

The Striking Similarities Between Northern Norway and Northern Sweden

Abstract

Contrary to the view held by many actors, this paper, by using a quantitative and longitudinal analysis in a comparative perspective, show that the demographic development in Northern Norway and Northern Sweden is much more similar than many think. Through the last 60 years there has been a small negative trend in the relative percentage of the national population living in the two regions. The exception is the “knowledge cities” and especially the two university cities, Tromsø and Umeå. Despite Broxian social theories of regional development in Northern Norway and the implementation of a set of generous regional policies there seem to be no cause for claiming a special path for a special Norwegian development in the North compared to Sweden, not in general or for smaller municipalities.

Keywords: Regional policy, Arctic, Northern Norway, University, Municipalities,

1. Introduction

Many politicians¹, scholars² and regional actors proclaim that Norway succeeds extremely well with their regional policy in Northern Norway. Since the mid-1970s Norwegian authorities have implemented generous policies for regional development aimed at keeping a dispersed population in Northern Norway. Of interest in this paper is to assess the reasons behind these different policies and their actual effect on regional development. In 2016 the Norwegian government spent around 12 billion NOK on specific policies aimed at regional development in Northern Norway (Finnmark, Troms and Nordland). In comparison, Sweden through the European Union structural funds, spent around 0.3 billion NOK on regional development in Northern Sweden (Västerbotten and Norrbotten). Norway and Sweden share a multitude of common social, cultural and political factors, making a comparison as most similar case design, a fruitful methodological approach.

The idea of an own path for Northern Norway can be rooted in the ideas of Ottar Brox³. His early work on Northern Norway has been selected as one of the most important nonfiction work in Norway since 1945⁴ and has heavily influenced much of the policymaking in Northern Norway, which have resulted to some important differences in policies implemented for regional development and keeping a dispersed settlement in the north. There are many structural similarities between Northern Sweden and Northern Norway and also regarding regional policies there are important similarities like the establishment of universities in the North and a very similar welfare system where the municipality level is the main provider for a universal welfare system.

However, there are also some important differences in regional policies and according to Broxian theories, these differences should lead to a more positive development in Northern Norway. First, Norway has chosen to stay outside the European Union twice (1972 and 1994). A major factor for voters was to maintain the national sovereignty over the policies for regional development⁵. Second, Norway has implemented regional policies including regionally differentiated payroll tax on employees, an extra contribution for municipalities in

¹ Kjell Werner, "Helga Satser På by Og Land," *FriFagbevegelse*, <https://frifagbevegelse.no/article-6.158.52638.bdb95fa104>.

² Ottar Brox, *Hva Skjer I Nord-Norge?* (Pax Forl., 1969).

³ *Ibid.*; *Nord-Norge: Fra Allmenning Til Koloni* (Universitetsforlaget, 1984).

⁴ Morten Strøksnes, "Nordlands Profet," *Dagbladet*, 30.07. 2008.

⁵ Henry Valen, "Norway: 'No' to Eec," *Scandinavian Political Studies* 8, no. A8 (1973).

Northern Norway⁶ and individual level tax cuts for people living in the special zone. Third, Norway has also chosen to maintain a municipality structure with a large number of small municipalities compared to Sweden. These differences have lead Norwegian politicians, like two former ministers Trygve Slagsvold Vedum⁷ and Helga Pedersen⁸ to claim that Norwegian regional policies have been much more successful in keeping a dispersed population structure than their neighboring countries, especially in the High North. The question is; is there a cause for claiming a special path for Northern Norway compared to Northern Sweden?

Even though the Broxian theories have had massive importance theoretically and politically, they have not been tested empirically. This paper will argue that a quantitative comparison between Northern Norway and Northern Sweden does not bring any arguments for a special Norwegian development path in the Arctic region. On the contrary the similarities between the two regions are striking. First I will review the theoretical and empirical arguments for the Norwegian regional policies and alternative theories for regional development. Afterward I will account for the quantitative methodological approach. Finally, the empirical results will be analyzed and discussed.

2. Theoretical framework

2.1 Center-peripheral relationship in the North and opposition to EU membership

Both Northern Norway and Northern Sweden is located in what Stein Rokkan⁹ would describe as a center-peripheral relationship, which is important to understand policy development. Combining the organizational decision system of Hirschman¹⁰ and Talcott Parson's paradigm for functional differentiation within states¹¹, Rokkan provides a general and theoretical model for solving the relationship between the center and the territorial periphery within the state. The theoretical salience of the center-periphery axis is that the existence of a political center logically presupposes a periphery – and vice versa. The two are interdependent.

⁶ Erik Oddvar Eriksen, "Det Nye Nord-Norge: Avhengighet Og Modernisering I Nord," in *Avhengighet Og Modernisering I Nord*, ed. Erik Oddvar Eriksen (Bergen: Fagbokforlaget, 1996).

⁷ Trygve Slagsvold Vedum, "Sentraliseringen Er Blåkopi," *Nationen*, 12.08.2015 2015.

⁸ Werner, "Helga Satser På by Og Land".

⁹ Stein Rokkan, *Stat, Nasjon, Klasse* (Oslo: Universitetsforlaget, 1987); *State Formation, Nation-Building, and Mass Politics in Europe: The Theory of Stein Rokkan: Based on His Collected Works* (Clarendon Press, 1999); Stein Rokkan and Derek W Urwin, *Economy, Territory, Identity: Politics of West European Peripheries* (Sage Publications, 1983).

¹⁰ Albert Hirschman, "Exit, Voice, and Loyalty," *Cambridge, MA: Harvard University Press* 1 (1970).

¹¹ Talcott Parsons, "On the Concept of Political Power," *Proceedings of the American Philosophical Society* 107, no. 3 (1963).

Because any collective distinction may serve as the underpinning for political mobilization¹² differing historiographies may create territorially different political identities. Hence, political actors that perceive themselves as representatives of “peripheries” tend to nurture the idea that different identities linked to territories have developed over time. Some geographical identity is thus an asset in the regional political mobilization against the state’s centralizing efforts. Whether regional actors choose and succeed in mobilizing on a territorial basis will largely depend on the status of the region vis-à-vis the state during the various phases in the modernization process. Throughout the nation-building process, the periphery is left with three choices that regional actors can mobilize upon; *exit, voice or loyalty*.

Exit by creating a more or less independent regional state has never been a real option in either Northern Norway or Northern Sweden. However, through either the use of protest (*voice*) or making deals with the central government (*loyalty*) some regional concessions have been made, especially in Norway. The reasons for regional policies have to be understood in a central-peripheral relationship. Receiving concessions could however turn out to be a double-edged sword. Departing from the Wilsonian concept of *Clientelism*¹³, Eriksen develops the notion of state dependency; the region in a clientele position towards the central government, and adopt a clientelist perspective. This perspective confines the regional actors’ scope for alternative political actions, and instead, their only focus is on existing programs and subsidies as the only possible way forward¹⁴.

Northern Norway was by Rokkan and by other scholars identified as a peripheral region considered as backward and less development by central authorities¹⁵. Norway implemented some regional policies throughout the post-war era, to stimulate regional development in Northern Norway. In the early 1950s the Labor Party government created a development plan for Northern Norway based on industrialization and macro-economic principles¹⁶. These principles for social and economic development were later challenged by the theories of Ottar

¹² Giovanni Sartori, "The Sociology of Parties," in *The West European Party System*, ed. Peter Mair (Oxford University Press on Demand, 1990).

¹³ James Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (Basic Books, 1989).

¹⁴ Eriksen, "Det Nye Nord-Norge: Avhengighet Og Modernisering I Nord."

¹⁵ O. Grønaas, J. Halvorsen, and L. Torgersen, "Problemet Nord-Norge," *Studieselskapet for nordnorsk næringsliv*. (1948).

¹⁶ Kjell Arne Røvik, Jens-Ivar Nergård, and Svein Jentoft, *Hvor Går Nord-Norge?* (Stamsund: Orkana akademisk, 2011).

Brox¹⁷ emphasizing the relative wealth of the agriculturist/fishermen-life in the rural parts of Northern Norway, the so-called *fisher-farmer* making choosing life in small peripheral communities a rational choice for people. Due to the Norwegian geography with a long coastal line, the fisher-farmer could live in small rural villages and live mostly by harvesting from nature. He could stay self-supplied outside monetary economy. According to Brox the relative wealth of the fisher-farmer was the reason that people did not move to industrial cities and chose to live in the rural settlement. This combination was unique for the coastal areas of Northern Norway and was the basis for the idea of a special way for Northern Norway where urbanization and industrialization were not seen as a necessity, but something that could be rejected by the people. Implicit in the Broxian theories we find that given a choice, people would choose the rural life and reject urbanization and industrialization.

The Broxian theories have had a major impact on political development in Norway regarding ecological awareness and as a counter-power to industrialization, globalization¹⁸ primarily associated with the powerful Labor party pictured as a one-party state¹⁹. They also contributed as a theoretical framework for the radical left in the 1970s and the mobilization of the winning coalition against Norwegian membership in the EEC in 1972 and the policies of the Labor Party for rural development²⁰. A coalition combining urban radical left and peripheral interest of farmers and fishers²¹. In the Norwegian referendums about EEC membership in 1972 and 1994, the opposition has been particularly strong in peripheral areas and particularly in Northern Norway. Without the no-votes in Northern Norway (Nordland, Troms, and Finnmark) there would have been the small majority (50.2 percent) in the rest of the country for Norwegian EU membership in 1994. In Northern Sweden (Västerbotten and Norrbotten) we find the same pattern for opposition against joining the European Union. In the EU referendum in 1994, 64 percent of the voters in Northern Sweden voted against joining the EU²² and 72 percent of the voters in Northern Norway voted against in the Norwegian referendum²³. The main difference however was the outcome of the national

¹⁷ Brox, *Hva Skjer I Nord-Norge?*

¹⁸ Nik Brandal, Øivind Bratberg, and D Thorsen, *The Nordic Model of Social Democracy* (Springer, 2013).

¹⁹ Rune Slagstad, *De Nasjonale Strateger* (Pax, 1998).

²⁰ Bjørn Hersoug and Dag Leonardsen, "Bygger De Landet," *Pax forlag, Oslo* (1979).

²¹ Valen, "Norway: 'No' to Eec."

²² European Election Database, "Election Results, Sweden: Referendum on the Accession to the European Union, 1994," (2018).

²³ "Norway: Referendum on the Accession to the European Union 1994," (2018).

referendum. A majority of the Swedish voters opted for joining the EU, but Norway stayed outside.

2.2 Differentiated tax roll and other subsidies

In the aftermath of the Norwegian EEC referendum in 1972, when a periphery-lead opposition against Norwegian membership won the referendum, the Labor party fighting pro-EEC lost heavily in the next general election, especially in the periphery. Subsequently, the Labor party changed its rhetoric and goals for regional development. When the Labor party regained strength in the 1977 parliamentary election, they did so with a broader alliance with peripheral regions and changed the official Norwegian policy to “maintain the fundamental features of the population distribution”²⁴. As shown by Cruickshank²⁵ this goal has won hegemony in Norwegian society.

From the 1970s national governments has created various policies to stimulate growth in peripheral areas, especially in Northern Norway. For business development, the most important was the introduction of the Regional differentiated payroll taxes (RDP) measure in 1975, based on a series of theoretical studies that discussed the market failures of the regional labor markets²⁶. Employers in Norway are charged a payroll tax, which differs between five geographical zones. The highest rate of 14.1 percent is charged in zone 1 where around 80 percent of the population resides. In the other zones the rate decreases according to remoteness. In the northernmost regions (Finnmark and Northern Troms) the rate is zero percent. The total national cost for the RDP is estimated to 13.3 billion NOK in 2016²⁷, and approximately 8 billion NOK for businesses located in Northern Norway. Regional governments and Innovation Norway have also received money to stimulate regional and business development in Norway. In 2016, one-third of all funds for regional development (370 million NOK) went to counties in Northern Norway, despite only 9 percent of the national population living in the region.

²⁴ Håvard Teigen, "Distriktpolitikens Historie: Frå Nasjonal Strategi Til Regional Fragmentering?," *Plan* 43, no. 06 (2011).

²⁵ Jørn Cruickshank, "Protest against Centralisation in Norway: The Evolvement of the Goal for Maintaining a Dispersed Settlement Pattern," *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography* 60, no. 3 (2006).

²⁶ Arild Hervik and Mette Rye, "An Empirical and Theoretical Perspective on Regional Differentiated Payroll Taxes in Norway," (2003).

²⁷ http://www.statsbudsjettet.no/upload/Statsbudsjett_2017/dokumenter/pdf/skatt.pdf

There is also an extra contribution for municipalities in Northern Norway. The revenue system for Norwegian municipalities is complicated, but the special treatment of Northern Norway is obvious, and the contribution per capita is much higher than for peripheral municipalities in the southern part. The total sum of the extra contribution (Nord-Norge tilskot) was in 2017 around 1.57 billion NOK²⁸. Table 1 displays the net contribution per capita in areas in Northern Norway, compared internally and externally with peripheral areas in the south.

Insert Table 1

A variety of other subsidies on the individual level has also been implemented, such as lower energy taxes that apply only to Northern Norway. Through the creation of the special zone in 1990 for municipalities in Finnmark and Northern Troms in 1990, people living in the municipalities receive lower income taxes, extra childcare support (until 2014) and reduction of student loans. The total sum of the individual level incentives for living in the special zone is about 1 billion NOK according to the national budget for 2017. In addition to these major policies, there are also other special arrangements for Northern Norway in smaller policy areas, such as culture, sports and higher education.

The total sum of regional policies mainly aimed at promoting living in Northern Norway was around 12 billion NOK in 2017. All these policies have been implemented from the 1970s until the latest ones in 1990. Even though there are some differences, they could be categorized as exogenous growth policies, designed to use fiscal incentives to creating growth in lagging areas²⁹.

Sweden on the other hand has since joining the EU conducted most of their regional policy through the European regional policy. Even though this policy has varied a bit, the northernmost areas of Sweden have been defined as a part of the European cohesion policy since Sweden joined the EU. From 2014 to 2020, €207 million is allocated to the Northern

²⁸ Government of Norway, "Tilskuddsbrev Til Fylkeskommuneen 2016 Programkategori 13.50 Post 60," ed. Ministry of Local Government and Modernisation (2016).

²⁹ Iain Begg, Barry Moore, and John Rhodes, "Economic and Social Change in Urban Britain and the Inner Cities," *Critical issues in urban economic development* 1 (1986).

Sparsely Populated Areas³⁰, meaning an annual contribution for regional policies in Northern Sweden around 0.3 billion NOK. Even though there are some transfers in the municipality revenue system, the contribution for regional policy is very small compared to the 12 billion NOK used in Norway.

2.3 Municipality structure

The second major policy difference between the Scandinavian Arctic regions is the municipality structure. Sweden conducted a major municipal reform in the 1960s and 1970s reducing the number of municipalities from around 2000 to 290. The motivation behind the reform was to make the municipalities capable of producing the necessary services in the new social democratic welfare state³¹. Francesco Kjellberg describes it as one of the comprehensive political reforms in western democracies³², leading to a very different municipality structure in Northern Norway and Northern Sweden (see table 2), even though Norway made a smaller reform in the mid-1960s reducing from around 750 municipalities to around 450 municipalities.

Insert Table 2

There are theoretical arguments for claiming that smaller jurisdictions lead to more satisfied citizens³³, and hence people will be expected not to move. The political economy literature postulates that citizens are more satisfied with smaller jurisdictions because they are more efficient, homogeneous, and democratic³⁴. The perspective argues that local governments offer some benefits that citizens appreciate: they facilitate local adaptations and variations, facilitate citizen influence and participation, and facilitate coordination efficiency.

³⁰ European Commission, "Cohesion Policy and Sweden,"

http://ec.europa.eu/regional_policy/en/information/publications/factsheets/2014/cohesion-policy-and-sweden.

³¹ Lars Strömberg and Jörgen Westerståhl, "De Nya Kommunerna," i *Strömberg, Lars & Jörgen Westerståhl (red), De nya kommunerna. En sammanfattning av den kommunaldemokratiska forskningsgruppens undersökningar. Stockholm: Liber Förlag (1983).*

³² Francesco Kjellberg, "Local Government and the Welfare State: Reorganization in Scandinavia," *I Dente, B. & Kjellberg, F.(red.) The Dynamics of Institutional Change. Local Government Reorganisation in Western Democracies. London: Sage Publications (1988).*

³³ Charles M Tiebout, "A Pure Theory of Local Expenditures," *Journal of political economy* 64, no. 5 (1956).

³⁴ Poul Erik Mouritzen, "City Size and Citizens' Satisfaction: Two Competing Theories Revisited," *European Journal of Political Research* 17, no. 6 (1989); Wallace E Oates, "Fiscal Federalism," *Books (2011)*; Tiebout, "A Pure Theory of Local Expenditures."; Harold Wolman, "Decentralization: What It Is and Why We Should Care," *Decentralization, Local Governments, and Markets (1990).*

Decentralized governments are said to be flexible and to have great ability to adapt to changing circumstances³⁵.

These theoretical assumptions about the importance of small municipalities where the needs and desires of the rural population are emphasized are echoed in the work of Ottar Brox on Northern Norway³⁶. He claims that it is vital to enable local communities to generate population growth. To achieve this goal the problems need to be solved within homogenous local communities, and not like in the development plan for Northern Norway, within regional structures that mixed expansion areas with sparsely populated areas³⁷. According to Brox the success of Northern Norway, compared to Sweden and Scotland, was due to the combination a large degree of self-determination within smaller local communities and a strong influence from actors in the primary industries on the policymaking.

The regional economic policy with tax breaks and subsidies have to be separated from the question of municipality structure. However, Broxian theories about the salience of small municipalities and national self-determination over primary industries (because of opting out of EU) point to the same direction. They all assume that smaller Northern Norwegian municipalities should have a more positive demographic development in comparison to Northern Sweden. Deriving from the sections above, there are arguments for the hypothesis.

H1: The demographic development have been stronger in smaller municipalities in Northern Norway than in Northern Sweden since 1975

2.4 Urbanization, higher education and general theories of development

Enterprise zone programs, with tax incentives for businesses to promote growth in lagging regions, have been politically popular for decades. Some studies³⁸ find a positive effect of

³⁵ Gordon L Clark, "A Theory of Local Autonomy," *Annals of the Association of American Geographers* 74, no. 2 (1984); Michael Goldsmith and Edward Page, *Central and Local Government Relations: A Comparative Analysis of West European Unitary States* (Sage London, 1987); David Osborne and Ted Gaebler, "Reinventing Government: How the Entrepreneurial Spirit Is Transforming Government," *Reading Mass. Adison Wesley Public Comp* (1992); Lawrence J Sharpe, "Local Government Reorganization: General Theory and Uk Practice," *The Dynamics of Institutional Change* (1988).

³⁶ Brox, *Hva Skjer I Nord-Norge?*

³⁷ *Ibid.*, 129

³⁸ Stephen Billings, "Do Enterprise Zones Work? An Analysis at the Borders," *Public Finance Review* 37, no. 1 (2009); Suzanne O'Keefe, "Job Creation in California's Enterprise Zones: A Comparison Using a Propensity Score Matching Model," *Journal of Urban Economics* 55, no. 1 (2004).

Special Economic Zones. More recent studies³⁹ show that tax incentivized enterprise zones are not as effective and do not increase employment. Porter⁴⁰ has emphasized an alternative endogenous approach for regional development, where the need for building and creating localized clusters for economic activity, rather than simply relying on temporary tax breaks or fiscal stimulus packages for attracting exogenous investment, is seen as an alternative strategy for regional development. New Economic Geography theories⁴¹ focus on core economic agglomerations and urban regions so-called “spatial spikes” as dominant factors for regional development. Richard Florida⁴² has emphasized the role of the cities and the creative class as engines for regional and urban development. Mellander and Florida have analyzed the role of the creative class in Sweden, but mainly focused on larger cities in the southern part⁴³.

The establishment of universities also plays a significant role in the production of talent and for development of growing cities⁴⁴. Norway and Sweden are examples of two countries that have funded, on a national scale, higher education institutions in remote and outlying regions to ensure a place for those remote regions in the modern economy. There are case studies in both Norway⁴⁵ and Sweden⁴⁶ about the regional effect of the establishment of universities in the North. It also has to be underlined that the establishment of the universities in Tromsø and Umeå, was not an arbitrary decision. The creation of universities in the North was a choice by national authorities to make higher education available for more people, but also to develop the northernmost regions, first in Sweden and then in Norway⁴⁷. Based on endogenous growth theories emphasizing the role of knowledge cities and urbanization, it is possible to launch a second hypothesis (H2), which does not exclude H1.

³⁹ David Neumark and Jed Kolko, "Do Enterprise Zones Create Jobs? Evidence from California's Enterprise Zone Program," *ibid.* 68 (2010); Susanne A Frick, Andrés Rodríguez-Pose, and Michael Wong, "Towards Economically Dynamic Special Economic Zones in Emerging Countries," (Utrecht University, Department of Human Geography and Spatial Planning, Group Economic Geography, 2018).

⁴⁰ Michael E Porter, "Location, Competition, and Economic Development: Local Clusters in a Global Economy," *Economic development quarterly* 14, no. 1 (2000).

⁴¹ Steven Brakman, Harry Garretsen, and Charles Van Marrewijk, *The New Introduction to Geographical Economics* (Cambridge University Press, 2009).

⁴² Richard Florida, *Cities and the Creative Class* (Routledge, 2005).

⁴³ Charlotta Mellander and Richard Florida, "Creativity, Talent, and Regional Wages in Sweden," *The Annals of Regional Science* 46, no. 3 (2011).

⁴⁴ Peter Arbo and Paul Benneworth, "Understanding the Regional Contribution of Higher Education Institutions: A Literature Review," *OECD Education Working Papers*, no. 9 (2007).

⁴⁵ Narve Fulsås, *Universitetet I Tromsø 25 År* (Universitetet i Tromsø, 1993); Peter Arbo, "Universitetet Som Regional Utviklingsaktør," in *Hvor Går Nord-Norge? Tidsbilder Fra En Landsdel I Forandring*, ed. Svein Jentoft, Jens-Ivar Nergård, and Kjell Arne Røvik (Stamsund: Orkana Akademisk, 2011).

⁴⁶ Björn Olsson and Ulf Wiberg, *Universitetet Och Den Regionala Utmaningen* (SISTER, Bokförlaget nya Doxa, 2003).

⁴⁷ Lars Elenius et al., *The Barents Region: A Transnational History of Subarctic Northern Europe* (Oslo: Pax Forlag, 2015).

H2: The demographic development has been stronger in university cities in Northern Norway and Northern Sweden compared to other cities in the region

Finally it is worth bearing in mind that the Scandinavian welfare model may hold a strong explanatory power for a more similar development. Esping-Andersen has advanced the importance of the Nordic welfare model⁴⁸ for a more socially and regionally equal development. In countries like the Nordic countries with high taxation, universal welfare system and centralized wage bargaining system public goods like kindergarten, education, social services and unemployment benefits are equally distributed through a welfare system where social rights are secured by national laws on an individual level regardless of the place of residence. These large universal fundamentals of the Nordic welfare state is essential for explaining why people would live in small rural areas in the Scandinavian Arctic region. Universal welfare goods are guaranteed regardless of municipality size. As an example of this so-called “Spatial Keynesianism”, a governmental increase in the expenditure on unemployment benefits, when unemployment is distributed unevenly between regions, would cause channeling of resources from richer regions to lagging regions. The welfare state is not only a social stabilizer, but also a regional stabilizer⁴⁹. In this comparative analysis the welfare system may be an important counter-theory for explaining the relatively small effect of regional policies.

3. Methodology

Although there are perfectly valid arguments for single case studies, there is a tendency for too many of them especially when concerning historical analyses. Kjeldstadli⁵⁰ has argued that historical studies could learn from systematic social sciences where the comparative method is essential for analyses. On the development of the Arctic region there are very few comparative analyses, although the recent work of Elenius et al⁵¹ is an important step in the comparative direction.

⁴⁸ Gosta Esping-Andersen, *The Three Worlds of Welfare Capitalism* (John Wiley & Sons, 2013).

⁴⁹ Harvey Armstrong and Jim Taylor, *Regional Economics and Policy (3rd Edition)* (Oxford: Blackwell, 2000).

⁵⁰ Knut Kjeldstadli, "Nytten Av Å Sammenlikne," *Tidsskrift for samfunnsforskning* 29, no. 5 (1988).

⁵¹ Elenius et al., *The Barents Region: A Transnational History of Subarctic Northern Europe*.

The comparative method is not a simple method because it is by no means easy to identify comparable cases⁵². By taking the approach of Teune and Przeworski⁵³ it is possible to apply the method that they call “most similar systems” design⁵⁴. Meaning finding two cases that which are the most similar to all independent variables except one crucial variable, and then find out if the dependent variable varies between the two cases. For the Arctic region, this is Northern Norway and Northern Sweden.

Comparative analysis in social sciences between Scandinavian countries is far from new⁵⁵. However there have been few analyses on a regional level, a phenomenon might be caused by what Rokkan⁵⁶ has describes as the “whole-nation bias”. Traditionally it has been relatively easy to obtain data about nations compared to subnational units and private associations. Northern Norway and Northern Sweden are both geographically located at the same latitude compared to a rather large capital in the south, with a rather difficult infrastructure system on the North-South axis. The settlement structure in the early 20th century was quite similar, although with some differences in scale. Both countries are protestant countries with a State church and in the 20th century a growing Social Democratic Party, especially in the North⁵⁷, and the development of a strong welfare state. The northern parts of Norway and Sweden also share numerous social, cultural and religious characteristics and despite a large homogenous majority culture, they both have small indigenous Sami communities. There are much more that unites these two regions than separate them.

Population growth can be seen as an indicator of regional development⁵⁸. Even though there are more variables to measure regional development, population growth is a proxy variable for development used in this paper, especially since the explicit settlement goal for

⁵² Arend Lijphart, "Ii. The Comparable-Cases Strategy in Comparative Research," *Comparative political studies* 8, no. 2 (1975).

⁵³ Henry Teune and Adam Przeworski, *The Logic of Comparative Social Inquiry* (New York: Wiley-Interscience, 1970).

⁵⁴ See Alexander L George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (mit Press, 2005). For a broader discussion of various names on comparative analysis

⁵⁵ Herbert Hendin, "Suicide and Scandinavia," (1964); Kaare Svalastoga, *Prestige, Class, and Mobility* (Scandinavian University Books, 1959); Arthur H Miller and Ola Listhaug, "Political Parties and Confidence in Government: A Comparison of Norway, Sweden and the United States," *British Journal of Political Science* 20, no. 3 (1990).

⁵⁶ Stein Rokkan, *Citizens, Elections, Parties: Approaches to the Comparative Study of the Processes of Development* (ECPR Press, 2009).

⁵⁷ Anders Lidström, "Socialdemokraternas Tillbakagång 1973-2014 : Strukturella Förklaringar Och Regionala Variationer," in *Forskningsrapporter i statsvetenskap vid Umeå universitet* (Umeå: Umeå universitet, 2018).

⁵⁸ Kristina Vaarst Andersen et al., "Nordic City Regions in the Creative Class Debate—Putting the Creative Class Thesis to a Test," *Industry and Innovation* 17, no. 2 (2010).

Norwegian policymakers to maintain the population distribution. Population growth can be measured in absolute growth rate or relative growth rate. The relative growth rate is often more interesting than the absolute growth rate, especially when comparing two regions in two different countries. The relative growth controls for large national trends that can inflict one of the two countries.

To assess our hypothesis about the population development I have used registry data from the municipality level collected mainly by Statistics Norway and Statistics Sweden. The hierarchical data-structure allows comparative analyses of regions at a variety of regional levels, as well as state-level comparison. To keep the unit of analysis constant throughout the period the unit of analysis is the municipality structure of 2013. The dependent variable is defined as a change variable. So for every municipality we have;

$$\text{Change}_t = \text{percentage of national population}_t - \text{percentage of national population}_{t-1}. \quad (1)$$

Even after redefining our dependent variable as a change variable there is still important autocorrelation in the variance of the models. To deal with this problem all the models have their error term corrected with an AR1 structure, which more or less removes the autocorrelation⁵⁹. The models are defined as a panel data analysis. In all models the variable *Year* has a random slope for each municipality. There are 116 municipalities based on 64 yearly observations (1952-2015), so the total number of observations is 7 424. It means that every year *t* is nested within *i* municipalities. The baseline model (model 0) is defined as:

$$\text{Level 1: } \gamma \text{change}_{ti} = \pi_{0i} + \pi_{1i} \text{trend}_{ti} + e_{ti}$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + u_{0i}$$

$$\pi_{1i} \text{trend}_{ti} = \beta_{10} + u_{1i}$$

Afterward new models are built by adding new independent variables. In model 1 there is modulated an interaction term for the period 1975-2015 to see if there is any significant change for Norwegian municipalities after the implementation of new regional policy and the decision of not joining the EU. In model 2 the municipalities are analyzed based on their population size in 1975 (see table 3), as to see if there is any difference within categories and

⁵⁹ Autocorrelation for first lag is -0.06 in the last model

to analyze if the effect of Norwegian regional policies is different on various types of municipalities⁶⁰.

Insert Table 3

Finally in model 3 we are assessing the effects of higher education by creating two dummy variables, one for universities (Tromsø and Umeå) and another one for university colleges based on the year the institutions were created in these municipalities⁶¹. To compare different models, all models are estimated by maximum likelihood procedure (ML). They have also been run with restricted maximum likelihood procedure (REML) showing the same results.

4. Results

4.1 Descriptive statistics

In figure 1 we see the demographic development in the four categories based on smoothed trend lines. Especially after 1975 we find some striking similarities.

Insert Figure 1

The similar demographic decline seen in figure 1, can also be seen in figure 2, where the demographic development in the three respectively largest municipalities in Northern Norway and Northern Sweden is shown in a longitudinal perspective.

Insert Figure 2

4.2 Regression models

Insert Table 4

All models are specified with *Year* as a random slope for each municipality. In model 0 there is a small significant negative trend for all municipalities throughout the period. In model 1 this effect is no longer significant when controlling for the interaction in 1975. Here the

⁶⁰ The models have also been run with $\log(1975\text{-population})$ as an independent variable. The results are the same as in the reported models with almost the same level of AIC

⁶¹ Tromsø (1968), Umeå (1965), Bodø (1971), Luleå (1971), Alta (1973), Nesna (1918), Harstad (1994), Kautokeino (1989), Narvik (1994)

interaction term for Norway is extremely close to zero and not significant. In model 2 the category with the largest municipalities is used as a baseline. There is a negative effect for all the other municipalities compared to the reference category. The interaction between Norway and the other categories of municipalities is significantly negative with a coefficient of -0.004 to -0.005. However, the total difference between Norway and Sweden is zero due to the dummy variable “Norway” which is significantly positive of 0.005. This means that the demographic development between all the categories, albeit the largest, is very similar between Northern Norway and Northern Sweden. The relative success of the largest Norwegian municipalities may also be because they are so few (only 3) compared to the 7 in Sweden.

Finally in our last model we test our *H2* and find a relatively large positive effect of having a university and a smaller one, but still significantly positive, for having a University City college. The “knowledge cities” have a more positive development than other municipalities. Even though the coefficient is changed in model 3 compared to model 2, the pattern is the same with regards to the relationship between the interaction term with population category and Norway. All models show a decreasing AIC and BIC throughout the model building, hence showing that model 3 is the best statistical fit for describing the demographic development in municipalities in Northern Norway and Northern Sweden from 1952 to 2015.

5. Discussion

The regression models in Table 4 reject *H1*. There is no case for arguing that the demographic development in smaller municipalities in Northern Norway has been more positive than the demographic development in Northern Sweden. The combination of the theoretical framework of Brox⁶², the implementation of generous regional policy and most importantly the fact that a larger percentage of the national population are living in Northern Norway than in Northern Sweden, makes it understandable why people claim the successful effect of regional policies. Confirmation bias and the notion of state dependency⁶³ could lead politicians⁶⁴ and scholars⁶⁵ towards the narrative of a Norwegian success when analyzing regional policy. The error may also occur because people think cross-sectional, instead of

⁶² Brox, *Hva Skjer I Nord-Norge?*

⁶³ Eriksen, "Det Nye Nord-Norge: Avhengighet Og Modernisering I Nord."

⁶⁴ Werner, "Helga Satsen På by Og Land"; Vedum, "Sentraliseringen Er Blåkopi."

⁶⁵ Paul Pedersen, "Personrettede Tiltak Som Distriktpolitiske Virkemiddel I Nord-Troms Og Finnmark Etter År 2000," in *Hvor Går Nord-Norge? Bind 3*, ed. Svein Jentoft, Jens-Ivar Nergård, and Kjell Arne Røvik (Stamsund: Orkana akademisk, 2013).

longitudinal, when analyzing social development. Most of Norwegian political science and sociology, especially in the 20th century, were mainly using cross-sectional analyses instead of longitudinal analyses⁶⁶. Finally, as mentioned earlier, the literature seems to be somewhat short of comparative regional studies.

The analysis also shows that not all policies for regional development have been in vain. In both countries policies that have significant local and regional impact is not always considered as a policy for spatial redistribution, but more as a policy for social redistribution in the Nordic welfare state⁶⁷. Public goods like kindergarten, education, social services and unemployment benefits are equally spatially distributed through a welfare system. Also in small rural communities citizens are secured a functioning welfare system and there are jobs (teachers, nurses etc) required for welfare production, in the local municipality. Another example is the effect of the national decision to create universities in Tromsø and Umeå to promote social equality by offering higher education for young Norwegians and Swedes. This also has a strong regional effect. Derived from this, *H2* suggesting a more positive development in the university cities is confirmed.

Instead of finding a special path of Norwegian regional development in the North, I find that Northern Norway and Northern Sweden have experienced a strikingly similar development over the last 65 years. First, there is a larger trend where the majority of the municipalities (105 out of 116) have a negative relative growth in the period 1952-2015. In both countries universities were established in the 1960s and 1970s within a social egalitarianism framework to expand the possibilities for higher education, to develop the Northern regions⁶⁸ and to meet the need for especially highly trained personnel in the expanding health services and welfare services in the north⁶⁹. As seen in the regression model (Table 4) and figure 2, the population development between these two university cities Tromsø and Umeå is very similar. The “knowledge cities” seem to be the winners also in the Scandinavian North. There is no doubt that the establishment and increased financing of higher education in the Northern region has been a key policy for national policymakers. When national authorities realized that it was not

⁶⁶ Tor Midtbø, "Et Spørsmål Om Tid: Tidsserieanalyse Som Et Verktøy I Samfunnsvitenskapen," *Tidsskrift for samfunnsforskning* 41, no. 4 (2000).

⁶⁷ Esping-Andersen, *The Three Worlds of Welfare Capitalism*.

⁶⁸ Elenius et al., *The Barents Region: A Transnational History of Subarctic Northern Europe*.

⁶⁹ Fulsås, *Universitetet I Tromsø 25 År*; Olsson and Wiberg, *Universitetet Och Den Regionala Utmaningen*; Arbo, "Universitetet Som Regional Utviklingsaktør."

enough capacity in the existing universities in Oslo and Bergen, they decided to meet the expanding need for higher education through the establishment of new universities, despite strong concerns from the existing research communities⁷⁰. Inspired by the establishment of the University of Umeå, the University of Tromsø was also established to promote regional development. Decisions made and to be understood as a part of the central-peripheral conflict in Norwegian politics⁷¹.

Second, there are also strong similarities in the relative development between Bodø and Luleå, where national authorities established university colleges in the 1970s, partly as a regional investment in industrial activity in the northern part of the country⁷². The relative success of Tromsø and Bodø (see figure 2) also explain why the average growth in the largest municipalities in Northern Norway is so much higher (see figure 1).

Third, the relative decline in the old industrial cities in the High North, especially after 1975, is also striking. Somehow their decline challenges the viewpoint that urbanization is the driving force behind the demographic changes. Until the early 1970s Skellefteå was the largest city in Northern Sweden, but now it has been surpassed by Umeå and Luleå. In Northern Norway, Rana's share of the national population has declined since 1970, but a smaller city like Alta, where there also is a university college, has increased.

Deindustrialization that has marked Western Europe the last 40 years also asserts Arctic Scandinavia.

Fourth, as seen in the regression models and in figure 1, the development after 1975 is very similar for the smallest municipalities, smaller municipalities and medium-sized municipalities, regardless of their country. A slow but consistent decline throughout the last 40 years, as assumed by theories of "knowledge cities"⁷³, urbanization and New Economic Geography⁷⁴. Tiebout⁷⁵ has used the expression "foot voting" to describe how people when they have the freedom to move, choose the community whose local government best satisfies his set of preferences. The comparison between Northern Norway and Northern Sweden show

⁷⁰ Fulsås, *Universitetet I Tromsø 25 År*.

⁷¹ Rokkan, *Stat, Nasjon, Klasse*.

⁷² Elenius et al., *The Barents Region: A Transnational History of Subarctic Northern Europe*.

⁷³ Florida, *Cities and the Creative Class*.

⁷⁴ Brakman, Garretsen, and Van Marrewijk, *The New Introduction to Geographical Economics*.

⁷⁵ Tiebout, "A Pure Theory of Local Expenditures."

that is not a large variety of tailor-made arrangement in small municipalities, but some more general urban qualities that people in Arctic Scandinavia chose when they have the choice. Not the rural life envisaged by Brox⁷⁶.

⁷⁶ Brox, *Hva Skjer I Nord-Norge?*

6. Conclusion

When analyzing the long lines of demographic development in Arctic Scandinavia the last 60 years it is striking how similar the development is between Northern Norway and Northern Sweden. Despite adopting an expansive regional policy inspired by Broxian theories of growth in smaller municipalities, there is no significant effect of these policies regarding demographic development. The larger trend in both countries is that the population in the North is declining at approximately the same relative speed compared to the rest of the nation.

This said, some regionally based policies, like the establishment of universities in the North seem to have had a positive effect on the development. “Knowledge cities” are the drivers for demographic development in Arctic Scandinavia. There is a positive effect in Norway and Sweden not only of university cities, but also university colleges.

This study has only focused on the two most similar regions in the Arctic, because of the desire to analyze the specific effect of policies conducted towards Northern Norway. A broader comparative analysis of the whole Arctic region could be a path for further study. Applying a mixed-methodological approach, case studies of some of the smaller, but still relative successful municipalities in Arctic Scandinavia could be of interest to social scholars.

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Table 1: Contribution from the national government for regional development

Regions	Extra contribution 2017- budget (NOK per capita)	Regional funds 2016- budget (NOK per capita)
Nordland and Namdalen	1710	730
Troms (outside special zone)	3279	682
Special zone Troms	3864	682
Finnmark	8008	1087
Peripheral areas south	218-1087 ⁷⁷	433 ⁷⁸

⁷⁷ Contribution per capita varies depending on the peripheral index for each municipality. There is also a fixed contribution up to 1,2 mill NOK per municipality depending on peripheral status

⁷⁸ Average for the counties Hedmark and Oppland

Table 2: Municipalities in Northern Norway and Northern Sweden (in 2015)

2015	Northern Norway	Northern Sweden
Number of municipalities	87	29
Number of municipalities <2000	38	0
Number of municipalities <5000	66	9
Largest municipality (population)	72 681	120 777
Smallest municipality (population)	486	2 453
Mean population per municipality	5 525	17 693
Population median municipality	2 188	6 771

Table 3: Municipality categories in Northern Norway and Northern Sweden (in 1975)

1975	Northern Norway	Northern Sweden
Smallest (<5000)	62	6
Small (5-9999)	15	14
Medium (10-25000)	7	2
Largest (>25000)	3	7

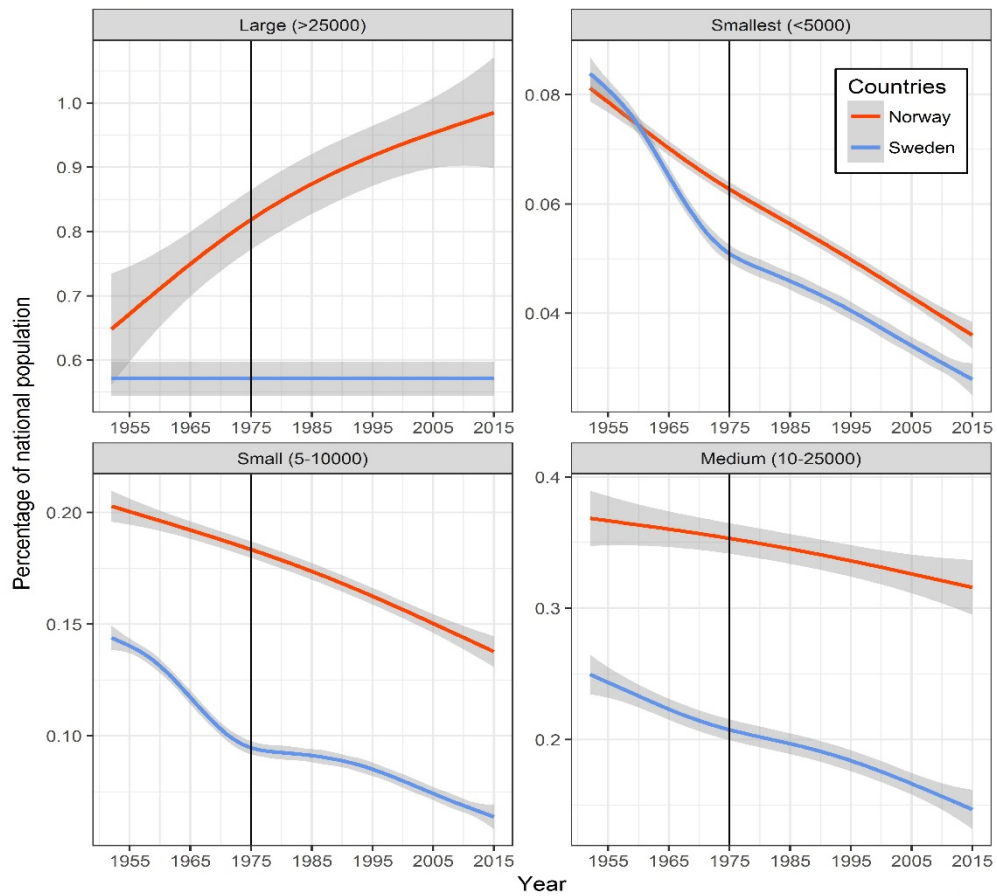
Table 4: Multilevel Regression Analysis 1952-2015

	<i>Dependent variable:</i>			
	Yearly change			
	Model 0	Model 1	Model 2	Model 3
Year	-0.00001*** (0.00000)	-0.00001 (0.00001)	-0.00001 (0.00001)	-0.00002* (0.00001)
Year after 1975		-0.00002 (0.00001)	-0.00002 (0.00001)	-0.00001 (0.00002)
Norway		-0.0002 (0.0004)	0.005*** (0.001)	0.002*** (0.001)
Municipality < 5000			-0.001 (0.001)	0.002*** (0.0004)
Municipality 5000-10000			-0.001* (0.001)	0.001*** (0.0003)
Municipality 10000-25000			-0.001 (0.001)	0.001 (0.001)
University City				0.009*** (0.0005)
University College City				0.001*** (0.0003)
Interaction Norway*Year after 1975		0.00002 (0.00001)	0.00002 (0.00001)	0.00002 (0.00002)
Municipality < 5000*Norway			-0.005*** (0.001)	-0.002*** (0.001)
Municipality 5-10000*Norway			-0.005*** (0.001)	-0.003*** (0.001)
Municipality10-25000*Norway			-0.004*** (0.001)	-0.002*** (0.001)
Constant	-0.0002 (0.0002)	-0.0002 (0.0004)	0.0004 (0.001)	-0.001*** (0.0004)
Observations	7,424	7,424	7,424	7,424
Log Likelihood	36,725.160	36,838.970	36,857.040	36,959.960
Akaike Inf. Crit.	-73,440.310	-73,657.940	-73,682.080	-73,883.920
Bayesian Inf. Crit.	-73,405.750	-73,588.810	-73,571.480	-73,759.500

*Note:**p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis

Figure 1

Figure 1 - Percentage of national population 1952-2015



Source: Statistics Norway and Statistics Sweden

Figure 2

Figure 2: Percentage of national population 1952-2015
The Three Largest Municipalities in Northern Norway and Northern Sweden

