritious than imported food, and producing country food also promotes social and cultural vales. A variety of factors have constrained traditional food production; these include economic integration, environmental change, and development and conservation decisions. The risks associated with eating country food are primarily health risks associated with contaminants. Health advisories warn of contaminant concerns to try to balance the health risks and the risks of *not* eating country food.

Myers also pointed to the factors promoting success in commercial fishery in the north. These include better research, information, and certainty about future harvest. It would also include infrastructure and support, such as adequate ports, harbors and processing plants; improved transportation/access; exploratory fisheries; fairer distribution of fishing licenses; more visible enforcement staff.

Johnny-Leo Jernsletten described other limits to the economic potential of community economies in the reindeer herding regions on the Finnish-Swedish border. Reindeer herding is an area intensive activity. The most important problem was the loss of pasture land from conflicts with other uses. The complexity of ownership arrangements in the reindeer industry also creates problems for the industry.

Rasmus Ole Rasmussen's presentation examined the pattern of settlement development in Greenland and the characteristics of successful small communities. The Greenland experience over the past 100 years has been centralization of the population; the population in the larger towns has increased while the village population has remained stable. Villages are more reliant on informal and subsistence income than are the residents of towns. Different types of communities have emerged defined by their attachment to commercial fishing. Communities that successfully incorporate commercial fishing have to be able to diversify and react to change

and be innovative and adaptive. Dependent communities are completely attached to outside decisions, and their economic path is outside of their control. Greenland also has communities that are detached from the commercial world; these communities rely on hunting to provide their economic base. A self-sustaining dynamic is defined as a development process able to react to changes due to either natural fluctuations or human change.

Rasmussen's case studies show varying success among these types of communities. Sisimuit is a resource dependent community with good hunting and fishing possibilities that has experienced growth in population and fishing sales. For example, Paamuit is a dependent community where the cod disappeared which resulted in population decline. Finally, Tasiilaq is a detached community with significant hunting activity that has maintained population stability.

Economic Change and Instability in Northern Economies

Workshop presentations about the formal economy were concerned with the economic instability faced by small resource dependent Arctic economies. These markets are controlled by external markets and institutions. This set of relations is descriptive of the industrial economy throughout the north. Economies of the Arctic can be characterized by their small size, their scattered population, remoteness and lack of accessibility, narrow resource base, and a climate that presents special challenges.

Structural features such as these have contributed to the high level of economic instability and economic dependency seen in the Arctic. Economic dependency means domestic economic institutions and decisions are controlled to a significant degree by external actors. The economic structure is one of few sectors with limited relationships between them. Resource use is less flexible than in more advanced economies. Finally, in dependent economies there is a disparity between the structure of domestic demand and domestic resource-use.

Joan Nymand Larsen discussed the association between dependency, economic instability and sustainability in Greenland and the west-Nordic region. In Greenland instability results from concentration on primary export and the lack of diversity. Greenland is economically dependent with limited resource mobility and ability to develop economic substitutes. These characteristics mean there is difficulty minimizing the adverse consequences of economic shocks and disturbances, such as a change in the world price of shrimp.

According to measurements based on the Hirshman-Gini coefficient, geographic and commodity concentration are very high in Greenland. Greenland has a very high export to GDP ratio. Trade consists almost entirely of primary export trade, with fish and fish products making up more than 95% of primary exports. This means that even small shocks or disturbances have large impacts. In Greenland and the Faroe Islands fish exports are highly concentrated, which differs from Iceland where fisheries have become increasingly diversified.

Results from econometric tests suggest that there is an association between primary export trade and economic growth, and that the Greenland economy has been able to reap the positive benefits from primary export trade. The results also suggest, however, that while primary export trade fuels economic growth, it is also associated with economic instability.

Economic instability acts as a dampening force on economic growth. Arctic economies must find more effective ways of responding to unexpected and sporadic instability. Instability that is unexpected may increase with globalization and increased economic openness. The Greenland economy is dependent and lacks flexibility. Developed and highly advanced countries, such as Iceland, tend to have higher degrees of responsiveness and flexibility despite trade dependency and high concentration in exports, which means that there is an ability to minimize the adverse effects of external shocks and disturbances through the utilization of domestic and foreign substitute resources.

Vladimir Didyk made a presentation on the driving forces and obstacles of economic development in the Murmansk region. The Murmansk region (*oblast'* in Russian), according to Russian classification belongs to territories of the "Extreme North". Almost the whole of this territory is situated above the Arctic Circle on the Kola Peninsula. Historically, this region illustrated the perils of economic dependency.

The main characteristic of the economy is the predominance of large-scale natural resource exploitation (extraction and primary processing of non-ferrous and rare metals, iron ore, phosphate, and many other types of minerals, as well as biological resources, especially fish). The region's economic development is connected to such driving forces as the military-strategic reasons for large state investments in physical infrastructure, starting with construction of the railway to Kola Bay during World War I and the use of state force and compulsory

methods to move people from central Russian regions to Kola Peninsula during the Stalin period. Extensive and often inefficient resource extraction in the region during the Soviet period have led to the accelerated depletion of the richest deposits of raw resources and severe environmental damage, as the environmental impacts were not seriously considered at that time.

The 1990s was characterised by major socio-economic and political transformations both in Russia as a whole, and in the Murmansk region. The transition to a market economy was aggravated by the legacy of Soviet development policy, which created important obstacles for further economic development. New challenges for economic development of the region are conditioned by (1) the growing impact of the different factors of globalization, (2) the recent trend to centralization and neglect of regional interests by the central government, (3) predominance of the large-scale corporations controlled from outside the region, which deepened the problem of disparity between the wealth produced by the region and the benefits that remain at its disposal, (4) low living standard among most people and a worsening of the demographic situation due to long-lasting natural and migration decrease of the population.

The regional government has pursued the development of large-scale investment projects related to Arctic oil and gas deposits. However, it is uncertain whether such projects will benefit the local population. Protection of the socio-economic interests of the local population should have higher priority for the regional authorities than economic growth itself. It seems that such priority is does not appear automatically but under the pressure of the institutions of civil society. The latter, however, remain weak in this region. Recent trends to centralization create an obstacle for economic development, in particular the problem of income and profits moving out of the region exists.

Economists view migration as a type of human capital investment with people moving from place to place to make themselves better off. Migration can also be seen as a mechanism for adjusting to limited economic opportunities in some regions. People move from regions of limited economic opportunities to regions with better opportunities. Understanding the factors influencing the migration decision is important for public policy. Migration has consequences for the economies of the places people move to and from affecting the demand and supply of goods and services and the provision of and support for public services. Migration from the region is a pattern found throughout the north in response to limited economic development. Murmansk has witnessed significant out migration. Similarly, Magni Laksafoss showed that Faroese migration has been a way of adjusting to economic cycles.

Lee Huskey described migration as economic adjustment in rural Alaska. In Alaska migration decisions are important to such policy decisions as subsistence rights, transfer payments, village relocation, and resource development. Significant movement of the rural Native population to the state's urban areas and regional centres has been a long run trend. Migration from the high unemployment rural regions can be seen as an adjustment mechanism. Rural Alaska is primarily a Native region. In terms of traditional measures, the rural Alaska economy is in bad shape. Incomes are low and living costs are high. Alaska migration faces a 'Todaro Paradox' which turns the traditional paradox on its head; while out migration from high unemployment rural places occurs, people continue to move into these rural places and migration has not cleared the labour markets.

Migrants in Alaska seem to be younger and single. Migrants from rural Alaska are more likely to be those with limited human capital. Return migrants are more likely to be men and women with relatively high levels of human capital. Relative potential economic welfare matters but the way it influences migration differs by gender and between rural in and out migration. Higher potential earnings increase out migration from rural Alaska. For return migrants (from urban to rural regions) potential earnings are important for females but not males. The key to Alaska's 'Todaro Paradox' may be in this different migration behaviour. Involvement in subsistence activities is likely to be an important part of an explanation. The different response of men and women to rural employment opportunities may also explain the causes of the gender imbalance found in many rural communities.

Long term disruptions of Arctic economies may result from environmental change or the exhaustion of resource deposits. Björn Gunnarsson suggested that environmental change may also produce some economic benefits for the Arctic. He suggested that climate change may result in the opening of the Northern sea-route for shipping. There is climate change going on in the Arctic resulting in an increase in the ice-melt season and the Arctic sea ice melting by about 3% per decade. The Northern Sea Route would provide new sea access to northern economic resources. It would also open a major international trade route. The northern sea route could be competition to the Suez Canal, and provide a new transportation route between European and Asian markets.

Heikki Eskelinen showed the impact of political and institutional changes on the Finnish border economy. The change in political regimes in Russia has diminished the role of the border region in trade between the

countries. Resource exhaustion at sites throughout the north has particular consequences for communities which grew in response to those resource developments.

Chris Southcott discussed the changing role of the social economy in Northern communities in Canada. Recent changes of the economy of Northern resource-dependent communities include “postfordist” restructuring (corporate restructuring, downsizing, new flexible labour relations, and technological changes) and a new role for women. What is the Social Economy? There is no strict agreed upon definition. European Community started promoting it in 1989. The primary purpose of organizations in the social economy is not to obtain a return on capital, rather Social Economy enterprises are created to meet changing social and economic circumstances. They are, by nature, part of a stakeholder economy, whose enterprises are created by and for those with common needs, and accountable to those they are meant to serve. They are generally managed in accordance with the principle of "one member, one vote" and are flexible and innovative. Most are based on voluntary participation, membership, and commitment.

The social economy is replacing the roles previously played by corporations and government, with women playing a dominant role in this sector. Success has been seen with respect to new developments linked to social economy type enterprises. There is evidence of increasing importance of social economy, and that social economy type operations are particularly well-suited to assist sustainability in Northern communities.

Information Technology and the North

Participants of the workshop debated the various challenges and opportunities facing the North. Oulu is an example of a peripheral place that has grown through Information and Communication Technology. The discussion turned to the question of whether the information technology industry can provide an economic base for the north?

Pekka Hautala described the role of social networking in developing technology industry in Oulu. The social networking approach stresses the important function of personal, trust relationships for successful regional development based on agglomerations of innovative firms. The crucial feature of the Oulu region’s success was the significant collaboration and networking between government, university and industry. The strength and the existence of the role of social networking in developing technology and business is hard to identify, but there can be found evidence that supports this view.

In 1966 Oulu University started the department of electrical engineering. The department was an active exponent in encouraging the development of the electronics based industry. The real possibilities in getting a new electronic industry to invest in Northern Finland was the assumption that low labour costs and an educated workforce would attract industry. In 1972 Nokia Plc started the production of U.S. military radio equipment in the Oulu region. Reasons for the location were the university’s active role and the regional policy of Finland, and it was profitable to invest in an underdeveloped area. Nokia started electric production in 1981 with 100 employees, and nowadays it is one of the biggest private employers in the Oulu region (about 4000 employees).

In 1974 the Technical Research Centre of Finland, a large non-profit research institute owned by government, was founded in Oulu as a part of regional policy. It concentrated on developing new mobile technologies. In the early years it was a significant employer of engineers graduating from the department of electrical engineering, which limited the migration of graduated engineers to Southern Finland.

At the beginning of the 1980s, Oulu city became a “city of technology”. In 1982 the first science park in the Nordic countries was established. The science park was a joint project of Oulu city, the university and local businesses. Although it was quite small during its early years, its symbolic value was important, and it provided a concrete form of the intent of becoming a city of technology. The park had strong ties to the university.

The regional policy, the intent of becoming “a technology city”, the foundation of the electric engineering department and the science park, the emergence of Nokia, these were all crucial preconditions to facilitate the growth of the knowledge-based industries in the area during 1990s. In terms of location, the advantages of the location of Oulu has been significant, and national regional policy has supported it because of its periphery location.

Strong investments in human capital and well developed knowledge networks between different actors can compensate for the costs caused by the periphery location. The social networking or innovative milieu approaches provide a plausible explanation of the regional conditions in the area, where collective learning and

innovation is occurring. Strong interactions and synergies stimulate broad imitation and collective learning processes, and regional policy encouraged the formation of sectoral networks and spatial alliances.

The creation of the high tech industry sector in Oulu has not diminished the importance of the resource sector in the region. Ilmo Maenpaa showed that northern Finland continues to depend on forestry and other resource based industries. The Oulu region has become a dual structured economy with primary and secondary economic sectors being more important in the region than in the country as a whole.

Charlie Karlsson's presentation examined whether new technology by lowering transaction costs would help promote regional development in the North. The developments within ICT have resulted in a fast improvement in the quality of ICT hardware and software and a sharp decline in their quality adjusted prices. The spatial effects of the developments within ICT will depend upon; the availability of an infrastructure for electronic connections; the level of services provided (the quantity and speed of information transmitted); the level of ICT use; and the speed of development of new types of services provided by electronic networks. Reductions in geographical transaction costs will affect the location of economic activities and the specialization of regions. The diffusion of ICT will mainly have three types of spatial effects: Effects on the mobility of people and products; effects on the location of households and firms; and effects on the productivity of firms due to differences in the spatial diffusion of ICT and thus in ICT usage.

The rapid diffusion of ICT does not imply the death of distance and that all economic activities will become foot-loose. Large, dense urban regions still offer comparative advantages for economic activities dependent upon face-to-face interaction. Face-to-face interactions tend to become more important in a society increasingly engaged in knowledge generation and exchange. However, ICT makes work at a distance a reality. It is possible to locate information handling activities in small functional regions with a low population density. But, rural and remote functional regions tend to lag behind large functional regions with regard to ICT infrastructure, services and human resources.

Given the existence of cumulative relationships between internal economies of scale, geographical transaction costs and market potentials, there are economic advantages and incentives to concentrate production in the region with the largest home market. Due to high geographical transaction costs the market for, in particular, many services is limited to the own region. By reducing the geographical transaction costs ICT may transform more local commodities to tradables, and thus increase the number of commodities that are traded between regions. Some of these new tradables can be potential export commodities for smaller regions.

The specialisation and growth of regions spring from internal conditions that can be influenced. Regional development policy deals with conditions that mainly must be developed and implemented with specific regional knowledge as a base. Regional development policies must be able to deal with processes that operate at different time scales. Regional development policies must be designed differently for regions of different size. Policies that lead to reduced fixed costs of firms including start-up costs reduces the dependence of the own region's market potential. Developing and marketing regional amenities is crucial for smaller regions to attract skilled labour. Conditions for interregional passenger transport are critical for smaller regions. Technology is not the solution for the North. Technology promotes concentration as well as de-concentration. However, technology offers options for the North. The North must concentrate on developing products with low geographical transaction costs.

Conclusion

The workshop included a discussion of future problems and opportunities in the North. It concluded with a discussion of questions and ideas for future work, which included:

- How do communities prepare for and adapt to change?
- Do we have the tools to do cross cultural economic comparisons?
- What are the causes and consequences of instability?
- Who gains from stability and instability in the North?
- The chicken or the egg: Does improving social welfare lead or follow economic development?
- Who migrates and why? What does this say about well-being?
- How can we obtain appropriate data to do analyses and get answers to the questions raised here?